



agenda

Te Komiti Rangahau o Unitec | Unitec Research Committee

Date:	2023-09-14
Scheduled Start:	1300h
Scheduled End:	1500h
Location:	Microsoft Teams

SECTION 1 NGĀ KUPU ARATAKI | PRELIMINARIES

1. Karakia Timatanga | Opening Prayer
2. Mihi Whakatau | Welcome from the Chair
3. Membership
4. Terms of Reference

SECTION 2 STANDING ITEMS

1. Ngā Whakapāha | Attendance, Apologies & Quorate Status
2. Pitopito Kōrero o Ngā Hui | Minutes of the Previous Meetings
3. Mahia Atu | Matters Arising

SECTION 3 MEA HEI WHAKAAE | ITEMS TO APPROVE

1. Definition of an Emerging Researcher at Unitec
2. 2024 ECR Contestable Fund GAC Membership

SECTION 4 WHAKAWHITI KŌRERO | ITEMS FOR DISCUSSION

1. PBRF Quality Evaluation 2026 – Consultation on Guidelines and Audit Methodology

SECTION 5 NGĀ TUKUNGA | ITEMS TO RECEIVE

1. 2023-2024 School Research Plans
 - a. School of Applied Business
 - b. School of Architecture
 - c. School of Building Construction
 - d. School of Community Studies
 - e. School of Computing, Electrical and Applied Technology

- f. School of Creative Industries
 - g. School of Environmental and Animal Sciences
 - h. School of Healthcare and Social Practice
- 2. 2023 Early Career Researcher Funding Progress Reports
 - a. Dr Irene Ayallo
 - b. Madhusudan Vyas
 - c. Dr Mary Yan
 - d. Dr Sarah Wells
 - e. Dr Caralyn Kemp
 - f. Tanya White
- 3. Research Related Documents on Te Aka | The Nest

SECTION 6 KUPU WHAKAMUTUNGA | CLOSING

- 1. Ētahi Kaupapa Anō | Any Other Business
- 2. Komiti Self-Assessment
- 3. Karakia Whakamutunga | Closing Karakia

SECTION 1 NGĀ KUPU ARATAKI | PRELIMINARIES

Item 1.1 Karakia Tīmatanga | Opening Prayer

KARAKIA TĪMATANGA	OPENING PRAYER
<i>Manawa mai te mauri nuku</i>	<i>Embrace the power of the earth</i>
<i>Manawa mai te mauri rangi</i>	<i>Embrace the power of the sky</i>
<i>Ko te mauri kai au</i>	<i>The power I have</i>
<i>He mauri tipua</i>	<i>Is mystical</i>
<i>Ka pakaru mai te pō</i>	<i>And shatters all darkness</i>
<i>Tau mai te mauri</i>	<i>Cometh the light</i>
<i>Haumi ē, Hui ē, Tāiki ē!</i>	<i>Join it, gather it, it is done!</i>

Item 1.2 Mihi Whakatau | Welcome from the Chair

Item 1.3 Te Komiti Rangahau o Unitec Membership

Marcus Williams (Associate Professor)	Chair and Director Research and Enterprise
Daisy Bentley-Gray (New and Emerging)	Nominee of Director, Pacific Success
Tanya White	Nominee of Director, Māori Success
Dr Helen Gremillion (Professor)	Healthcare and Social Practice
Dr Yusef Patel (Early Career)	Architecture
Vacant	Building Construction
Dr Lian Wu (Associate Professor)	Healthcare and Social Practice
Dr Hamid Sharifzadeh (Professor)	Computing and Information Technology
Dr Leon Tan (Associate Professor)	Creative Industries

Dr Kristie Cameron (Associate Professor/ Early Career)	Environmental & Animal Sciences
Vacant	Applied Business
Carly Van Winkel	Bridgepoint
Dr Norasieh Md Amin (Subject Librarian)	Library
Kate Zeng (Student Rep)	Nominee of Student Council
Arun Deo (Research Advisor)	Tūāpapa Rangahau
In attendance: Brenda Massey (Acting Secretary)	Tūāpapa Rangahau

Item 1.4 Te Komiti Rangahau o Unitec Terms of Reference

The powers and functions of Te Komiti Rangahau o Unitec (URC) shall be to:

- a. Foster the conduct of research, and support the achievement of Unitec’s strategic research, enterprise and innovation priorities.
- b. Propose and advise on strategic directions and priorities for research, enterprise, and innovation.
- c. Provide expert advice on institutional policy.
- d. Develop protocols and guidelines and make recommendations in relation to the conduct of research, enterprise, and innovation.
- e. Oversee the Grants Advisory Committee and the reporting of funded projects.
- f. Encourage and enhance the development of the research, enterprise, and innovation culture along with student and staff research capability, with emphasis on the development of Māori and Pacific research capability.
- g. Oversee the monitoring of research outputs and research reporting.
- h. Foster Māori and Pacific, transdisciplinary, collaborative and externally engaged research, enterprise, and innovation.

SECTION 2 STANDING ITEMS

Section 2.1 Ngā Whakapāha | Attendance, Apologies & Quorate Status

RECOMMENDATION

That the committee accepts the apologies of today’s meeting.

Section 2.2 Pitopito Kōrero o Ngā Hui | Minutes of the Previous Meetings *refer to [pg6](#)*

RECOMMENDATION

That the committee approves the minutes of the meeting of 2023-08-10.

Section 2.3 Mahia Atū | Matters Arising

refer to [pg13](#)

SECTION 3 MEI HEI WHAKAAE | ITEMS TO APPROVE

Section 3.1 Definition of an Emerging Researcher at Unitec

refer to [pg14](#)

Section 3.2 2024 ECR Contestable Fund GAC Membership

refer to [pg19](#)

SECTION 4 WHAKAWHITI KŌRERO | ITEMS FOR DISCUSSION

Section 4.1 PBRF Quality Evaluation 2026 – Consultation on Guidelines and Audit Methodology

refer to [pg20](#)

SECTION 5 NGĀ TUKUNGA | ITEMS TO RECEIVE

Section 5.1 School Research Plans

refer to [pg302](#)

- a. School of Applied Business [pg304](#)
- b. School of Architecture [pg314](#)
- c. School of Building Construction [pg341](#)
- d. School of Community Studies [pg364](#)
- e. School of Computing Electrical and Applied Engineering [pg376](#)
- f. School of Creative Industries [pg392](#)
- g. School of Environmental and Animal Sciences [pg406](#)
- h. School of Healthcare and Social Practice [pg429](#)

Section 5.2 2023 Early Career Researcher Funding Progress Reports

refer to [pg453](#)

- a. Dr Irene Ayallo [pg454](#)
- b. Madhusudan Vyas [pg461](#)
- c. Dr Mary Yan [pg465](#)
- d. Dr Sarah Wells [pg468](#)
- e. Dr Caralyn Kemp [pg470](#)
- f. Tanya White [pg473](#)

Section 5.3 Research Related Documents on Te Aka | The Nest

refer to [pg479](#)

SECTION 6 **KUPU WHAKAMUTUNGA | CLOSING**

Section 6.1 **Ētahi Kaupapa Anō | Any Other Business**

Section 6.2 **Komiti Self-Assessment**

refer to [pg481](#)

Section 6.3 **Karakia Whakamutunga | Closing Karakia**

TE KARAKIA WHAKAMUTUNGA	CLOSING PRAYER
<i>Ka wehe atu tātou</i>	<i>We are departing</i>
<i>I raro i te rangimārie</i>	<i>Peacefully</i>
<i>Te harikoa</i>	<i>Joyfully</i>
<i>Me te manawanui</i>	<i>And resolute</i>
<i>Haumi ē, Hui ē, Tāiki ē!</i>	<i>We are united, progressing forward!</i>



minutes

Te Komiti Rangahau o Unitec | Unitec Research Committee

Date:	2023-08-10
Scheduled Start:	1330h
Scheduled End:	1500h
Location:	Microsoft Teams

MEETING OPENED:	1330h

SECTION 1 – NGĀ KUPU ARATAKI | PRELIMINARIES

Item 1.1 Karakia Tīmatanga | Opening Prayer

Item 1.2 Mihi Whakatau | Welcome from the Chair

The Chair warmly welcomed members of the committee to the meeting.

SECTION 2 – STANDING ITEMS

Item 2.1 Ngā Whakapāha | Attendance, Apologies & Quorate Status

Members Present

1. Marcus Williams (Chair)
2. Arun Deo
3. Kristie Cameron
4. Nora Md Amin
5. Tanya White
6. Helen Gremillion
7. Carly Van Winkel
8. Kate Zeng
9. Leon Tan
10. Hamid Sharifzadeh (from 1.45pm)

Total members represented: 10 members

Apologies

1. Daisy Bentley-Gray
2. Yusef Patel

3. Hamid Sharifzadeh (for lateness)
4. Lian Wu

Total apologies:

4 members

MOTION

That the committee accepts the apologies for today's meeting.

Moved: Helen Gremillion

Seconded: Leon Tan

MOTION CARRIED

Quorate Status

Due to vacancies on the committee, a minimum of seven representatives is now required; the meeting was quorate.

Hunga Mahi | Staff in Attendance

1. Brenda Massey, Acting Secretary

Item 2.2 Pitopito Kōrero o Ngā Hui | Minutes of Previous Meeting

MOTION

That the committee approves the minutes of the 2023-05-11 and 2023-07-13 meetings as a true and accurate record.

Moved: Kristie Cameron

Seconded: Tanya White

MOTION CARRIED

Item 2.3 Mahia Atu | Matters Arising

Agenda Item(s)	Action	Responsible	Outcome
3.1	Advise Dr Hinekura Smith of the approval of the appointment of Dr Byron Rangiwai as an Honorary Research Fellow within Ngā Wai a Te Tūi.	Marcus Williams/ Brenda Massey	Complete
3.2	Develop terms of reference for the ECR Forum Committee that includes committee membership, forum membership, meeting times etc. The committee's feedback from today's meeting should be considered and incorporated. The draft terms of reference should be presented at the committee's next meeting for approval.	Kristie Cameron/ Marcus Williams/ Brenda Massey	Complete – on agenda
3.3	Tūāpapa Rangahau to add Pacific and Māori focussed journals and conferences to the directory of research dissemination opportunities. Set up a meeting with Daisy Bentley-Gray and her MIT counterpart in early September to progress the idea of running a Pacific research talanoa, shared across Unitec and MIT, to be held in late October or early November 2023.	Marcus Williams/ Brenda Massey	Complete
		Marcus Williams	Complete
		Marcus Williams	Complete

	Circulate the updated list of journals/conferences and the external funding opportunities list through the research leader networks at Unitec and MIT.		
5.1	Draft letters to the research centre annual report writers thanking and acknowledging them for their reports and mahi.	Brenda Massey	Complete

SECTION 3 – MEA HEI WHAKAAE | ITEMS TO APPROVE

Section 3.1 2022 Unitec Research Report

This item should have been submitted ‘for information’ not ‘for approval’ as the report is commissioned by Te Komiti Mātauranga not Te Komiti Rangahau.

The committee enthusiastically received the 2022 Unitec Research Report which reports on the third year of the Unitec Research Strategy 2020-2024.

Action: Arun Deo to distribute the report to:

- Research Leaders
- Heads of School
- Senior Leadership Team
- Executive Leadership Team
- Supervision Register
- ECR Forum
- Academic Programme Managers
- Te Rōpū Mataara (via Tanya White)
- Pacific Centre Director
- The six Research Centre Directors
- Ngā Kaitiaki (via Tanya White)

Section 3.2 Early Career Researcher Forum Terms of Reference

The committee reviewed the proposed Early Career Researcher (ECR) Forum Terms of Reference (ToR).

The ToR state that the ECR Forum should ensure that emerging researchers are also supported and included where practicable. It was queried whether the Scope of the ToR should therefore also apply to staff who meet the definition of an emerging researcher, and it was agreed that they should, notwithstanding that the funding available is not relevant to this cohort.

The committee then discussed how emerging researchers should be defined.

The PBRF guidelines refer to ‘new and emerging researchers’, and state that new and emerging researcher status is specifically for staff members who have started their research career in the 2026 Quality Evaluation assessment period (1 January 2018 – 31 December 2025).

At Unitec, emerging researchers have tended to be positioned as ‘pre-early career’, which does not align with the PBRF definition and is a broader descriptor. There is not currently a formal definition of what constitutes an emerging researcher at Unitec.

It was agreed that a definition of an emerging researcher at Unitec needs to be established.

Action: Kristie Cameron and Marcus Williams to draft a definition of an emerging researcher at Unitec for tabling at the next meeting.

Action: Brenda Massey to add emerging researchers to the scope of the ECR Forum ToR and arrange for the ToR to be published on Te Aka | The Nest.

The requirement for a Māori Co-Chair of the ECR Forum Committee was supported by the committee, but it was recognised that it may be an aspirational goal at this juncture. There are currently very few Māori researchers at Unitec, all of whom are significantly stretched. It is hoped that Te Pūkenga is prioritising the recruitment of Māori academics.

MOTION

That the committee approves that the Unitec Early Career Researcher Forum Terms of Reference, subject to its scope being revised to include emerging researchers.

Moved: Kristie Cameron

Seconded: Marcus Williams

MOTION CARRIED

SECTION 4 - WHAKAWHITI KŌRERO | ITEMS FOR DISCUSSION

Section 4.1 Communication Strategy for 2026 PBRF Quality Evaluation

Arun Deo drafted an illustrative 2026 PBRF Evidence Portfolio (EP) template which was presented to the committee alongside a document that highlighted the differences between the 2026 and 2018 EP templates.

A summary of the discussion of some of the main changes is as follows:

- The ‘Extraordinary Circumstances’ provision has been renamed as ‘Researcher Circumstances’ and covers circumstances such as force majeure, which includes pandemics.
- Staff can now indicate if they worked part-time during the assessment period, in which case there are reduced submission requirements.
- The character limit for the contextual summary section has been reduced but the character limit for the contextual narrative (ERE) section has increased. This is because EPs are now based on examples of research excellence, with a change of focus to a more capacious understanding of what excellence means, including, but not exclusive to, research outputs.
- EP weightings remain the same: 70% on research excellence and 30% on research contributions.
- In 2026 submitters can select up to three ERE (evidence of research excellence), while in 2018 they could select up to four NRO (nominated research outputs).

- Submitters can link up to three supplementary research outputs to their EREs, i.e., ‘here is the example of research excellence and here are the outputs associated with it, e.g., journal paper, conference, book chapter etc’. An ‘additional information’ field is also available for submitters to explain any additional activities (not only outputs) associated with the ERE.

The committee were asked to consider a communications strategy for staff who will be participating in the 2026 PBRF Quality Evaluation (QE). A summary of discussions is as follows:

- While Te Pūkenga will be approaching the QE as a national kaupapa, the committee felt it would be useful to circulate the information that is known at this time to staff forthwith.
- If the illustrative 2026 PBRF EP template and document that highlights the differences between the 2026 and 2018 templates are circulated, the inclusion of narrative blurbs to clarify some of the above discussion points might be useful.
- The provision of short workshops for interested staff would be useful.
- Research Leaders or dedicated Research Champions (perhaps staff still at Unitec who participated in the last PBRF round) could be engaged to circulate information from the Research Office within their Schools and to assist staff in their areas who have been identified as eligible to submit EPs.
- The PBRF 2026 QE Guidelines and Summary of Decisions has not yet been released by TEC, and Te Pūkenga has yet to determine the software platform that staff will be using to prepare their EPs. Workshops and one-on-one support sessions would generally be offered by Tūāpapa Rangahau closer to the EP submission date which is still two years away. It was clarified that the communication strategy under discussion today represents a cursory and early divulgence and explanation of what is known so far to have changed.
- Wānanga would provide a valuable platform to share information with kaimahi Māori and to raise their awareness of the PBRF pathway. Te Rōpū Mataara could provide a vehicle for this.
- Mid-semester break (25 Sept to 6 Oct) might be good timing for workshops. Most staff won’t be teaching, and although some may be on leave, they could catch up later (e.g. through the above-suggested Research Champions). If sessions were run that were open to everyone, but were also targeted at Research Leaders and/or Research Champions, these staff could then run their own, later sessions, thereby enhancing Tūāpapa Rangahau’s capacity to communicate details of the QE. Te Rōpū Mataara and Pacific representatives could also attend sessions, and special effort could be made to articulate the potential that the PBRF QE has for emerging kairangahau careers.
- An online workshop forum should improve attendance rates and today’s discussions demonstrate this is a feasible option.
- Opportunities for participation could be made available to both Unitec and MIT staff.
- Arun Deo is happy to write a detailed instruction manual once the PBRF structure is finalised and once the submission platform is decided by Te Pūkenga. It would include screenshots, which users have found useful in the past.

Action: Marcus Williams to develop and implement a communications strategy for staff who will be participating in the 2026 Performance-Based Research Fund (PBRF) Quality Evaluation (QE) based on the committee’s feedback.

Section 5.1 School Research Plans

All Schools have submitted updated School Research Plans.

The plans provide useful information for degree moderators and programme monitors and for the identification of new research groups which sometimes flourish into new research centres.

Action: Arun Deo to table the completed plans at the next committee meeting along with a one-page visual schematic of all of Unitec's research groups.

SECTION 6 - KUPU WHAKAMUTUNGA | CLOSING

Section 6.1 Ētahi Kaupapa Anō | Any Other Business

N/A

Section 6.2 Komiti Self-Assessment

An opportunity was given for the committee to reflect on their self-assessment provocations. The committee is reminded that feedback on any aspect of the committee's operation can be emailed to the Chair or the Secretary at any time (in confidence if requested).

Section 6.3 Karakia Whakamutunga | Closing Karakia

MEETING CLOSED: 1445 h

SUMMARY OF ACTIONS

Agenda Item(s)	Action	Responsible	Outcome
3.1	Distribute the 2022 Unitec Research Report to the following stakeholders: • Research Leaders • Heads of School • Senior Leadership Team • Executive Leadership Team • Supervision Register • ECR Forum • Academic Programme Managers • Te Rōpū Mataara (via Tanya White) • Pacific Centre Director • The six Research Centre Directors • Ngā Kaitiaki (via Tanya White)	Arun Deo	
3.2	Draft a definition of an emerging researcher at Unitec for tabling at the next meeting.	Kristie Cameron / Marcus Williams	

	Add emerging researchers to the scope of the ECR Forum ToR and arrange for the ToR to be published on Te Aka The Nest.	Brenda Massey	
4.1	Develop and implement a communications strategy for staff who will be participating in the 2026 Performance-Based Research Fund (PBRF) Quality Evaluation (QE) based on the committee's feedback.	Marcus Williams	
5.1	Table School Research Plans at the next committee meeting along with a one-page visual schematic of all of Unitec's research groups.	Arun Deo	

MATTERS ARISING

Agenda Item(s)	Action	Responsible	Outcome
3.1	Distribute the 2022 Unitec Research Report to the following stakeholders: • Research Leaders • Heads of School • Senior Leadership Team • Executive Leadership Team • Supervision Register • ECR Forum • Academic Programme Managers • Te Rōpū Mataara (via Tanya White) • Pacific Centre Director • The six Research Centre Directors • Ngā Kaitiaki (via Tanya White)	Arun Deo	In progress
3.2	Draft a definition of an emerging researcher at Unitec for tabling at the next meeting. Add emerging researchers to the scope of the ECR Forum ToR and arrange for the ToR to be published on Te Aka The Nest.	Kristie Cameron / Marcus Williams Brenda Massey	Complete – on agenda Complete – on agenda
4.1	Develop and implement a communications strategy for staff who will be participating in the 2026 Performance-Based Research Fund (PBRF) Quality Evaluation (QE) based on the committee's feedback.	Marcus Williams	Complete
5.1	Table School Research Plans at the next committee meeting along with a visual schematic of all of Unitec's research groups.	Arun Deo	Complete – on agenda

Unitec New Zealand Limited

Meeting of Te Komiti Rangahau o Unitec | Unitec Research Committee

Date of Meeting: 14 September 2023

Title	Definition of an Emerging Researcher at Unitec
Provided by:	A/P Marcus Williams, Director Research and Enterprise & A/P Kristie Cameron, Chair Early Career Researcher Forum
For:	APPROVAL

Recommendation/s

That the committee approves the proposed definition of an emerging researcher at Unitec as follows:

An Emerging Researcher at Unitec is a person who:

- Meets the inclusion criteria for the Research Productivity Traffic Light (RPTL) or has been accepted onto the Non-Degree Teaching Research Track.
- Has an approved Individual Research Plan which identifies clear efforts toward a recognised research output within the next 12 months.
- Is a named member of a Research Group in an approved School Research Plan.
- Has an [ORCID number](#).

Purpose

At its last meeting, the committee approved the Early Career Researcher Forum Terms of Reference, whose purpose includes ensuring that emerging researchers are also supported and included where practicable. The committee determined that, for clarity, a definition of an emerging researcher at Unitec should be tabled at today's meeting for approval.

Background

The Unitec ECR Forum aims to provide space for identification and discussion of the particular issues faced by ECRs at Unitec, with a long-term goal of developing and sustaining ECRs' careers and Unitec's research culture and performance. The Forum has adopted formal Terms of Reference, which were approved by the committee at its meeting last month.

At Unitec, an ECR is defined as:

An ECR at Unitec lies between 'emerging/beginner' and 'senior/advanced'. An ECR is within 10 years (prior to the closing date for full applications for ECR funding) of becoming an

‘independent’ researcher, which is defined as one or both of the following, whichever comes first:

1. A researcher who has been awarded a PhD or a professional doctorate with a significant research component.
2. A researcher who has been the primary author of an independently investigated (i.e., unsupervised, disseminated quality assured research output. This criterion excludes conference presentations and typically also excludes very short written outputs.

Time taken for parental leave is not counted as part of the 10-year window (i.e., one year of parental leave would extend the eligibility period to 11 years since achieving criterion 1 or 2). Note that other forms of extended leave may be considered by negotiation with Tūāpapa Rangahau.

This definition was approved and adopted by the Unitec Research Committee in April 2021.

Next Steps

The definition of an early career researcher and an emerging researcher at Unitec will be appended to the Early Career Researcher Forum Terms of Reference.

Attachments

Early Career Researcher Forum Terms of Reference



TERMS OF REFERENCE FOR THE EARLY CAREER RESEARCHER FORUM

Purpose

The purpose of this procedure is to:

- Define the Terms of Reference for the Early Career Researcher Forum.
 - Ensure that the Early Career Researcher Forum is Te Tiriti aligned.
 - Ensure that all Early Career Researchers are supported, including those approved on a Non-Degree Teaching Track.
 - Ensure that Emerging Researchers are also supported and included where practicable.
 - Ensure that there are robust processes in place to ensure the Early Career Researcher Forum is supported and provided an institutional voice.
-

Scope

This procedure applies to:

- Full-time or part-time tenured staff who meet the definition of an Early Career Researcher and are teaching on a degree programme 0.2 FTE or more.
- Full-time or part-time tenured staff who meet the definition of an Early Career Researcher and are approved to the Non-Degree Teaching Track.
- Emerging Researchers.
- The relevant Academic Leader of each eligible staff member.
- The Director of Research and Enterprise.
- The Co-Chair(s) and membership of the Early Career Researcher Forum Committee.
- The Unitec Research Committee.
- The Research Partners.

The Early Career Researcher Forum Committee

- Membership: Co-Chair Māori - Early Career Researcher Forum Committee.
Co-Chair Te Tiriti Partner - Early Career Researcher Forum Committee.
Pacific representation.
Kairangahau representation.
Early Career Researcher representation from at least three different disciplines.
Emerging Researcher representation from a different discipline to above.
Research Partner representation.
- Terms of Reference:
The committee meets once per semester.

The committee is Te Tiriti aligned.

The committee recognises and celebrates diversity.

The committee operates in a high ethical and values-based framework.

The committee keeps an accurate membership record which differentiates Early Career Researchers and Emerging Researchers.

The committee strives to provide communications, opportunity, and advocacy for the membership.

The committee provides representation on the Unitec Research Committee.

The committee provides a brief annual report of its activities, achievements, and challenges to the Unitec Research Committee by March 31st of the year following.

Responsibilities

Role	Responsibilities
Co-Chairs	- Work together collaboratively - Ensure ToR are adhered to
Director Research and Enterprise	- Ensures there is funding for Early Career Researchers - Advocates for the Early Career Researcher Forum - Ensures research strategy concisely includes Early Career Researchers and Emerging Researchers - Supports the Co-Chairs - Ensures Research Partners have time resource to support Early Career Researchers and the Forum
Research Advisor	- Supports the development of the Early Career Researcher Forum Annual Report - Gathers relevant data for the Unitec Annual Research Report
Research Partners	Support Early Career Researchers and the Forum.

Reference Documents

- [Unitec Research Strategy 2020-2024](#)

Approval Details

Version number	1	Issue Date	1 August 2023

Approval authority:	Te Komiti Mātauranga Academic Committee	Procedure Owner:	Director Research & Enterprise
Contact Person	URC Secretary	Date of Next Review	August 2025

Unitec New Zealand Limited

Meeting of Te Komiti Rangahau o Unitec | Unitec Research Committee

Date of Meeting: 14 September 2023

Title	2024 ECR Contestable Fund Grants Advisory Committee (GAC) Membership
Provided by:	A/P Marcus Williams, Director Research and Enterprise
For:	APPROVAL

Recommendation/s

That the committee approves the membership of the 2024 ECR Fund Grants Advisory Committee (GAC), a sub-committee of the Unitec Research Committee, as follows:

GAC membership who will consider every application:

A/P Marcus Williams, Director Research and Enterprise

Jamie Ihimaera Smiler, Kaiwhakahaere Rangahau, WelTec

A/P Evangelia Papoutsaki, Research Ethics Administrator, Tūāpapa Rangahau

GAC membership who will consider specific applications:

2 x academics specifically selected for each applicant, chosen from outside of the applicant's school where possible, but with relevant discipline or transdisciplinary expertise. Bespoke members will be selected by Tūāpapa Rangahau.

Purpose

Nine early career researchers submitted registrations of interest for 2024 Early Career Research Funding. They have each been invited to submit full applications before 5pm on Monday, 16 October 2023. The full applications will need to be assessed by members of the GAC.

The committee should note that allocations of funding are subject to confirmation from Te Pūkenga (pending) that budget is available.

Next Steps

GAC members will read, consider, and provide feedback on the applications, convening on Tuesday, 28 November 2023 to decide whether the applications should be funded. Applicants will be notified of the outcome of their applications on or before Friday, 1 December 2023.

Unitec New Zealand Limited

Meeting of Te Komiti Rangahau o Unitec | Unitec Research Committee

Date of Meeting: 14 September 2023

Title	PBRF Quality Evaluation 2026 – Consultation on Guidelines and Audit Methodology
Provided by:	A/P Marcus Williams, Director Research and Enterprise
For:	Feedback/Discussion

Recommendation

That the committee reviews, considers and provides feedback on the draft TEO PBRF Quality Evaluation 2026 Guidelines, Assessment Guidelines and the revised audit methodology.

Key Points

The TEO Guidelines and Assessment Guidelines incorporate the in-principle decisions made by the TEC on the basis of the Sector Reference Group's (SRG) consultation process and recommendations since September 2021. The accompanying Summary of TEC's In-Principle Decisions provides a full record of these in-principle decisions for reference.

The SRG is consulting on the full drafts of these guidelines to ensure that all changes have been clearly explained, rather than for further feedback on the decisions made earlier in the process.

The draft TEO Guidelines include three new proposals for changes based on earlier sector feedback on the SRG's technical matters and reporting papers:

- **Introducing the use of Australian and New Zealand Standard Research Classification (ANZSRC) codes** for the Field of Research field in the Evidence Portfolio (EP), rather than a free text field. This proposal is based on feedback from the University of Otago.
- **Adding an EP Language field**, to allow participating staff members to indicate if any languages other than English are used in any of the Example of Research Excellence (ERE) Outputs included in the EP. This proposal is based on feedback from Victoria University of Wellington.
- **Updating the description of "Software"** as a Research Output type to better reflect current practice. This proposal is based on feedback from the University of Auckland.

The TEC is also consulting on the draft audit methodology developed with their TEO auditing partner Deloitte. The audit will focus largely on whether staff and EPs meet PBRF requirements.

Next Steps

The feedback period runs from **11 August to 22 September 2023**. The committee's feedback will be conveyed to the Rangahau Research Forum (RRF) for review/discussion, along with any other feedback received from within Te Pūkenga. The RRF will collate a response for input/submission to TEC by Te Pūkenga. Individual submissions can also be made here:

<https://www.surveymonkey.com/r/9HBB32J>.

The SRG will carefully consider all feedback. The final guidelines will be published in November 2023.

Attachments

- Summary of TEC's In-Principle Decisions
- Overview of changes to the Guidelines for the QE 2026 Assessment Process
- PBRF Guidelines for the QE 2026 Assessment Process
- Overview of changes to the Guidelines for TEOs participating in the QE 2026
- PBRF Guidelines for TEOs Participating in the QE 2026
- Draft Audit Methodology for the PBRF QE 2026



Summary of TEC's in-principle decisions

This document provides a record of the TEC's in-principle decisions on changes to the design of Quality Evaluation 2026.

These in-principle decisions are based on the recommendations of the Sector Reference Group following public consultation in 2021-2023 and have informed the drafting of the Guidelines of the Quality Evaluation.

Following consultation on the full draft of the Guidelines during 11 August 2023 – 22 September 2023, these decisions will be confirmed by the TEC Board prior to final publication in November 2023.

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1. PBRF research and research excellence definitions

PBRF Definition of Research

Based on the recommendations of the SRG, the TEC has agreed in principle the following PBRF Definition of Research:

For the purposes of the PBRF, research is defined as a process of investigation or inquiry leading to new, recovered, or reinterpreted knowledge or understanding which is effectively shared and capable of rigorous assessment by the appropriate experts.

In Aotearoa New Zealand our distinctive research cultures and environments draw on diverse ontological, epistemological, and methodological traditions of critical inquiry, experimentation, and knowledge-creation. This definition of research includes Māori ways of knowing, being, and conducting rangahau such as kaupapa Māori and mātauranga Māori; diverse Pacific ways of knowing, being, and conducting research; and work that embodies new insights of direct relevance to the specific needs of iwi, hapū, marae, communities, government, scholarship and teaching, industry, and commerce, which may be developed through collaborative and practice-led processes involving stakeholders from those constituencies.

Research can be an individual or collective process and may be embodied in the form of artistic works, performances, designs, policies, or processes that lead to novel or substantially improved insights.

For further clarification, research includes:

- › Activity that leads to scholarly books, journal articles, and other nationally and internationally published outputs and presentations that offer new, recovered, or reinterpreted knowledge;
- › Activity that leads to contributions to the intellectual underpinning of different ontologies and epistemologies, subjects, and disciplines (for example, dictionaries, scholarly editions, teaching materials that embody original research, or teaching practices or activities that produce original research);
- › Applications of existing knowledge to produce new or substantially improved materials, devices, products, designs, policies, granted patents, or creative outputs;
- › Re-centering and revitalisation of knowledge (for example, the study of raranga, whakapapa narratives, waiata composition, navigational knowledge, translation studies, historical or literary archival studies, or ecological research); and
- › The synthesis and analysis of previous research to the extent that the insights generated are new.

It does not include:

- › routine testing and data collection lacking analysis, interpretation and/or evaluation;
- › preparation for teaching that does not embody original research (for example, collation of existing research and research outputs into handbooks or textbooks where this does not embody new insights); or
- › the legal and administrative aspects of intellectual property protection and commercialisation activities.

Approach to articulating Māori research and Pacific research

Based on the recommendations of the SRG, the TEC has agreed in principle that the following statements will sit in the Guidelines alongside the PBRF Definition of Research:

The new definition of research includes explicit reference to Māori ways of knowing, being, and conducting rangahau. Rangahau and knowledge of relevance to Māori communities, such as kaupapa Māori and mātauranga Māori, are essential components of Aotearoa New Zealand's distinctive research cultures. The Māori Knowledge and Development Panel-Specific Guidance has elaborated the ontologies, epistemologies, methodologies, knowledges and understandings which comprise Te Āo Māori. This elaboration applies across all Panels and will be used to determine whether EPs should be cross-referred.

The new definition of research includes explicit reference to diverse Pacific ways of knowing, being, and conducting research. Research and knowledge of relevance to Pacific communities are essential components of Aotearoa New Zealand's distinctive research cultures. The Pacific Research Panel-Specific Guidance has elaborated the topics, ontologies, epistemologies, methodologies, knowledges and understandings which make up Pacific research cultures. This elaboration applies across all Panels and will be used to determine whether EPs should be cross-referred.

Approach to defining research excellence

Based on the recommendations of the SRG, the TEC has agreed in principle the following revised definition of research excellence will sit in the Guidelines:

For the purposes of the Quality Evaluation, research excellence will be assessed in terms of originality, rigour, reach, and significance, with reference to the quality standards appropriate to the subject area and to the unique nature of Aotearoa New Zealand's research cultures and needs.

Excellence will be assessed across the following areas of activity:

- › The production and creation of knowledge, including ontologies, epistemologies, and methodologies unique to Māori and to Pacific communities;
- › The dissemination and application of that knowledge within academic and/or other communities and its impact outside the research environment; and
- › Activity which sustains and develops the research environment, within and across both academic and non-academic domains.

For the purposes of the Quality Evaluation, the impact of research is defined as a positive effect on, change, or benefit to society, culture, the environment, or the economy at any level, outside the research environment.

Impacts on scholarship, research, or the advancement of knowledge within the research environment are not included.

Revising Quality Category descriptors

Based on the recommendations of the SRG, the TEC has agreed in principle that the revised Quality Category descriptors are as follows:

Quality Category A

The panel considers that as a whole the EP contains evidence of activity that is recognised by peers as outstanding, representing the leading-edge in its field (including if appropriate through international publication or dissemination), demonstrates very significant contributions to the research environment, and/or has led to very significant impact.

- › Research outputs are recognised by peers as leading-edge for the field in terms of their originality, rigour, and significance and/or in terms of the reach and significance of their impact.
- › Research-related activities demonstrate very significant outcomes from collaboration, dissemination and/or engagement within or outside academic domains; they may have delivered very significant impacts, with considerable reach, and where relevant have gained the highest level of recognition from peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/ or professional practice.
- › Research environment contributions demonstrate very significant contributions to the vitality and sustainability of the research culture and environment, which is likely to occur beyond the field of research.

Quality Category B

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as high-quality within its field (including if appropriate through international recognition), demonstrates significant contributions to the research environment, and/or has led to significant impact.

- › Research outputs are recognised by peers as high quality for the field in terms of their originality, rigour, and significance and/or in terms of the reach and significance of their impact.
- › Research-related activities demonstrate significant outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered significant impacts with reach, and where relevant have gained recognition from peers which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions demonstrate significant contributions to the vitality and sustainability of the research culture and environment.

Quality Category C

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as having met quality-assurance standards within its field (including if appropriate through international recognition), demonstrates some contributions to the research environment and/or has led to some impact.

- › Research outputs are recognised by peers as meeting the quality standards of the field in terms of their originality, rigour, and significance, and/or demonstrate impact which is limited in terms of reach or significance.
- › Research-related activities demonstrate some outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered moderate impacts and where relevant may have gained some recognition by peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.

- › Research environment contributions demonstrate some contributions to the vitality and sustainability of the research culture and environment.

Quality Category C(NE)

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as having met quality-assurance standards within its field (including if appropriate through international recognition), and/or has led to some impact. The EP may contain evidence of contributions to the research environment.

- › Research outputs are recognised by peers as meeting the quality standards of the field in terms of their originality, rigour, and significance, and/or demonstrate impact which is limited in terms of reach or significance.
- › Research-related activities demonstrate some outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered moderate impacts and where relevant may have gained some recognition by peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions, if present, demonstrate some contributions to the vitality and sustainability of the research culture and environment.

This Quality Category can be awarded to the EPs of new and emerging researchers only.

Quality Category R

An EP will be assigned an R when the evidence included does not demonstrate the quality standard required for a C Quality Category or higher.

Quality Category R(NE)

An EP will be assigned an R(NE) when the evidence included does not demonstrate the quality standard required for a Quality Category C(NE) or higher.

This Quality Category can be awarded to the EPs of new and emerging researchers only.

2. Redesigning Evidence Portfolios

What comprises an Example of Research Excellence?

Based on the recommendation of the SRG, the TEC has decided in principle that:

An Example of Research Excellence (ERE) must include:

- › a single core research output
- › a brief contextualizing narrative.

In addition, an ERE may include up to three supplementary items which:

- › may be either research activities OR additional research outputs, and
- › must relate to the core research output.

The Guidelines will clarify that:

- › EREs are assessed according to the same assessment criteria regardless of the number of supplementary items they contain, if any; and
- › Research activities demonstrating impact must have occurred within the assessment period to be eligible, but the underpinning research output does not have to been published within the assessment period (as in Quality Evaluation 2018). Impacts which were first claimed in a previous Quality Evaluation are not eligible for submission in Quality Evaluation 2026.

Approach to the minimum number of EREs in an EP

Based on the recommendation of the SRG, the TEC has decided in principle that an EP must contain three EREs, unless one of the following exceptions applies:

- › New and Emerging Researcher
- › Extraordinary Circumstances (noting that the SRG is currently consulting on a change of name)
- › Part-time employment.

What comprises an Other Example of Research Excellence?

Based on the recommendation of the SRG, the TEC has decided in principle that both research outputs and research activities will be eligible as OEREs.

How many OEREs should an EP include

Based on the recommendation of the SRG, the TEC has decided in principle that an EP can list up to eight OEREs, alongside a narrative which staff may use to contextualise each OERE listed.

Renaming the Research Contribution component

Based on the recommendation of the SRG, the TEC has decided in principle that the Research Contributions component will be renamed Contributions to the Research Environment.

Reducing and revising the eligible Research Contribution types

Based on the recommendation of the SRG, the TEC has decided in principle that items submitted within the Contributions to the Research Environment component must belong to one of the following six types:

- › Contribution to Research Discipline, Culture, and Environment (previously Contribution to Research Discipline and Environment)
- › Facilitating, Networking and Collaboration
- › Researcher Development, Capability-Building, and Mentoring (previously Researcher Development)
- › Reviewing, Refereeing, Judging, Evaluating and Examining
- › Student Development and Support (previously Student Factors)
- › Peer esteem and research recognition not included in ERE section.

For clarity, the following types which were previously eligible as Research Contributions will be eligible as research activities within the ERE and OERE sections:

- › Invitations to Present Research or Similar
- › Outreach and Engagement
- › Recognition of Research Outputs
- › Research Funding and Support
- › Research Prizes, Fellowships, Awards and Appointments
- › Uptake and Impact.

Following the recommendation of the SRG, the TEC has further decided in principle that the type descriptors will be reviewed and revised ahead of consultation on the draft Guidelines to better reflect Māori and Pacific research modes, to clarify the distinctions between types, and to ensure that peer esteem factors have a clear place within the EP.

What should the Research Contribution component comprise?

Based on the recommendation of the SRG, the TEC has decided in principle that the Contributions to the Research environment component must contain a minimum of one and a maximum of ten items. Each item must be categorised within one of the six eligible types, and must comprise a brief description containing sufficient detail to enable audit.

3. Panel membership criteria and working methods

Panel chairing arrangements

Based on the recommendations of the SRG, the TEC has agreed that:

Each panel will be led by two Co-Chairs, with the role of Deputy Panel Chair to be disestablished.

At least one Co-Chair must have expertise in Māori knowledge. In this context, 'Māori knowledge' should be understood broadly, but indicates a level of expertise distinct from the general requirement that all panellists demonstrate awareness and understanding of Te Tiriti o Waitangi and the significance of Māori-Crown partnership. The Co-Moderator Māori will play a central role in assessing the relevant expertise of nominees for the role of Co-Chair Māori in each peer review panel.

The following criteria will be applied when considering suitable candidates for the role of a Panel Co-Chair. Co-Chairs will:

- › be recognised experts in one of the subject areas within the relevant Panel (essential)
- › demonstrate awareness and understanding of Te Tiriti o Waitangi and the significance of Māori-Crown partnership (essential)
- › demonstrate an appreciation of the diverse range of ontologies, epistemologies, knowledges, and research in Aotearoa New Zealand (essential)
- › have expertise in Māori knowledge (at least one Co-Chair)
- › have previous experience as a PBRF panel member or equivalent including international research assessment exercises (at least one Co-Chair)
- › be familiar with quality evaluation processes
- › be from a different subject area and/or TEO to the previous Panel Chair (where applicable/feasible)
- › be able to commit the necessary time (essential).

It is also expected that Panel Co-Chairs will meet the criteria for Panel Members where those differ from the Co-Chair criteria.

Panels composition criteria

Based on the recommendations of the SRG, the TEC has agreed that:

Panel Co-Chairs will be required, except where candidates meeting the criteria cannot be found, to appoint panels which reflect the diversity of Aotearoa New Zealand and the PBRF principles of equality and inclusivity, and which specifically include representation of:

- › Māori researchers
- › Pacific researchers
- › The full range of participating TEO types and where appropriate non-TEO research organisations
- › The full range of career stages including, where candidates meet the criteria, early career researchers
- › International researchers
- › New panellists
- › Practice-based, community-based, or applied research as appropriate
- › Interdisciplinary research.

The TEC will report on panel make-up against the groups listed above, as well as on panel gender and ethnic diversity, when panels are announced.

The TEC notes that the panel selection guidance and instructions to Panel Co-Chairs will continue to require coverage across the subject areas included in each Panel. The TEC additionally notes that, as in Quality Evaluation 2018, specific language requirements and individual subject area capacity are best addressed by Co-Chairs once TEOs have provided EP submission intentions.

Medicine and Public Health Panel

Based on the recommendations of the SRG, the TEC has agreed:

- › To split the Medicine and Public Health panel into two new panels:
 - a. The Medicine panel, covering the Biomedical and Clinical Medicine subject areas.
 - b. The Public Health panel, covering the Public Health subject area.
- › That splitting the Medicine and Public Health panel provides an opportunity to review subject area coverage for both new panels, and that in particular there is an opportunity to consider the Public Health subject area coverage. The TEC will make the feedback available to the Co-Chairs of the two new panels, to support the initial panel member appointments and the development of the Panel-Specific Guidelines.

Panel workloads

Based on the recommendations of the SRG, the TEC has agreed to:

- › Retain the existing overall ratio of 35 Evidence Portfolios per panellist in determining panel sizes.
- › Share feedback from 2018 panel members with Panel Co-Chairs to support the panel appointment process.

Renaming the Māori Knowledge and Development panel

Based on the recommendations of the SRG, the TEC has agreed that:

- › The Māori Knowledge and Development Panel will be provisionally renamed the Mātauranga Māori panel.
- › Once appointed, the Co-Chairs and initial panel members will be invited to revisit and confirm the name of the panel when they develop the Panel-Specific Guidance.

Note. The Co-Chairs of the Mātauranga Māori panel were appointed in May 2023. They have confirmed their support for the proposed new name.

4. Individual circumstances

Achievement Relative to Opportunity

Based on the recommendations of the SRG the TEC has agreed in principle that:

- › The proposed Achievement Relative to Opportunity framework will be adopted.
- › The 'Extraordinary Circumstances' provision will be renamed as 'Researcher Circumstances'.

Note that the Achievement Relative to Opportunity framework will include the eligible professional and personal circumstances which have impacted on individual researchers' capacity to carry out research and research-related activity during the assessment period. These are defined as:

- › Meeting the New and Emerging Researcher eligibility criteria
- › Meeting the part-time employment definition (as defined for the purposes of determining EP submission requirements)
- › Experiencing one or more eligible Researcher Circumstances.

New and Emerging Researchers – eligibility criteria

Based on the recommendations of the SRG the TEC has agreed in principle that the following eligibility criteria and additional guidance for determining New and Emerging Researchers will be adopted:

- › Definition of a New and Emerging Researcher

New and Emerging Researchers are defined as members of staff who meet the PBRF staff eligibility criteria at the census date and who first became independent researchers on or after the start of the assessment period on 1 January 2018.

For the purposes of the PBRF Quality Evaluation, an individual is deemed to have become an independent researcher from the date at which they first held a contract of employment of 0.2 FTE or more at any organisation (whether in New Zealand or elsewhere) in which their role included the expectation to carry out one or more of the research activities described in the 'substantiveness test for research'.

- › The revised substantiveness test for research, for the purposes of determining both PBRF eligibility and New and Emerging status, is as follows:

Staff members are required to undertake one or more of the following: the design of research activity; the preparation of research outputs (for example, as a co-author or co-producer) that is likely to result in being named as an author (or co-author or co-producer) on one or more research outputs; the academic supervision of graduate research students in a primary, joint, or co-supervisor role.

- › TEOs should refer to the following clarifications in applying the definition of a New and Emerging Researcher and the substantiveness test for research:
 - Staff members who are employed to carry out supervised or non-independent research activity (for example research assistants or postdoctoral research fellows who do not design their own research activity), and students who carry out supervised or non-independent research activity (including research degrees), are not considered to meet the definition of an independent researcher for the purposes of the Quality Evaluation, regardless of whether

they carry out activities that would otherwise appear to meet the substantiveness test for research.

- Membership on supervisory teams in non-primary, non-joint, or non-co-supervisory roles is not considered to meet the academic supervision criterion in the substantiveness test for research.
- Job titles are not relevant to determining whether a staff member meets the definition of an independent researcher.
- The independent production of research outputs where that is not a role requirement is not relevant to determining whether a staff member meets the definition of an independent researcher.
- Where a staff member was self-employed prior to commencing a PBRF-eligible role in a TEO, the substantiveness test for research should still be applied; i.e. was the staff member required to carry out research as a function of that self-employed role. Where the application of the substantiveness test for research does not produce a clear outcome, the staff member will not be considered to have met the definition of an independent researcher in that self-employed role.

Extraordinary Circumstances – eligible types and revised wording

Based on the recommendations of the SRG the TEC has agreed in principle that the following types of Researcher Circumstances, as described below, will be eligible:

- › **Long-term illness or disability** that has affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This could include physical or mental disability, ill-health or injury, developmental conditions, or other disabilities, health conditions, or diseases that may be progressive or have fluctuating or recurring effects.
- › **Extended personal leave** that has affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This could include leave due to shorter-term physical or mental ill health or injury, parental leave relating to fertility, pregnancy, maternity, paternity, adoption, or childcare. Sabbatical leave is not considered in this circumstance.
- › **Significant family or community responsibilities** that have affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This includes responsibility for dependants, including caring for elderly or ill, injured or disabled family group or community members, or responsibilities to specific communities, such as iwi or Pacific communities.
- › **Career breaks or interruptions in employment** that have affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This includes periods where the staff member was not employed in a PBRF-eligible role, or any other role in New Zealand or overseas in New Zealand or overseas, which met the substantiveness test for research, as well as periods of unemployment. Extended personal leave or leave without pay is not included in this circumstance.

- › ***Force majeure:*** *a significant unforeseen natural or human-made event that has affected the quantity of research outputs produced and/or activities undertaken during the assessment period. These may include, but are not limited to, events such as earthquakes, including the ongoing impacts of the Canterbury earthquakes, floods, hurricanes, fire or other severe weather events, volcanic activity, pandemics, armed conflict, or terrorist attacks. The impacts on research must have occurred within the assessment period and meet the six-month summative threshold. The events can have occurred during or prior to the assessment period in New Zealand or anywhere in the world.*

Note that the inclusion of pandemics within the *Force majeure* type is not prejudicial to any decision taken on how COVID-19 impacts will be recognised.

Note that across all eligible types, the circumstance/s must have impacted on the staff member's ability to carry out research activity for a minimum of six months in total during the assessment period (this does not need to be a single period of time). This duration is in line with the New Zealand Disability Strategy.

Researcher Circumstances – declarations process

Based on the recommendations of the SRG the TEC has agreed in principle that the process for inviting and validating Researcher Circumstances declarations will be as follows:

- › TEOs develop a process for inviting voluntary staff declarations of researcher circumstances and for ensuring the total duration of the impacts declared meets the minimum time period of six months total across the assessment period. Declarations will be used by the TEO to determine the submission requirements for the EP, and the type of Researcher Circumstance will be noted in the EP for panellists' information. Information in the declarations is not submitted as part of the EP and panellists will not make any assessment of declared Researcher Circumstances.
- › Staff make voluntary declarations to TEOs. Declarations comprise the category of circumstance (for example: Long-term illness or disability) and the total duration of time the circumstance impacted on their ability to carry out research activity during the assessment period (for example: 2 years' total period of impact). Declarations do not have to include any description of the circumstance/s or impact statements. Declarations do not ordinarily include any personal information or records where the staff member has previously disclosed the circumstance to their employing TEO. Where the staff member has not previously disclosed the circumstance, they will need to provide sufficient information to enable the TEO to validate the category of circumstance and the duration of impact.
- › While declarations must be voluntary, it is the responsibility of TEOs to ensure researcher circumstances declarations are valid and have led to the declared duration of impact. For the avoidance of doubt, where a staff member has not previously provided, and chooses not to provide information sufficient to validate a declaration, the TEO should not validate the declaration.

Note that the processes for inviting and validating declarations established by TEOs are audited during the Process Assurance phase. In developing the audit methodology with the auditors, the TEC will consider how to ensure that TEO processes comply with the PBRF Quality Evaluation 2026 Guidelines and all relevant legislation including the Employment Relations Act 2000, the Privacy Act 2020, and the Human Rights Act 1993.

The TEC will also consider whether any sample-based auditing of TEOs' calculations to determine EP submission requirements based on Achievement Relative to Opportunity is necessary. Any proposed changes to the audit methodology will be consulted on to ensure they will provide robust assurance in the process.

Researcher circumstances – Canterbury Earthquakes

Based on the recommendations of the SRG the TEC has agreed in principle that, for Quality Evaluation 2026, the five Canterbury Earthquakes impact types recognised in the Quality Evaluation 2018 Guidelines will be combined into a single Researcher Circumstances type recognising the ongoing impacts of the Canterbury Earthquakes, and included within the new *Force majeure* extraordinary circumstance type (see recommended wording of *Force majeure*).

Part-time employment definition

Based on the recommendations of the SRG the TEC has agreed in principle that the following definition and guidance will be used by TEOs to determine which of their PBRF-eligible staff qualify as part-time for the purposes of determining EP submission requirements:

› Part-time researcher definition

For the purposes of determining EP submission requirements a PBRF-eligible staff member is considered to be employed part-time if they:

Held a relevant contract or contracts for employment during the assessment period that:

- At any one time totalled less than 1.0 FTE; and
- in total comprised a maximum of 0.8 FTE across the duration of the staff member's employment during the assessment period.

› Note that:

- Only contracts for roles that qualify the staff member for PBRF eligibility or non-TEO roles that meet the substantiveness test for research are relevant in calculating a staff member's FTE for this purpose. As in Quality Evaluation 2018, in order to be considered PBRF eligible, a staff member's role must be a minimum of 0.2 FTE.
- As in Quality Evaluation 2018, 1.0 FTE is defined as 37.5 hours a week. This applies for the purposes of all FTE calculations.
- Applying the definition of 'part time' for the purposes of determining EP submission requirements is separate from the process of calculating FTE for the purposes of determining PBRF staff eligibility and funding allocations.
- All relevant roles must be included in calculating FTE across the assessment period, including where the staff member changed employer.
- In calculating FTE across the assessment period, periods where the staff member was not employed in any PBRF-eligible role, or any other role which met the substantiveness test for research, should be excluded. Such periods can be claimed under the Career breaks Researcher Circumstance type.

The SRG noted the sector's concerns that applying this definition is a new administrative step but noted that alternative approaches either do not fully address the existing equity issues or may create new inequities. TEC officials will continue to engage with TEOs to ensure that there is clear guidance and

consistent understanding of this new definition and process, supported by and reflected in the Guidelines.

EP submission requirements – New and Emerging Researchers

Based on the recommendations of the SRG the TEC has agreed in principle that the following EP submission requirements will apply:

- › A staff member who first became eligible as a New and Emerging Researcher from 1 January 2018 – 31 December 2021 inclusive submits an EP that contains a **minimum of two EREs** (each containing a research output, narrative, and up to three supplementary items), up to eight OEREs, and up to 10 CREs. The staff member may choose to submit **three EREs**.
- › A staff member who first became eligible as a New and Emerging Researcher from 1 January 2022 – 31 December 2025 submits an EP that contains a **minimum of one ERE** (containing a research output, narrative, and up to three supplementary items), up to eight OEREs, and up to 10 CREs. The staff member may choose to submit up to **three EREs**.
- › EPs submitted by New and Emerging Researchers continue to be eligible for the C(NE) and R(NE) Quality Categories as well as A and B Quality Categories.

Note that so long as an EP meets the minimum submission requirements, the number of items in the EP, including EREs, will not be considered in and of itself as part of its assessment and does not affect the Quality Categories that can be awarded. Assessors and panels will assess all EPs that have met the submission requirements according to the same criteria, regardless of the number of EREs or the number of supplementary items within each ERE.

EP submission requirements – part-time staff

Based on the recommendations of the SRG the TEC has agreed in principle that the following EP submission requirements will apply:

- › A staff member who is employed 0.5 – 0.8 FTE in total across the duration of their employment during the assessment period submits an EP containing a **minimum of two EREs** (each containing a research output, narrative, and up to three supplementary items), up to eight OEREs, and a minimum of one and up to 10 CREs. The staff member may choose to submit **three EREs**.
- › A staff member who is employed 0.2 – 0.49 FTE in total across the duration of their employment during the assessment period submits an EP containing a **minimum of one ERE** (containing a research output, narrative, and up to three supplementary items), up to eight OEREs, and a minimum of one and up to 10 CREs. The staff member may choose to submit up to **three EREs**.

Note that so long as an EP meets the minimum submission requirements, the number of items in the EP, including EREs, will not be considered in and of itself as part of its assessment and does not affect the Quality Categories that can be awarded. Assessors and panels will assess all EPs that have met the submission requirements according to the same criteria, regardless of the number of EREs or the number of supplementary items within each ERE.

EP submission requirements – Researcher Circumstances

Based on the recommendations of the SRG the TEC has agreed in principle that the following EP submission requirements will apply for PBRF-eligible staff who have declared, and had validated, eligible Researcher Circumstances:

- › Where there has been an impact on the staff member's ability to carry out research activity for between six months and four years in total during the assessment period, a staff member submits an EP containing **two EREs** (each containing a research output, narrative, and up to three supplementary items), up to eight OERs, and a minimum of one and up to 10 CREs.
- › Where there has been an impact on the staff member's ability to carry out research activity for more than four years in total during the assessment period, a staff member submits an EP containing **one ERE** (containing a research output, narrative, and up to three supplementary items), up to eight OERs, and a minimum of one and up to 10 CREs.
- › So long as an EP meets the submission requirements, the number of items in the EP will not be considered as part of its assessment. Assessors and Panels will assess all EPs that have met the agreed submission requirements according to the same criteria, regardless of the number of EREs or the number of supplementary items within each ERE.

Note that declaring Researcher Circumstances is a matter of individual choice for each submitting staff member.

Staff ethnicity data collection and reporting processes

Based on the recommendations of the SRG the TEC has agreed in principle that to ensure staff ethnicity data is collected and reported in a fair and transparent manner, the following will be adopted:

- › A statement in the Guidelines setting out the TEC's expectations that staff ethnicity declarations remain voluntary;
- › The audit process will include scrutiny of TEO staff data collection, recording, and processing processes (note that staff data will not be audited);
- › The chief executive officer of the submitting TEO will be required to sign a declaration that staff data has been collected and reported in line with the Privacy Act 2020; and
- › Statistics New Zealand Level 3 coding will continue to be used for collecting and reporting Pacific ethnicity.

5. Panels Assessment Criteria

Adjustments to the cross-referral process guidance

Based on the recommendations of the SRG, the TEC has agreed in principle that:

Guidance on cross-referral to the Mātauranga Māori and Pacific Research Panels

- › The 'Māori Research elements' and 'Pacific Research elements' sections in the EP template will be renamed the 'Mātauranga Māori Panel cross-referral request' and 'Pacific Research Panel cross-referral request' sections respectively, to clarify that these sections should only be completed if the staff member/TEO wishes to request cross-referral to either/both panels. This guidance will also be reflected in the main Guidelines.
- › The Mātauranga Māori and Pacific Research Panel-Specific Guidelines will each contain a specific cross-referral section, which will set out the circumstances in which each panel will consider a cross-referral request that is initiated by a TEO/submitting staff member.
- › The main Guidelines will refer TEOs and submitting staff to the Panel-Specific Guidelines to determine whether a request for cross-referral should be made to the Mātauranga Māori or Pacific Research Panels. This will ensure there is no risk of non-alignment between the main Guidelines and the Panel-Specific Guidelines, and clarify for TEOs and submitting staff that the Panel-Specific Guidelines are the overriding guidance for determining whether a cross-referral should occur.

Guidance on cross-referral to other panels

- › The main Guidelines will have a standalone 'Cross-referral' section, which for the avoidance of doubt will repeat the conditions under which Panel Co-Chairs may request cross-referral as set out in the Assessment Guidelines.
- › The cross-referral section will clarify that Panel Co-Chairs will draw on information provided in the Field of Research section, as well as the ERE and OERE subjects.
- › The Assessment and main Guidelines will both clarify that Panel Co-Chairs who request cross-referral must specify the parts of the EP that require cross-referral.

The language used to refer to the cross-referral process will be standardised across both Guidelines so that, for example, the use of 'request' versus 'initiate' or 'initiate a request' is rationalised.

Adjustments to the holistic assessment guidance

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › In both the main and Assessment Guidelines, 'detailed holistic assessment' (a process which is carried out only for EPs which meet the criteria below) will be renamed as 'detailed reassessment'. This change will distinguish the process from 'holistic assessment', which describes the routine holistic consideration of all EPs carried out as part of the panel assessment stage.
- › The Assessment Guidelines will clarify the expectation that detailed reassessment is an exceptional process and will not be necessary for the majority of EPs.
- › Only EPs that meet one or more of the following criteria will be referred for detailed reassessment:

- The Panel identifies that the EP has specific quality issues that are uncommon relative to subject-area norms such as unusual research outputs, activities, or the presence or absence of CRE item types.
- In relation to the CRE component only, the Panel identifies that the EP has specific quantity issues that are uncommon relative to subject-area norms such as an unusually low or high number of CRE items or particular types relative to career-stage.
- The Panel identifies specific scoring concerns which may include significant differences in scoring either by the panel-pair or cross-referral assessors, unusual scoring combinations like a low RO score but a high RC score, or where a panellist believes the raw component scores may not accurately represent the overall quality of the EP.
- Additionally, Panel Co-Chairs will have the discretionary ability to refer EPs for detailed reassessment in exceptional circumstances where EPs do not meet any of the criteria but the Panel Co-Chairs consider that there are strong reasons for detailed reassessment.

EP calibration check

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › As part of their oversight of the panel-pair assessment phase, the Moderation Team will receive regularly updated initial scoring data. The Moderation Team will review initial scoring data for any significant variation between scores given to EPs with fewer than three EREs and scores given to EPs with three EREs. Any concerns will be flagged with Panel Co-Chairs.
- › Ahead of the panel meetings, panels will receive average component scores and analysis comparing EPs with three EREs against the different groups of EPs that have fewer than three EREs.
- › During the panel meeting, where meaningful variation is observed (likely to vary across panels) the panel will carry out specific calibration of the various groups against each other, as part of the calibration process, to ensure that ERE quantity has not informed scoring. While Panel Co-Chairs will determine how the EP calibration process occurs within the panel, and what degree of score variation will be considered 'meaningful' in the context of that panel, the TEC will ensure that the EP calibration process does take place across all panels and that the same standard of scrutiny occurs.

EP component weightings

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › the Examples of Research Excellence component will be weighted at 70 percent and the Contributions to the Research Environment component will be weighted at 30 percent.

EP component and tie-point descriptors

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › The component descriptors will be renamed to reflect the new Examples of Research Excellence and Contributions to the Research Environment component names
- › The tie-point descriptors will continue to align to the two, four, and six tie-points
- › TEC officials will make further detailed adjustments, as appropriate, to the component and tie-point descriptor wording to reflect specific sector feedback and the in-principle decisions to date. Revised component and tie-point wording will be reflected in the draft Guidelines published for sector consultation in June 2023.

- › TEC officials will ensure the component and tie-point descriptors are clear that any supplementary items listed in an ERE will be taken into consideration in assessing the EP. However, in line with the principle that the Quality Evaluation assesses research quality, not quantity, the number, presence, or absence of any supplementary items will not in and of itself be a factor in assessment.

6. Technical matters and EP design

Platform of Research – Contextual Summary

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › The proposed approach to the Platform of Research is adopted. This section remains part of the EP but no longer needs to set out information about the staff member's employment or other circumstances during the assessment period. The Platform of Research should focus on introducing staff member's research focus and platform, as well as any relevant aspects of their research environment.
- › The Guidelines for TEOs and for panellists will clarify that this component is not scored but will be used by panellists to inform their assessment of the two scored components, and by panels to inform their holistic consideration of the EP.
- › The character count of the Platform of Research is reduced from 2,500 characters to 1,500 characters, rather than to 1,000 characters as originally proposed.
- › The drafting of the Guidelines will address the more detailed feedback provided by the sector to ensure the purpose of this section is clear and distinct in the EP design.

Request and supply of physical ERE Outputs

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › The proposed approach to ERE Output request and supply processes is adopted and the expected default is that ERE Outputs are submitted as electronic versions, either via direct link or by uploading to the TEC file-store.
- › In circumstances where a submitting staff member believes that a digital version of a born-physical ERE Output will not enable full and fair assessment, or a digital version cannot otherwise be created, the physical output can be supplied.
- › The EP will not include a new field requiring a rationale for physical submission, as had been proposed.
- › The proposed approach to requests is adopted and that Panellists will submit requests for physical ERE Output within 15 working days of EP allocation.
- › The proposed approach to supply is adopted and that TEOs will supply physical ERE Outputs within 15 working days of receipt of a request from a panellist.
- › Discipline-specific advice will be provided in the Panel Specific Guidelines where needed to clarify what sorts of physical submissions a panel expects to consider.

EP structure

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › The EP's narrative field character-length counts will be as follows:
 - as above, the Platform of Research – Contextual Narrative increases from 1,000 to 1,500
 - the ERE contextual narrative remains at 1,500 characters
 - proposed Research Activity narratives of 1,500 characters in the Supplementary Items and OERE sections are removed. Any narrative related to these items should be included in the ERE contextual narrative or OERE contextual narrative

- the Contribution to the Research Environment (CRE) narrative for each item is reduced from 1,500 to 1,000 characters.
- › The order of items in an ERE will place the Contextual Narrative first, rather than the ERE Output
- › Language regarding 'Core Research Output' and 'Main Research Object' has been reviewed as the difference in meaning between these two terms is unclear and both terms shift the focus back to older approach of an NRO. The new term "ERE Output" is adopted.
- › The completion of the Individual Contribution field is compulsory for ERE Outputs that have more than one author. This does not mean that collaborative work cannot be submitted, or that an individual within a group must always be identified as a lead author.
- › A Dataset can be included as an ERE Output if it meets PBRF definition of research.
- › Consideration will be given to ensuring that the main Guidelines and Panel Specific Guidelines have updated definitions of Creative output types and Software output types.

Research outputs and activities, CRE types

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › The proposed new Products and Processes research output type will be added. The Guidelines will clarify that some outputs may be classifiable under more than one of the types and clarify audit expectations regarding these.
- › Detailed sector feedback on a variety of other issues – including for example the definitions of Creative Arts output types and Collaboration – will be clarified in drafting the Panel Specific Guidelines and the main Guidelines, with input where appropriate from Panels.
- › The Panel Specific Guidelines and the main Guidelines allow for some flexibility around potential overlaps between Collaboration and Peer Esteem items. This will be reflected in the EP schema.
- › The proposed 'Other' CRE type is removed.
- › "Research Funding and Support" will remain an eligible type of Research Activity.

7. Recognising the impact of the COVID-19 pandemic

Recognising COVID-19 impacts under Researcher Circumstances – Force Majeure

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › The design of the Quality Evaluation will recognise the impact of the COVID-19 pandemic during the assessment period via the new Force Majeure provision within Researcher Circumstances.
- › The purpose of reduced submission requirements under the Achievement Relative to Opportunity framework will be clarified in the draft Guidelines.
- › The Guidelines will clarify how the optional nature of Supplementary Items will work in the assessment process.

8. Reporting the results of Quality Evaluation 2026

Purpose of reporting

Based on the recommendations of the SRG, the TEC has agreed in principle that the revised purpose of reporting is:

- › to support accurate understanding of the outcomes of the Quality Evaluation
- › to provide meaningful information that is of value to the sector
- › to make the results accessible to a wide general audience.

Continuing to report information previously reported

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › aside from the AQS measures, the TEC will continue to report the information that was provided to the public in the Quality Evaluation 2018.

Areas where reporting will be added to reflect changes

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › generalised/anonymised explanations of any cross-referral declines will not be required from panels or reported on by TEC. General information on cross-referrals will be included in each panel's report at the end of Quality Evaluation 2026
- › proposed new data reporting related to Māori and Pacific researchers will be reported at a TEO and national level, with privacy safeguards in place similar to previous rounds
- › a field will be added to the EP to indicate if it contains material that is not in English. This will assist Panels to assign EPs and help establish a baseline from which to track the growth of research in Te Reo Māori and other languages relevant to the Aotearoa New Zealand research environment, including Pacific languages. As noted, this is a provisional decision subject to further consultation.

Opportunities to add value to previous reporting

Based on the recommendations of the SRG, the TEC has agreed in principle that:

- › PBRF data will not be linked to other datasets held by TEC or externally when reporting the results of Quality Evaluation 2026
- › TEOs will not be required to report new information about the costs of participating in the PBRF
- › new information about sexual identity and neurodiversity information will not be collected from submitting staff members.

Appendix 1: Links to the Sector Reference Group (SRG) consultation papers, stakeholder feedback and decision documents

No.	Consultation paper	Consultation period	Consultation status	Decision status
1	Approach to the design of the 2025 Quality Evaluation (PDF, 1.3 MB)	6 October–5 November 2021	CLOSED	Decisions reached: Summary of consultation feedback and SRG decisions (PDF, 880 KB)
2	Towards a more holistic understanding of research excellence: PBRF research and research excellence definitions (PDF, 1.1 MB)	10 December 2021–14 February 2022	CLOSED	Decisions reached: TEC In Principle decisions and summary of feedback on research definitions (PDF, 475 KB)
3	Redesigning Evidence Portfolios (EPs) (PDF, 1.1 MB)	4 March–18 April 2022	CLOSED	Decisions reached: TEC In Principle decisions and summary of feedback on EP design (PDF, 485 KB)
4	Roles and person specifications for the Moderation Team (PDF, 423 KB)	31 March–27 April 2022	CLOSED	Decisions reached
5	Individual researcher circumstances and Staff Identification (PDF, 1.2 MB)	6 May–2 June 2022	CLOSED	Decision reached – see below
6	Panels: membership criteria and working methods (PDF, 1.2 MB)	1 July–29 July 2022	CLOSED	Decisions reached (PDF, 476 KB)
7	Individual Circumstances 2 (PDF, 2.1 MB) Individual Circumstances Appendix 2 (A3 version) (PDF, 127 KB)	12 August–22 September 2022	CLOSED	Decisions reached: TEC In-Principle decisions and summary of feedback on Individual Circumstances (PDF, 528 KB)
8	Panels: assessment criteria (PDF, 1.2 MB) Proposed component descriptors (DOCX, 197 KB)	30 September–11 November 2022	CLOSED	Decision reached: TEC In-Principle decisions and summary of feedback on panel assessment criteria (PDF, 429 KB)
9	Technical matters/detailed EP structure and submission requirements (PDF, 1.4 MB) Detailed EP structure and submission requirements (DOCX, 491 KB)	19 December 2022–24 February 2023	CLOSED	Decision reached: TEC In-Principle Decisions and Summary of Feedback on Technical Matters, and recognising the impact of the COVID-19 pandemic (PDF 442 KB)

10	<u>Recognising the impact of the COVID-19 pandemic</u> (PDF 463 KB)	24 March–5 May 2023	CLOSED	<u>Decision reached: TEC In-Principle Decisions and Summary of Feedback on Technical Matters, and recognising the impact of the COVID-19 pandemic</u> (PDF 442 KB)
11	<u>Reporting the results of the Quality Evaluation 2026</u> (PDF 493 KB)	5 May 2023–16 June 2023	CLOSED	<u>TEC In-Principle Decisions and Summary of Feedback on Reporting the results of Quality Evaluation 2026</u> (PDF 381 KB)

Overview of changes to the *Guidelines for the Quality Evaluation 2026 assessment process*

This document provides a high-level overview of changes in the consultation draft of *Guidelines for the Quality Evaluation 2026 assessment process* (Assessment Guidelines). Its purpose is to assist stakeholders in reading and providing feedback on the consultation draft. It should be read in conjunction with the Summary of TEC In-Principle decisions.

- › You can access the consultation draft of the Assessment Guidelines on the [TEC website](#).
- › The following table highlights where the Assessment Guidelines have changed compared to the 2018 Assessment Guidelines. Changes are based on the sector feedback process led by the Sector Reference Group.
- › Consultation on the draft Assessment Guidelines is open from 11 August to 22 September. Final Guidelines will be published in November 2023.

Overview of changes to the Assessment Guidelines

Section	Pages	Level of change
How to use these guidelines	5-6	Minor changes only.
An overview	7-11	Minor changes only, such as updates to the timeline.
What is research?	12-14	Updated definitions of research, excellence, and impact and revised Quality Category descriptors.
What is an Evidence portfolio?	15-17	Major changes to the design of EPs.
What is the Quality Evaluation assessment?	18-21	Minor changes only reflecting new EP design, e.g. changes to the Platform of Research – Contextual Summary.

Section	Pages	Level of change
What is the role of peer review panels?	22-26	Minor changes only reflecting introduction of Co-Chairing and changes to the names and configuration of some panels.
How do conflicts of interest and confidentiality work?	27-33	Minor changes only to reflect the introduction of Co-Moderators and Co-Chairs.
How does the scoring system work?	34-39	Minor changes only to reflect new EP design and new Quality Category descriptors.
What are the stages of the assessment process?	40-47	Minor changes only to the Panel meeting assessment and scoring section (pp. 44-47) to reflect the Achievement Relative to Opportunity framework and clarification of language around holistic assessment.
Assessing Examples of Research Excellence	48-57	Updated principles, component descriptors, and tie-point descriptors to reflect new EP design and revised definitions of research, excellence, and impact.
Assessing Contributions to the Research Environment	58-63	Updated principles, component descriptors, and tie-point descriptors to reflect new EP design and revised definitions of research, excellence, and impact.
What is the moderation process?	64-70	Minor changes only reflecting shift to Co-Moderators, EP design changes, and introduction of Achievement Relative to Opportunity framework.
Glossary	71-74	Minor changes only. This has been updated to reflect changes to EP design and other relevant changes.



We ensure New Zealand's future success.

**Tertiary
Education
Commission**
Te Amorangi
Mātauranga Matua



Performance-Based Research Fund

Guidelines for the Quality
Evaluation 2026 assessment
process

Consultation Draft, August 2023

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Providing feedback on this document

This document is a consultation draft of the *Guidelines for the Quality Evaluation 2026 assessment process*. It is one of four guidelines documents that will be produced by the TEC as part of the Performance-Based Research Fund (PBRF) Quality Evaluation 2026 round.

The document updates the equivalent 2018 version of the assessment guidelines. It incorporates the in-principle decisions made by the TEC on the basis of the Sector Reference Group (SRG) consultation process that ran from September 2021 to July 2023.

The TEC established the SRG to provide advice and recommendations to us on operational changes to the design of the Quality Evaluation 2026. An accompanying document provides a full record of the in-principle decisions that TEC has made based on the SRG's recommendations.

The general purpose of consultation on a full draft of these assessment guidelines is to ensure that all changes have been clearly explained, rather than to seek further feedback on the substantive decisions made earlier in the process. However, in the draft *Guidelines for TEOs*, which have been released for consultation at the same time as this document, there are three new proposals for changes.

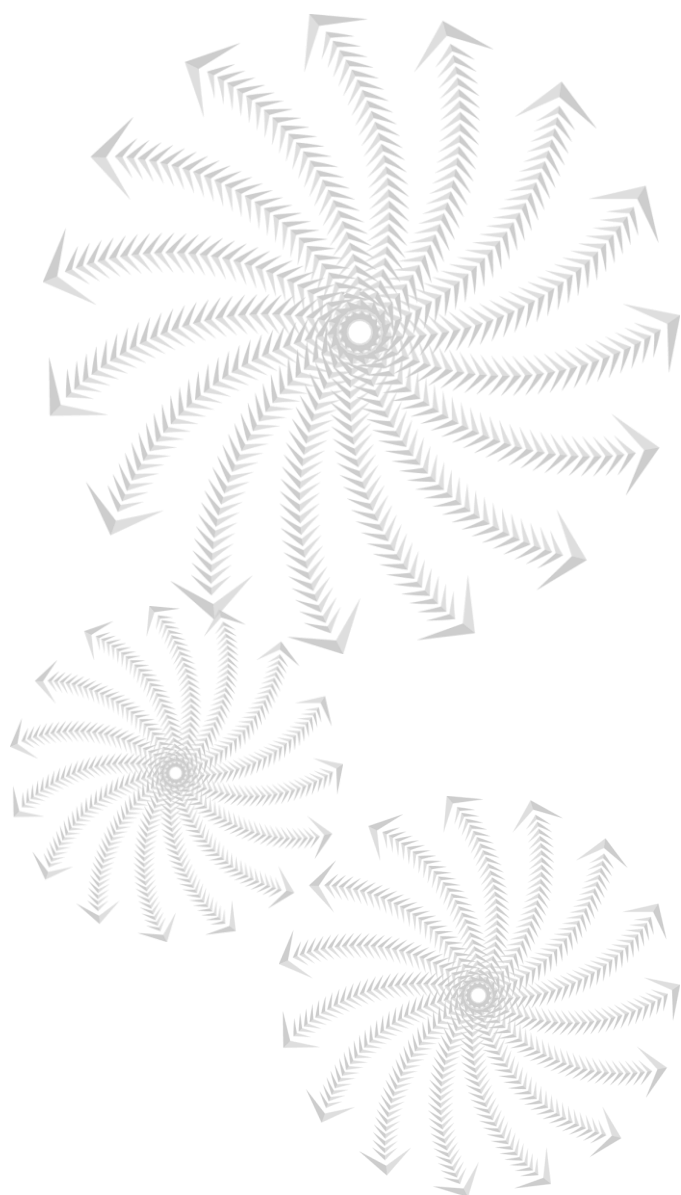
These three new proposed changes have arisen out of SRG recommendations based on sector feedback on the technical matters and reporting papers:

- **Introducing the use of ANZSRC codes** for the Field of Research field in the EP, rather than retaining a free text field. This proposal was made by the University of Otago.
- **Adding an EP Language field**, to allow participating staff members to indicate if any languages other than English are used any of the ERE Outputs included in the EP. This proposal was made by Victoria University of Wellington.
- **Updating the description of 'Software'** as a Research Output type 'to better reflect current practice. This proposal was made by the University of Auckland.

The TEC invites feedback on this draft, including these three new proposals, which can be provided via an online survey: <https://www.surveymonkey.com/r/9HBB32J>

The survey is open from 11 August to 22 September 2023. All feedback received will be carefully considered by the SRG and the TEC and the final guidelines will be published in November 2023.

If you have any questions about this consultation, please contact PBRF.Help@tec.govt.nz.



Guidelines for the Quality Evaluation 2026 assessment process

Consultation Draft, August 2023

How to use these guidelines

Structure of these guidelines

This document provides information about the assessment process undertaken by the peer review panels.

This includes information on the responsibilities of the panels, the scoring system and detailed scoring descriptors for Evidence Portfolios (EPs), the stages in the assessment process, the moderation process, and information about conflicts of interest and confidentiality.

Information on the background and purpose of the PBRF can be found on the PBRF pages of the TEC's website www.tec.govt.nz.

Other available guidelines

For Quality Evaluation 2026, we have provided guidelines for three specific audiences:

- › tertiary education organisations (TEOs)
- › panels carrying out the assessment process (this document)
- › participating TEO staff members (not yet available).

The *Guidelines for tertiary education organisations* provide information that TEOs need to determine staff eligibility, complete EPs, understand and participate in the TEC audit process, and understand the reporting of results. It also provides information about other related processes, such as submitting conflict of interest notices and complaints to the TEC.

The *Guidelines for participating staff TEO members* provide staff members with an overview of the process, their responsibilities, and the responsibilities of their employing TEO and the TEC. It also identifies the key areas of the Quality Evaluation process that relate to them and who can provide support. The guide is designed to be an overview of the process and it directs staff members to the relevant areas of the other guidelines.

The peer review panels also develop *Panel-Specific Guidelines* to provide subject and discipline-specific information to help staff develop their EPs. These are designed to be read in conjunction with the TEO guidelines.

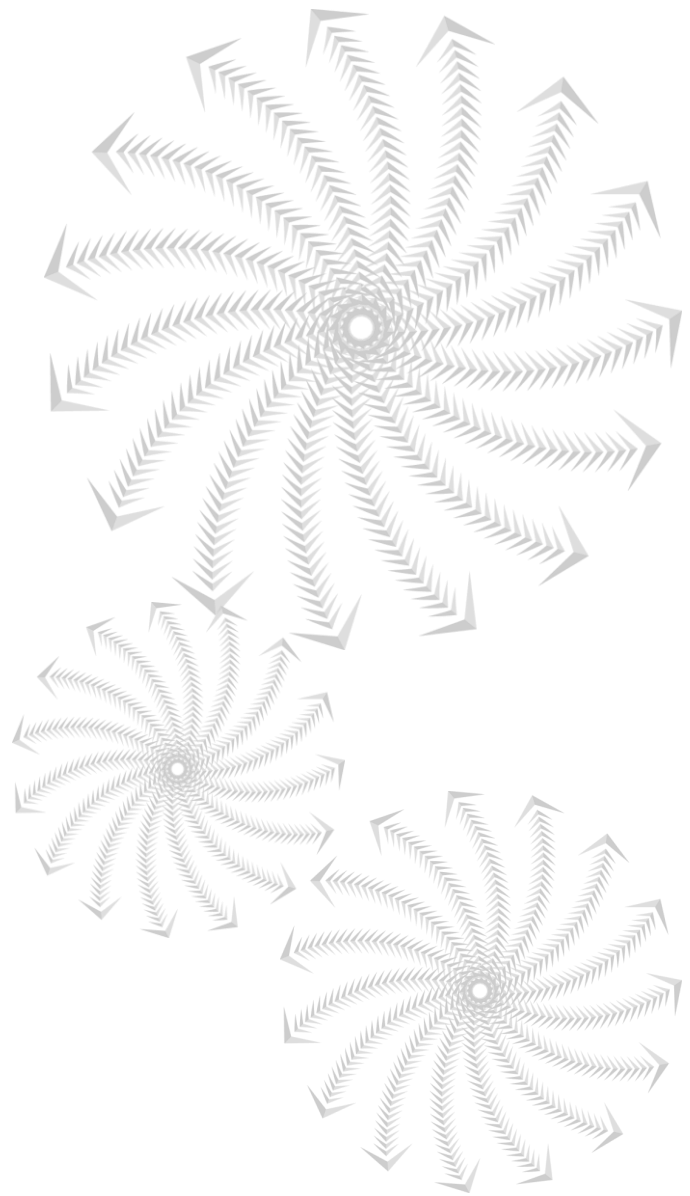
The table below shows the main audience for each document. A tick (✓) indicates that the document also contains information relevant for that particular audience.

Audience	Guide for staff	Guidelines for TEOs	Guidelines for the assessment process	Panel-specific guidelines
Peer review panels			Main audience	✓
TEOs	✓	Main audience	✓	✓
Staff members	Main audience	✓	✓	✓

Changes to the guidelines

In previous Quality Evaluations, sector queries and other decisions affecting the Quality Evaluation process have led to minor clarifications to the Guidelines following publication. Any future changes made to these guidelines will be set out in the table below.

Change	Page reference	Date of update
Brief description of the change	p. xx	Month, Year



Quality Evaluation 2026

An overview

What happens in the Quality Evaluation?

The primary purpose of the Performance-Based Research Fund (PBRF) is to ensure that excellent research in the tertiary education sector is encouraged and rewarded. The Fund allocates \$315 million a year in total across three components: the Quality Evaluation, Research Degree Completions, and External Research Income.

Quality Evaluation 2026 is an assessment of the research performance of staff at eligible tertiary education organisations (TEOs) for the period 1 January 2018 to 31 December 2025. The results of Quality Evaluation 2026 will determine the allocation of 55 percent of the Fund for a seven-year period (2026 to 2032).

TEOs determine which of their staff members are eligible to participate if their research is likely to meet the standard for a funded Quality Category. They compile Evidence Portfolios (EPs) for these staff based on the relevant submission options for them under the Achievement Relative to Opportunity framework. EPs that TEOs decide are not likely to meet the requirements for achieving a funded Quality Category are not submitted for panel assessment.

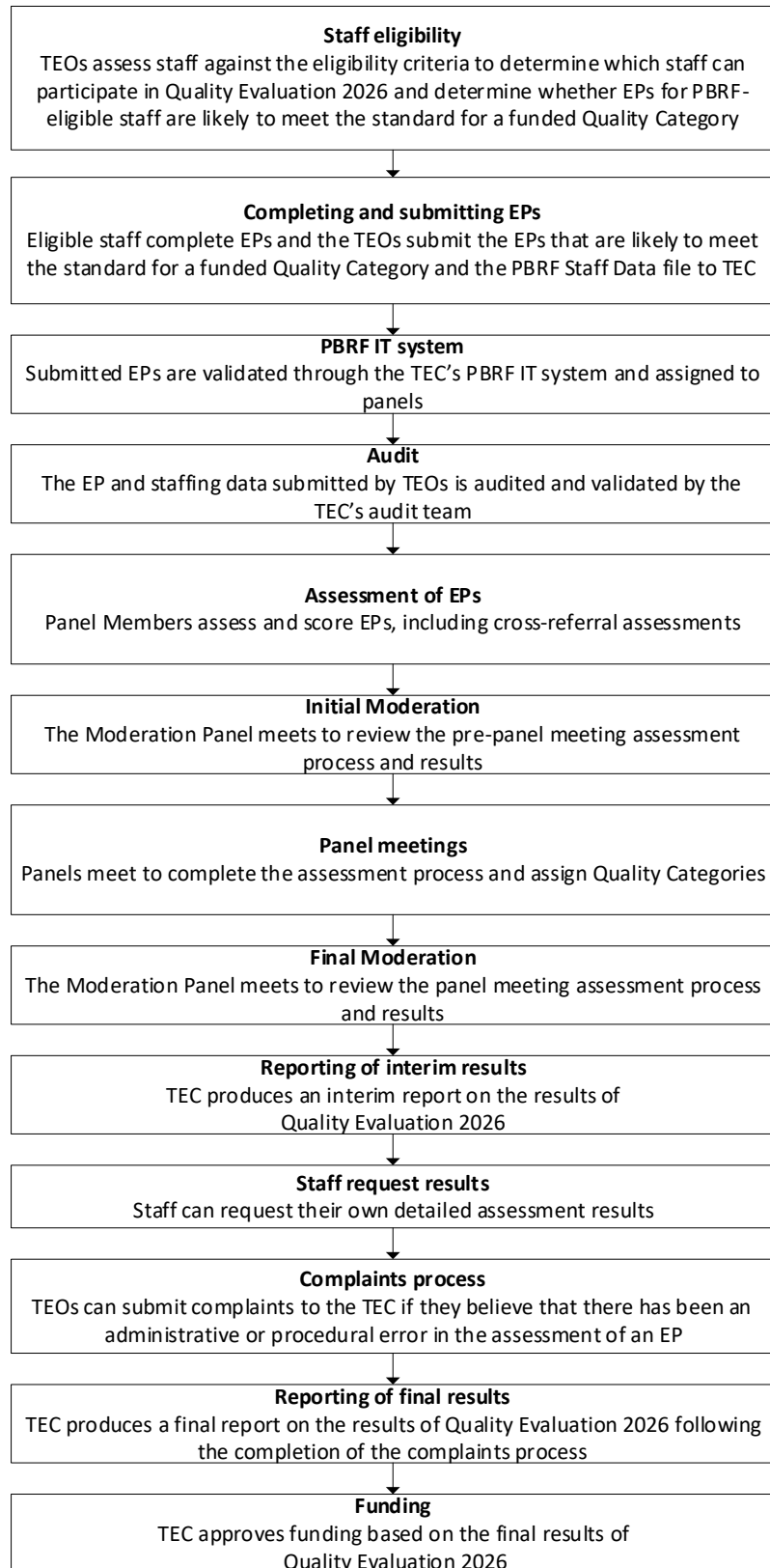
TEOs submit a Staff Data File, which provides information to confirm the identity, eligibility status, and submission details of staff who are submitting EPs to the TEC. Following this, TEOs submit EPs to be considered by one of the 14 peer review panels. This information is submitted through the PBRF IT System and audited by the TEC to ensure that staff meet the eligibility criteria and that the information provided in EPs is accurate. This information is used in the reporting of results and form the basis of the funding calculation.

The peer review panels complete their assessment and assign one of six Quality Categories to each EP. Where needed, elements of an EP can be cross-referred to other panels. The overall process is overseen by a Moderation Panel, which ensures PBRF standards and processes are applied consistently across all panels.

The TEC administers the submission and assessment process through the PBRF IT System, provides support for panels and TEOs, and considers and approves the findings of the Quality Evaluation for funding and reporting of results.

At the conclusion of the Quality Evaluation, the TEC reports the results and calculates updated TEO funding allocations for the Quality Evaluation component.

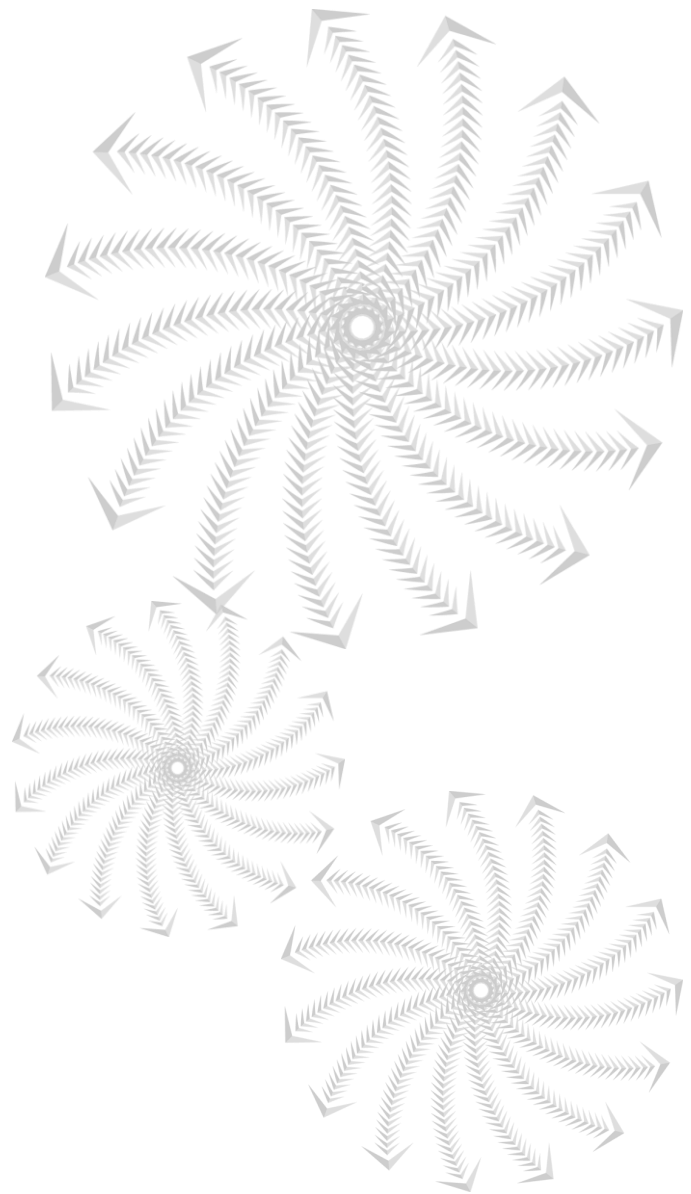
Figure 1: The stages of the Quality Evaluation 2026 process



Key dates for Quality Evaluation 2026

Phase	Deadline/activity	Dates
The assessment period	Eligibility period for Evidence Portfolio items	1 January 2018 – 31 December 2025
Audit – process	TEO process assurance audit	February 2025 – September 2025
Staff-eligibility period⁹	Staff must be employed or contracted by the submitting TEO within this period and on 11 June 2026 to be considered PBRF-eligible	12 June 2025 – 11 June 2026
TEOs submit of EPs and Staff Data	Preliminary submission date for EP data and PBRF Staff Data files	3 July 2026
	Period for final review and correction of EP data and PBRF Staff Data files	3 July 2026 - 4.00pm 9 July 2026
	Close-off date for resubmission of EP data and PBRF Staff Data files	4.00pm 9 July 2026
	Deadline for Vice-Chancellor's/Chief Executive Officer's declaration	4.00pm 13 July 2026
Audit – data	Data evaluation audit	July 2026 – December 2026
Panel assessment and moderation	Assignment of EPs for assessment	11 July 2026 – 23 August 2026
	Requesting physical ERE Outputs	15 days to request, 15 days to supply
	Pre-meeting panellist assessment of EPs	24 August 2026 – 30 October 2026
	Panel meetings	16 November 2026 – 4 December 2026
	Moderation Panel meeting	December 2026
Reporting and complaints process	Interim report on Quality Evaluation 2026 results released Final Quality Categories reported to TEOs Staff requests for Quality Evaluation 2026 results start	April 2027
	35-day period for TEOs to lodge complaints	April 2027 – May 2027

Phase	Deadline/activity	Dates
	60-day period for the TEC to investigate complaints	May – July 2027
	Final report on 2026 Quality Evaluation results released	September 2027
Funding allocations	Indicative funding allocations for 2026 and 2027 updated with new results Indictive allocations for 2028 calculated	October 2027



Quality Evaluation 2026

What is research?

What counts as research in Quality Evaluation 2026?

The PBRF Definition of Research is intended to be a broad and inclusive characterisation that includes original investigation in all domains, including Mātauranga Māori, Pacific research, and creative, professional, and applied research. The PBRF Quality Evaluation explicitly recognises that research excellence occurs across the full spectrum of original investigative activity.



The PBRF Definition of Research has been expanded to ensure that it better reflects the diversity of ontologies and epistemologies in the Aotearoa New Zealand and reflects the importance of Mātauranga Māori as a taonga under Te Tiriti o Waitangi.

PBRF Definition of Research

For the purposes of the PBRF, research is defined as a process of investigation or inquiry leading to new, recovered, or reinterpreted knowledge or understanding which is effectively shared and capable of rigorous assessment by the appropriate experts.

In Aotearoa New Zealand our distinctive research cultures and environments draw on diverse ontological, epistemological, and methodological traditions of critical inquiry, experimentation, and knowledge-creation. This definition of research includes Māori ways of knowing, being, and conducting rangahau such as kaupapa Māori and mātauranga Māori; diverse Pacific ways of knowing, being, and conducting research; and work that embodies new insights of direct relevance to the specific needs of iwi, hapū, marae, communities, government, scholarship and teaching, industry, and commerce, which may be developed through collaborative and practice-led processes involving stakeholders from those constituencies.

Research can be an individual or collective process and may be embodied in the form of artistic works, performances, designs, policies, or processes that lead to novel or substantially improved insights.

For further clarification, research includes:

- › Activity that leads to scholarly books, journal articles, and other nationally and internationally published outputs and presentations that offer new, recovered, or reinterpreted knowledge;
- › Activity that leads to contributions to the intellectual underpinning of different ontologies and epistemologies, subjects, and disciplines (for example, dictionaries, scholarly editions, teaching materials that embody original research, or teaching practices or activities that produce original research);
- › Applications of existing knowledge to produce new or substantially improved materials, devices, products, designs, policies, granted patents, or creative outputs;
- › Re-centering and revitalisation of knowledge (for example, the study of raranga, whakapapa narratives, waiata composition, navigational knowledge, translation studies, historical or literary archival studies, or ecological research); and
- › The synthesis and analysis of previous research to the extent that the insights generated are new.

It does not include:

- › routine testing and data collection lacking analysis, interpretation and/or evaluation;
- › preparation for teaching that does not embody original research (for example, collation of existing research and research outputs into handbooks or textbooks where this does not embody new insights); or
- › the legal and administrative aspects of intellectual property protection and commercialisation activities.

Mātauranga Māori

The new definition of research includes explicit reference to Māori ways of knowing, being, and conducting rangahau. Rangahau and knowledge of relevance to Māori communities, such as kaupapa Māori and mātauranga Māori, are essential components of Aotearoa New Zealand's distinctive research cultures.

The Mātauranga Māori panel's Panel-Specific Guidance has elaborated the ontologies, epistemologies, methodologies, knowledges and understandings which comprise Te Āo Māori. This elaboration applies across all panels and will be used to determine whether EPs should be cross-referred.

Pacific Research

The new definition of research includes explicit reference to diverse Pacific ways of knowing, being, and conducting research. Research and knowledge of relevance to Pacific communities are essential components of Aotearoa New Zealand's distinctive research cultures.

The Pacific Research panel's Panel-Specific Guidance has elaborated the topics, ontologies, epistemologies, methodologies, knowledges and understandings which make up Pacific research cultures. This elaboration applies across all panels and will be used to determine whether EPs should be cross-referred.

Research excellence and impact

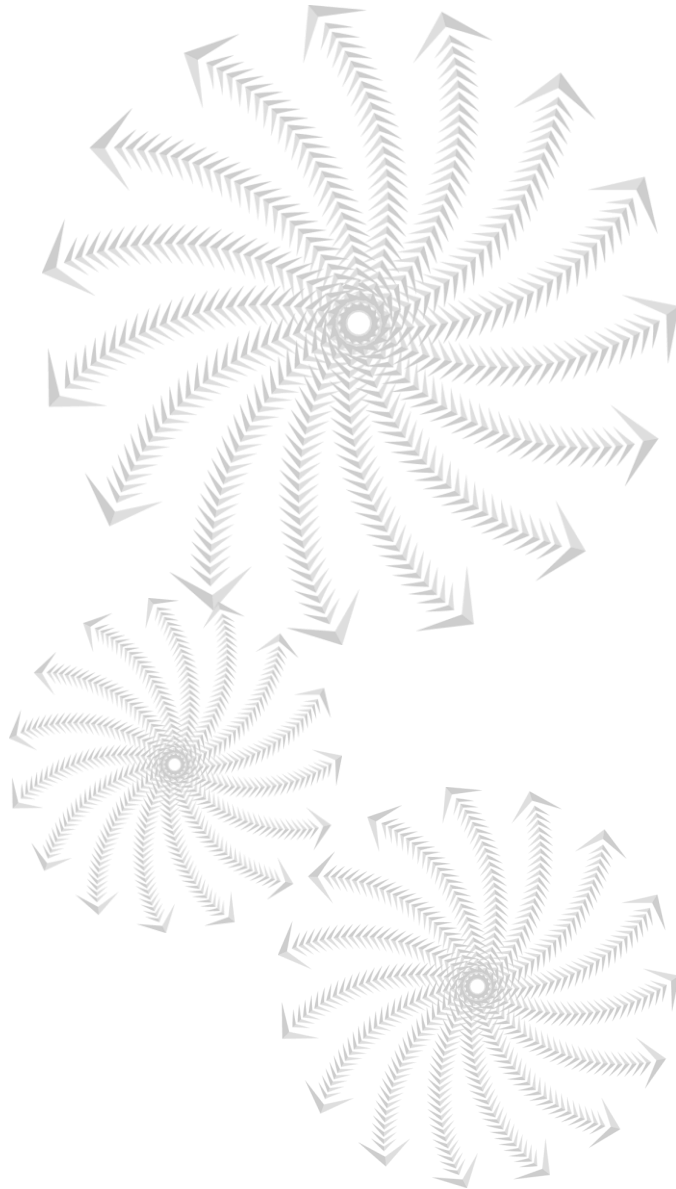
For the purposes of the Quality Evaluation, research excellence will be assessed in terms of originality, rigour, reach, and significance, with reference to the quality standards appropriate to the subject area and to the unique nature of Aotearoa New Zealand's research cultures and needs.

Excellence will be assessed across the following areas of activity:

- › The production and creation of knowledge, including ontologies, epistemologies, and methodologies unique to Māori and to Pacific communities;
- › The dissemination and application of that knowledge within academic and/or other communities and its impact outside the research environment; and
- › Activity which sustains and develops the research environment, within and across both academic and non-academic domains.

For the purposes of the Quality Evaluation, the impact of research is defined as a positive effect on, change, or benefit to society, culture, the environment, or the economy at any level, outside the research environment.

Impacts on scholarship, research, or the advancement of knowledge within the research environment are not included under impact as they already fall within the broader definition of research excellence.



Quality Evaluation 2026

What is an Evidence Portfolio?

What is an Evidence Portfolio?

An Evidence Portfolio (EP) is the key element of the Quality Evaluation. It represents an eligible staff member's best examples of research and research-related activity carried out during the assessment period.

EPs are submitted on behalf of staff members by participating TEOs where they have determined that a staff member is eligible and likely to achieve a funded Quality Category. An EP contains all the information that will be assessed by peer review panels.

- › An EP has two assessed components:
 - the Examples of Research Excellence component (ERE component)
 - the Contributions to the Research Environment component (CRE component).
- › The assessment is based on the quality of the research outputs and activities submitted in the EP.
- › EPs have a mixture of optional and non-optional items. All items submitted in the EP will be considered as part of the assessment of quality; however, the number of optional items included in the EP will have no bearing on the outcome of the assessment. This is in line with the principle that the PBRF Quality Evaluation assesses research quality, not quantity.
- › Staff members should select their best research outputs and research-related activities completed in the assessment period.
- › TEOs submit EPs following their internal processes. The TEC does not require staff members to sign off or approve the content of EPs submitted. Only one EP can be submitted for each PBRF-eligible staff member.
- › Te Reo Māori can be used to complete any or all of the information in the staff member's EP.

What information is in an Evidence Portfolio?

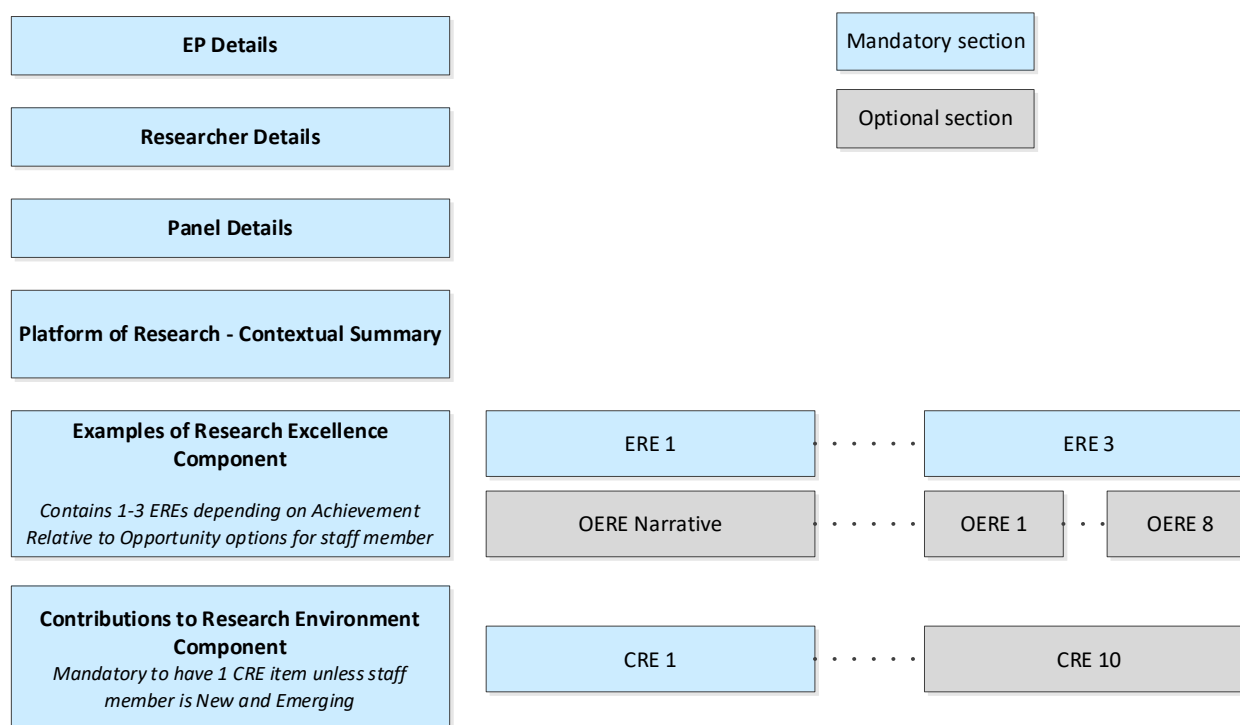
EPs submitted to Quality Evaluation 2026 are made up of the following sections:

- › EP Details
- › Researcher Details
- › Panel Details
- › Platform of Research – Contextual Summary
- › Examples of Research Excellence (ERE) Component:
 - Examples of Research Excellence (ERE) section
 - Up to three EREs, each containing:
 - ERE narrative
 - ERE Output
 - Up to three Supplementary Items
 - Other Examples of Research Excellence (OERs) section
 - Single contextual narrative
 - Up to eight OERs

- › Contributions to the Research Environment (CRE) Component
 - Up to ten CRE items

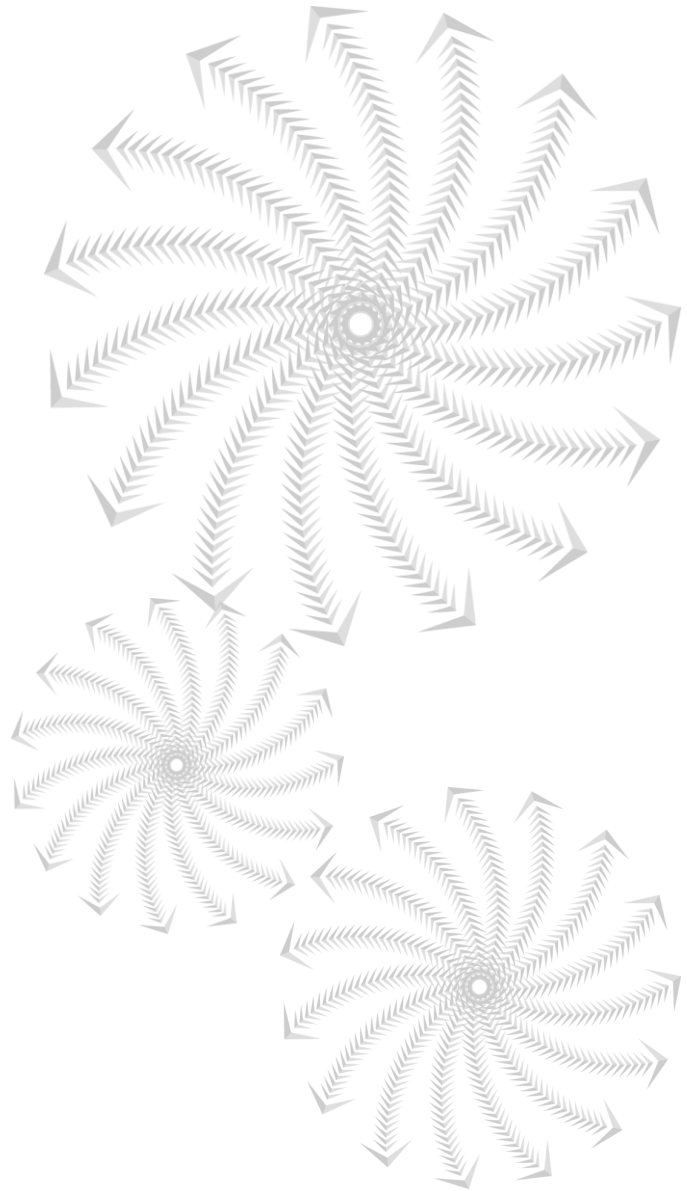
Some sections are optional, and some have a minimum and maximum number of items, while other parts are mandatory. The diagram below provides an overview to the EP structure and should be consulted in conjunction with the illustrative EP template.

Structure of Evidence Portfolios for Quality Evaluation 2026



EP = Evidence Portfolio. ERE = Example of Research Excellence. OERE = Other Example of Research Excellence. CRE = Contributions to the Research Environment.

An important feature of the new EP design is that the number of EREs included can vary based on decisions individual researcher make under the Achievement Relative to Opportunity framework. For more information about this framework, see the TEO Guidelines on the TEC's website.



Quality Evaluation 2026

What is the Quality Evaluation assessment?

The Quality Evaluation 2026 assessment

The Quality Evaluation is the assessment of the research quality of tertiary education organisation (TEO) staff. This quality is assessed by expert peer review panels through the research activity presented in an Evidence Portfolio (EP) for each eligible staff member.

- › An EP is assessed on its two components:
 - Examples of Research Excellence (ERE)
 - Contributions to the Research Environment (CRE).
- › The Quality Evaluation assessment is concerned with the quality of the research rather than the quantity of research submitted in the EP.

The general principles of the Quality Evaluation assessment

The following principles should be used in assessing EPs:

- › The Quality Evaluation is a standards-referenced rather than a norm-referenced assessment process. There are no predetermined limits on the proportion of PBRF-eligible staff members' EPs that can be awarded particular Quality Categories.
- › The assessment is a holistic, judgement-based process that incorporates **all** the information provided in the full EP including the Platform of Research – Contextual Summary. This information is judged against the component and tie-point descriptors for each of the two components of the EP and also the descriptors for each Quality Category.
- › Only the information contained in the EP, along with any ERE Outputs examined by the relevant peer review panel, will be used for assessment purposes. No external information will be taken into account; for example, what a panellist may know as part of their professional role. Panels cannot seek out any additional information to inform their judgements.
- › There are specific considerations for new and emerging researchers that relate to assigning the C(NE) Quality Category.
- › The Achievement Relative to Opportunity framework recognises that being a new and emerging researcher, part-time researcher, and/or having experienced eligible Researcher Circumstances affect the quantity of research and/or research-related activity carried out during the assessment period and allow for staff members in these groups to submit reduced numbers of EREs in an EP.
- › In the ERE component, each output must meet the PBRF Definition of Research and the output(s) collectively would normally be of sufficient quality to meet the standard for an RO score of two (as a minimum) to be considered for a funded Quality Category.
- › At the detailed reassessment stage, particular attention will be given to EPs that:
 - are on, or close to, the boundaries between Quality Categories
 - have unusual combinations of scores between the components (for example, seven for ERE but two for CRE).

What is the platform of research?

The research platform is the body of research that primarily includes the outputs as described in the ERE and the OERs.

ERE component scores are likely to be higher where the overall platform of research in an EP shows evidence of a greater breadth or depth of research activity. However, this does not mean that having more items means a higher score will be awarded – the quality of the items, not the quantity, is the focus of the assessment.

The Platform of Research – Contextual Summary is a narrative component which provides staff members with the opportunity to present panellists with information that will allow them to contextualise the items submitted in the ERE and CRE components.

It should provide a clear introduction to the research outputs, activities and research-related activity presented within the EP and reflect the staff member's overall platform of research. The focus is on how the staff member's overall platform of research and research activity has contributed to their field, discipline, or area, rather than on indicators of esteem or standing.

Staff members can also use this component to provide relevant information on their research context, which may include, for example:

- › the specific research environment they are working in, such as applied research or professional practice, relevant norms associated with that environment, and how this informs the type of research outputs and activities they produce
- › any changes in the focus of their research within the assessment period
- › any information about relevant activity carried out during the assessment period that is not submitted as an item within the EP but that provides important contextual information
- › an inter- and trans-disciplinary approach bridging multiple fields or multiple subcategories in a panel or across panels; for example, research that combines Mātauranga Māori and Western approaches.

Each panel has developed panel-specific guidelines that may provide specific advice on what information should be included in the Platform of Research – Contextual Summary.

For Quality Evaluation 2026 the Contextual Summary – Platform of Research narrative has a reduced character count relative to Quality Evaluation 2018 (1,500 as opposed to 2,500). This reflects the new EP design, which provides other opportunities to give narrative detail and context through the contextual narrative required for each ERE, as well as through the optional OERE summary narrative.

It also reflects that the Achievement Relative to Opportunity framework means that narrative about being new and emerging, or part-time, is no longer required in this field. Instead, these factors are taken into account via submission requirements.

Assessing new and emerging researchers

EPs from staff members identified as new and emerging researchers may be assigned the following Quality Categories: A, B, C(NE) and R(NE).

There are special assessment requirements for new and emerging staff to be considered for the C(NE) Quality Category. New and emerging researchers must meet the same standards as all other staff members to be considered for the A and B Quality Categories. The EPs of new and emerging researchers that do not meet the standard for a funded Quality Category will be assigned an R(NE) Quality Category.

ERE component

New and emerging researchers can be considered for the C(NE) Quality Category with a less well-established platform of research than would normally be considered for a C Quality Category.

The submission of a thesis is **not** a requirement for new and emerging researchers, but theses can be included as an eligible type of ERE Output, Supplementary Item, or OERE. If a new and emerging researcher is submitting more than one ERE, it is expected that at least one other quality-assured ERE Output is also submitted as well as a thesis. If only submitting one ERE, it is usually preferable to choose a quality-assured output.

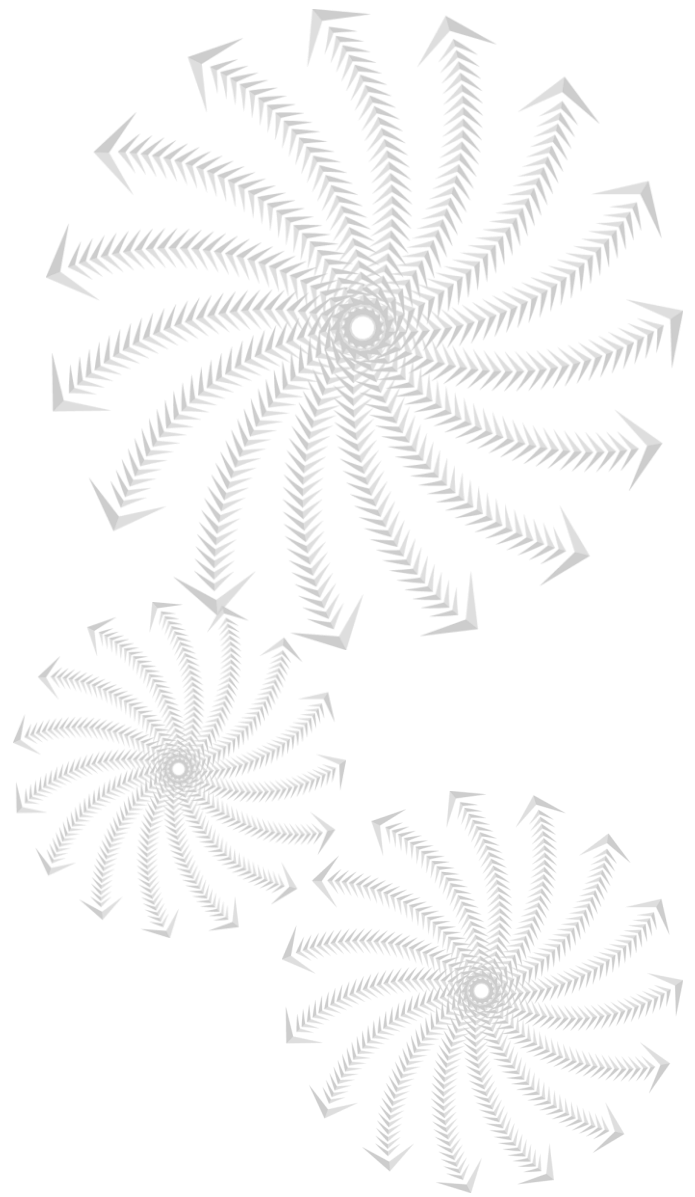
Collectively, the EREs need to be of sufficient quality to meet the standard for an ERE component score of two (as a minimum). This allows for a new and emerging researcher to be considered for the C(NE) Quality Category.

CRE component

Evidence in the CRE component is not required for a new and emerging researcher's EP to be assigned a C(NE) Quality Category. New and emerging researchers are encouraged, however, to complete this component of their EP, as this may allow the EP to be considered for a higher Quality Category.

Scoring of new and emerging researchers

A new and emerging researcher awarded a score of two for their ERE component and a one or zero in their CRE component will have their weighted score automatically rounded up from 140 or 170 to 200. This is the only unique scoring consideration for new and emerging researchers. New and emerging researchers are required to meet the same standards as established researchers to obtain an A or B Quality Category.



Quality Evaluation 2026

What is the role of peer review panels?

Responsibilities of panel Co-Chairs and members

The role of a peer review panel is to assign a Quality Category to each Evidence Portfolio (EP) that has been allocated to it. The responsibilities of panel Co-Chairs and members are outlined below.

What are Peer Review panels?

As part of running the PBRF, the TEC convenes expert panels to directly assess research quality based on researchers' submitted EPs.

Peer review panels cover defined subject areas, which are drawn from a list of 43 options that have been defined for use in the PBRF.

Panellists are appointed for their specific expertise and knowledge, and expertise in assessing research. They do not act as representatives of their employer or discipline.

Panels are supported by a TEC Panel Advisor who provides technical, process and administrative advice; monitors the assessment process; and supports the Co-Chairs and panellists as required.

For Quality Evaluation 2026, there will be 14 peer review panels, organised as follows:

Panel	Panel Identifier	Subject Area
Biological Sciences	BIOS	Agriculture and other applied biological sciences Ecology, evolution and behaviour Molecular, cellular and whole organism biology
Business and Economics	BEC	Accounting and finance Economics Management, human resources, industrial relations, international business and other business Marketing and tourism
Creative and Performing Arts	CPA	Design Music, literary arts and other arts Theatre and dance, film and television and multimedia Visual arts and crafts
Education	EDU	Education

Panel	Panel Identifier	Subject Area
Engineering, Technology and Architecture	ETA	Architecture, design, planning, surveying Engineering and technology
Health	HEALTH	Dentistry Nursing Other health studies (including rehabilitation therapies) Pharmacy Sport and exercise science Veterinary studies and large animal science
Humanities and Law	HAL	English language and literature Foreign languages and linguistics History, history of art, classics and curatorial studies Law Philosophy Religious studies and theology
Mātauranga Māori	MĀORI	Māori knowledge and development
Mathematical and Information Sciences and Technology	MIST	Computer science, information technology, information sciences Pure and applied mathematics Statistics
Medicine	MED	Biomedical Clinical medicine
Pacific Research	PACIFIC	Pacific research
Physical Sciences	PHYSC	Chemistry Earth sciences Physics
Public Health	PUB	Public Health
Social Sciences and Other Cultural/ Social Studies	SSOCSS	Anthropology and archaeology Communications, journalism and media studies Human geography Political science, international relations and public policy Psychology

Panel	Panel Identifier	Subject Area
		Sociology, social policy, social work, criminology and gender studies

For Quality Evaluation 2026, some important changes have been made to the peer review panels membership criteria, composition expectations, and structure. These changes reflect the new PBRF principles of Partnership, Equity, and Inclusiveness. For Quality Evaluation 2026:

- › peer review panels will be led by Panel Co-Chairs, at least one of whom will have expertise in Māori knowledge
- › all panellists will be expected to demonstrate awareness and understanding of Te Tiriti o Waitangi and the significance of Māori-Crown partnership
- › all panellists will be expected to demonstrate an appreciation of the diverse range of ontologies, epistemologies, knowledges, and research in Aotearoa New Zealand
- › Co-Chairs will convene panels which better reflect the diversity of people and research cultures in Aotearoa New Zealand.

Responsibilities of a panel Co-Chair in the assessment process

Panel Co-Chairs are responsible for ensuring that the panel assessment process is conducted in a fair, transparent, and timely way according to the Guidelines and other policies and processes set out by the TEC. They will do this by:

- › assigning each EP to two panel members for pre-meeting assessment and determining which of these panel members will be the lead for that EP
- › if necessary, deciding whether part of an EP requires cross-referral to another peer review panel, or whether an EP requires transferral to another peer review panel, and liaising with the Co-Chairs of the cross-referred panel to facilitate this process
- › advising and mentoring panel members, as required, on the assessment criteria and processes
- › chairing meetings of the panel to review and calibrate the scores and to assign EPs to Quality Categories
- › ensuring panel decisions are documented and that critical issues necessary for a fair review are appropriately addressed
- › ensuring that the panel completes its preparation and evaluation work to agreed timeframes
- › ensuring that all panel members have an opportunity to contribute to the process and participate fully in the panel's activities
- › taking due regard of the decisions of the Moderation Team and the Moderation Panel
- › maintaining confidentiality of both the deliberations and decisions of the panel
- › exercising due skill and care in the performance of their responsibilities

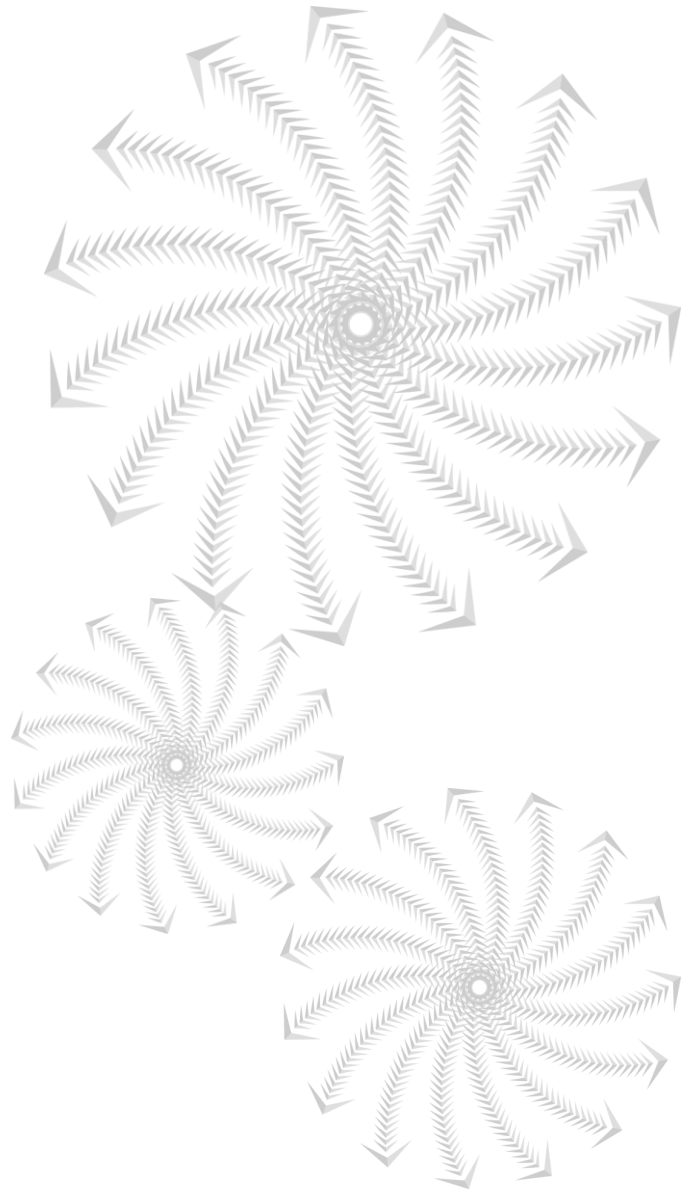
- › managing any conflicts of interest as they relate to panellists
- › identifying instances where they may have a conflict of interest and raising this with the Co-Moderators prior to the conflict affecting the assessment process
- › reporting to the TEC Board at the end of the Quality Evaluation.

Responsibilities of panel members in the assessment process

Panel members are to participate fully in the evaluation process within their panel.

Specifically, their responsibilities are to:

- › understand the principles, guidelines and procedures of the PBRF Quality Evaluation
- › assess EPs assigned to them by the Panel Co-Chairs, primarily by assigning preparatory and preliminary scores as required
- › understand the broad criteria under which the evaluations are to be made, and apply these objectively to the work of the panel
- › be diligent in their preparation for meetings and in completing tasks allocated to them by the Panel Co-Chair (such as undertaking initial assessment of EPs allocated to them in a timely manner)
- › contribute fully, constructively and dispassionately to all panel processes and take collective ownership for the panel decisions
- › maintain confidentiality of both the deliberations and decisions of the panel
- › exercise due skill and care in the performance of their responsibilities
- › identify instances where they may have a conflict of interest and raise this with the Panel Co-Chairs prior to the conflict affecting the assessment process.



Quality Evaluation 2026

How do conflicts of interest and confidentiality work?

Guidelines for conflict of interest

All panellists involved in Quality Evaluation 2026 are required to comply with the TEC's conflict of interest policy.

Conflict of interest policy

Definition

In the PBRF Quality Evaluation process, individuals are appointed as peer review panellists in their own right, for their specific skills and expertise in both research and the assessment of research.

In this context, a conflict of interest is any situation where a panellist has an interest which conflicts, might conflict or might be perceived to conflict with the interests of the TEC in running a fair, impartial and effective peer review process.

While the conflict of interest itself is unlikely to be improper, it could lead to improper conduct or allegations of such conduct if not declared.

Principles

The TEC's policy on conflict of interest for panellists is guided by the following principles:

- › all conflicts of interest must be declared and recorded;
- › a conflict of interest can be declared at any time during the process but must be done as soon as practicable;
- › Panel Co-Chairs have discretion to take decisions on the action required in any situation;
- › the action required depends on the nature of the conflict;
- › all actions on declared conflicts will be recorded; and
- › individual panellists can exclude themselves from panel discussions even if this is not required by the policy.

The policy is also guided by the fact that the Quality Evaluation process, through the use of the Moderation Team, Co-Chairs, panel pairs and wider panel assessment, ensures that no single panellist is responsible for the decision on the final Quality Category given to an EP.

Identifying a conflict of interest

In determining whether a conflict is present or not, there are two questions to ask:

- › Would a fair-minded reasonably informed observer have a reasonable apprehension that the panellist's professional judgement would be compromised in evaluating another researcher's evidence portfolio?
- › Does the interest create an incentive for the panellist to act in a way that would be contrary to the objectives of a fair, impartial and effective peer review process?

If the answer to these questions is 'yes', then a conflict exists.



In this context, the term 'panellists' should be read to include Panel Co-Chairs, Panel Members, Moderators, TEC Panel Advisors, and other TEC staff involved in Quality Evaluation 2026



Professional differences of opinion do not necessarily constitute a conflict of interest.

Examples of possible conflicts of interest

Examples of possible conflicts of interest can include, *but are not limited to*:

- › assessment of one's own EP
- › assessment of the EP of:
 - a family member/partner or close personal friend;
 - a current colleague within the same small academic unit or research team;
 - a close colleague or someone reporting directly to the panellist or to whom the panellist currently reports;
 - a colleague with whom the panellist has, or has had at any time in the assessment period, a research collaboration and/or direct teaching collaboration;
 - an academic who is undertaking doctoral work under the supervision of the panellist;
- › assessment of an EP where the panellist may receive a personal financial benefit from a high Quality Category;
- › any situation where the panellist considers they might not provide an objective review of another researcher's EP because of a direct, indirect, potential or perceived conflict of interest, or where a reasonable observer would consider the panellist to be conflicted.

Conflict at institutional level

The following activities can be perceived as representing a conflict of interest for panellists:

- › involvement in the internal assessment process the TEOs use to determine which EPs to submit to the TEC; and
- › the provision by panellists of either general or specific advice or guidance on the preparation of EPs within their TEO.

The provision by panellists of general information and guidance about the assessment process within or outside their employing TEOs is not considered a conflict of interest by the TEC; however to ensure that the peer review process is perceived as fair, impartial and effective the TEC has determined the following principles generally apply to panellists:

- › If the panellist is involved in the internal assessment of their TEO's EPs, or they have provided specific advice or guidance on individual EPs at their TEO while serving on a panel, they cannot assess EPs from their TEO at the individual assessment stage and can only contribute to panel discussions at the request of the Panel Co-Chairs.
- › If the panellist has no involvement in the internal assessment of their TEO's EPs, they have not provided specific advice or guidance on individual EPs at their TEO while serving on a panel and they have no other conflict of interest, they cannot be a Lead assessor for EPs from their TEO but they may be assigned as a second assessor.



If a panellist has provided specific advice or guidance on the preparation of EPs at a TEO within the assessment period, but is no longer at that TEO, the panellist should identify this as a potential conflict of interest. If the specific advice or guidance on the preparation of EPs has only been at a unit level (for example, a school or department level), then the relevant unit should be identified.

When to declare a conflict of interest

A panellist may declare a conflict of interest at any time during the Quality Evaluation process. Conflicts must be declared as soon as practicable after the person concerned realises that a conflict may exist. However, the TEC would expect any new known or potential conflicts to be declared at the following points in the Quality Evaluation process:

- › when first appointed;
- › on assignment of EPs;
- › at the beginning of peer review panel meetings; and
- › when discussing an individual EP at the panel meeting.

Responsibilities

All interests must be recorded within the PBRF IT system, which will create an Interests Register.

All panellists are responsible for registering interests and undertaking any action required by the Panel Co-Chairs.

The TEC's Secretariat is responsible for registering any interests submitted by TEOs, recording any action(s) that may be required, and monitoring the Interests Register.

The Co-Chairs of each panel, on the advice of the TEC Secretariat, are responsible for deciding whether a conflict of interest exists in any instance.

The Co-Chairs of each panel are also responsible for ensuring that:

- › all conflicts and any action(s) that may be required have been recorded in the Interests Register;
- › appropriate action(s) is taken in respect of the conflict of interest during assignment, assessment and/or panel meetings; and
- › the action(s) taken with respect to declared conflicts as part of the panel meeting process is recorded in the panel meeting minutes.

The Moderation Team is responsible for considering conflicts of interest for Co-Chairs and determining the appropriate action to be taken.

The TEC is responsible for undertaking an independent review of the Interests Register and the actions taken.

Actions to take

The nature of any action(s) to be undertaken by a panellist will depend on the extent of the conflict of interest. Most potential conflicts will be managed at the assignment stage of the assessment process, with conflicted panellists not being assigned individual EPs.

Actions may include, but are not limited to, one or more of the following:

- › not receiving or being able to access an individual or group of EPs.

- › having no involvement in the EP assessment at any stage and leaving the room when the EP is being discussed and decisions made at the panel meeting.
- › having no involvement in the EP assessment at the individual assessment stage but remaining in the room when the EP is being discussed by the panel at the panel meeting, and participating in the discussion and/or decision-making if asked by the panel Co-Chairs.
- › possible involvement in the EP assessment at the individual assessment stage (although not as the lead assessor) and full participation in the discussion and decision-making on the EP.

The TEC may determine that a panellist's conflicts of interest are at a level that they may impact on the operation of a fair, impartial and effective evaluation process. In such a situation, the TEC reserves the right to stand-down a panellist.

Panel Co-Chair conflicts

Where a Panel Co-Chair has a conflict of interest, this must be declared to the Moderation Team and the TEC's Secretariat assigned to that panel. The decision on what action, if any, should be taken will rest with the Moderation Team.

In these circumstances, the Moderation Team may ask another panellist to act as Panel Co-Chair for the period if it is decided that the Co-Chair is unable to participate.

The TEC's Secretariat will be responsible for recording any action(s) undertaken in the panel meeting minutes.

Assessment of panellists' own EPs

A member of the Moderation Panel, the TEC's Moderation Secretariat, or the TEC's internal auditor will be present during panel meetings when the EP of a panellist is being assessed.

When a panellist's own EP is being assessed by the panel, the panellist will leave the room. Other panellists from the same institution may also be required to leave the room. The Panel Co-Chairs will be responsible for determining an appropriate quorum and seek the Moderation Team's approval of this.

Consideration of a TEO conflict of interest notice

The Co-Chairs of the panel will notify the panel member that a notice of conflict of interest has been received, giving the name of the staff member and the nature of the conflict. The panel member will be given an opportunity to discuss this with the Co-Chairs if required.

The Co-Chairs of the panel will then determine what action, if any, is required.

If the notice is in relation to a Co-Chair of the panel, it will be considered by the Co-Moderators. The decision on what action, if any, is required will also be made by the Co-Moderators.

The TEC's process assurance auditor will review the conflicts of interest and any required actions, and ensuring that these actions, if any, are taken. This provides assurance that any conflict of interest notices are appropriately managed.

Confidentiality policy

All panellists involved in Quality Evaluation 2026 are required to comply with the TEC's confidentiality policy.

The TEC requires all panellists in the Quality Evaluation 2026 to sign a confidentiality agreement. This ensures that all information received, and all discussions and decisions made in the process are kept confidential.

The TEC's confidentiality policy, which all contracted panellists agreed to comply with, is set out below.

Confidentiality of Information policy

As a participant in the PBRF Quality Evaluation 2026 assessment process, you will receive information and be a party to discussions and decisions that may be confidential. You are responsible for taking all reasonable steps to maintain the security of the information provided to you and maintaining this confidentiality during your involvement and after it has ended.

Information

Electronic Information

You must retain any electronic information in a secure manner.

You must not treat electronic information in such a way that it could be accessed by others with or without your knowledge.

Storage and destruction of physical information

You are permitted to obtain and retain physical copies of Tertiary Education Commission (TEC) information (or supporting information) provided for meetings. You must keep these papers secure at all times to avoid the accidental disclosure to a third person. You are not permitted to make additional copies of this information unless expressly authorised by the TEC.

You may elect to return any or all physical copies of information you hold to the TEC for disposal at any time during your tenure as a participant in the PBRF Quality Evaluation 2026 assessment process.

At the end of your tenure you must return to the TEC all physical copies of information you hold that have not been publicly released.

No other uses

You are not permitted to use electronic or physical information for any purpose other than that for which it was provided.

Official Information Act 1982 and Privacy Act 2020

Information received by the TEC will be official information in terms of the Official Information Act (OIA) and may be personal information under the Privacy Act 2020, so may be requested by various parties. The TEC will be responsible for dealing with any requests made under the OIA or the Privacy Act.

For the purposes of section 27(1)(c) of the OIA and section 50 of the Privacy Act 2020, this paragraph constitutes a promise that the TEC will keep confidential at all times your notes relating to your assessment of Evidence Portfolios (EPs). However, you acknowledge that if the TEC receives a request for such notes under the OIA or the Privacy Act, the TEC may be under a legal obligation to release such information and such release will not amount to a breach of the terms of this letter by the TEC.

Confidential information

Confidential information includes, but is not limited to, EPs, associated evidence of Examples of Research Excellence, and the assessment information related to EPs.

Treatment of confidential information

You must not circulate or communicate confidential information provided to you by the TEC, whether in hard copy or by electronic means, to another person for any reason.

Physical copies of any electronic confidential information can be made for the purpose of assessment only. You must keep these papers secure at all times to avoid the accidental disclosure to a third person.

You must not treat confidential information in such a way that it could be accessed by others with or without your knowledge.

At the end of your tenure as a participant in the PBRF Quality Evaluation 2026 assessment process you must:

- › return to the TEC for disposal, or securely dispose of, any or all physical copies of confidential information you hold; and
- › delete any or all electronic copies of confidential information you hold.

No other uses

You are not permitted to use confidential information for any purpose other than that for which it was received.

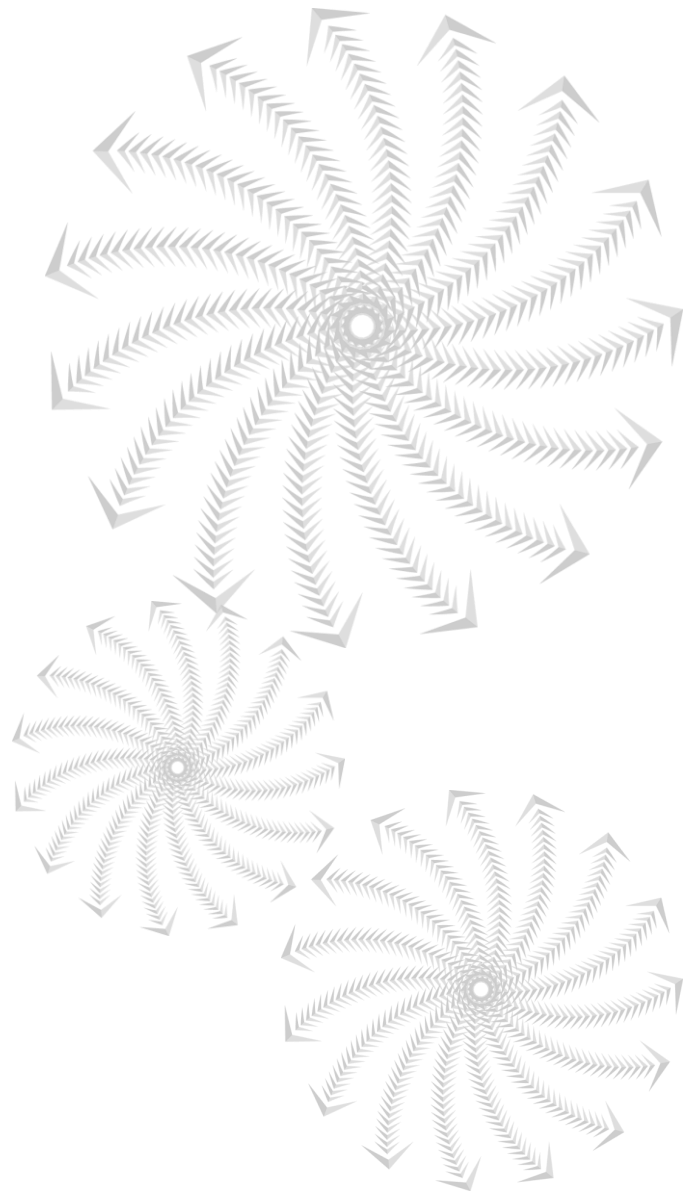
PBRF meeting discussions

Discussions and communications

You must treat as confidential all discussions and communications between fellow participants (Moderators, Panel Co-Chairs, Panel Members), the TEC Secretariat and other TEC employees.

Outcomes

You must treat as confidential any decisions made by PBRF peer review panels into perpetuity.



Quality Evaluation 2026

How does the scoring system work?

The scoring system for Evidence Portfolios

The numerical scoring system

The first stage in the assessment of Evidence Portfolios (EPs) is based on allocating scores for each of the two components of the EP.

The scoring scale used has the following characteristics:

- › the scale has a range from zero to seven
- › seven is the highest score on the scale and zero is the lowest
- › a score of zero would reflect that no evidence has been provided in the EP for that component
- › only whole number scores can be allocated
- › the scores of two, four and six are tie-points – these are used to distinguish between different benchmarks of quality.

Both the ERE and CRE components are scored using the zero to seven-point scale. Each component has a specific descriptor and tie-point descriptors to help the panels with scoring.

The component descriptor introduces the component being assessed. The tie-point descriptors encapsulate the standard expected for that score.

Score	Significance
7	Maximum
6	Tie-point
5	
4	Tie-point
3	
2	Tie-point
1	Minimal evidence
0	No evidence supplied

A score of at least two on the ERE component is required for the award of a C and a C(NE) Quality Category. A detailed reassessment at the panel meeting may however over-ride this.

The weighting system for scores

The ERE component is weighted at 70 percent of the total score and the CRE component is weighted at 30 percent of the total score.

These weightings are used for all EPs, to ensure maximum comparability in judgements across panels.

The weighting scoring system is **not** intended as a mechanical or absolute method for determining Quality Categories. The weighted score may be overridden as part of the detailed assessment of EPs at peer review panel meetings.

A weighted score will be automatically calculated by the PBRF IT System for each component of each EP.

The table below provides an example of how a total weighted score is calculated.

EP component	Raw score (0-7)	Weighting (%)	Weighted score
ERE	4	70	280
CRE	5	30	150
Total weighted score			430

Relationship between the total weighted score and Quality Categories

The table below is used for the scoring of all EPs except those identified as new and emerging researchers.

ERE Component Score									
CRE Component Score		0	1	2	3	4	5	6	7
	0	0	70	140	210	280	350	420	490
	1	30	100	170	240	310	380	450	520
	2	60	130	200	270	340	410	480	550
	3	90	160	230	300	370	440	510	580
	4	120	190	260	330	400	470	540	610
	5	150	220	290	360	430	500	570	640
	6	180	250	320	390	460	530	600	670
	7	210	280	350	420	490	560	630	700
Quality Category		R		C		B		A	

The table below is used for the scoring of all EPs identified as new and emerging researchers. A new and emerging researcher awarded a score of two for their ERE component and a one or zero in their CRE component, will have their total weighted score automatically rounded up from 140 or 170 to 200.

ERE Component Score									
CRE Component Score		0	1	2	3	4	5	6	7
	0	0	70	200	210	280	350	420	490
	1	30	100	200	240	310	380	450	520
	2	60	130	200	270	340	410	480	550
	3	90	160	230	300	370	440	510	580
	4	120	190	260	330	400	470	540	610
	5	150	220	290	360	430	500	570	640
	6	180	250	320	390	460	530	600	670
	7	210	280	350	420	490	560	630	700
Quality Category		R(NE)		C(NE)		B		A	

What are the Quality Categories?

While the following descriptors provide a useful reference point, they are generalised in approach. In determining or assigning Quality Categories, panels will be guided by the overall principle of a holistic assessment and will carry out a detailed reassessment of EPs where they meet the relevant criteria.

The Quality Categories have been revised to reflect changes to the definition of research and clarified understandings of research excellence and impact.

Quality Categories A, B, C, and R can be awarded to the EPs of any PBRF-eligible staff members with 1, 2, or 3 EREs in their Evidence Portfolios.

Quality Categories A, B, C(NE), and R (NE) can be awarded to the EPs of New and Emerging PBRF-eligible staff members with 1, 2, or 3 EREs in their Evidence Portfolios.

Quality Category A

The panel considers that as a whole the EP contains evidence of activity that is recognised by peers as outstanding, representing the leading-edge in its field (including if appropriate through international publication or dissemination), demonstrates very significant contributions to the research environment, and/or has led to very significant impact.

- › Research outputs are recognised by peers as leading-edge for the field in terms of their originality, rigour, and significance and/or in terms of the reach and significance of their impact.
- › Research-related activities demonstrate very significant outcomes from collaboration, dissemination and/or engagement within or outside academic domains; they may have delivered very significant impacts, with considerable reach, and where relevant have gained the highest level of recognition from peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/ or professional practice.

- › Research environment contributions demonstrate very significant contributions to the vitality and sustainability of the research culture and environment, which is likely to occur beyond the field of research.

This Quality Category can be awarded to the EPs of all PBRF-eligible staff members.

Quality Category B

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as high-quality within its field (including if appropriate through international recognition), demonstrates significant contributions to the research environment, and/or has led to significant impact.

- › Research outputs are recognised by peers as high quality for the field in terms of their originality, rigour, and significance and/or in terms of the reach and significance of their impact.
- › Research-related activities demonstrate significant outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered significant impacts with reach, and where relevant have gained recognition from peers which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions demonstrate significant contributions to the vitality and sustainability of the research culture and environment.

This Quality Category can be awarded to the EPs of all PBRF-eligible staff members.

Quality Category C

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as having met quality-assurance standards within its field (including if appropriate through international recognition), demonstrates some contributions to the research environment and/or has led to some impact.

- › Research outputs are recognised by peers as meeting the quality standards of the field in terms of their originality, rigour, and significance, and/or demonstrate impact which is limited in terms of reach or significance.
- › Research-related activities demonstrate some outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered moderate impacts and where relevant may have gained some recognition by peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions demonstrate some contributions to the vitality and sustainability of the research culture and environment.

This Quality Category can be awarded to the EPs of all PBRF-eligible staff members **except** for new and emerging researchers.

Quality Category C(NE)

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as having met quality-assurance standards within its field (including if appropriate through international recognition), and/or has led to some impact. The EP may contain evidence of contributions to the research environment.

- › Research outputs are recognised by peers as meeting the quality standards of the field in terms of their originality, rigour, and significance, and/or demonstrate impact which is limited in terms of reach or significance.
- › Research-related activities demonstrate some outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered moderate impacts and where relevant may have gained some recognition by peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions, if present, demonstrate some contributions to the vitality and sustainability of the research culture and environment.

This Quality Category can only be awarded to the EPs of new and emerging researchers.

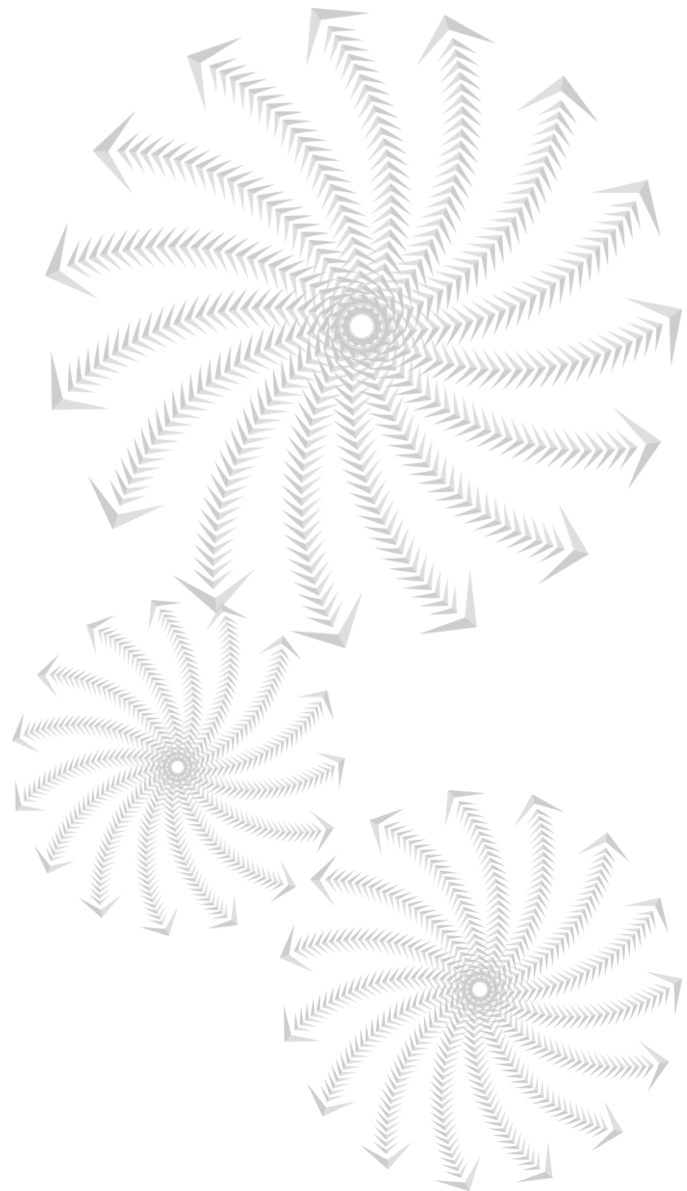
Quality Category R

An EP will be assigned an R when the evidence included does not demonstrate the quality standard required for a Quality Category C or higher.

Quality Category R(NE)

An EP will be assigned an R(NE) when the evidence included does not demonstrate the quality standard required for a Quality Category C(NE) or higher.

This Quality Category can only be awarded to the EPs of new and emerging researchers.



Quality Evaluation 2026

What are the stages of the assessment process?

The panel assessment process

Calibration in the context of the Quality Evaluation assessment is the process where panel members align their judgements (as individuals and as a panel) against the ERE component and the CRE component scoring descriptors.

Calibration occurs in a number of ways:

- as part of the training of panels
- the discussions that occur as part of a panel-pair, and with the cross-referral assessors where needed
- the discussions that occur as part of a whole panel meeting.

Panels can make adjustments to scoring through the different stages of the assessment process as a result of this calibration.

The process of assessing an Evidence Portfolio (EP) starts with the assignment of the EP to panellists and ends with the panel determining a Final Quality Category. A diagram of the assessment process is included at the end of this section.

- › Quality Evaluation 2026 uses a **points-based scoring system** with a range from zero to seven to allocate scores to the two components of an EP. The ERE component is weighted at 70 percent of the total score and the CRE component is weighted at 30 percent of the total score.
- › Six different **Quality Categories** can be assigned by a panel: A, B, C, C(NE), R and R(NE). The first four Quality Categories (A, B, C, C(NE)) attract funding and are reported.
- › The assessment is a six-stage process conducted in two phases:
 - First, the pre-panel-meeting assessment process where:
 - Panel Co-Chairs assign EPs to panel members for assessment and scoring, with a lead and second assessor for each EP. EPs are assigned to ensure that all declared conflicts of interest are managed.
 - **preparatory** scores for the ERE and CRE components are determined individually by each pair of assigned panel members, and possibly also cross-referred panel members
 - **preliminary** scores for the ERE and CRE components are determined collectively by the two primary panel members (panel-pair) after consultation with each other. This consultation may include input from any cross-referred panel members. An Indicative Quality Category will be automatically assigned in the IT system based on the Preliminary component scores.
 - Second, the panel meeting assessment process where:
 - calibrated panel scores are determined for each of the two components based on the calibration of the previous scores. A Calibrated Quality Category will be automatically assigned in the IT system based on these calibrated component scores
 - a Holistic Quality Category may be determined based on a detailed reassessment for some EPs
 - a Final Quality Category is confirmed for each EP submitted to the panel.
- › In deciding on the assignment of a Quality Category to an EP, panels will need to ensure their decisions are defensible.

Assigning Evidence Portfolios to panel members

Panel Co-Chairs will assign EPs to two panel members (panel-pair) for pre-meeting assessment and scoring.

In allocating EPs to panel members, the Co-Chairs will have regard to:

- › the expertise of the panel members in the subject areas in which the staff member is being assessed
- › any declared conflicts of interest
- › achieving a balance of workload across panel members.

Panel Co-Chairs will designate one member of the panel-pair as lead assessor for that EP.

The lead panel member will:

- › coordinate the discussion with the other assigned panel member during the Preliminary scoring stage
- › if cross-referral has taken place
 - consider Preparatory scores and comments provided as a result of cross-referral
 - include the cross-referral assessor in the discussion to determine the Preliminary component scores in all cases where a difference in preparatory scoring could impact on the Quality Category result
- › record any discussion points with other panel members and any cross-referral assessors involved in the assessment
- › lead any discussion on that EP at the panel meeting.

The Co-Chairs will assign themselves a number of EPs to ensure they are able to work with each member of the panel. The Co-Chairs will be the second assessors on these EPs. This will be part of the calibration process.

If an EP has been submitted by a TEO for a Co-Chair, the other Co-Chair will assign this EP to the appropriate panel members.

The panel Co-Chairs will also, if necessary, determine whether any part or parts of the EP will be cross-referred to another peer review panel, or if the whole EP will be transferred to another panel.

Cross-referring an Evidence Portfolio to the Mātauranga Māori panel and the Pacific Research panel

An EP can be cross-referred to the Mātauranga Māori panel and the Pacific Research panel in two ways:

- › by the TEO including a Mātauranga Māori or Pacific Research cross-referral request in the EP, or
- › at the request of the Co-Chairs of the panel to which the EP was submitted.

If the Co-Chairs of a panel request a cross-referral, they will provide specific advice on which part or parts of an EP need to be considered. The decision on whether a cross-referral is accepted is made by the Co-Chairs of the panel(s) receiving the cross-referral.

Cross-referring an Evidence Portfolio to another panel for assessment

A request for an EP to be cross-referred to any panel other than Mātauranga Māori or Pacific Research can **only** be made by the Co-Chairs of the panel the EP is assigned to.

Normally, panel Co-Chairs will seek a cross-referral for an EP to another panel (or other panels) when a significant proportion, but not a majority, of the ERE Outputs, Supplementary Items, or OERES in the ERE component fall within the subject areas covered by the other panel(s).

Cross-referral may also be appropriate when one or more of the ERE Outputs fall within the subject areas covered by another panel.

The Co-Chairs of the assigned panel will provide specific advice on which part or parts of an EP need to be considered in the cross-referral assessment.

The decision on whether the cross-referral is accepted is made by the Co-Chairs of the panel or panels receiving the cross-referral.

Transferring an Evidence Portfolio to another panel

Participating tertiary education organisations (TEOs) will have selected a panel, subject area and provided a primary field of research for each EP submitted to the TEC. The panel Co-Chairs will review this information as part of the assignment process, as well as any conflicts of interest related to the EP. The Co-Chairs may also review the EREs submitted if necessary, to make a decision regarding the assignment or possible transfer of an EP.

Panel Co-Chairs can seek a transfer of the EP to another panel through the TEC for several reasons including, but not limited to, the following:

- › the primary subject area of research falls within the coverage of another panel
- › a conflict of interest exists within the primary panel that cannot be resolved within the primary panel
- › the relevant subject-area expertise resides in a different panel.

The TEC will transfer an EP to another panel based on the recommendation of the panel Co-Chairs and advice may be sought from other panel Co-Chairs or the Co-Moderators, or both. The TEC will make the final decision on the transfer of an EP to another panel, changing the subject area, and recording the reason for the transfer.

The new panel is responsible for assessing and reporting on the EP and the EP may be cross-referred to the original panel for additional input if the panel Co-Chairs agree that this is required.

The submitting TEO will be notified if an EP is transferred to another panel as part of the reporting of results. The notification will include the reason(s) for the transfer.

Pre-meeting assessment and scoring

Panel members are required to work within the established policies, guidelines and procedures for the PBRF and within the specific guidelines for their particular panel.

Panel members are responsible for assessing the EPs assigned to them, and they are required to:

- › follow the assessment process
- › advise the Co-Chairs if they have any conflicts of interest that prevent them from assessing any of the EPs assigned to them
- › review all the material in the EPs assigned to them
- › review or request any of the ERE Outputs, as required
- › if necessary, advise the panel Co-Chairs that a cross-referral assessment may be required
- › determine and record in the PBRF IT System Preparatory ERE and CRE component scores for each assigned EP, using the PBRF assessment policies, the descriptors and tie-points for each component, the panel-specific guidelines, and taking into account any advice from the Moderators

- › maintain confidentiality in relation to all material in, and discussions relating to, the EPs reviewed.

Determining Preparatory scores

Each member of the panel-pair an EP is assigned to is required to determine and record a set of Preparatory scores for both components of an EP.

The Preparatory scores are determined independently of any other member of the panel.

A cross-referral panel member assigned to an EP also determines and records a Preparatory score for one or both of the components of the EP, depending on the request provided by the panel Co-Chairs. The cross-referral panel member must also provide a commentary along with the score(s) for their assessment. This commentary must include confirmation of the part(s) of the EP that were assessed and provide a rationale for the component score(s) provided.

Determining Preliminary scores

The panel-pair assigned to work together on an EP will discuss the Preparatory scores they have each given to the EP, then determine and record one set of component Preliminary scores for that EP.

If the EP has been cross-referred to another panel, the panel-pair will include the cross-referral assessor in the discussion to determine the Preliminary component scores in all cases where a difference in scoring could impact on the Quality Category result.

The Preliminary scores are determined after calibration of their Preparatory scores, including those from the panel-pair and any cross-referral panel members. It is possible for changes (higher or lower) to be made to the Preliminary component scores as a result of the panel members' calibration of the Preparatory scores against the tie-point descriptors.

If agreement cannot be reached on Preliminary scores, the lead panel member will identify the EP as 'decline to score'. This means that the EP will go directly to the Calibrated panel component score stage at the panel meeting. No Preliminary scores will be recorded.

Deriving Indicative Quality Categories

When a set of Preliminary component scores are recorded, the PBRF IT System will derive an Indicative Quality Category for that EP using the total weighted score. This is not the Final Quality Category that an EP will receive, as it is the result of only partially calibrated scoring.

The PBRF IT System will automatically make changes to scoring for the C(NE) Quality Category for new and emerging researchers where appropriate at this stage in the assessment process. This is the only difference in the scoring process for new and emerging researchers.

Panel meeting assessment and scoring

The final stages of the assessment process occur at the panel meeting.

Panel members are required to:

- › prepare for and attend the panel meeting
- › follow the assessment process

- › confirm they have no conflicts of interest that prevent them from participating in the panel discussions
- › maintain confidentiality in relation to all material in, and discussions relating to, the EPs reviewed.

EP calibration check

As part of their oversight of the panel-pair assessment phase, the Moderation Team will receive regularly-updated initial scoring data. The Moderation Team will review initial scoring data for any significant variation between scores given to EPs with fewer than three EREs and scores given to EPs with three EREs. Any concerns will be flagged with Panel Co-Chairs.

Ahead of the panel meetings, panels will receive average component scores and analysis comparing EPs with three EREs against the different groups of EPs that have fewer than three EREs.

During the panel meeting, where meaningful variation is observed (likely to vary across panels) the panel will carry out specific calibration of the various groups against each other, as part of the calibration process, to ensure that ERE quantity has not informed scoring.

While Panel Co-Chairs will determine how the EP calibration process occurs within the panel, and what degree of score variation will be considered ‘meaningful’ in the context of that panel, the TEC will ensure that the EP calibration process does take place across all panels and that the same standard of scrutiny occurs.

Determining Calibrated Panel component scores

At the panel meetings, panel members will discuss and calibrate Preliminary component scores against the tie-point descriptors. This process uses EPs submitted to the panel that are considered exemplars of the standards to ensure that the panel is in agreement on the Calibrated Panel component scores. These scores are recorded in the PBRF IT System.

It is possible for changes (higher or lower) to be made to the Calibrated Panel component scores as a result of the panel’s calibration of the Preliminary component scores against the tie-point descriptors.

The panel will determine the Calibrated Panel component scores for any EPs where the panel-pair declined to score at the Preliminary scoring stage.

Deriving Calibrated Panel Quality Categories

The TEC’s PBRF IT System will derive a Calibrated Panel Quality Category for each EP when a set of Calibrated Panel component scores are recorded.

It is expected that for the majority of EPs the Calibrated Panel Quality Category will become the Final Quality Category as changes at the detailed reassessment stage are primarily for exceptions.

Determining Holistic Quality Categories

Holistic Quality Categories are determined through detailed reassessment at panel meetings. The purpose of the detailed reassessment is to determine which of the available Quality Categories is most appropriate for an EP, by taking all relevant factors into consideration. It is expected that most EPs will not require detailed reassessment.

Criteria for Evidence Portfolios to be considered for detailed reassessment

The panel will be required to undertake a detailed reassessment of the Calibrated Panel Quality Category assigned to their EPs where the panel has determined that those EPs meet either of the criteria below:

- › The panel identifies that the EP has specific quality issues that are uncommon relative to subject-area norms such as unusual research outputs, activities, or the presence or absence of CRE item types
- › In relation to the CRE component only, the panel identifies that the EP has specific quantity issues that are uncommon relative to subject-area norms such as an unusually low or high number of CRE items or particular types relative to career stage.
- › The panel identifies specific scoring concerns which may include significant differences in scoring either by the panel-pair or cross-referral assessors, unusual scoring combinations like a low ERE component score but a high CRE component score, or where a panellist believes the raw component scores may not accurately represent the overall quality of the EP.

Panel Co-Chairs will have the discretionary ability to refer any EP for detailed reassessment in exceptional circumstances where EPs do not meet any of the criteria but the Panel Co-Chairs consider that there are strong reasons for detailed reassessment.

EPs with a total weighted Calibrated Panel score greater than 70 points (one ERE component score) from a boundary that do not meet any of these criteria would not normally be considered for detailed reassessment.

Panel considerations at detailed reassessment stage

Panels are required to determine whether the Calibrated Panel Quality Category awarded to each EP identified for detailed reassessment are consistent with the Quality Category descriptors, and other EPs assigned those categories, when all relevant factors and information from the EP are considered holistically.

The panel will take the following information into account when making a decision to change a Quality Category as part of the detailed reassessment process:

- › the Quality Category descriptors and the Quality Categories arising out of each of the stages of the assessment process are consistent when looking at all information presented in the EP
- › the scoring of the ERE and CRE components at each of the stages of the assessment process
- › the information set out in the Platform of Research – Contextual Summary

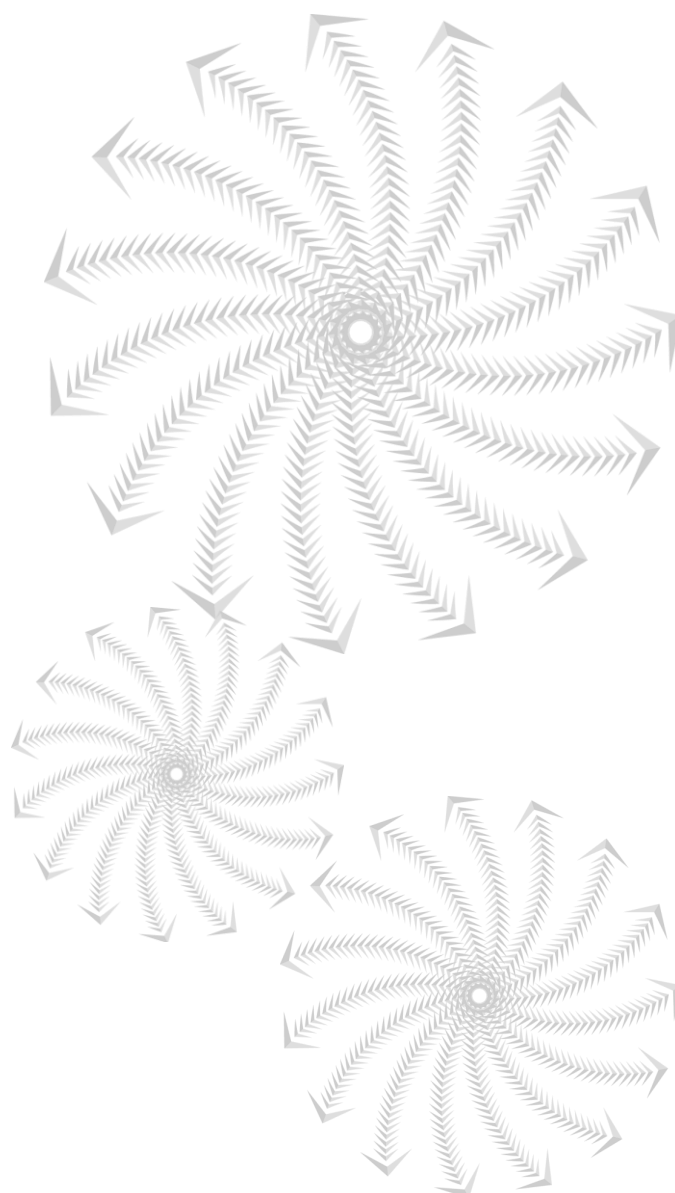
The panel will then determine and confirm a Holistic Quality Category for each EP assessed as part of this process. Holistic Quality Categories are recorded in the PBRF IT System for all EPs.

The Holistic Quality Category may or may not be different from the Calibrated Panel Quality Category. If the Holistic Quality Category is different, it may be higher or lower than the Calibrated Panel Quality Category and panels will record the factors that influenced their decision. This information will be available to staff members who request their detailed results.

There is no requirement for the component scores and Quality Category to be in agreement if the detailed reassessment of an EP produces a different result.

Assigning Final Quality Categories

Following the determination of any Holistic Quality Categories, panels will confirm the Final Quality Category recorded in the PBRF IT System for each EP.



Quality Evaluation 2026

Assessing Examples of Research Excellence

Assessing the Examples of Research Excellence component

The Examples of Research Excellence (ERE) component is the basis for the peer review panel's assessment of the quality of research outcomes and activities presented in an EP. The primary focus of assessment are the individual Examples of Research Excellence (ERE).

- › The ERE component is weighted at 70 percent of the total score given to the staff member's Evidence Portfolio (EP).
- › Each research output included in the ERE component must be eligible for submission which means:
 - it meets the PBRF Definition of Research
 - the final version of any research output included in the EP, including confidential outputs, was first made available in the public domain during the assessment period (**1 January 2018 – 31 December 2025**)
 - it can be provided for assessment by the peer review panel (for ERE Outputs) or audit (ERE Outputs, Supplementary Items and OEREs).

General principles for assessing the ERE component

The following general principles apply to the assessment of research outputs:

- › Excellent research in Aotearoa New Zealand draws on diverse ontological, epistemological, and methodological traditions of critical inquiry, experimentation, and knowledge-creation.
- › This includes Māori ways of knowing, being, and conducting rangahau such as kaupapa Māori and mātauranga Māori; diverse Pacific ways of knowing, being, and conducting research; and work that embodies new insights of direct relevance to the specific needs of iwi, hapū, marae, communities, government, scholarship and teaching, industry, and commerce, which may be developed through collaborative and practice-led processes involving stakeholders from those constituencies.
- › All types of research output will be considered on their merits and one type of research is not considered to be of greater quality than another because of the nature of the output type (for example, a performance is not considered of lesser standing than a publication in a journal or vice versa).
- › The absence of quality assurance for an output will not automatically be taken to imply low quality.

Allocating scores to the ERE component

The following tables provide a detailed description of the ERE component, and the tie-point descriptors for the scores of six, four and two. This information must be used to assign a score to the ERE component of the EP.

A score of at least two for the ERE component is required for the award of a C or C(NE) Quality Category. The panel's detailed reassessment, however, may over-ride this.

ERE component descriptor

Component	Examples of Research Excellence (ERE)
Descriptor	This component is concerned with the quality of research and research-related activity, including research impact. As part of the evidence in this component, EPs will ordinarily include three EREs. EPs submitted by New and Emerging, part-time, and/or staff with Researcher Circumstances may include fewer EREs depending on the circumstance or combination of circumstances. Each ERE will comprise: › a contextual narrative (required) which summarises the key discoveries, innovations, contributions, and/or impacts the ERE demonstrates, and which can link together the ERE output with any Supplementary Items. › an ERE Output (required) which must be submitted for assessment › up to three optional Supplementary Items, which can be related research outputs and/or research activities which are briefly described along with bibliometric or equivalent details sufficient to enable audit. EPs may also include up to eight Other Examples of Research Excellence (OEREs), which may be either research outputs or activities. In scoring the ERE component, the number of total EREs and/or OEREs, and the number, presence or absence of any supplementary items within each ERE, has no bearing on the assessment of quality. Research outputs are any form of assessable output which embody research findings and are generated out of research activity meeting the PBRF Definition of Research, and may include: › published or otherwise disseminated academic work such as scholarly books, journal articles, Master's or doctoral theses, or presentations › published or otherwise disseminated creative work that embodies original research such as works of fiction, artworks, or compositions. › publicly available or confidential work that embodies original research such as reports, policies, legislation, or designs › work published or otherwise disseminated in digital, visual, audio, or other non-print media including computer programs, waiata, carving, buildings › other forms of outputs such as granted patents, materials, products, performances, orations, and exhibitions. Research activities describe activity concerned with the planning, preparation, production, dissemination and sharing of research meeting the PBRF Definition of Research. Research activities also include activity and outcomes associated with the recognition and impact of research, and may include:

- › presentation or sharing of research outputs, outcomes, or work in progress in scholarly, industry or sector-based, iwi, community or public fora. Examples might include academic, industry or professional conference presentations, public lectures or seminars, hui, fono, workshops, presentations or displays
- › external support for research projects and activity, including competitive or other funding, contracts or commissions, public or private sector collaborations or partnerships, and community, iwi, or marae support
- › recognition of research activity and/or outputs in the form of fellowships, prizes, awards, secondments, appointments or elections to relevant roles, honours or other indicators of peer or external esteem
- › outreach and engagement activity concerned with engaging with and contributing to non-academic communities and stakeholder groups. Examples might include evidence of research impact meeting the PBRF definition of research impact through uptake and use of or engagement with, research outputs or activities. Examples of impact might include legislative, regulatory, or policy changes, economic or commercial outcomes or benefits including products, practices and processes, social, health, environmental or cultural benefits or changes, or other changes to services or quality of life, at all levels from the global to the local community.

The EP may include research which is pure, basic, theoretical, applied, creative, community, or practice-based, so long as it meets the PBRF Definition of Research. All types and modes of research will be considered equal and no quality distinctions should be made on that basis.

The absence of quality assurance will not of itself be taken to imply low quality but the onus is on the submitter to provide evidence of quality. Evidence of research outputs having been reviewed through peers is one measure of quality, noting that the appropriate peers and peer review processes may in some contexts or fields be external to the academy. Other quality-assurance processes, including but not limited to referees, commissioning processes, and community, iwi or marae endorsement will also be given regard.

Review processes may cause overlap between the ERE and CRE components. Assessors need to ensure that they adequately differentiate between review outcomes as they relate to evidencing of quality-assurance process for core research outputs submitted in the ERE component (for example evidence of peer review of the output), and review activity or outcomes (for example awards, prizes, funding, invitations to present research) that may be presented either as supplementary or OERE research activities or as part of the CRE component. Most of the assessment time should be spent on the ERE component.

ERE component tie-points

ERE component tie-point descriptors	
Scores	7
6	The EP demonstrates a body of leading-edge research outputs and/or activities that is recognised by peers as ranking with the best of its kind in terms of its originality, rigour, and significance, and/or in terms of the reach and significance of its impact. EREs, including ERE Outputs and any Supplementary Items, likely represent significant intellectual or creative advances, contributions to the formation of new paradigms, novel conceptual or theoretical analysis or theories, the recovery or revitalisation of significant knowledges, highly novel or creative practical applications or syntheses of research, or other important new or creative findings with wider implications. EREs may evidence research that has delivered very significant impact that has either wide-ranging reach across multiple stakeholders, or has achieved profound depth of change or benefit, or both. Outputs could demonstrate research that is exemplary or at the leading edge in its field, highly innovative, has significance beyond its field or across fields, or all of the above. They would be expected to demonstrate the highest levels of intellectual rigour, imaginative insight or methodological skill, and/or to form a primary point of reference to be disseminated widely. A significant proportion of research outputs should be presented through the most appropriate and best channels relative to the field or topics of research. Where relevant, research and research-related activities may have gained the highest level of recognition from peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/ or professional practice. Research-related activities likely demonstrate very significant outcomes from collaboration, dissemination, and/or engagement with the leading or most relevant representative groups and bodies within or outside academic domains. They may have delivered impacts which may be either very significant, have extensive reach potentially across multiple beneficiary groups, or both. Such impacts could include significant changes in professional, policy, organisational, artistic, or research practices, commercial developments, processes, and applications, or other outcomes which have significant benefits for public stakeholder groups, private sector or commercial enterprises, or communities.

5

- 4 The EP demonstrates a body of research outputs and/or activities that is recognised as high-quality in terms of its originality, rigour, and significance, and/or in terms of the reach and significance of its impact.

EREs, including ERE Outputs and any Supplementary Items, likely represent substantial new ideas, interpretations, or critical findings, valuable contributions to existing paradigms, the recovery or revitalisation of knowledge, innovative practical applications or syntheses of research, or other new or creative findings. EREs may evidence research that has delivered significant impact; reach may be significant in terms of breadth or depth or both.

Outputs could demonstrate research that is recognised as high quality and significant within its field. They would be expected to demonstrate a high level of intellectual rigour, insight or methodological skill, and may be a point of reference within the relevant field.

Research outputs will typically be presented through reputable and appropriate channels relative to the field or topic of research.

Where relevant, research and research-related activities may have gained recognition from peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/ or professional practice.

Research-related activities may demonstrate some significant outcomes from collaboration, dissemination, and/or engagement with relevant representative groups and bodies within or outside academic domains. They may have delivered impacts which have achieved either reach or significance for a beneficiary group. Such impacts could include changes or contributions to changes in professional, policy, organisational, artistic, or research practices, commercial developments, processes, and applications, or other outcomes which have realised benefits for public stakeholder groups, private sector or commercial enterprises, or communities.

3

- 2 The EP demonstrates a body of research outputs and/or activities that is recognised as meeting the minimum standards of originality, rigour, and significance relative to the field, and/or as having achieved some limited impact.

EREs, including ERE Outputs and any Supplementary Items, likely represent some contributions to or developments on existing ideas, paradigms or interpretations, practical applications research, or other findings that have some significance within the field. EREs may evidence impact,

likely limited to small stakeholder groups and/or to a more superficial degree of change or benefit.

Outputs could demonstrate research that has a sound and justifiable methodology and is recognised as meeting minimum quality assurance standards within the field. Outputs should typically be presented through reputable channels relative to the field or topic of research.

Where relevant, research and research-related activities may have gained some limited recognition from peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/ or professional practice.

Research-related activities may demonstrate evidence of collaboration, dissemination, and/or engagement with representative groups and bodies within or outside academic domains; outcomes and impacts for specific beneficiary groups may be limited. Such impacts could occur within public, private, third sector or community contexts but are likely to be limited both in terms of significance and reach.

-
- 1** The EP demonstrates minimal evidence of research or research-related activity. The research presented is assessed as having limited or no originality, significance, or rigour, and has achieved little or no impact.

EREs represent little or no additional contributions to or applications of knowledge. Research outputs demonstrate no or very limited contributions to understanding or insight in the discipline or field, or lack the appropriate application of theory or methods, or both. Research-related activities demonstrate very limited collaboration, dissemination, or engagement, with little evidence of outcomes or of peer recognition.

-
- 0** No evidence of research or research-related activity is presented.

Selecting, accessing and examining EREs

The assessment of EREs is the critical aspect of the Quality Evaluation assessment process.

- › Panel members will primarily assess (examine) the ERE contextual narrative, the ERE Output, and any Supplementary Items. They may also consider any evidence submitted as supporting information for the ERE Output.
- › If an EP has one or two EREs, peer review panels will examine all of these. If an EP has three EREs, panels will examine at least two out of three EREs. Where an EP has three EREs, panel members select which particular EREs they want to examine.
- › All the ERE Outputs included in an EP will be available to a panel member either as a link to an electronic document or as a physical copy (provided on request).
- › Panels do not examine Supplementary Items or OERs in the same way as ERE Outputs.

Selecting an ERE for assessment

Panel members will examine EREs to determine the quality of the research. The ERE contextual narrative field of each ERE supports assessment by providing information on the nature and significance of the research, and the quality assurance process where this is necessary. The Individual Contribution field for the ERE Output also provides specific detail on the contribution the staff member has made to the research. This information may help panel members to determine which EREs they choose to examine in further detail.

If an EP has one or two EREs, panel members will examine all the ERE Outputs submitted. If an EP has three EREs, panels will examine at least two out of three ERE outputs. In EPs with three EREs, the number of ERE Outputs examined, and which EREs are selected for examination may vary for a variety of reasons including but not limited to:

- › a cross-referral has been sought on an EP and assessment of a specific ERE has been requested
- › confirming a particular ERE Output meets the PBRF Definition of Research
- › there being serious doubt about the appropriate score for the ERE component of an EP; or there is a significant risk of an error of judgement being made (for example, there is uncertainty as to whether the quality of the ERE component is just above or just below a particular tie-point) if it is not examined
- › when a significant proportion of ERE Outputs listed in the EP are non-quality-assured or are confidential
- › confirming the quality of the ERE component, if there are additional questions after the examination of a particular ERE.

All research output types, including those identified as confidential, can be selected for examination. There is no requirement for the panel members responsible for assessing an EP to select the same EREs for examination. Panel members must ensure that all confidential research outputs are kept confidential.

It is the responsibility of submitting TEOs to ensure that all ERE Outputs submitted are accessible to panels for assessment. We do not require a full translation of ERE Outputs into English. If a TEO chooses to provide full or part translations, there is no requirement for these to be independently validated. The TEC will not organise or fund translation of research outputs for assessment purposes.

While some panels may have the capacity and expertise to deal with research in languages that are not official Aotearoa New Zealand languages, in particular the Pacific panel, this should not be assumed for all panels. Panels are appointed for their expertise in assessment and their subject area knowledge. Panels are not expected or intended to necessarily have expertise in a range of languages.

Accessing copies of selected ERE Outputs

Panel members will be able to access either:

- › an electronic form of the ERE Output through a link in the EP, or
- › a physical form of the ERE Output.

The EP will clearly identify whether the ERE Output is an electronic or physical form.

Issues with electronic links to ERE Outputs

If an electronic link to an ERE Output is not working, the panel member will need to contact the TEC to have it fixed. If it cannot be fixed the TEC will request an updated link or copy from the tertiary education organisation (TEO).

Requesting and accessing physical versions of ERE Outputs

If the TEO has indicated that there is only a physical version of the ERE Output available, the panel member will use the PBRF IT System to request that the ERE Output is provided to the TEC. A copy of the ERE Output will be requested from the relevant TEO through the PBRF IT System. When the ERE Output has been provided to the TEC by the TEO, the TEC will forward it to the panel member.

Requests for physical copies of ERE Outputs must be made within 15 days of the EP being assigned to a panel member. Once a request is made, TEOs have 15 days to provide the physical ERE Output to the TEC. It is therefore important that panel members check which of the EPs assigned to them do not have electronic ERE Outputs and determine as quickly as possible if they wish to request the physical outputs.

Some ERE Outputs (for example, installations) may require the panel member to visit a site to properly assess the ERE Output. The location details will be provided in the ERE Output.

If a physical version of an ERE Output is readily available to the panel member (for example, via their institution's library), the panel member can access a copy of the ERE Output themselves. Panel members must ensure that they are accessing the correct version of the ERE Output.

Examining selected ERE Outputs

Examination allows panel members to check and clarify the nature, integrity and general quality of the ERE outputs.

Examining in this context is defined as applying a level of scrutiny that allows the panel member to make an informed judgement about the overall quality (and score for) the ERE component of the EP. This could be achieved by either reading an ERE Output in full, substantially or sufficiently to make that assessment, or an equivalent level of scrutiny for those ERE Outputs that are not in a written form.

Panel members are not expected to undertake a full, in-depth, rigorous and critical analysis of each ERE Output selected for examination, as they would if they were conducting a formal peer review.

What needs to be considered when examining ERE Outputs?

When examining an ERE Output, the following questions should be considered:

- › Is the research methodology clear, rigorous and appropriate – or, in some cases, innovative and ground-breaking?
- › What kind of original contribution does the ERE Output make to human knowledge, understanding, or creativity (for example, theoretical, conceptual, empirical, practical, or artistic)?
- › What is the impact, reach, or significance of the ERE Output?

In considering these questions, panel member's assessments need to be based upon a clear and consistent understanding and application of the PBRF Definition of Research and the considerations outlined in the Panel-Specific Guidance for their panel.

Recording that a ERE Output has been examined

Each panel member must record in the PBRF IT System which EREs Outputs they have examined.

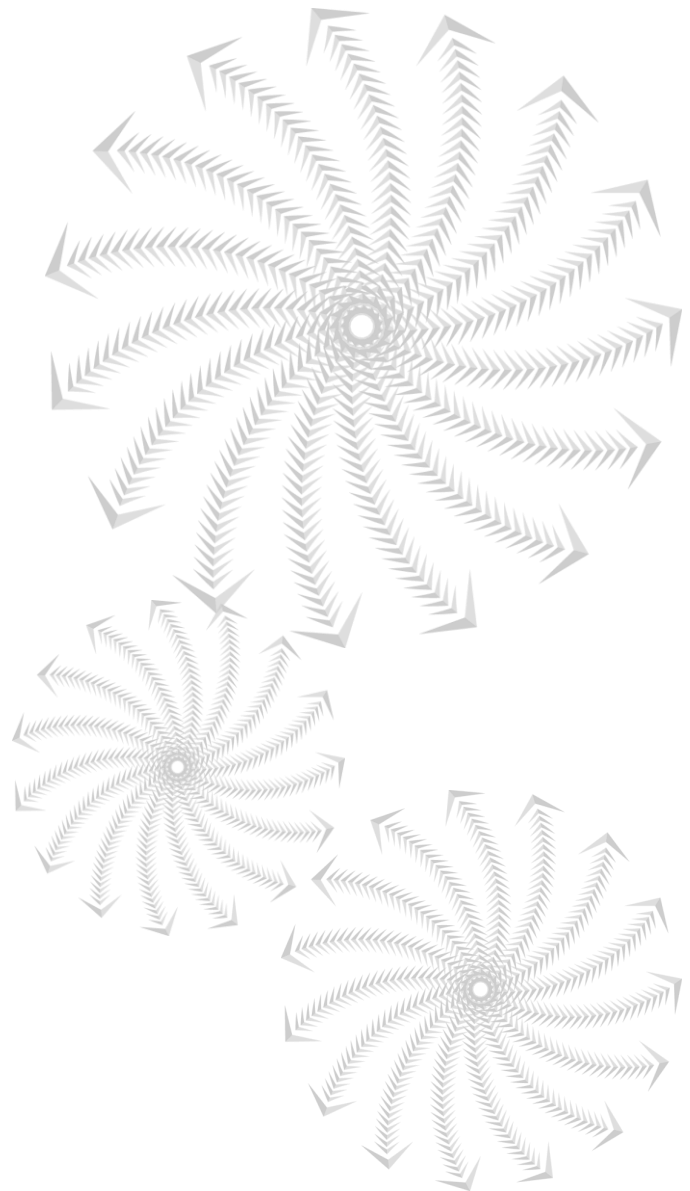
Recording that an ERE Output has been examined means that it has been assessed and included in the panel member's decision on the scoring of the ERE component.

If the panel member accesses an ERE but it is not included in their assessment and scoring decision (for example, because the evidence is inappropriate for assessment) then the panellist **must not** record it as examined.

What if there are other problems with ERE Outputs?

If an ERE Output is not of sufficient quality to be examined, or does not meet the evidence requirements for the research output type, the panel member is not required to assess it. The panel member should apply their judgement based on the information that is available to them. Panel members cannot request an updated or revised version of an ERE Output or any additional material.

If panel members have concerns about the eligibility any research output included in the ERE component, or about the validity of particular aspects of an output (for example, the authorship or the contribution of the staff member in question), or find mistakes in the information provided, the panel member can submit an Audit Concern through the PBRF IT System. These concerns will be checked by the TEC's audit team. This applies to ERE Outputs, Supplementary Items, and OERs.



Quality Evaluation 2026

Assessing Contributions to the Research Environment

Assessing the Contributions to the Research Environment component

The Contributions to the Research Environment (CRE) component describes the research-related contributions the staff member has made to sustaining, developing, and/or growing the research environment and culture.

- › The CRE component has a weighting of 30 percent of the total score for the EP.
- › Each EP contains a minimum of one CRE item and may contain up to ten items. The EPs of new and emerging researchers can be submitted without CRE items.
- › The CRE component allows for recognition of activities and outcomes that are indicative of a vital, high-quality, sustainable research environment that may exist across academic, community, industrial, public, and commercial domains. There are six CRE types.

General principles for assessing the CRE component

The following general principles apply to the assessment of CRE items:

- › all research-related activities and outcomes in the CRE component must have occurred within the assessment period (**1 January 2018 – 31 December 2025**)
- › all CRE types will be considered on their merit. This means no one specific type will be weighted higher than another
- › the CRE component should reflect the broad range of activities and outcomes that are undertaken and/or achieved by a researcher relative to opportunity, and be appropriate to an individual's research discipline
- › the items submitted within EPs will differ across the six CRE types.

Allocating scores to the Contributions to the Research Environment component

The following tables provide a detailed description of the CRE component, and the tie-point descriptors for the scores of six, four and two. This information must be used to assign a score to the CRE component of the EP.

A score of at least two on the CRE component is normally required for the award of a C Quality Category. The detailed reassessment, however, may override this.

An CRE component score of more than zero is not required for the award of a C(NE) Quality Category to a new and emerging researcher.

CRE component descriptor

Component	Contributions to the Research Environment
Descriptor	This component is concerned with the contribution a staff member has made to sustaining, developing, and/or growing the research environment and culture of which they are a part. The component allows for recognition of activities and outcomes that are indicative of a vital, high-quality, sustainable research environment that may exist across academic, community, industrial, public, and commercial domains. Research environments and the activity that sustains and grows them may be local, regional, national or international in orientation. EPs will normally be expected to include a minimum of one and up to ten CRE items, unless the EP is submitted by a new and emerging researcher, in which case no CRE items are required. In scoring the CRE component, the number of CRE items submitted should have no bearing on the assessment of quality so long as the minimum of one item (where relevant) has been included. The component will recognise the following types of activity or outcome: › Contributions to Research Discipline, Culture, and Environment that demonstrate the staff member's contribution to the general development, sustainability, vitality or visibility of their discipline, field or the broader research environment, culture or capability both within and outside academic domains. Examples might include research leadership roles such as head of department, laboratory, centre, or institute director, institutional or other research related committee membership, activity related to establishing, validating, representing, raising awareness of, and advocating for the discipline or field, or acting in the 'critic and conscience' role. › Facilitating, Networking and Collaboration activity that demonstrates the staff member's contribution to the research environment specifically through developing and supporting research networks, groups, or collaborations that develop or sustain their discipline, field, or the broader research environment, culture or capability both within and outside academic domains. Examples might include setting up, leading, or contributing to research centres, groups, seminars, wānanga, fono, lecture series, reading groups, fora, or networks. › Researcher Development, Capability-Building, and Mentoring activity that demonstrates the staff member's contribution to developing and growing the research environment specifically through staff development, mentoring and support both within and outside academic domains. Examples might include formal mentoring roles, leadership roles and advocacy/representative roles for

particular career stages, or contributions to promotions processes and appointments panels.

- › **Reviewing, Refereeing, Judging, Evaluating and Examining** activity that demonstrates the staff member's contributions to developing and sustaining their discipline or field through reviewing, refereeing, judging, evaluating and examining their peers. Invitations to undertake such activity may also indicate the staff member's standing and/or peer esteem within the discipline or field. Examples might include positions on editorial boards, publisher, journal, institutional or other peer-review roles, funding or awards panel membership.
- › **Student Development and Support** activity which demonstrates the staff member's contributions to developing or growing research capacity and capability through supervision, mentoring, support, evaluation or review of research students, activity aimed at addressing equity and inclusivity issues including for Māori and Pacific research students in particular, as well as esteem and recognition factors associated with a staff member's research student supervisees.
- › **Peer esteem and research recognition factors not included in ERE section**, including indicators associated with the staff member and/or work over the duration of a career rather than associated with a specific ERE or OERE. Examples might include prizes, awards, honours, elected roles or other indicators.

Panels recognise that the items submitted across the six CRE types will differ in kind depending on disciplinary norms and that inherent opportunities for research environment contributions will likewise vary across fields or disciplines.

It is not expected that evidence of contributions across all six types will be submitted, and neither will submission of evidence across a greater or lesser range of types form the sole basis for quality assessment. All six types of CRE are considered as equally valuable and as equally capable of producing the highest score.

CRE component tie points

CRE component tie-point descriptors	
Scores	7
6	The EP demonstrates that the staff member makes a leading contribution to a sustainable research environment in New Zealand and/or internationally. This is likely to be shown through, for example: › research leadership at the highest levels (for example, membership of significant research selection and/or assessment panels nationally or internationally, leading major collaborative research centres, consortia, units, teams or other groups including initiatives at the highest level of Te Ao Māori, Pacific, and other communities, institutional or cross-institutional, national or international leadership roles including of research or professional membership organisations and bodies) › leading or contributing to the development of significant institutional, national, or international research capacity-building or support including infrastructure, services, collections, funds, fellowships › significant contributions to or leadership of research-focused conferences, stakeholder engagement, or attracting research funding or support; › attracting renowned scholars to the TEO and/or Aotearoa New Zealand › a consistent record of successful supervision of post-graduate students; contributions to developing new research capacity that go beyond student supervision, including for Māori and Pacific research students and researchers, and/or supporting research students to produce research outputs that are quality-assured; › contributions to knowledge in the discipline through editorship positions, membership of editorial panels or refereeing of top-ranked journals. The staff member may have a public profile either nationally or internationally as a consequence of their expertise in their field or discipline, and may regularly provide expert public commentary or raise awareness of the role or value of their discipline or field.
5	4
4	The EP demonstrates that the staff member makes a strong contribution to a high-quality, sustainable research environment in New Zealand and/or internationally. This is likely to be shown through, for example: › research leadership which may include membership of research selection and/or assessment panels nationally or internationally, membership or participation in collaborative research centres, consortia, units, teams or other groups, institutional or cross-institutional, national or international leadership roles including of research or professional membership organisations and bodies)

- › contributing to the development of institutional research capacity-building or support including infrastructure, services, collections, funds, fellowships
- › contributions to research-focused conferences, stakeholder engagement, or attracting research funding or support;
- › attracting renowned scholars to the TEO and/or Aotearoa New Zealand
- › a record of successful supervision of post-graduate students; contributions to other research student development, mentoring, and support initiatives including for Māori and Pacific research students, and/or supporting research students to produce research outputs that are quality-assured
- › contributions to knowledge in the discipline through editorship positions, membership of editorial panels or peer review roles at high-quality journals.

The staff member may have a developing public profile as a consequence of their expertise in their field or discipline, and may have provided expert public commentary or raised awareness of the role or value of their discipline or field.

3

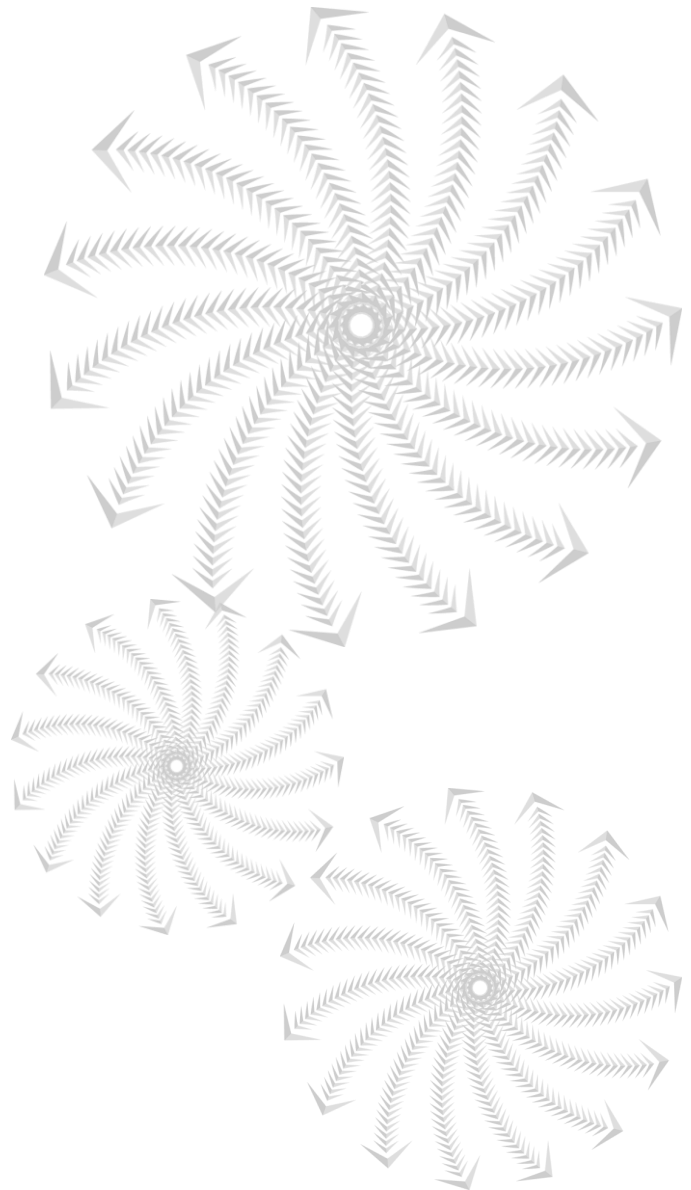
2 The EP demonstrates that the staff member has made some contribution to a high-quality, sustainable research environment in their discipline or field at an organisational or national level. This is likely to be shown through, for example:

- › participation in research centres, consortia, units, teams or other groups within their specific discipline or at the institutional level;
- › contributions to the institutional research environment through membership of relevant committees or discipline-related bodies;
- › contributions to research-focused conferences or seminars, or to stakeholder engagement activity;
- › the successful supervision of post-graduate students, including Māori and Pacific research students;
- › contributions to knowledge in the discipline through membership of editorial panels or peer review roles at journals that are recognised within the discipline or field.

The staff member may have had some experience of providing public commentary as a consequence of their specific research expertise.

1 The EP demonstrates minimal evidence of contribution to the staff member's research environment. Any activity is likely to be limited to the departmental or sub-organisational level, or to platforms and events that are not well-recognised within the discipline or field. There may limited or no evidence of research student supervision or support.

0 No evidence of contributions to the research environment is presented.



Quality Evaluation 2026

What is the moderation process?

The moderation process

The function of moderation is to ensure that standards are consistent across peer review panels and that the PBRF Guidelines are properly adhered to.

- › The Moderation Panel consists of the Co-Moderator, Co-Moderator Māori, Deputy Moderator Pacific, and the 28 peer review panel Co-Chairs. The Moderation Panel is supported by the TEC's Moderation Panel Advisor.
- › The structure of the Moderation Panel also provides a support mechanism for panel Co-Chairs.

The TEC has made changes to the person specifications and structure of the Moderation team for the Quality Evaluation 2026. These changes reflect the recommendations of the SRG on how to implement Cabinet's decisions on the PBRF Review.

In the 2018 round, the Moderation team included a Principal Moderator and two Deputy Moderators. For 2026, this has been changed to a structure that includes a Co-Moderator, a Co-Moderator Māori, and a Deputy Moderator Pacific.

The person specifications and roles have also been changed to better reflect the new PBRF Principles and the TEC's commitment under the Education and Training Act 2020 to honour its obligations under Te Tiriti o Waitangi and to uphold Māori-Crown partnership:

- › Partnership: the PBRF should reflect the bicultural nature of Aotearoa New Zealand and the special role and status of the Treaty of Waitangi / Te Tiriti o Waitangi.
- › Equity and Inclusiveness, ensuring equitable outcomes and that the PBRF encourages and recognises the full diversity of ontologies, epistemologies, knowledges, and methodologies in Aotearoa New Zealand.

This change also aligns with the recommendation of the Quality Evaluation 2018 *Report of the Moderation Panel and Peer Review Panel* that the TEC should consider appointing a Māori Moderator. The report noted that panels would have benefitted from better advice on interpreting and assessing research of relevance to Māori.

Purpose of the moderation process

The moderation process is designed to promote systematic reflection on the issues of consistency, standards and cross-panel calibration by:

- › creating an environment in which the judgements of the peer review panels generate consistency on a cross-panel basis, while at the same time not reducing the panel judgements to a mechanistic application of the assessment criteria
- › providing an opportunity for independent review of the standards and processes being applied by panels
- › ensuring the consistent application of the Achievement Relative to Opportunity framework, including the consistent assessment of new and emerging researchers, part-time staff members, and staff members claiming Researcher Circumstances

- › establishing mechanisms and processes by which material differences or apparent inconsistencies in standards and processes can be addressed by panels
- › advising the TEC Board on any issues regarding consistency of standards across panels.

The moderation process

There are four stages in the moderation process.

Stage	Purpose	Timing
1 Individual assessment moderation/monitoring	Identify any patterns or variations in the preparatory and/or preliminary scores within panels that might indicate potential bias, error, or the inconsistent application of assessment criteria.	August – November 2026
2 Initial Moderation Panel meeting	Review the scoring data from the pre-panel meeting assessments to ensure the consistent application of assessment standards across panels.	November 2026
3 Panel assessment moderation/monitoring	Identify any patterns or variations in the Calibrated Panel component scores and Quality Categories within and across the panels that might indicate potential bias, error, or the inconsistent application of assessment criteria.	November – December 2026
4 Second Moderation Panel meeting	Review the Final Quality Categories assigned by panels to ensure consistency across panels.	December 2026

Pre-panel assessment moderation and monitoring

The goal of moderation during the pre-panel assessment stage in August–November 2026 is to identify any patterns or variations in the Preparatory and/or Preliminary scores within panels that might indicate potential bias, error, or the inconsistent application of assessment criteria.

The TEC Panel Advisors provide Co-Chairs and Co-Moderators with an analysis of the preparatory and preliminary scores generated by panel members, including cross-referral assessors. This information allows Co-Chairs to identify inconsistencies within their panels and Co-Moderators to identify inconsistencies across panels, for example, by looking at the correlation between lead, second, and cross-referral Preparatory scores and Preliminary component scores. Identifying any inconsistencies related to Achievement Relative to Opportunity provisions will also be important.

The report will also include information provided by cross-referral assessors. Co-Chairs can monitor cross-referral assessments and where issues or potential issues arise, these can be discussed between Co-Chairs and Co-Moderators before the initial assessment process concludes.

TEC Panel Advisors also monitor and review any concerns raised by panel members and provide updates to Co-Chairs and Co-Moderators identifying potential issues. While most concerns are likely to relate to the TEO audit of the

data, this provides Co-Chairs and Co-Moderators with an opportunity to intervene if necessary.

Initial Moderation Panel meeting

The initial Moderation Panel meeting will be held in November 2026 once the individual assessment process has been completed.

The purpose of this meeting will be to:

- › confirm that the judgements of the panel have been based on the consistent application of principles and standards across all the panels, while at the same time not reducing the individual panel judgements to a mechanistic application of the assessment criteria
- › address any outstanding issues that have emerged for members of the panels that might impact on the consistent application of standards during panel meetings
- › agree on a consistent approach to issues that have the potential to compromise the integrity and consistency of the PBRF standards during panel meetings – for example, the consistent and appropriate treatment of new and emerging researchers, applied and practice-based research, or the approach to the assessment of unusual or uncommon types of research outputs.

As a result of the meeting, the Co-Chairs of each panel will, with help from their Panel Advisor, be in a position to:

- › promote the principles of consistency
- › ensure adherence to agreed procedures and standards
- › identify and respond to areas of potential risk
- › communicate to panel members the Moderation Panel's agreed approach to any identified issues.

For this to be achieved, the following information (at a minimum) will be the basis of discussion at the meeting:

- › a review of the status of the EPs for each of the panels, including:
 - summary data of the numbers of EPs submitted by each TEO, EPs submitted to each panel, EPs submitted to each subject area, EPs transferred and cross-referred to other panels, and the number of new and emerging researchers
 - a summary of EPs assessed by each panel and by panel members, including assessment of NROs
- › an analysis of the standard deviations, standard errors, and box and whisker diagrams outlining the spread of Indicative Quality Category (determined from the Preliminary scores) results by panel and subject area
- › an issues report based on moderation undertaken during individual assessment
- › a comparison of the Quality Categories assigned in previous Quality Evaluation exercises against the Indicative Quality Categories.

This information will be prepared by the TEC's Moderation Panel Advisor. However, all data reports will be available through the PBRF IT System throughout the assessment process.

Panel assessment moderation and monitoring

The goal of moderation during the panel meetings of the Quality Evaluation will be to identify any patterns or variations in the Calibrated panel scores and Quality

Categories across the panels that might indicate potential bias, error, or the inconsistent application of assessment criteria.

Co-Moderators will need to consider whether:

- › there is evidence to suggest that the assessment process has not been applied according to the relevant guidelines
- › the pattern of Quality Category profiles generated by each panel appears credible and justified.

Where there are possible material inconsistencies or an inadequate explanation of recommendations, the Co-Moderators will need to address these concerns with the Co-Chairs of the relevant panel in order for the Co-Chairs to review the Quality Categories assigned to their EPs, or provide further explanation of them.

Moderators will give a specific focus to this process to ensure that aspects such as the Achievement Relative to Opportunity framework have been taken account of and applied consistently. Ensuring EPs with fewer than three EREs have been fairly assessed based on quality will be a key area of focus.

Co-Moderators will be provided with information on a daily basis during the panel meetings to ensure they can determine there is consistency in the judgements and standards being applied across the panels, and that Co-Chairs are undertaking any actions required of them.

The information for Co-Moderators will include changes between Preliminary Quality Categories and Calibrated Panel Quality Categories by panel, changes at the detailed reassessment stage, and distribution of Quality Categories by panel and subject area across Quality Evaluations. The aim is to identify if any additional issues need to be addressed as early as possible.

Co-Chairs will also be provided with information on a daily basis; this information will be focused on supporting the workflow of the panel.

Second Moderation Panel meeting

This meeting will be held in December 2026 once the panel meetings have been completed.

The purpose of this meeting will be to:

- › provide an independent review of the standards that have been applied by panels in the assignment of Quality Categories to EPs
- › confirm that there has been consistent application of the detailed reassessment process, including Achievement Relative to Opportunity provisions
- › review the Final Quality Categories assigned to ensure consistency across panels.

For this to be achieved, the following information (at a minimum) will be prepared by the Moderation Panel Advisor:

- › An analysis of the Quality Categories agreed within each panel and across all panels, which will also show:
 - any outlier results in respect of subject areas, TEOs or panels
 - the extent to which panels have departed from, or confirmed, the quality profiles generated from the preliminary scores
 - a comparison of the 2026 aggregate Quality Categories profile and distribution against the 2003, 2006, 2012, and 2018 aggregate profile and distribution.

The Co-Chairs of each panel will also briefly present a summary of their panel meeting that may include comment on the practices of panel members, the panel process, and any issues that arose during the review process.

Reconvening of panels

A panel may need to be reconvened if there is a need to review its recommendations following the moderation process or the complaints process. Panels will be reconvened via videoconference only.

Reconvening panels will include:

- › the Co-Chairs and any members of the panel required to review the recommendations (excluding those members with any conflicts of interest or those without the required expertise in the subject area)
- › the Co-Moderators, Deputy Moderator Pacific, and the Co-Chairs of another panel
- › the appropriate Panel Advisor and/or the Moderation Panel Advisor and/or other TEC staff as appropriate.

Prior to reconvening, the Co-Moderators will provide direction on the matters to be considered and how these should be addressed.

Following any reconvening, the Co-Chairs of the panel will be required to report in writing to the Co-Moderators:

- › the reasons for the request for the review
- › the outcomes of the panel's reconsideration, specifying any changes resulting from the review
- › a commentary justifying the outcome (such as, any changes to, or confirmation of, their original recommendations).

This report will be required within five working days of the panel reconvening. This information will be provided to the TEC Board if there are any changes which result in a change to the funding allocations.

Moderation Panel reporting

The Moderation Panel report provides advice and assurance to the TEC Board on the consistent application of principles and standards within and across panels. This ensures a high level of confidence in the recommendations presented to the TEC Board by each of the panels.

Inputs to the Moderation Panel's report to the TEC Board include:

- › panel reports
- › any additional reports from the Co-Chairs of panels that were asked to review their recommendations
- › relevant benchmarking information from the moderation process.

The Moderation Panel's report includes:

- › the extent to which the Moderation Panel is satisfied that the assessment standards have been applied on a consistent basis
- › a brief discussion of the recommendations from each panel, highlighting any issues that the Moderation Panel wishes to comment on and/or provide recommendations on
- › information on the application of assessment standards, particularly during the assessment, and in relation to the application of Achievement Relative to Opportunity provisions

- › any areas where refinement of the Quality Evaluation might be required
- › a commentary on the overall Quality Evaluation process, highlighting issues that may impact on consistency across some or all panels
- › a commentary from the Moderators addressing any matters of particular significance.

Glossary

The glossary contains the broad meanings of commonly used terms. Full descriptions of these can be found in the main body of the guidelines.

Term	Meaning
Achievement Relative to Opportunity framework	This framework provides equity-based accommodations for staff members who are New and Emerging, Part-Time, or who declare valid Researcher Circumstances.
Assessment period	The period between 1 January 2018 and 31 December 2025. Only research outputs produced and research activities and contributions undertaken in this period are eligible for inclusion in an Evidence Portfolio for Quality Evaluation 2026.
Co-authorship	Process by which a research output is produced by more than one researcher.
Component scores	The scores from zero to seven that are assigned to each of the two components of an Evidence Portfolio (Research Output and Research Contribution).
Co-production	Process by which a research output is produced by more than one researcher.
Contributions to the Research Environment (CRE)	A CRE item is evidence that describes the contribution or recognition or impact of a staff member's research and research-related activities. A CRE type is one of the six defined categories for listing these research-related activities in an Evidence Portfolio.
Contributions to the Research Environment component (CRE component)	The CRE component is one of the two components of an Evidence Portfolio and is weighted at 30 percent of the overall assessment score.
Evidence Portfolio (EP)	TEOs collect information on the research and research-related activity of their PBRF-eligible staff members during the assessment period. This information forms the EP that is submitted by the TEO to the TEC for assessment by a peer review panel.
Example of Research Excellence (ERE)	An ERE is a product of research that is evaluated during the Quality Evaluation process. It includes a contextual narrative, an ERE Output, and up to three optional Supplementary Items.
Examples of Research Excellence (ERE) component	An ERE is a product of research that is evaluated during the Quality Evaluation process. The ERE component is one of the two components of an Evidence Portfolio and is weighted at 70 percent of the overall assessment score.
ERE Output	The research output that is provided as part of an ERE.

Research excellence	For the purposes of the Quality Evaluation, research excellence will be assessed in terms of originality, rigour, reach, and significance, with reference to the quality standards appropriate to the subject area and to the unique nature of Aotearoa New Zealand's research cultures and needs.
External Research Income (ERI)	A measure of the income for research purposes gained by a TEO from external sources. ERI is one of the three measures of the PBRF, along with the Research Degree Completion measure and the Quality Evaluation.
Interdisciplinary research	Research that crosses two or more academic disciplines or subject areas.
Joint research	Research produced by two or more researchers.
Moderation Panel	Panel that meets to review the work of peer review panels to ensure that the TEC policy has been followed and the Quality Evaluation process has been consistent across the panels. The Moderators and the Panel Co-Chairs form the Moderation Panel.
New and emerging researcher	A PBRF-eligible staff member who is employed to undertake substantive and independent research for the first time during the assessment period and meets the criteria for new and emerging researcher status.
Non-quality-assured research output	A research output that has not completed a formal process of quality assurance.
Other Example of Research Excellence (OEREs)	Up to eight research outputs or activities that the PBRF-eligible staff member nominates in their Evidence Portfolio. OEREs form evidence of the staff member's platform of research.
Panel	See peer review panel and Moderation Panel.
PBRF-eligible staff member	A person who is employed by a TEO or otherwise contracted by a TEO on a contract for service in their own right as individuals, an entity or trading name, through their employer, or any other contracting the TEO may have developed, and meets the staff-eligibility criteria.
PBRF IT System	Online information technology system used by the TEC to administer and support the Quality Evaluation process.
Peer review panel	Group of experts who evaluate the quality of research as set out in individual Evidence Portfolios. There are 14 peer review panels, each covering different subject areas or combinations of subject areas.
Scoring system	The points range used to score each of the two assessed components of an Evidence Portfolio during the first stage in the assessment. The

	scoring system ranges from zero (lowest) to seven (highest).
Primary field of research	The research field of the staff member's research activity during the assessment period, and especially that of the EREs selected for their Evidence Portfolio.
Produced	'Produced' in the context of the PBRF means that the final version of the research output was made available in the public domain for the first time during the assessment period of 1 January 2018 to 31 December 2025.
Quality-assurance process	Formal, independent scrutiny by those with the necessary expertise and/or skills to assess quality.
Quality-assured research output	Research output that has been subject to a formal process of quality assurance.
Quality Category	A rating of research excellence assigned to the Evidence Portfolio of a PBRF-eligible staff member following the Quality Evaluation process. There are six Quality Categories: A, B, C, C(NE), R and R(NE). Quality Category A signifies researcher excellence at the highest level, and Quality Category R represents research activity or quality at a level that is insufficient for recognition by the PBRF. The A, B, C(NE) and R(NE) Quality Categories are all available for new and emerging researchers. The A, B, C and C(NE) Quality Categories are funded Quality Categories.
Quality Evaluation	The process that assesses the quality of research produced by PBRF-eligible staff members, the contribution they have made to the research environment, and the impact their research has had within a given assessment period. The Quality Evaluation is one of the three measures of the PBRF, along with the Research Degree Completion measure and the External Research Income measure.
Research	See the PBRF Definition of Research on page 13 of these Guidelines.
Research Degree Completion (RDC) measure	A measure of the number of research-based postgraduate degrees completed within a TEO where there is a research component of 0.75 equivalent full-time students or more and external moderation. One of the three measures of the PBRF, along with the External Research Income measure and the Quality Evaluation.
Researcher Circumstances	Researcher Circumstances provisions for Quality Evaluation 2026 aim to ensure staff members who have experienced circumstances that have seriously affected the quantity of research outputs

	and research-related activities during the assessment period are treated equitably.
Subject area	One of the 43 subject areas defined to represent the range of research disciplines assessed in the Quality Evaluation.
TEC	Tertiary Education Commission.
TEO	Tertiary education organisation.
Tie-points	The standards expected for the scores two, four and six in each of the two components of an Evidence Portfolio.
Total weighted score	The sum of the points allocated to each component of the Evidence Portfolio during the first stage of assessment, multiplied by the weighting for each component.

Overview of changes to the *Guidelines for TEOs participating in the Quality Evaluation 2026*

This document provides a high-level overview of changes in the consultation draft of *Guidelines for TEOs participating in the Quality Evaluation 2026* (TEO Guidelines). Its purpose is to assist stakeholders in reading and providing feedback on the consultation draft. It should be read in conjunction with the Summary of TEC In-Principle decisions.

- › You can access the consultation draft of the TEO guidelines on the [TEC website](#).
- › The following table highlights where the TEO guidelines have changed compared to the 2018 TEO Guidelines. Changes are based on the sector feedback process led by the Sector Reference Group.
- › Consultation on the draft TEO Guidelines is open from 11 August to 22 September. Final Guidelines will be published in November 2023.

Overview of changes to the TEO Guidelines

Section	Pages	Level of change
How to use these guidelines	8-9	Minor changes only.
An overview	10-14	Minor changes only, such as updates to the timeline.
What is research?	15-20	Major changes to the definitions of research, excellence, and impact and to Quality Category descriptors.
Who is eligible to participate?	21-32	Minor changes to research substantiveness test wording. New and Emerging researcher eligibility content moved to new chapter on EP submission options.
Achievement relative to opportunity	33-37	This completely new chapter introduces the new Achievement Relative to Opportunity framework, which applies to New and Emerging

Section	Pages	Level of change
		researchers, Part-Time researchers, and Researcher Circumstances provisions.
EP submission options	38-51	This completely new chapter explains how the new Achievement Relative to Opportunity framework affects EP submission options for New and Emerging and Part-Time researchers, and staff who declare Researcher Circumstances.
Understanding Evidence Portfolios	52-62	Major changes to the design of EPs. Minor changes to: - the number and coverage of some panels - the way cross-referrals are initiated - the scope of the Platform of Research – Contextual Summary field. It also contains new proposals to: - use ANZSRC codes to populate the Field of Research - introduce a new EP Language field.
Completing the ERE and CRE components	63-81	Major changes to the design of an EP, focusing on the ERE component and the CRE component. This includes the introduction of new EP items such as ERE Outputs, Supplementary Items, Research Activity types, and CRE types.
Providing ERE Outputs	82-91	Minor changes only. This new chapter is largely similar to previous guidance on providing nominated research outputs (NROs).
Conflicts of interest	92-94	Minor changes only to reflect the introduction of Co-Moderators and Co-Chairs.
What happens in the audit process?	95-111	Minor changes only, to reflect new EP design and the Achievement Relative to Opportunity framework. Minor change to information on forms of evidence for audit, which has also been moved to this chapter.
How will the results be reported?	112-124	Major changes related to the removal of all content regarding the calculation and reporting of the AQS. Otherwise, minor changes to reflect new EP design and the ARO framework.

Section	Pages	Level of change
How to make a complaint about errors	125-127	Minor changes only.
Glossary	128-132	Minor changes only. This has been updated to reflect changes to EP design, the ARO framework, and other relevant changes.
TEO audit declaration	133-134	Minor changes only. Changes highlight the importance of validating eligible declarations under the Achievement Relative to Opportunity framework and the importance of appropriate processes for collecting staff ethnicity data.
Appendix: Eligible EP item types	135-155	The majority of this information is unchanged from 2018. Major changes include: • the new 'Processes and products' research output type • the introduction of Research Activity types (p. 146-149) • the introduction of CRE types (p. 150-154) • and changes the proposed new description of 'Software'. There are also minor edits to the wording of the other types, reflecting earlier consultation.



We ensure New Zealand's future success.

**Tertiary
Education
Commission**
Te Amorangi
Mātauranga Matua



Performance-Based Research Fund

Guidelines for tertiary education
organisations participating in
Quality Evaluation 2026

Consultation Draft, August 2023

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Providing feedback on this document

This document is a consultation draft of the *Guidelines for tertiary education organisations participating in Quality Evaluation 2026*. It is one of four guidelines documents that will be produced by the TEC as part of the Performance-Based Research Fund (PBRF) Quality Evaluation 2026 round.

The document updates the equivalent 2018 version of the TEO guidelines. It incorporates the in-principle decisions made by the TEC on the basis of the Sector Reference Group (SRG) consultation process that ran from September 2021 to July 2023.

The TEC established the SRG to provide advice and recommendations to us on operational changes to the design of the Quality Evaluation 2026. An accompanying document provides a full record of the in-principle decisions that TEC has made based on the SRG's recommendations.

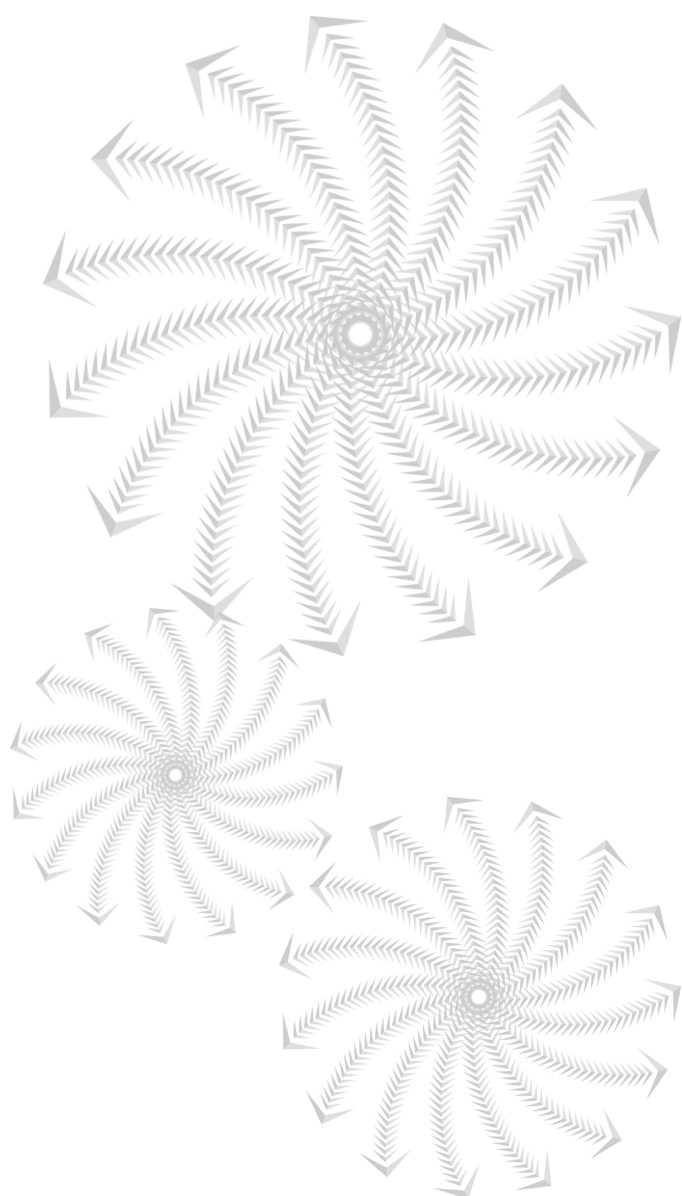
The general purpose of consultation on a full draft of these assessment guidelines is to ensure that all changes have been clearly explained, rather than to seek further feedback on the substantive decisions made earlier in the process. However, there are three new proposals for changes in this document based on sector feedback on the technical matters and reporting papers:

- **Introducing the use of ANZSRC codes** for the Field of Research field in the EP, rather than retaining a free text field. This proposal was made by the University of Otago.
- **Adding an EP Language field**, to allow participating staff members to indicate if any languages other than English are used any of the ERE Outputs included in the EP. This proposal was made by Victoria University of Wellington.
- **Updating the description of 'Software'** as a Research Output type 'to better reflect current practice. This proposal was made by the University of Auckland.

The TEC invites feedback on this draft, including these three new proposals, which can be provided via an online survey: <https://www.surveymonkey.com/r/9HBB32J>

The survey is open from 11 August to 22 September 2023. All feedback received will be carefully considered by the SRG and the TEC and the final version will be published in November 2023.

If you have any questions about this consultation, please contact PBRF.Help@tec.govt.nz.



Guidelines for TEOs participating in Quality Evaluation 2026

Consultation Draft, August 2023

How to use these guidelines

Structure of these guidelines

These guidelines are divided into chapters explaining different parts of the Quality Evaluation process. The topics covered are listed in the table of contents.

This document provides the information that tertiary education organisations (TEOs) need to:

- › understand what happens in the Quality Evaluation
- › determine organisational and staff eligibility
- › understand the new Achievement Relative to Opportunity framework
- › complete Evidence Portfolios (EPs)
- › submit conflict of interest notices
- › participate in the audit process
- › understand the reporting of results
- › make complaints about errors.

Information on the background and purpose of the PBRF can be found on the PBRF pages of the TEC's website: www.tec.govt.nz.

Other available guidelines

For Quality Evaluation 2026, we have provided guidelines for three specific audiences:

- › tertiary education organisations (this document)
- › panels carrying out the assessment process
- › participating TEO staff members (not yet available).

The *Guidelines for the assessment process* provide information about the assessment process undertaken by members of the panels. This includes information on the responsibilities of the panels, the scoring system and detailed scoring descriptors for EPs, the stages in the assessment process, the moderation process, and information about conflicts of interest and confidentiality.

The *Guidelines for participating TEO staff members* provide staff members with an overview of the process, their responsibilities, and the responsibilities of their employing TEO and the TEC. It also identifies the key areas of the Quality Evaluation process that relate to them and who can provide support. The guide is designed to be an overview of the process and it directs staff members to the relevant areas of the other guidelines.

The peer review panels also develop *Panel-Specific Guidelines* which provide subject and discipline-specific information to help staff as they develop their EPs. These are designed to be read in conjunction with the TEO guidelines.

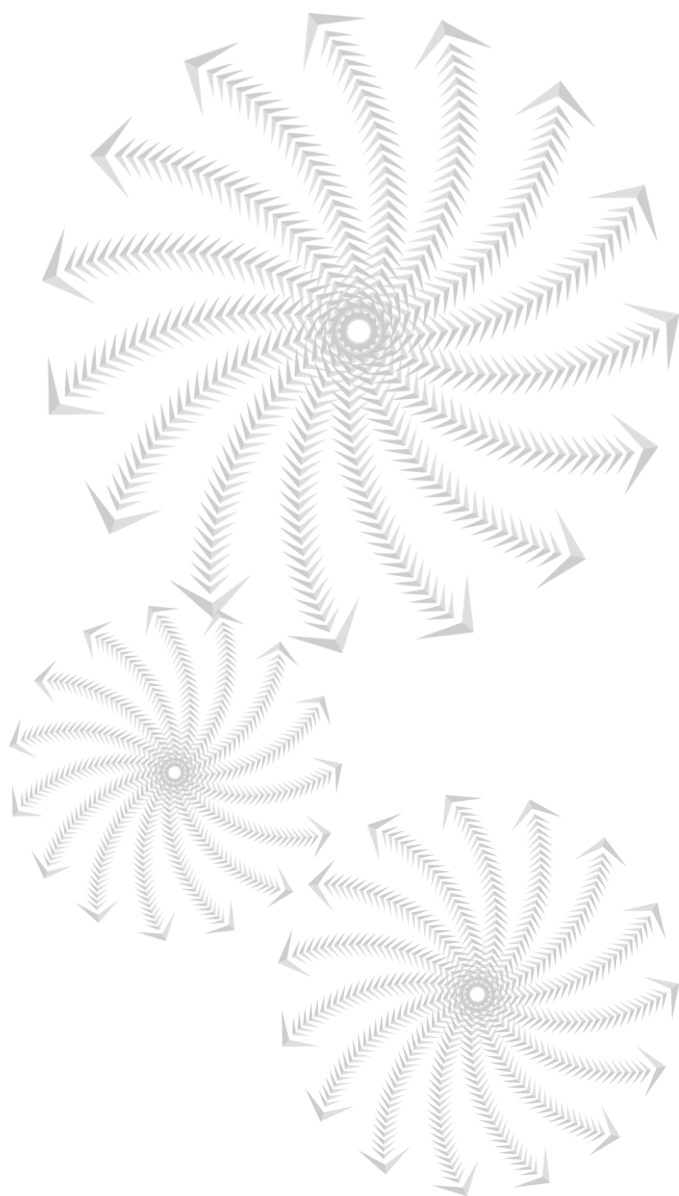
The table below shows the main audience for each document. A tick (✓) indicates that the document also contains information relevant for that particular audience.

Audience	Guidelines for staff	Guidelines for participating TEOs	Guidelines for the assessment process	Panel-specific guidelines
TEOs	✓	Main audience	✓	✓
Peer review panels			Main audience	✓
Staff members	Main audience	✓	✓	Main audience

Changes to the guidelines

In previous Quality Evaluations, sector queries and other decisions affecting the Quality Evaluation process have led to minor clarifications to the Guidelines following publication. Any future changes made to these guidelines will be set out in the table below.

Change	Page reference	Date of update
Brief description of the change	p. xx	Month, Year



Quality Evaluation 2026

An overview

What happens in the Quality Evaluation?

The primary purpose of the Performance-Based Research Fund (PBRF) is to ensure that excellent research in the tertiary education sector is encouraged and rewarded. The Fund allocates \$315 million a year in total across three components: the Quality Evaluation, Research Degree Completions, and External Research Income.

Quality Evaluation 2026 is an assessment of the research performance of staff at eligible tertiary education organisations (TEOs) for the period 1 January 2018 to 31 December 2025. The results of Quality Evaluation 2026 will determine the allocation of 55 percent of the Fund for a seven-year period (2026 to 2032).

TEOs determine which of their staff members are eligible to participate and if their research is likely to meet the standard for a funded Quality Category. They compile Evidence Portfolios (EPs) for these staff based on the relevant submission options for them under the Achievement Relative to Opportunity framework. EPs that TEOs decide are not likely to meet the requirements for achieving a funded Quality Category are not submitted for panel assessment.

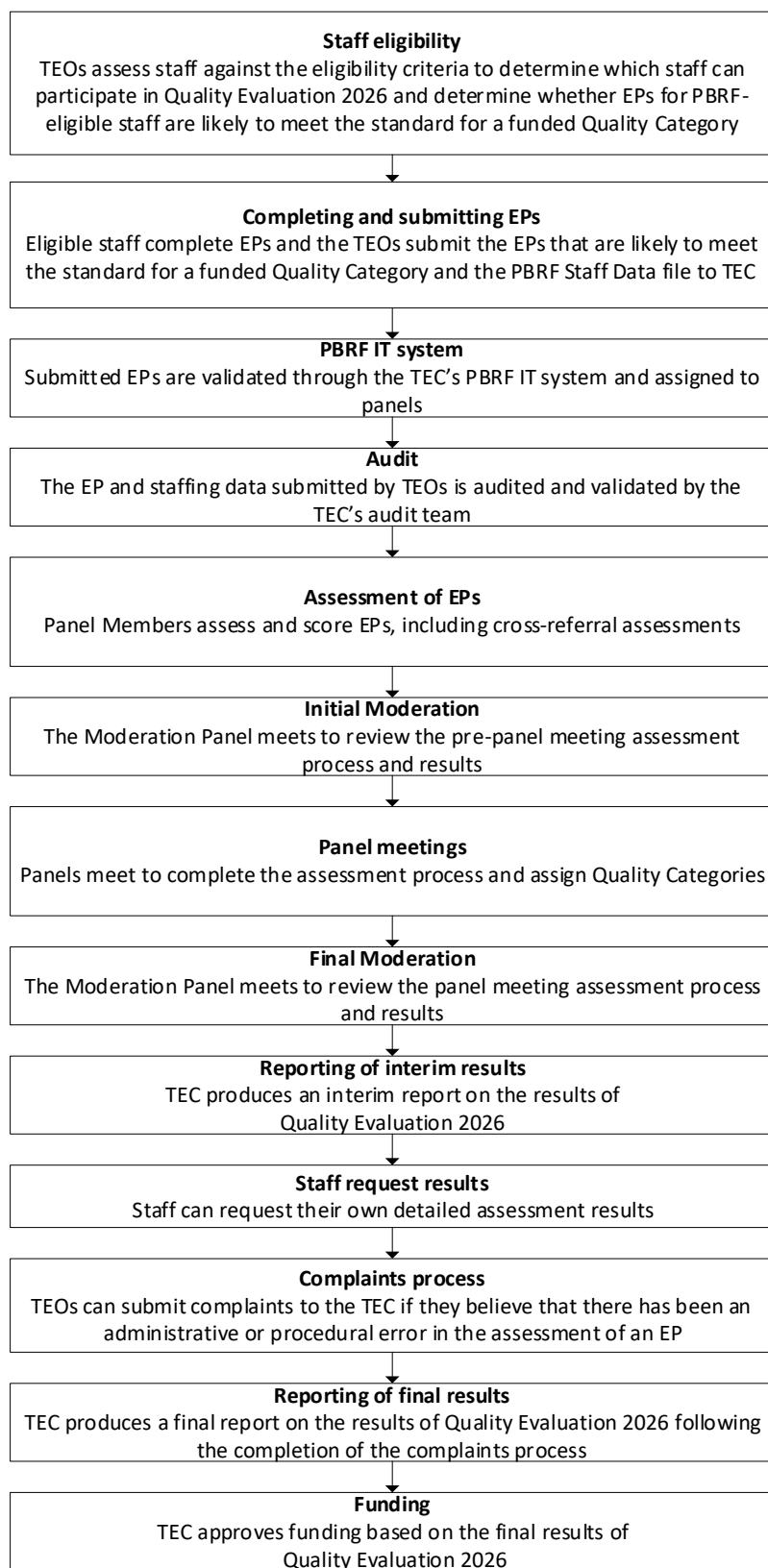
TEOs submit a Staff Data File, which provides information to confirm the identity, eligibility status, and submission details of staff who are submitting EPs to the TEC. Following this, TEOs submit EPs to be considered by one of the 14 peer review panels. This information is submitted through the PBRF IT System and audited by the TEC to ensure that staff meet the eligibility criteria and that the information provided in EPs is accurate. This information is used in the reporting of results and forms the basis of the funding calculation.

The peer review panels complete their assessment and assign one of six Quality Categories to each EP. Where needed, elements of an EP can be cross-referred to other panels. The overall process is overseen by a Moderation Panel, which ensures PBRF standards and processes are applied consistently across all panels.

The TEC administers the submission and assessment process through the PBRF IT System, provides support for panels and TEOs, and considers and approves the findings of the Quality Evaluation for funding and reporting of results.

At the conclusion of the Quality Evaluation, the TEC reports the results and calculates updated TEO funding allocations for the Quality Evaluation component.

The stages of the Quality Evaluation 2026 process



Key dates for Quality Evaluation 2026

Phase	Deadline/activity	Dates
The assessment period	Eligibility period for Evidence Portfolio items	1 January 2018 – 31 December 2025
Audit – process	TEO process assurance audit	February 2025 – September 2025
Staff eligibility period	Staff must be employed or contracted by the submitting TEO within this period and on 11 June 2026 to be considered PBRF-eligible	12 June 2025 – 11 June 2026
TEOs submit EPs and Staff Data files	Preliminary submission date for EP data and PBRF Staff Data files	3 July 2026
	Period for final review and correction of EP data and PBRF Staff Data files	3 July 2026 – 4.00pm 9 July 2026
	Close-off date for resubmission of EP data and PBRF Staff Data files	4.00pm 9 July 2026
	Deadline for Vice-Chancellor's/Chief Executive Officer's declaration	4.00pm 13 July 2026
Audit – data	Data evaluation audit	July 2026 – December 2026
Panel assessment and moderation	Assignment of EPs for assessment	11 July 2026 – 23 August 2026
	Requesting physical ERE Outputs <i>15 working days to request, 15 working days to supply</i>	11 September 2026 – final date for Panel requests
	Pre-meeting panellist assessment of EPs	24 August 2026 – 30 October 2026
	Panel meetings	16 November 2026 – 4 December 2026
	Moderation Panel meeting	December 2026

Phase	Deadline/activity	Dates
Reporting and complaints process	Interim report on Quality Evaluation 2026 results released	April 2027
	Final Quality Categories reported to TEOs	
	Staff requests for Quality Evaluation 2026 results start	
	35-day period for TEOs to lodge complaints	April 2027 – May 2027
	60-day period for the TEC to investigate complaints	May 2027 – July 2027
	Final report on 2026 Quality Evaluation results released	September 2027
Funding allocations	Indicative funding allocations for 2026 and 2027 updated with new results Indicative allocations for 2028 calculated	October 2027

Which organisations are eligible to participate in the PBRF?

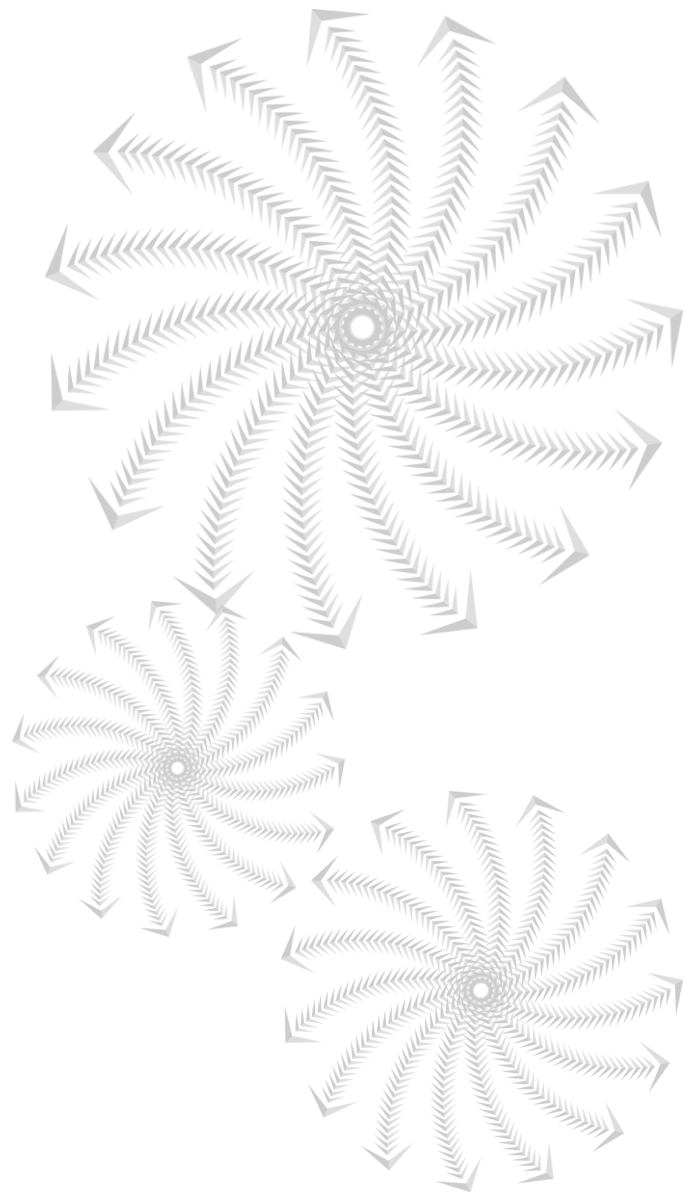
TEOs that want to participate in Quality Evaluation 2026 must meet both of the following criteria:

- › The TEO receives TEC funding via the Delivery on the New Zealand Qualifications and Credentials Framework at Levels 7 (degree) and above (DQ7+) Fund
- › The TEO has degree-granting authority on 11 June 2026.

The next funding period for the PBRF is 2026 to 2032. TEOs that want to seek funding from the PBRF for this period must participate in Quality Evaluation 2026.

TEOs cannot receive PBRF funding from 2026 to 2032 through either the Research Degree Completion or External Research Income elements of the PBRF unless they have participated in Quality Evaluation 2026.

Note that to receive DQ7+ funding from the TEC, an organisation must have an approved Investment Plan.



Quality Evaluation 2026

What is research?

What counts as research in Quality Evaluation 2026?

The PBRF Definition of Research is intended to be a broad and inclusive characterisation that includes original investigation in all domains, including mātauranga Māori, Pacific research, and creative, professional, and applied research. The PBRF Quality Evaluation explicitly recognises that research excellence occurs across the full spectrum of original investigative activity.

PBRF Definition of Research

For the purposes of the PBRF, research is defined as a process of investigation or inquiry leading to new, recovered, or reinterpreted knowledge or understanding which is effectively shared and capable of rigorous assessment by the appropriate experts.

In Aotearoa New Zealand our distinctive research cultures and environments draw on diverse ontological, epistemological, and methodological traditions of critical inquiry, experimentation, and knowledge-creation. This definition of research includes Māori ways of knowing, being, and conducting rangahau such as kaupapa Māori and mātauranga Māori; diverse Pacific ways of knowing, being, and conducting research; and work that embodies new insights of direct relevance to the specific needs of iwi, hapū, marae, communities, government, scholarship and teaching, industry, and commerce, which may be developed through collaborative and practice-led processes involving stakeholders from those constituencies.

Research can be an individual or collective process and may be embodied in the form of artistic works, performances, designs, policies, or processes that lead to novel or substantially improved insights.

For further clarification, research includes:

- › Activity that leads to scholarly books, journal articles, and other nationally and internationally published outputs and presentations that offer new, recovered, or reinterpreted knowledge;
- › Activity that leads to contributions to the intellectual underpinning of different ontologies and epistemologies, subjects, and disciplines (for example, dictionaries, scholarly editions, teaching materials that embody original research, or teaching practices or activities that produce original research);
- › Applications of existing knowledge to produce new or substantially improved materials, devices, products, designs, policies, granted patents, or creative outputs;
- › Re-centering and revitalisation of knowledge (for example, the study of raranga, whakapapa narratives, waiata composition, navigational knowledge, translation studies, historical or literary archival studies, or ecological research); and



The PBRF Definition of Research has been expanded to ensure that it better reflects the diversity of ontologies and epistemologies in Aotearoa New Zealand and reflects the importance of mātauranga Māori as a taonga under Te Tiriti o Waitangi.

- › The synthesis and analysis of previous research to the extent that the insights generated are new.

It does not include:

- › routine testing and data collection lacking analysis, interpretation and/or evaluation;
- › preparation for teaching that does not embody original research (for example, collation of existing research and research outputs into handbooks or textbooks where this does not embody new insights); or
- › the legal and administrative aspects of intellectual property protection and commercialisation activities.

Mātauranga Māori

The new definition of research includes explicit reference to Māori ways of knowing, being, and conducting rangahau. Rangahau and knowledge of relevance to Māori communities, such as kaupapa Māori and mātauranga Māori, are essential components of Aotearoa New Zealand’s distinctive research cultures.

The Mātauranga Māori Panel’s Panel-Specific Guidance has elaborated the ontologies, epistemologies, methodologies, knowledges and understandings which comprise Te Āo Māori. This elaboration applies across all panels and will be used to determine whether EPs should be cross-referred.

Pacific Research

The new definition of research includes explicit reference to diverse Pacific ways of knowing, being, and conducting research. Research and knowledge of relevance to Pacific communities are essential components of Aotearoa New Zealand’s distinctive research cultures.

The Pacific Research Panel’s Panel-Specific Guidance has elaborated the topics, ontologies, epistemologies, methodologies, knowledges and understandings which make up Pacific research cultures. This elaboration applies across all panels and will be used to determine whether EPs should be cross-referred.

Research excellence and impact

For the purposes of the Quality Evaluation, research excellence will be assessed in terms of originality, rigour, reach, and significance, with reference to the quality standards appropriate to the subject area and to the unique nature of Aotearoa New Zealand’s research cultures and needs.

Excellence will be assessed across the following areas of activity:

- › The production and creation of knowledge, including ontologies, epistemologies, and methodologies unique to Māori and to Pacific communities;
- › The dissemination and application of that knowledge within academic and/or other communities and its impact outside the research environment; and
- › Activity which sustains and develops the research environment, within and across both academic and non-academic domains.

For the purposes of the Quality Evaluation, the impact of research is defined as a positive effect on, change, or benefit to society, culture, the environment, or the economy at any level, outside the research environment.

Impacts on scholarship, research, or the advancement of knowledge within the research environment are not included under impact as they already fall within the definition of excellence.

Revised Quality Category descriptors

Quality Categories are awarded to each EP based on an assessment of quality. They also carry a funding weighting that is an input into the formula for calculating PBRF Funding.

The Quality Categories have been revised for 2026 to reflect changes to the definition of research and clarified understandings of excellence and impact.

Quality Category A

The panel considers that as a whole the EP contains evidence of activity that is recognised by peers as outstanding, representing the leading-edge in its field (including if appropriate through international publication or dissemination), demonstrates very significant contributions to the research environment, and/or has led to very significant impact.

- › Research outputs are recognised by peers as leading-edge for the field in terms of their originality, rigour, and significance and/or in terms of the reach and significance of their impact.
- › Research-related activities demonstrate very significant outcomes from collaboration, dissemination and/or engagement within or outside academic domains; they may have delivered very significant impacts, with considerable reach, and where relevant have gained the highest level of recognition from peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions demonstrate very significant contributions to the vitality and sustainability of the research culture and environment, which is likely to occur beyond the field of research.

Quality Category B

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as high-quality within its field (including if appropriate through international recognition), demonstrates significant contributions to the research environment, and/or has led to significant impact.

- › Research outputs are recognised by peers as high quality for the field in terms of their originality, rigour, and significance and/or in terms of the reach and significance of their impact.
- › Research-related activities demonstrate significant outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered significant impacts with reach, and where relevant have gained recognition from peers which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.

- › Research environment contributions demonstrate significant contributions to the vitality and sustainability of the research culture and environment.

Quality Category C

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as having met quality-assurance standards within its field (including if appropriate through international recognition), demonstrates some contributions to the research environment and/or has led to some impact.

- › Research outputs are recognised by peers as meeting the quality standards of the field in terms of their originality, rigour, and significance, and/or demonstrate impact which is limited in terms of reach or significance.
- › Research-related activities demonstrate some outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered moderate impacts and where relevant may have gained some recognition by peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions demonstrate some contributions to the vitality and sustainability of the research culture and environment.

Quality Category C(NE)

The panel considers that as a whole the EP contains evidence of activity which is recognised by peers as having met quality-assurance standards within its field (including if appropriate through international recognition), and/or has led to some impact. The EP may contain evidence of contributions to the research environment.

- › Research outputs are recognised by peers as meeting the quality standards of the field in terms of their originality, rigour, and significance, and/or demonstrate impact which is limited in terms of reach or significance.
- › Research-related activities demonstrate some outcomes from collaboration, dissemination and/or engagement either within or outside academic domains; they may have delivered moderate impacts and where relevant may have gained some recognition by peers, which may also include peers within industry, communities, iwi, hapū, marae, the public and third sectors, and/or professional practice.
- › Research environment contributions, if present, demonstrate some contributions to the vitality and sustainability of the research culture and environment.

This Quality Category can be awarded to the EPs of New and Emerging Researchers only.

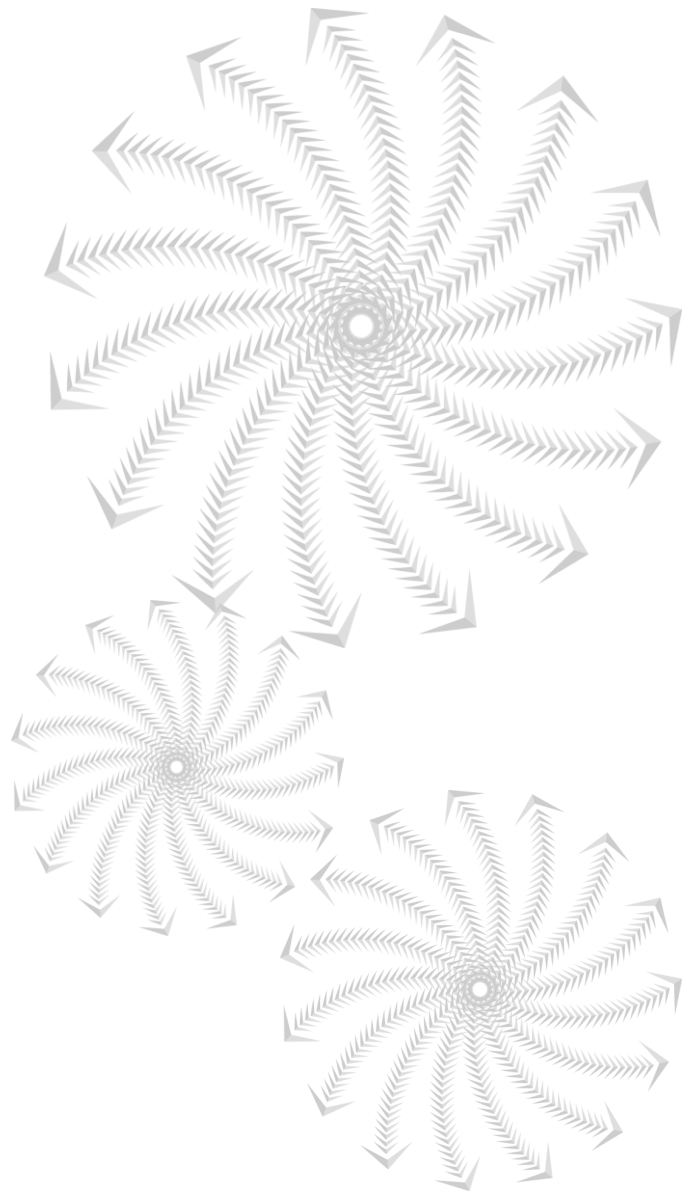
Quality Category R

An EP will be assigned an R when the evidence included does not demonstrate the quality standard required for a C Quality Category or higher.

Quality Category R(NE)

An EP will be assigned an R(NE) when the evidence included does not demonstrate the quality standard required for a Quality Category C(NE) or higher.

This Quality Category can be awarded to the EPs of New and Emerging Researchers only.



Quality Evaluation 2026

Who is eligible to participate?

Who is eligible to participate in Quality Evaluation 2026?

This chapter explains the staff eligibility criteria that must be used by tertiary education organisations (TEOs) to determine which staff members are eligible to participate in Quality Evaluation 2026.

- › The principle that underpins the staff eligibility criteria for Quality Evaluation 2026 is that a staff member is expected to make, or has made, a substantial and independent contribution to:
 - degree or postgraduate level teaching at an Aotearoa New Zealand TEO; and/or
 - research activity at an Aotearoa New Zealand TEO.
- › Each participating TEO must assess all employed or contracted individuals involved in teaching at degree or postgraduate level, or research, or both, against the PBRF staff eligibility criteria. For the purposes of the Quality Evaluation, these individuals are referred to as staff members.
- › Staff employed or otherwise contracted in wholly owned subsidiaries such as commercialisation companies and in fully controlled trusts of the TEO are PBRF-eligible (if they satisfy the other eligibility criteria), since these bodies operate under the control of the participating TEO.
- › Different eligibility requirements apply to staff contracted to a TEO by a non-TEO.
- › TEOs can only submit the Evidence Portfolios (EPs) of staff members who are PBRF eligible and employed or otherwise contracted by that TEO on the **PBRF staff eligibility date** of 11 June 2026.

The staff eligibility criteria are set out and explained in detail below, with a flowchart of the steps TEOs need to follow in determining staff eligibility.

Staff eligibility criteria for Quality Evaluation 2026

All Aotearoa New Zealand-based staff employed or contracted by a TEO must meet **all** four of the eligibility criteria set out below:

1. They are employed or otherwise contracted (under a contract for service):
 - at any time between 12 June 2025 and 11 June 2026 (see eligibility for transferring staff); **and**
 - under one or more agreements or concurrent agreements of paid employment or service with a duration of at least one year on a continuous basis.
2. They meet one of the following conditions. They have:
 - A minimum of 0.2 FTE throughout the duration of their employment if they are resident in Aotearoa New Zealand; or
 - a minimum of 0.5 FTE throughout the duration of their employment if they are not resident in Aotearoa New Zealand.
3. They meet the substantiveness test for teaching **or** research, **or both**, by:
 - fulfilling a ‘major role’ in the teaching and assessment of at least one degree or postgraduate-level course or equivalent (**the substantiveness test for teaching**)
 - being required to undertake one or more of the following: the design of research activity; the preparation of research outputs that is likely to result in being named as an author (or co-author or co-producer) on one or more research outputs; the academic supervision of graduate research students in a primary, joint, or co-supervisor role (**the substantiveness test for research**).
4. Their employment or service contract functions include degree and/or postgraduate-level teaching, or research, or both.

Interpretation of the eligibility criteria

Only Aotearoa New Zealand-based staff members are eligible

Only staff members who are based in Aotearoa New Zealand are eligible to participate in Quality Evaluation 2026.

Staff members are considered to be based in Aotearoa New Zealand if they are either:

- › resident in Aotearoa New Zealand for more than 50 percent of the period they are employed; or
- › resident in Aotearoa New Zealand for less than 50 percent of the period they are employed, but they are employed at 0.5 full-time equivalent (FTE) or higher by the submitting TEO.

When determining the amount of time a staff member is resident in Aotearoa New Zealand, the TEO must consider if the staff member is actually living in the country (that is, actually has their feet on the ground).

TEOs need to calculate the percentage of time a staff member is resident in Aotearoa New Zealand for either:

- › the 12-month period from 12 June 2025 to 11 June 2026; or
- › the 12-month period from their contract start date, if their appointment was after 12 June 2025.

TEOs must use one of these two 12-month contract periods to determine the amount of time the staff member is based in Aotearoa New Zealand.

Employment on a continuous basis

Employment on a **continuous basis** means the staff member had no gaps in their service. The following are not considered to be gaps in service:

- › days the organisation is closed
- › days when the staff member is on leave taken within the terms of their employment agreement(s)
- › a single gap of up to, but not exceeding, one month between employment agreements or contracts for service at the same TEO.

Definition of an FTE

One FTE is defined as 37.5 hours per week. This includes any non-research and/or non-teaching hours/activities but excludes any unpaid hours.

Definition of a major role in teaching

A **major role** means an individual contributes at least 25 percent overall to the delivery of the course **and** corresponding working time to the assessment process or design of the course (or both assessment and design of the course). TEOs must consider all aspects of teaching, design of the course, and the design of the assessment process that the individual is involved in regardless of the component of the course being delivered (such as lectures, workshops and tutorials) when assessing staff contribution to a course. If the staff member's contribution of at least 25 percent is in more than one stream of a multi-stream course, or is split into components of less than 25 percent across more than one course, the staff member is not fulfilling a major role.

A **degree-level course or equivalent** is a course that leads to a degree or related qualification. Degree-level courses include those at Level 5 or above on the New Zealand Qualifications and Credentials Framework (NZQCF). Courses taught as part of qualifications, such as certificates or diplomas that can form one or more years of study towards a degree, are included as degree-level courses.

Eligibility criteria for staff contracted from a non-TEO

If the staff member is contracted to a TEO by a non-TEO, to be eligible they must meet the four eligibility requirements outlined above and a strengthened substantiveness test for degree-level teaching and research. The strengthened substantiveness test is:

- › fulfilling a major role in the teaching and assessment of at least one degree or postgraduate-level course or equivalent during each year in Aotearoa New Zealand for **three years bridging the staff-eligibility date** of 11 June 2026; **and**
- › undertaking one or more of the following: the design of research activity; the preparation of research outputs that is likely to result in being named as an author (or co-author or co-producer) on one or more research outputs; the academic supervision of graduate research students.

The **three years bridging the staff-eligibility date** includes any continuous three-year period between 12 June 2023 and 11 June 2029.

The exceptions to continuous employment apply for each of the three years.

If any of the three-year period extends beyond 11 June 2026, it is expected that staff members are contracted either on a permanent basis or fixed-term basis covering the entire period. This requirement can be demonstrated by preparing a memorandum that indicates the courses that the staff member will be expected to teach (and their role in teaching) for the three years.

As noted in the section Auditing process for tertiary education organisations, follow-up reporting on staff eligibility may also occur before funding is finalised, to ensure that the eligibility requirements have been met.

- › Fulfilling a **major role** in the teaching and assessment of at least one degree or postgraduate-level course or equivalent during each year of the three-year period can be demonstrated in any semester in each of the relevant years.

Understanding staff eligibility criteria dates

The **PBRF staff eligibility date** is 11 June 2026. This is the key date for determining staff eligibility. Only staff members employed at a participating TEO on this day are considered eligible to submit an EP.

Staff must be employed or contracted at any time between 12 June 2025 and 11 June 2026. Staff must be employed for at least one year (12 months) on a **continuous basis**. This may be on one contract or multiple sequential contracts.

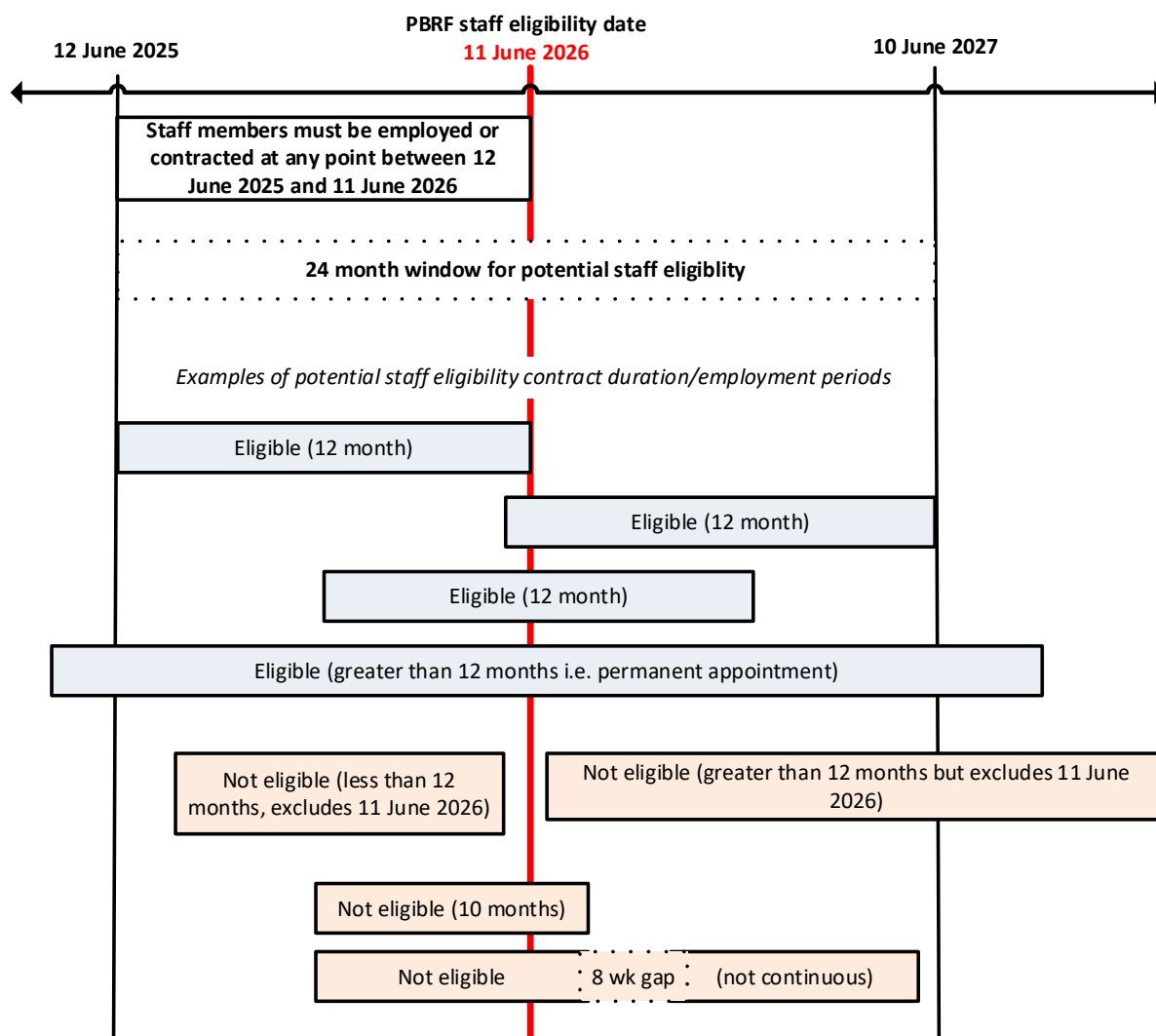
These two criteria combined mean the earliest that an eligible staff member's contract can start, if their contract is only for the 12-month minimum, is 12 June 2025 (as their contract's last day will be 11 June 2026). The last date on which a contract can start, whether for 12 months or longer, is 11 June 2026.

As staff members must be employed on 11 June 2026 for a minimum of one year, there is a window of 24 months where a staff member's employment can make them eligible to participate in Quality Evaluation 2026.

The 12-month **employment period** used to determine eligibility may differ, depending on how long the staff member is contracted for. TEOs must ensure that they apply the staff-eligibility criteria and the 12-month employment period to an individual staff member consistently. For example, if a staff member has a contract duration period of 1 January 2026 to 31 December 2026, the TEO must use this period when determining the staff member's eligibility, if the staff member is considered to be based in Aotearoa New Zealand, **and** for determining their FTE.

The following diagram shows how the dates and periods relate to each other.

Staff eligibility periods



Additional information on determining staff eligibility

Employment agreement requirements

Staff members must have an employment agreement or contract for service with a participating TEO and be paid for this employment or service at a level consistent with the time commitment, responsibilities, and seniority of the position.

Employment functions are the tasks, goals and accountabilities that a staff member is required to undertake during the 12-month (or longer) period reported at the PBRF staff-eligibility date. These may be contained in a job description, role profile, performance agreement, contract for services or agreement of annual goals and accountabilities.

If a staff member meets the substantiveness test for degree and/or postgraduate-level teaching, or research, or both, but their employment agreement or contract for service does not specify these functions, this does not make them

automatically ineligible for PBRF. The TEO, however, may need to address this discrepancy to ensure that the staff member does meet the staff-eligibility criteria and that the reason for this has been clearly documented.

Calculating FTE

One FTE is defined as 37.5 hours per week, which includes any non-research and/or non-teaching activities but excludes any unpaid hours. TEOs are required to pro rata any contracts with fewer than 37.5 contract hours per week. There is a cap of 1.0 FTE regardless of any paid hours over 37.5 hours per week or where separate contracts total more than 1.0 FTE.

FTE is to be calculated for the 12-month period from 12 June 2025, or the appointment date of the first PBRF-eligible appointment if that appointment was after 12 June 2025. TEOs cannot arbitrarily choose which 12-month contract period to calculate FTE.

TEOs must also ensure that the minimum FTE threshold is met for their staff throughout the 12-month period (either 0.2 FTE or 0.5 FTE, depending on the specific residency circumstances of individual staff members).

Calculating FTE where there are multiple contracts

The FTE rules apply to the total employment over the year 12 June 2025 to 11 June 2026, even if it is made up of employment from two or more contracts (which do not need to be ≥ 0.2 FTE each), or where a staff member's FTE status changes during the year.

Where a staff member has multiple concurrent and/or overlapping employment agreements, if any one of these is considered PBRF eligible (such as, a 12-month contract at either 0.2 FTE (for resident staff) or 0.5 FTE (for non-resident staff) that includes degree-level and/or postgraduate teaching, and/or research), then the staff member's FTE is to be calculated on the sum of all the contracts from the start of the first PBRF-eligible appointment.

Calculating FTE where a staff member has a variable FTE over the PBRF-eligible contract period

TEOs must calculate an average FTE for staff that change their employment status from full-time to part-time or vice versa.

When determining the FTE of a staff member with multiple contracts or variable FTE, TEOs can determine whether this is averaged on a monthly (as in the examples provided), weekly or daily basis. However, TEOs need to be consistent in the approach applied across all their staff.

Eligibility of staff on leave

A staff member will be eligible for inclusion in Quality Evaluation 2026 if they are on any of the following types of short-term leave on the PBRF staff-eligibility date:

- › annual leave
- › study leave
- › sabbatical leave
- › sick leave



Examples of calculating FTE

If a staff member is employed from 1 May 2026 to 31 December 2027 at 1.0 FTE for the entire period, their FTE is calculated for the 12-month period starting on 1 May 2026 and is recorded as 1.0.

Calculating FTE where there are multiple contracts

If a staff member has two concurrent contracts (both contract duration periods are 1 January 2025 to 31 December 2028) and is employed for 0.2 FTE in one contract and 0.7 FTE in the other contract, these should be taken together and treated as 0.9 FTE

Calculating FTE where there are changes in employment status

If a staff member changes from full-time employment on 30 November 2025 to take on a 0.5 FTE role, then they would count as follows:

$$1.0 \text{ FTE} \times 6/12 + 0.5 \text{ FTE} \times 6/12 = 0.75 \text{ FTE.}$$

If a staff member is hired at 0.5 FTE on 1 January 2026 and moves to an ongoing full-time role at 1.0 FTE on 1 June 2026, then they would count as follows:

$$0.5 \text{ FTE} \times 5/12 + 1.0 \text{ FTE} \times 7/12 = 0.79 \text{ FTE.}$$

If a staff member on a one-year contract worked for six months at 0.7 FTE from 1 January 2026 and then six months at 0.1 FTE from 1 July 2026, then the staff member is ineligible as they must be at least 0.2 FTE throughout the period of employment.

- › bereavement or tangihanga leave
- › paid parental leave
- › other forms of paid short-term leave.

Staff members on long-term leave on 11 June 2026 will be considered PBRF eligible if the following two criteria are met:

- › their employment agreement requires them to return to their substantive role within one year from the start of their period of absence
- › the staff member recruited specifically to cover their duties in the TEO does not have an EP submitted to Quality Evaluation 2026 by the TEO.

Long-term leave in the context of Quality Evaluation 2026 means one or more of the following:

- › unpaid leave of absence
- › secondment
- › unpaid parental leave
- › other forms of unpaid long-term leave.

Secondments under the long-term leave provision refer to internal transfers only (such as within a TEO). A secondment under the long-term leave provision allows staff who are, for example, seconded out of an academic position into a purely administrative role within their TEO to remain eligible to participate in the Quality Evaluation process.

Where staff members are seconded to another TEO or to a non-TEO, the long-term leave criteria do not apply. The home TEO retains any funding and Quality Category results relating to that staff member. Staff members seconded to another TEO cannot be considered eligible at both the home TEO and the host TEO.

To be eligible at both TEOs, a staff member would need to have a separate employment agreement or contract for service with each TEO. See below.

Eligibility of staff members employed by two or more TEOs or who leave in the year before 11 June 2026

Staff employed concurrently by two or more TEOs

If a staff member is employed by two or more participating TEOs, and is PBRF-eligible at both TEOs, they are referred to as a **concurrently employed staff member**. Funding for that staff member can be shared by both TEOs.

A staff member employed by two or more TEOs but who is only PBRF eligible at one of them can only be counted by the TEO where they are PBRF eligible and is **not** considered a **concurrently employed staff member**.

Submitting data for concurrently employed staff members

The TEO where the staff member has the highest FTE should submit the EP. If the FTE is equal at the two or more organisations, the staff member must choose the organisation through which they submit their EP.

TEOs should record information on any PBRF-eligible staff member who is concurrently employed in their Staff Data file. This will ensure that the TEC can match and proportion funding appropriately.

The Quality Category awarded to a concurrently employed staff member will be reported against the TEO that submitted the EP.

Transferring staff members

PBRF-eligible staff members who leave a participating TEO after 12 June 2025 and are employed by another participating TEO before or on 11 June 2026 are considered **transferring staff members**.

TEOs may be able to share funding for those staff members. In the PBRF funding calculation, transferring staff members are counted according to the relevant proportion of their contribution on an FTE basis for each TEO. The TEC will calculate the effective FTE based on the information provided by each TEO in the Staff Data file.

The following table shows the proportion of an FTE applying to staff members leaving or arriving at a TEO in the 12 months before 11 June 2026. The same proportions will be applied if a staff member's FTE is less than 1.0.

Month	Proportion of FTE for staff leaving in this month	Proportion of FTE for staff arriving in this month
July 2025	0.08	0.92
August 2025	0.17	0.83
September 2025	0.25	0.75
October 2025	0.33	0.67
November 2025	0.42	0.58
December 2025	0.50	0.50
January 2026	0.58	0.42
February 2026	0.67	0.33
March 2026	0.75	0.25
April 2026	0.83	0.17
May 2026	0.92	0.08
June 2026	1.00	0.00

Submitting data on transferring staff members

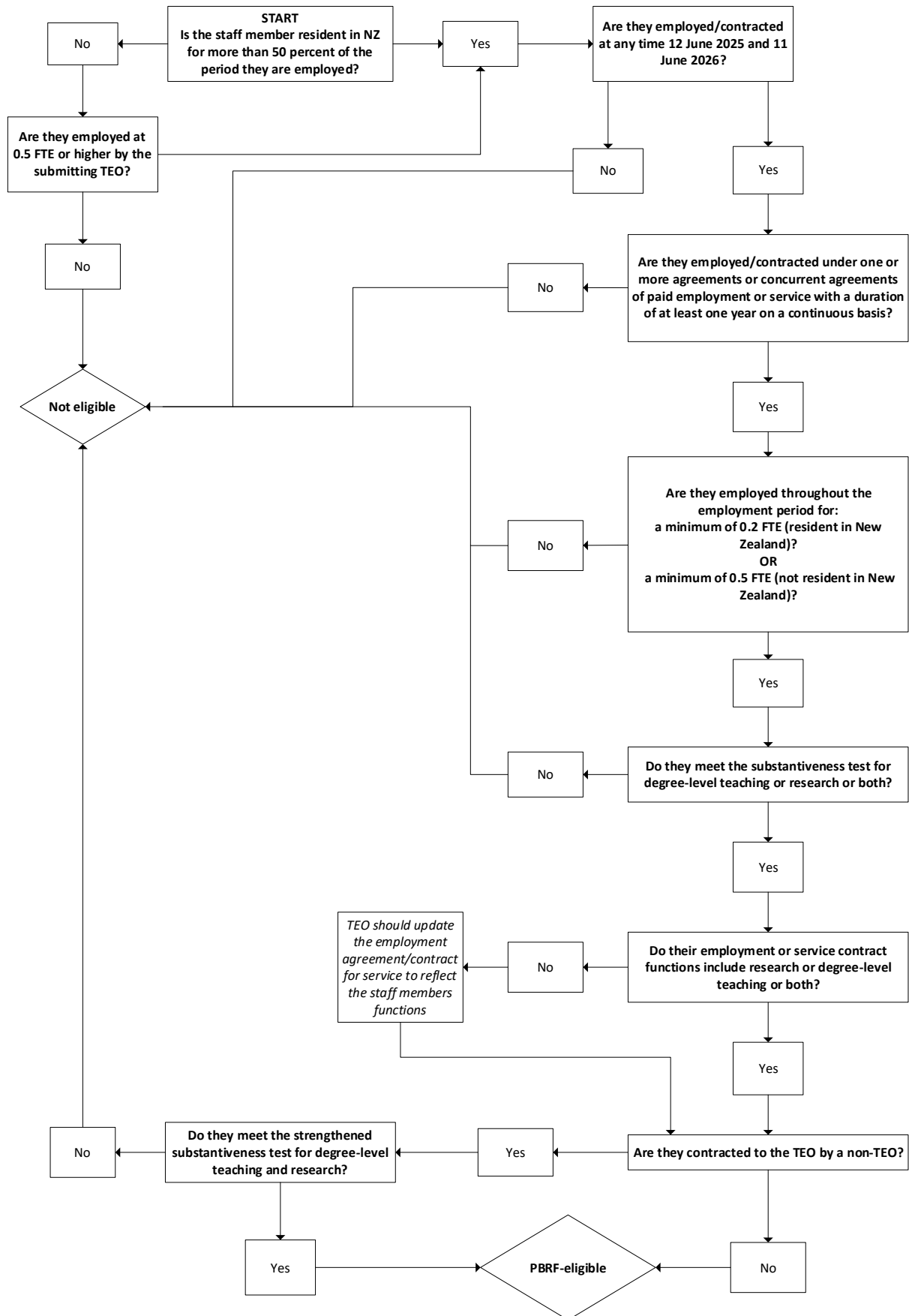
Only the TEO that employs the staff member on 11 June 2026 can submit an EP for that staff member. TEOs should, however, include information on any PBRF-eligible staff member who left after 12 June 2025 but before 11 June 2026 in their Staff Data file. This will ensure that the TEC can match and pro rata funding appropriately. TEOs should record the entire FTE of the transferring staff member in the Staff Data file, not the percentage based on the table above.

The TEC will apportion time for staff members who have a break in service between positions according to the month in which they left one organisation and commenced employment in the other (so they will count for less than 1.0 FTE).

The Quality Category awarded to a transferring staff member will be reported against the TEO that submitted the EP.

Staff members who are not employed in a participating TEO on 11 June 2026 are not eligible to participate even if they have been employed in the 12 months before that date.

Staff-eligibility decision tree for Quality Evaluation 2026



PBRF Staff Data file

TEOs participating in the PBRF are required to submit a PBRF Staff Data file. This contains information about staff members employed or contracted for services between 12 June 2025 and 11 June 2026:

- › for whom an EP is being submitted for Quality Evaluation 2026
- › who are PBRF eligible but left the TEO between 12 June 2025 and 11 June 2026 (potentially transferring staff)
- › who are PBRF eligible and concurrently employed by another TEO at 11 June 2026 that is submitting the EP.

This information must be submitted by TEOs through the PBRF IT System by **4.00pm 9 July 2026**.

This information will be used by the TEC to confirm the eligibility of staff and is subject to the TEC's data checking and verification audit.

The PBRF Staff Data file will contain the following information for each PBRF-eligible staff member:

- › their PBRF Unique Identifier
- › an individual identifier to help the TEO and TEC to identify the staff member
- › their title and name, including their preferred name if they use a different first name
- › their date of birth, gender, and ethnicity
- › their FTE for funding purposes (as set out above)
- › their employment start dates and, where applicable, end dates (essential for transferring staff)
- › if they are a New and Emerging Researcher, the date during the assessment period at which they became eligible
- › if they are submitting as a Part-Time staff member, confirmation of their average annual FTE over the assessment period (either 0.2-0.49 or 0.5-0.8 FTE)
- › their nominated academic unit within the TEO.

If a staff member is recorded as a New and Emerging Researcher or as Part-Time in the Staff Data file they can choose either to submit three EREs or to reduce submission requirements in line with the Achievement Relative to Opportunity framework.

Note: The TEC is developing a PBRF Staff Data file specification to support the technical aspects of completing this information. The PBRF Staff Data file specification document will be available shortly for feedback.



The PBRF Staff Data

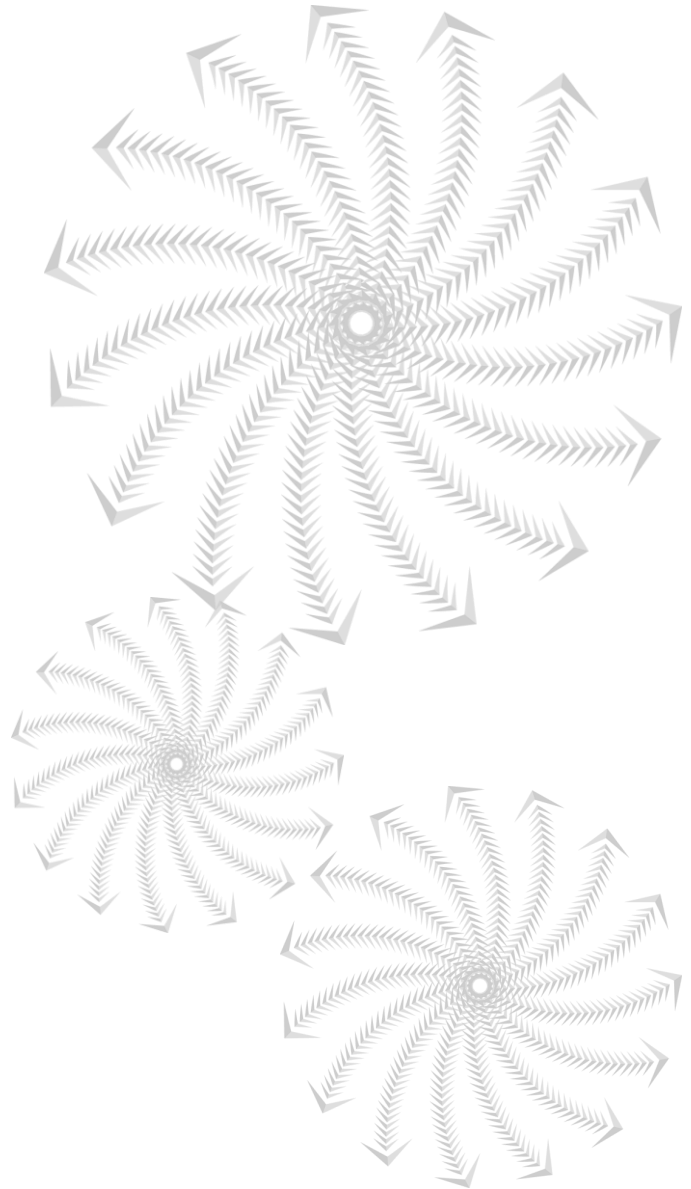
file is submitted to the TEC and collects information that supports the assessment and audit processes.



Collection of ethnicity data

Given the introduction of new ethnicity-based weightings, the TEC's Sector Reference Group recommended that these guidelines should clarify TEC expectations with regard to TEOs collecting information on staff member's ethnicity. Staff ethnicity declarations remain voluntary and TEOs' processes for collecting this information are subject to the Privacy Act 2020.

An assurance that TEOs have complied with this legislation has also been added to the CEO Declaration.



Quality Evaluation 2026

Achievement relative to opportunity

Making Quality Evaluation 2026 more equitable and inclusive

This chapter provides an overview of the new Achievement Relative to Opportunity framework. It covers why the framework has been introduced and which staff members it covers.

An ‘Achievement Relative to Opportunity’ framework

In July 2021, the Government released decisions on changes to the PBRF based on the recommendations of the PBRF Review held in 2019-2020. This included instructing the TEC to simplify the New and Emerging qualifying criteria and revise extraordinary circumstances qualifying criteria to:

- › Introduce a ‘merit relative to opportunity’ element to allow assessment of research quantity in ways that promote equity and inclusion
- › Ensure the process collects and evaluates information in a sensitive way, and limits the number of people with access to this information
- › Review and potentially remove the minimum threshold of three years for extraordinary circumstances
- › Allow for part-time employment to be considered more deliberately throughout assessment, including potentially in this category, and
- › Take account of the negative impacts of COVID-19.¹

To achieve this, Quality Evaluation 2026 introduces an equity-based Achievement Relative to Opportunity framework (the framework). The framework goes beyond the previous extraordinary circumstances provision, which are now redesigned as Researcher Circumstances and sit within the framework.

The framework recognises a wider range of professional and personal circumstances which can have an impact on individual researchers’ capacity to carry out research and research-related activity during the assessment period. For Quality Evaluation 2026, these circumstances are defined as:

- › Meeting the New and Emerging Researcher eligibility criteria
- › Meeting the new Part-Time employment definition
- › Declaring one or more of the eligible Researcher Circumstances types.

The purpose of recognising these three categories under the framework is to promote equity of outcomes for all staff who participate in the Quality Evaluation. This is achieved by providing different submission options for staff members who are eligible under the framework.

Quality Evaluation 2026 has also redesigned the way eligibility as a New and Emerging Researcher is determined, with a view to making this less complex for TEOs and more equitable for staff members.

¹ *Final Report back on the review of the Performance-Based Research Fund*, paragraph 59.
<https://assets.education.govt.nz/public/Final-report-back-on-the-Review-of-the-Performance-Based-Research-Fund.pdf>

Recognising staff members don't have the same opportunity to produce research

Under the framework, Quality Evaluation 2026 recognises that participating staff members will not have had the same opportunity to produce research during the assessment period. Rather than expecting panels to make subjective judgements about how this might have affected quality, the framework provides the opportunity for eligible staff members to submit fewer EREs, and/or for New and Emerging Researchers not to submit CRE items, without disadvantage. This approach is consistent with the PBRF's focus on quality rather than quantity in assessing research excellence.

The previous approach of asking staff members to submit between one and four Nominated Research Outputs (NROs) on a voluntary basis led to an inequitable situation where nearly all EPs submitted in 2018 contained the maximum of four. This meant that New and Emerging Researchers, Part-Time staff, and staff with extraordinary circumstances were all expected in practice to have the same quantity of NROs as other staff.

For Quality Evaluation 2026, there is a common, fixed requirement that all EPs will have three EREs, unless the staff member is eligible under the framework. Where any of these three categories apply to an eligible staff member, they will have different EP submission options to a staff member to whom these circumstances do not apply.

There is a distinction in the framework between the approach for New and Emerging and Part-Time staff members compared to the approach for staff members with Researcher Circumstances. Being New and Emerging or Part-Time both relate to an individual's employment status and therefore cannot be opted into or out of for the purposes of the Quality Evaluation. Researcher Circumstances provisions, however, recognise personal circumstances outside of employment status, and are voluntary to declare.

Under the framework, New and Emerging and Part-Time staff members who meet the criteria can choose whether they want to submit three EREs or if they want to submit fewer EREs, in accordance with the options open to them. These staff members will be recorded as New and Emerging and/or as Part-Time in the Staff Data file regardless of which submission option they choose.

For Researcher Circumstances, the choice for a staff member is whether to make a declaration. If a Researcher Circumstances declaration is made and validated by the submitting TEO, then the staff member's EP **must** contain fewer than three EREs. The number of EPs will depend on the duration of the Researcher Circumstances declared. If the staff member wishes to submit three EREs, they can do so, but they cannot also declare Researcher Circumstances. Under the framework, the sole reason for a staff member to claim Researcher Circumstances is to enable them to submit fewer EREs.

Focus on submission requirements

The purpose of the framework is to create an accommodation for staff members who have experienced reduced opportunities to conduct research and produce research outputs during the assessment period.

The principle underlying this approach is that the most equitable way that an individual's circumstances can be meaningfully reflected in submission requirements is by considering the amount of time the circumstance/s has affected their research activity as a proportion of the total assessment period. On this basis, submission options and requirements for EPs submitted by New and Emerging and Part-Time staff, and for staff members declaring Research Circumstances, vary according to the amount of time the circumstance has applied.

This approach removes the need for staff members with Research Circumstances to have to share personal and private information and for panels to make highly subjective judgements about how this related to the quality of the EP being considered. Under the framework, the specific nature or severity of individuals' circumstances has no bearing on determining submission requirements beyond recognition of the amount of time they were affected.

Staff members eligible under the framework who choose to submit one or two EREs can still submit up to eight OERs and up to ten CREs. They can also include up to three Supplementary Items in each ERE they include. Unless they are New and Emerging, staff members who are Part-Time or who declare Researcher Circumstances must still include at least one CRE item in the CRE component.

Replacing Extraordinary Circumstances with Researcher Circumstances

As part of the introduction of the framework, extraordinary circumstances have been replaced by Researcher Circumstances. This change includes not just a new name, but also some revisions to the previous three types and the addition of two new types of eligible circumstance. There have also been changes to the process for making declarations and the role these play in the assessment.

Previously, staff members could declare extraordinary circumstances and still submit four NROs. They were required to make a personal statement which was included in their EP. This was then considered by the assessment panel at the Holistic Quality Category stage. To be included, the circumstance had to have a duration of at least three years. This approach has now been replaced by providing staff members with the option to submit fewer EREs.

Changes to existing types and new types

The previous Extraordinary Circumstances - Canterbury Earthquakes provision, which was part of the design of the PBRF in 2012 and 2018, has been removed. However, staff members can still make declarations related to the impacts of the Canterbury Earthquakes under the new *Force majeure* type of Researcher Circumstances described further below.

The three types defined under previous general Extraordinary Circumstances have been retained with some minor changes.

Two new types have been added: ***Career breaks or interruptions in employment*** and ***Force majeure***. These new types have been added to create more flexibility to recognise the kinds of events that can impact on staff members.

The addition of *Force majeure* recognises that the design of the PBRF will benefit from anticipating disruptions due to unexpected events. The design of the PBRF

means that any assessment period carries a moderate likelihood of having to find a way to manage disruptions. This has been seen with the need to introduce a Canterbury Earthquakes provision for 2012 and in this round with the COVID-19 pandemic. Both previous Canterbury Earthquakes provisions and a new COVID-19 provision have been incorporated into the *Force majeure* category.

These types are explained in the section on Researcher Circumstances below.

Removing personal statements

Feedback from the previous Quality Evaluation and the PBRF Review highlighted concerns from both staff members and panels, about the requirement to submit a personal statement in an EP. This process was seen as an inappropriate intrusion on staff members' privacy and potentially retraumatising.

As employers, TEOs have previously played a role in validating staff members' extraordinary circumstances declarations, and this will continue. However, under Researcher Circumstances any requirement to submit a personal statement as part of the EP has been removed.

The submitted EP will contain information that Researcher Circumstances have been claimed, the type, and the duration. This will provide assurance to panels that the EP has the correct number of EREs, and a very broad indication of the reason for this.

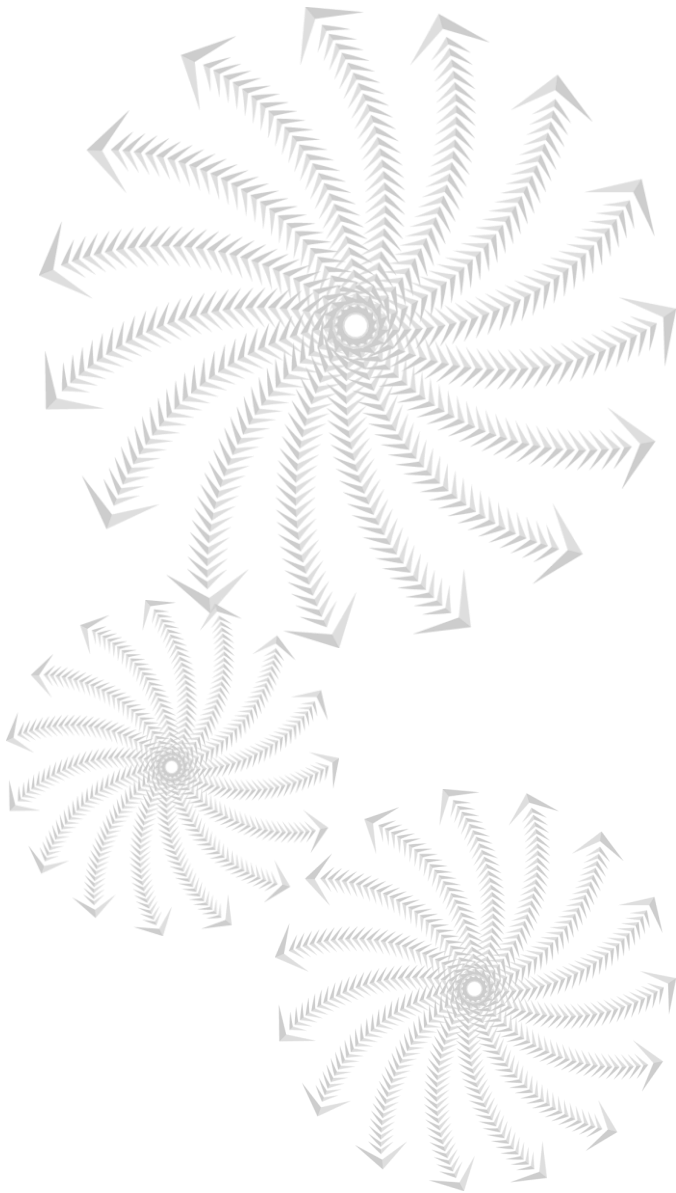
Duration of eligible impacts

The settings for the duration of researcher circumstances have been changed. Researcher circumstances can now be claimed where the impact on research is six months or more, rather than three years.

The Government instructed the TEC to consider removing or reducing the current requirement that extraordinary circumstances must have impacted on research quantity for a minimum of three years total during the assessment period. This followed a recommendation in the PBRF Review to reconsider this limit in particular because it is longer than common parental leave periods, and thus may reinforce inequities for women, who are more likely to take parental leave.

The Office for Disability Issues has also provided advice that a three-year limit is not consistent with the [New Zealand Disability Strategy](#), which defines a person as disabled where their condition lasts for six months or more. This advice has informed the minimum total length of time Researcher Circumstances must have impacted on research quantity.

Researcher Circumstances can be declared for any length of time longer than six months. The effect of these is grouped into two time periods: 6 months to 4 years, and more than four years (i.e. more than half of the eight-year assessment period).



Quality Evaluation 2026

EP submission options

How the framework affects Evidence Portfolio submission requirements

How many EREs should an eligible staff member submit?

Most staff members will include three EREs in their EP and all EPs must include a minimum of one ERE.

Only staff members who meet one or more of the following criteria will have the option to include fewer than three EREs in their EPs:

- › They first met the eligibility criteria for being a New and Emerging Researcher during the assessment period
- › They were employed Part-Time in a PBRF-eligible role for at least 0.2 FTE and up to a maximum of 0.8 FTE across the duration of the assessment period (1 January 2018-31 December 2025)
- › They have declared validated Researcher Circumstances.

Staff members who are New and Emerging and/or Part-Time can still choose to submit three EREs in their EP. However, they also have the option to submit either one or two EREs, depending on when during the assessment period they first met the criteria for New and Emerging and/or whether their average FTE was more than 0.49 FTE over the assessment period.

Staff members who declare and have validated Researcher Circumstances cannot include three EREs in their EP. Depending on the duration of impact for the Researcher Circumstances declared, these staff members will be able to submit either two EREs (where the impact was between six months and four years) or one ERE (where the impact was for more than four years) in their EP.

More detailed information about the submission requirements for staff members who meet these criteria is provided below. Where a staff member has not experienced any of these eligible circumstances, they must include three EREs in their EP.

New and Emerging Researchers

Under the framework, New and Emerging staff members have a choice about the number of EREs they include in their EPs, depending on when in the assessment period they first met the criteria for New and Emerging Researchers. This includes the option to include three EREs.

Date of eligibility as a NER	Number of EREs in EP
1 January 2018 – 31 December 2021 (inclusive)	› Minimum of two EREs › Option to submit three EREs
1 January 2022 – 31 December 2025	› Minimum of one ERE › Option to submit up to three EREs

Part-Time employment

Under the framework, Part-Time staff members have a choice about the number of EREs they include in their EP, depending on the total proportion of FTE they worked across the assessment period. This includes the option to include three EREs.

Proportion of FTE employment across assessment period	Number of EREs in EP
0.5–0.8 FTE total	› Minimum of two EREs › Option to submit three EREs
0.2–0.49 FTE total	› Minimum of one ERE › Option to submit up to three EREs

FTE calculations for Part-Time staff are based on 1 FTE = 37.5 hours per week.

As Part-Time staff have the ability to choose a reduced ERE submission requirement, they are no longer able to provide commentary on any impacts of being part-time in the Platform of Research – Contextual Summary field as was done in 2018. As a result, that field has been shortened from 2,500 characters to 1,500 characters.

Researcher Circumstances

The purpose of providing staff members with the ability to declare Researcher Circumstances is to allow them to account for circumstances that have led to reduced research outputs and activity during the assessment period. This is a completely voluntary option and a choice for each staff member to make, depending on their circumstances and the effect these have had on their ability to carry out research during the assessment period.

For this reason, when a staff member declares Researcher Circumstances this creates fixed submission requirements in terms of the number of EREs in their EP. Unlike other staff members, they no longer have the option of submitting three EREs. This applies in all cases, including when Researcher Circumstances are combined with other circumstances such as being a New and Emerging Researcher and/or being Part-time.

This means that a staff member who has declared eligible Researcher Circumstances to their TEO, and had these validated, will either submit one or two EREs in their EP. The number of EREs submitted depends on the total duration of impact, taking into account all eligible Researcher Circumstances experienced, across the submission period.

Total duration of Researcher Circumstance/s impact across assessment period	Number of EREs in EP
Six months – four years' total duration	› Two EREs
More than four years' total duration	› One ERE

Staff members who have been affected by multiple eligible circumstances

Some staff members may have been affected by more than one of the eligible circumstances defined by the framework. For example, they may be New and Emerging and also Part-Time; or they may be New and Emerging and also wish to declare Researcher Circumstances.

In these cases, each factor is taken into account in determining the number of EREs that can be submitted. However, for an assessment to take place an EP cannot contain less than one ERE.

In some instances where PBRF-eligible staff members have been affected by multiple circumstances, the cumulative impact may be such that the TEO may wish to consider whether the most appropriate outcome is that the staff member is not expected to submit an EP for Quality Evaluation 2026. These are:

- › Staff members who declare Researcher Circumstances with an impact lasting more than 4 years, who also meet any other eligible circumstances i.e. they are either New and Emerging or Part-Time. The maximum number of EREs this staff member can submit would be one.
- › Staff members who declare Researcher Circumstances with an impact lasting less than 4 years, who also meet two other eligible circumstances i.e. they are New and Emerging and Part-Time. The minimum number of EREs this staff member could submit would be one, with the choice to submit up to two EREs.

The tables below explain the different ERE requirements for all staff, including those staff who are affected by multiple circumstances.

Staff members who don't have Researcher Circumstances declarations

Staff member...	Full-time at 1 FTE	0.5–0.8 FTE total across assessment period	0.2 –0.49 FTE total across assessment period
Is not NER	3	Up to 3, minimum of 2	Up to 3, minimum of 1
First met NER criteria between 1-Jan-2018 and 31-Dec-2021	Up to 3, minimum of 2		
First met NER criteria between 1-Jan-2022 and 31-Dec-2025			

Note: Staff with the submission option of 'Up to three, minimum of 1' will be able to submit one, two, or three EREs.

Staff members with Researcher Circumstances where the impact is six months – four years

Staff member...	Full-time at 1 FTE	0.5–0.8 FTE total across assessment period	0.2 –0.49 FTE total across assessment period
Is not NER	2		Up to 2, minimum of 1
First met NER criteria between 1-Jan-2018 and 31-Dec-2021	Up to 2, minimum of 1	Up to 2, minimum of 1; however, TEOs may wish to consider whether the most appropriate outcome is that the staff member does not submit and EP	
First met NER criteria between 1-Jan-2022 and 31-Dec-2025			

Staff members with Researcher Circumstances where the impact is more than four years

Staff members who declare Researcher Circumstances of more than four years' impact who are affected by **any** other eligible circumstance can only submit one ERE. However, TEOs may wish to consider in such instances whether the most appropriate outcome is that the staff member is not expected to submit an EP.

Deciding if the framework applies to a staff member

New and Emerging Researchers

Once a TEO has determined which of its staff are eligible to participate in Quality Evaluation 2026, they need to determine if any eligible staff can be categorised as New and Emerging Researchers.

New and Emerging Researcher status is specifically for staff members who have started their research career in the Quality Evaluation 2026 assessment period (1 January 2018 – 31 December 2025).

The purpose is to allow these staff members, who are starting to build a platform of research outputs but have had limited opportunities to engage in the kinds of activities submitted in the CRE component, to be recognised and funded under the PBRF. This category also supports the Government's goal of building a sustainable tertiary workforce.

The new eligibility criteria and guidance are designed to simplify the process of correctly and consistently identifying New and Emerging Researchers.

New and Emerging Researcher eligibility criteria

New and Emerging Researchers are defined as staff members who meet the PBRF eligibility criteria at the census date, and first became independent researchers on or after **the start of the assessment period** on 1 January 2018.

For the purposes of the PBRF Quality Evaluation, an individual is deemed to have become an independent researcher from the date at which they first held a contract of employment of 0.2 FTE or more at any organisation (whether in Aotearoa New Zealand or elsewhere) in which their role included the expectation to carry out one or more of the research activities described in the 'substantiveness test for research'.

The revised substantiveness test for research, which applies for the purposes of determining PBRF eligibility and New and Emerging status, is as follows:

Staff members are required to undertake one or more of the following: the design of research activity; the preparation of research outputs that is likely to result in being named as an author (or co-author or co-producer) on one or more research outputs; the academic supervision of graduate research students in a primary, joint, or co-supervisor role.

Guidance on applying the New and Emerging Researcher criteria

TEOs should refer to the following clarifications in applying the definition of a New and Emerging Researcher and the substantiveness test for research:

- › Staff members who are employed to:
 - carry out supervised or non-independent research activity (for example research assistants or postdoctoral research fellows who do not design their own research activity), and
 - students who carry out supervised or non-independent research activity (including research degrees)

are not considered to meet the definition of an independent researcher for the purposes of the Quality Evaluation, regardless of whether they carry out

activities that would otherwise appear to meet the substantiveness test for research.

- › Membership on supervisory teams in non-primary, non-joint, or non-co-supervisory roles is not considered to meet the academic supervision criterion in the substantiveness test for research.
- › Job titles are not relevant to determining whether a staff member meets the definition of an independent researcher.
- › The independent production of research outputs where that is not a role requirement is not relevant to determining whether a staff member meets the definition of an independent researcher.
- › Where a staff member was self-employed prior to commencing a PBRF-eligible role in a TEO, the substantiveness test for research should still be applied, i.e. was the staff member required to carry out research as a function of that self-employed role. Where the application of the substantiveness test for research does not produce a clear outcome, the staff member will not be considered to have met the definition of an independent researcher in that self-employed role.

TEOs should assess any potential New and Emerging Researchers against this new definition, noting that it focuses on the role in which someone is employed, and no longer includes reference to outputs that meet the definition of research.

It is important for TEOs to document their rationale for their decisions for audit purposes. As a minimum, you must be able to provide the staff member's CV. A sample of staff identified as New and Emerging Researchers will be reviewed as part of the TEC's Data Evaluation audit. TEOs will be able to discuss the eligibility criteria and evidence requirements with auditors during the Process Assurance audit before EPs are submitted in July 2026.

EPs of staff that the audit process establishes have incorrectly assigned New and Emerging Researcher status will continue to be assessed as part of Quality Evaluation 2026. However, they will not be considered eligible for the C(NE) or R(NE) Quality Categories.

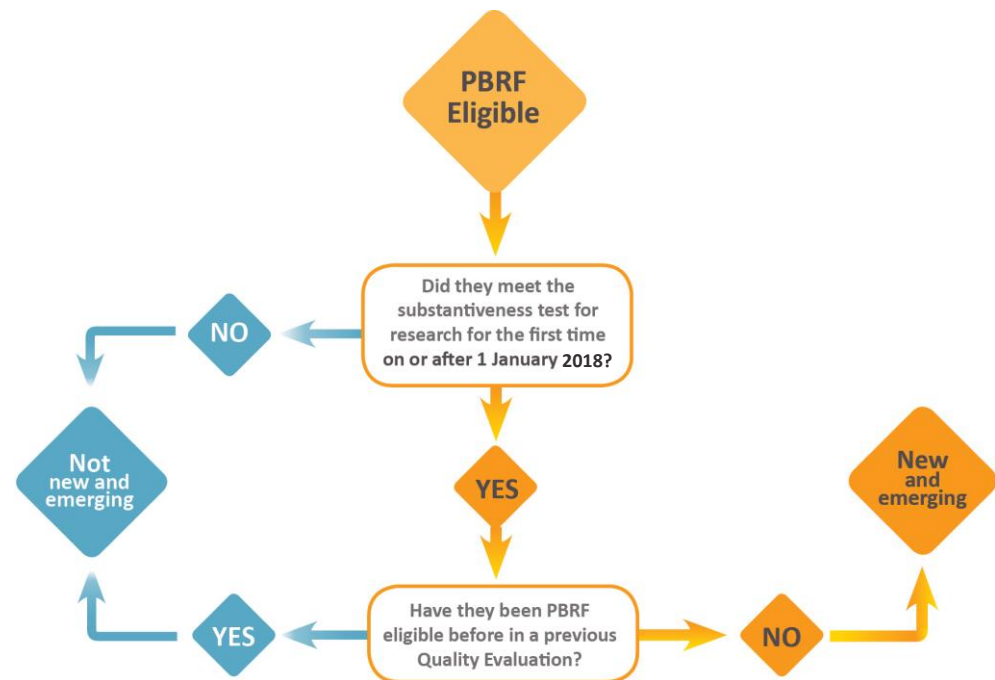
Working examples for determining if a staff member can be categorised as new and emerging are set out in the table below.

Examples	Meets PBRF staff-eligibility criteria	Meet the substantiveness test for research for the first time on or after 1 January 2018	PBRF eligible in a previous Quality Evaluation?	Decision
Staff member A is a recent PhD graduate and completed their thesis in 2019. Staff member A is employed to teach and to undertake research at 1 FTE since 1 March 2020.	Yes.	Yes – they have been employed to undertake independent research for the first time in the assessment period.	No – they have not been employed by a TEO before.	New and Emerging
Staff member B has been employed at 0.4 FTE to teach on a degree-level course since 1990 but is not employed to undertake research or any research-related activity.	Yes.	No – they do not meet the substantiveness test for research during any assessment period because it isn't required by their role.	Yes – they were eligible but were not put forward for assessment.	Not New and Emerging

Examples	Meets PBRF staff-eligibility criteria	Meet the substantiveness test for research for the first time on or after 1 January 2018	PBRF eligible in a previous Quality Evaluation?	Decision
Staff member C has been employed to teach on a sub-degree programme since 2000. In 2019, their role changed and they were required to teach a degree-level programme and undertake research at 0.5 FTE.	Yes.	Yes – the job changes mean they met the substantiveness test for the first time during the assessment period.	No – they were not eligible as they did not meet the PBRF staff-eligibility criteria until 2019.	New and Emerging
Staff member D has been employed to teach for the first time on a degree-level programme for 0.2 FTE for three years from 2024. Staff member D has been employed due to their expertise in their professional area and is not required to undertake research as part of their role. They have and continue to work as a self-employed artist who produces outputs including exhibitions and other creative outputs for the past 15 years that the TEO believes meet the PBRF Definition of Research.	Yes.	No – They met the definition of being an independent researcher before the start of the assessment period as a requirement of their self-employed role.	No – they have not been employed by a TEO before.	Not New and Emerging
Staff member E has been employed to supervise graduate research students and teach full-time on a degree-level course since 1 January 2018. Before 2018, they mentored colleagues in the workplace but did not undertake any academic supervision or teaching in an academic setting. They have a long career in product development and have produced a number of products and hold several granted patents and have received industry awards for excellence.	Yes.	No – They met the definition of being an independent researcher before the start of the assessment period through their previous role in which they were required to produce outputs that met the PBRF Definition of Research.	No – they have not been employed by a TEO before.	Not New and Emerging
Staff member F completed their PhD in 1999 and has started an academic role for the first time in July 2018 after working in the private sector. They are now employed full-time to teach and undertake research. During 1999-2017 they wrote a number of research papers that were published, and these met the PBRF Definition of Research.	Yes.	Yes – the previous research wasn't undertaken as a requirement of a relevant role.	No – they have not been employed by a TEO before.	New and Emerging

Examples	Meets PBRF staff-eligibility criteria	Meet the substantiveness test for research for the first time on or after 1 January 2018	PBRF eligible in a previous Quality Evaluation?	Decision
Staff member G has worked as a lecturer since 2012 at a university in the UK teaching on degree programmes and carrying out research as part of their role. The staff member is appointed full-time as a lecturer at an NZ university in 2020, with degree-level teaching and research obligations.	Yes.	No. They met the substantiveness test for research from 2012.	No – they have not been employed by a NZ TEO before.	Not New and Emerging
Staff member H completed their research degree in 2016 and published journal articles from their thesis before 1 January 2018. The staff member started an academic role for the first time in 2019. They are now employed full-time to teach at degree and postgraduate level and to undertake research.	Yes.	Yes. They were employed for the first time in an eligible role during the assessment period. Their previous publications were not undertaken as a requirement of a role.	No – they have not been employed by a TEO before the start of the assessment period.	New and Emerging
Staff member J has been employed in a teaching-only role at 0.6 FTE since 2020, when they completed their doctoral study. They meet the criteria for playing a major role in teaching and assessment. They are not required to carry out research as part of their role, but they have published enough research outputs to be likely to receive a 'C' funded Quality Category.	Yes.	No. They don't meet the substantiveness test for research. The TEO can still submit an EP if it is likely to meet the standard for a C (or higher).	No	Not New and Emerging

New and Emerging Researcher decision tree



Part-time researchers

The following definition and guidance will be used by TEC and TEOs to determine which of their PBRF-eligible staff qualify as Part-Time for the purposes of determining EP submission options and requirements:

Part-time researcher definition

For the purposes of determining EP submission requirements a PBRF-eligible staff member is considered to be employed Part-Time if they:

- › Held a relevant contract or contracts for employment during the assessment period that:
 - At any one time totalled less than 1.0 FTE; **and**
 - in total comprised a maximum of 0.8 FTE across the duration of the staff member's employment during the assessment period.

Note that:

- › 1.0 FTE is defined as 37.5 hours a week.
- › In order to be considered PBRF eligible, a staff member's role must be a minimum of 0.2 FTE.
- › Only contracts for roles that qualify the staff member for PBRF eligibility, or non-TEO roles that meet the substantiveness test for research, are relevant in calculating a staff member's FTE for this purpose.
- › Applying the definition of Part-Time for the purposes of determining EP submission requirements is separate from the process of calculating FTE for the purposes of determining PBRF staff eligibility and calculating funding allocations. The definition of a Part-Time researcher relates to the FTE over the whole assessment period of 1 January 2018 to 31 December 2025, rather than the FTE for the 12 months before/after 11 June 2026.
- › All relevant roles must be included in calculating FTE across the assessment period, including where the staff member changed employer.
- › In calculating FTE across the assessment period, periods where the staff member was not employed in any PBRF-eligible role, or any other role which met the substantiveness test for research, should be excluded. Such periods can be claimed under the Career breaks Researcher Circumstance type.
- › TEOs will need to declare the Part-Time FTE for all staff members meeting the criteria, even if they have opted to submit three EREs. This is important to provide visibility of the choices Part-Time staff members have made under the Achievement Relative to Opportunity framework.

Researcher Circumstances

Researcher Circumstances provisions for Quality Evaluation 2026 aim to ensure staff members who have experienced circumstances that have seriously affected the quantity of research outputs and research-related activities during the assessment period are treated equitably.

- › Researcher Circumstances will be considered by TEOs only in relation to the **quantity** of research outputs and other aspects of research activity produced during the assessment period.
- › TEO-validated Researcher Circumstances will allow a staff member to submit fewer EREs without disadvantage in the assessment. The number of EREs will depend on the duration of the Researcher Circumstances.
- › Panels will only receive the information that a staff member has declared Researcher Circumstances that have been validated by the TEO, the category of Researcher Circumstances claimed, and the duration of the impact.
- › Researcher Circumstances are not relevant to assessing the quality of research outputs and activities.
- › Staff members may claim one or more than one Researcher Circumstances provision if they are eligible. However, all EPs must contain at least one ERE.

Eligibility of Researcher Circumstances

TEOs must only submit Researcher Circumstances in EPs where they have validated that:

- › the staff member's circumstances are legitimate and there has been a reduction in the quantity of research outputs or research-related activity, or both, during the assessment period
- › the duration for which the staff member's circumstances have occurred during the assessment period.

Researcher Circumstances types

One or more of the following five researcher circumstances types can be claimed under this provision:

- › **Long-term illness or disability** that has affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This could include physical or mental disability, ill-health or injury, developmental conditions, or other disabilities, health conditions, or diseases that may be progressive or have fluctuating or recurring effects.
- › **Extended personal leave** that has affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This could include leave due to shorter-term physical or mental ill health or injury, parental leave relating to fertility, pregnancy, maternity, paternity, adoption, or childcare. Sabbatical leave is not considered in this circumstance.
- › **Significant family or community responsibilities** that have affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This includes responsibility for dependants, including caring for elderly or ill, injured or disabled family group or community members, or responsibilities to specific communities, such as iwi or Pacific communities.

- › **Career breaks or interruptions in employment** that have affected the quantity of research outputs produced and/or activities undertaken during the assessment period. This includes periods where the staff member was not employed in a PBRF-eligible role, or any other role in Aotearoa New Zealand or overseas, which met the substantiveness test for research, as well as periods of unemployment. Extended personal leave or leave without pay is not included in this circumstance.
- › **Force majeure:** a significant unforeseen natural or human-made event that has affected the quantity of research outputs produced and/or activities undertaken during the assessment period. These may include, but are not limited to, events such as earthquakes, including the ongoing impacts of the Canterbury earthquakes, floods, hurricanes, fire or other severe weather events, volcanic activity, pandemics, armed conflict, or terrorist attacks. The impacts on research must have occurred within the assessment period and meet the six-month summative threshold. The events can have occurred during or prior to the assessment period in Aotearoa New Zealand or anywhere in the world.

Note: The EP schema will allow the declaration of Force majeure, Force majeure – Canterbury Earthquakes, and Force majeure – COVID-19 as separate entries.

Validating Researcher Circumstances declarations

Where a TEO includes Researcher Circumstances in an EP, the circumstances must have been discussed with the staff member in sufficient detail that the TEO can make a judgement about the specific negative impact the circumstance(s) have had on the **quantity** of research or research-related activity, or both, in the assessment period.

There is no requirement for a description or evidential documentation to be included in an EP or submitted to the TEC. The TEC does require the TEO, which has the primary relationship with an affected staff member, to have discussed the circumstances and duration with the staff member and determined if there is a legitimate claim.

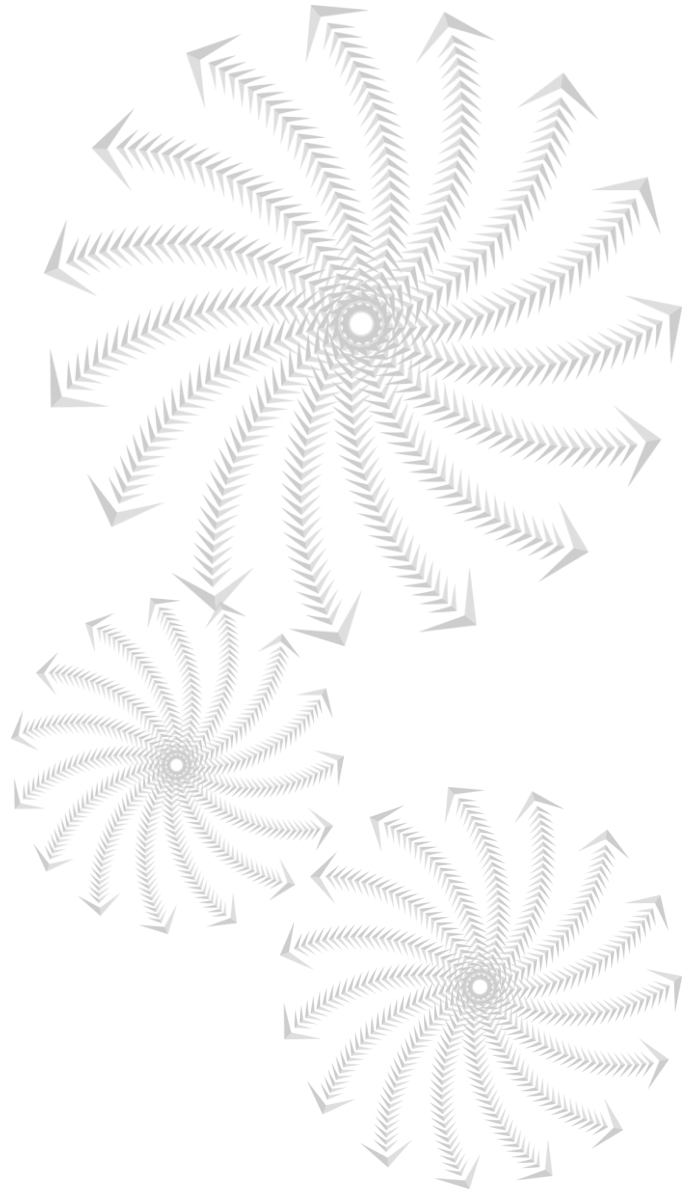
The process for inviting and validating Researcher Circumstances declarations will be as follows:

- › TEOs develop a process for inviting voluntary staff declarations of Researcher Circumstances and for ensuring the total duration of the impacts declared meets the minimum period of six months total across the assessment period. This process needs to include internally verifying that staff members have sustained a reduction in research outputs and research-related activity during the assessment period. Depending on the situation, this process could include, for example, seeking confirmation from the head of department or school or mapping research activity over time.
- › Staff make voluntary declarations to TEOs. Declarations include the category (for example, Long-term illness or disability) and the total duration of time the circumstance impacted on their ability to carry out research activity during the assessment period (for example, two years).
- › Declarations do not have to include any description of the circumstance/s or an impact statement. Declarations do not ordinarily include any personal information or records where the staff member has previously disclosed the

circumstance to their employing TEO. Where the staff member has not previously disclosed the circumstance, they will need to provide sufficient information to enable the TEO to validate the category of circumstance and the duration of impact.

- › Declarations will be used by the TEO to determine the submission requirements for the EP. The type of Researcher Circumstance, and its duration will be submitted in the Staff Data file and noted in the EP for panellists' information. Information in the declarations is not submitted as part of the EP and panellists will not make any assessment of declared Researcher Circumstances.
- › While declarations must be voluntary, it is the responsibility of TEOs to ensure Researcher Circumstances declarations are valid and have led to the declared impact. For the avoidance of doubt, where a staff member has not previously provided, and chooses not to provide information sufficient to validate a declaration, the TEO should not validate the declaration.
- › The TEO Audit Declaration requires the Vice-Chancellor or Chief Executive Officer to confirm that all reasonable steps have been taken to ensure that only staff members with legitimate Researcher Circumstances have claimed the provision.

The processes established by TEOs for inviting and validating declarations will be in scope for audit during the Process Assurance phase. If a TEO does not have any staff members claiming researcher circumstances, then they are not required to have such a process in place.



Quality Evaluation 2026

Understanding Evidence Portfolios

What is an Evidence Portfolio?

An Evidence Portfolio (EP) is the key element of the Quality Evaluation. It represents an eligible staff member's best examples of the research and research-related activity they carried out during the assessment period. An EP contains all the information that will be assessed by peer review panels.

EPs are submitted on behalf of staff members by participating TEOs where they have determined that a staff member is eligible and likely to achieve a funded Quality Category.

- › An EP has two assessed components:
 - the Examples of Research Excellence component (ERE component)
 - the Contributions to the Research Environment component (CRE component).
- › Everything included in these two components is assessed. The assessment is based on the quality of the research and research-related activities submitted in the EP.
- › EPs have a mixture of optional and non-optional items. All items submitted in the EP will be considered as part of the assessment of quality. The number of optional items included in the EP will have no bearing on the outcome of the assessment. This is in line with the principle that the PBRF Quality Evaluation assesses research quality, not quantity.
- › Staff members should select their best research outputs and research-related activities from the assessment period.
- › TEOs submit EPs following their internal processes. The TEC does not require staff members to sign off or approve the content of EPs submitted. Only one EP can be submitted for each PBRF-eligible staff member.
- › Te Reo Māori can be used to complete any of the information in the staff member's EP.

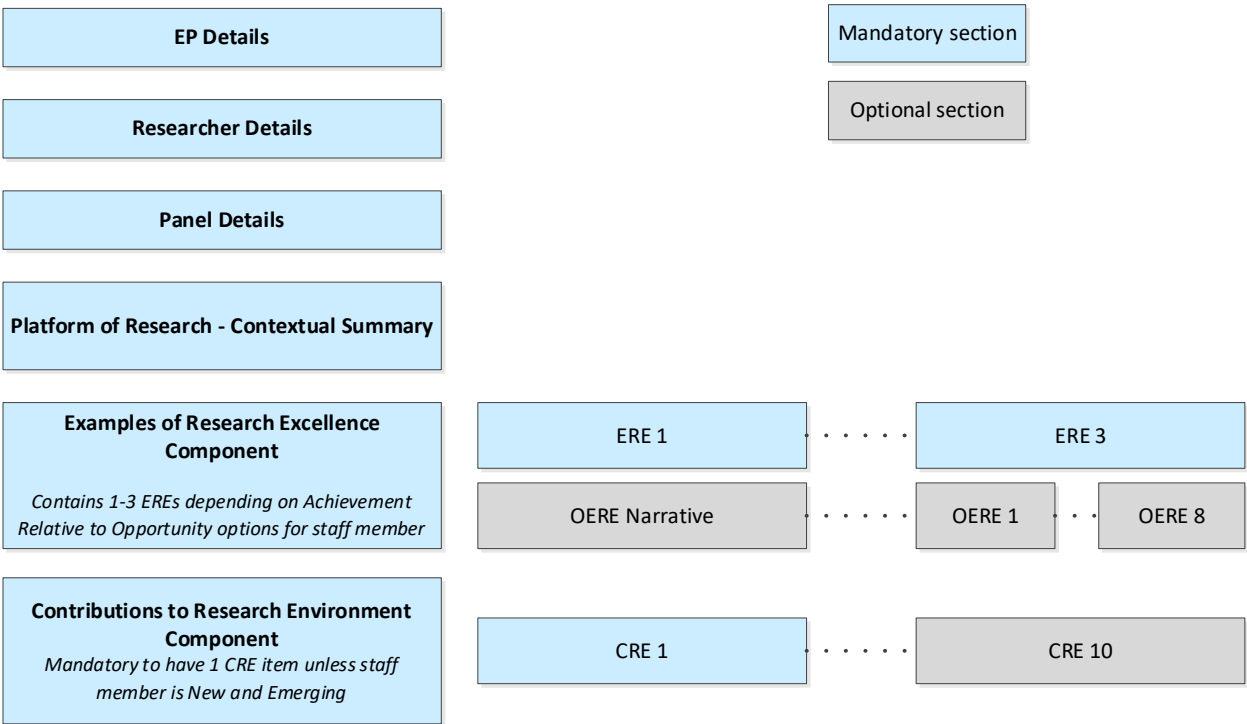
What information is in an Evidence Portfolio?

EPs submitted to Quality Evaluation 2026 are made up of the following sections:

- › EP Details
- › Researcher Details
- › Panel Details
- › Platform of Research – Contextual Summary
- › Examples of Research Excellence (ERE) Component:
 - Examples of Research Excellence (ERE) section
 - Up to three EREs, each containing:
 - ERE narrative
 - ERE Output
 - Up to three Supplementary Items
 - Other Examples of Research Excellence (OEREs) section
 - Single contextual narrative
 - Up to eight OEREs
- › Contributions to the Research Environment (CRE) Component
 - Up to ten CRE items

Some sections are optional, and some have a minimum and maximum number of items, while other parts are mandatory. The diagram below provides an overview to the EP structure and should be consulted in conjunction with the illustrative EP template.

Structure of Evidence Portfolios for Quality Evaluation 2026



EP = Evidence Portfolio. ERE = Example of Research Excellence. OERE = Other Example of Research Excellence.
CRE = Contributions to the Research Environment.

Evidence Portfolio Details and Researcher Details sections

The Evidence Portfolio Details and Researcher Details sections contain information that supports the administrative and procedural aspects of the Quality Evaluation.

- › The TEC has developed a detailed Evidence Portfolio Schema document to support the technical aspects of completing EPs.
- › The TEC has also developed an EP template that tertiary education organisations (TEOs) can use to help the development and completion of EPs with their staff members.



Confidential research outputs are research outputs that are not in the public domain in a traditional sense. However, for the purpose of Quality Evaluation 2026, the research is considered to be in the public domain when it is accepted by its commissioner. The flag in this section identifies them to the TEC to ensure that the proper process for managing them is followed.

TEOs should use the staff member's actual date of birth where possible. Where TEOs do not have a staff member's actual date of birth they can use a default date of birth.

Completing the Evidence Portfolio Details section

For each EP, a TEO completes fields to:

- › provide a unique EP identifier to help the TEO, the TEC, and panellists identify specific EPs
- › identify if the EP contains any ERE Outputs that are **confidential research** and if so confirm that permission has been given to allow the research to be assessed
- › identify if the staff member wants their Quality Category result sent to them by the TEO.

Completing the Researcher Details section

For each EP, a TEO enters:

- › the staff member's PBRF Unique Identifier
- › an individual identifier to help the TEO and the TEC identify the staff member
- › the staff member's title and name, including their preferred name if they use a different first name
- › the staff member's date of birth
- › the type and duration of any declared and validated Researcher Circumstances.

Information about whether a staff member is New and Emerging and/or Part-Time is collected via the Staff Data file and matched to the EP. Where the staff member is eligible, more than one Achievement Relative to Opportunity category can be declared. The PBRF IT system will use this information to validate the number of EREs the EP contains is correct. Submission options are explained in the Achievement Relative to Opportunity chapter.

The IT system will be live well before the submission dates, which will allow TEOs to test and identify any queries about submission requirements in advance.

Completing the Panel Details section

Staff members nominate a peer review panel and subject area for each EP they submit.

- › There are 14 peer review panels in Quality Evaluation 2026. Each panel is responsible for assessing a specific subject area or areas.

- › Each panel has developed panel-specific guidelines that provide further advice on the subject areas it expects to assess.
- › Staff members nominate one primary peer review panel. This will be the panel that undertakes the assessment and awards the Quality Category for the EP.
- › Staff members nominate one primary subject area from the 43 PBRF subject areas.
- › Staff members provide brief information on the primary field of research for the Field of Research Description, reflecting the content of the research in the staff member's EP. This information helps the Co-Chairs to assign the EP appropriately.
- › Panel Co-Chairs are able to recommend that the TEC transfers EPs to another panel. If this occurs, the TEO will be advised when it receives the results of the Quality Evaluation.

Which panel should be nominated as the primary panel?

The nominated peer review panel should be the one that best matches the majority of the research outputs and activities in the EP submitted. This will be the panel that covers the subject area or discipline that best matches the majority of the research outputs and activities.

43 subject areas have been identified across the panels, and staff members select the subject area that best matches their primary subject area of research in their EP. This may not always be the same as the subject area represented by the staff member's academic department.

Where the research outputs and activities in an EP involve interdisciplinary research that is covered by more than one panel, the TEO nominates the panel and the subject area that best matches the majority of the of the research outputs and activities in the EP. In these cases, the TEO notes the interdisciplinary nature of their EP in the Field of Research Description (see below).

What are the peer review panels and subject areas?

The 14 peer review panels and their subject areas are set out in the table below.

Panel	Subject areas
Biological Sciences	Agriculture and other applied biological sciences Ecology, evolution and behaviour Molecular, cellular and whole organism biology
Business and Economics	Accounting and finance Economics Management, human resources, industrial relations, international business and other business Marketing and tourism
Creative and Performing Arts	Design Music, literary arts and other arts Theatre and dance, film and television and multimedia



The subject area selected for the EP will be the subject area that the quality score will be reported under on a nationally standardised basis.

Research in the area of **design** can potentially be submitted to the Creative and Performing Arts panel (under Design) or the Engineering, Technology and Architecture panel (under Architecture, design, planning, surveying). The panel-specific guidelines for these two panels set out what each panel would expect to see from design research submitted to each of the panels, to help with allocation to one of these panels.

Panel	Subject areas
	Visual arts and crafts
Education	Education
Engineering, Technology and Architecture	Architecture, design, planning, surveying Engineering and technology
Health	Dentistry Nursing Other health studies (including rehabilitation therapies) Pharmacy Sport and exercise science Veterinary studies and large animal science
Humanities and Law	English language and literature Foreign languages and linguistics History, history of art, classics and curatorial studies Law Philosophy Religious studies and theology
Mātauranga Māori	Māori knowledge and development
Mathematical and Information Sciences and Technology	Computer science, information technology, information sciences Pure and applied mathematics Statistics
Medicine	Biomedical Clinical medicine
Pacific Research	Pacific research
Physical Sciences	Chemistry Earth sciences Physics
Public Health	Public Health
Social Sciences and Other Cultural/Social Studies	Anthropology and archaeology Communications, journalism and media studies Human geography Political science, international relations and public policy Psychology Sociology, social policy, social work, criminology and gender studies

EPs submitted to and assessed by the Mātauranga Māori Panel will have a funding weighting of 3 and EPs submitted to and assessed by the Pacific Research panel will have a funding weighting of 2.5.

Note that if an EP is not accepted for assessment by the Co-Chairs of these panels, it will be assigned the funding weighting of the new subject area to which it is reassigned.

Cross-referrals from other panels to the Mātauranga Māori and Pacific Research panels will not mean that the cross-referred EP receives the higher funding weighting of these two panels. The funding weighting for any cross-referred EP will be based on the weighting of the main subject area to which they have been submitted.

Completing the Field of Research Description

For Quality Evaluation 2026, we propose using Australia and New Zealand Standard Research Classification (ANZSRC) field of research codes for collecting the Field of Research. Previously this has been a free text field.

Providing Field of Research information through ANZSRC codes will standardise the data entered and help simplify the process of assigning EPs. It will also allow Field of Research level reporting, which has not been possible previously in part due to the wide variability of free text entries.

For each EP, a TEO enters up to four six-digit ANZSRC codes to identify the field of research. The text description of the codes will be displayed when panellists view the EP.

This information is used by Panel Co-Chairs to help with assigning the EP to appropriate panel members and to determine whether elements in an EP should be cross-referred to another panel. It is important that panels have:

- › a succinct and accurate description of the research field for the majority of the ERE outputs and activity contained in the EREs submitted; and
- › information that describes the staff member's research at the level of a discipline or sub-discipline (for example, educational psychology, molecular biology).

If the staff member's research is interdisciplinary, TEOs can indicate this by entering the relevant ANZSRC codes.

Completing the EP Languages field

For Quality Evaluation 2026, we propose adding an EP Languages field. As well as helping with EP assignment, over time this change will provide a richer dataset for understanding the Aotearoa New Zealand research landscape and in particular help to increase visibility and understanding of research in Te Reo Māori and Pacific languages.

For each EP, a TEO enters if it contains research that is in Te Reo Māori, a Pacific language, or one of a range of other languages commonly used in Aotearoa New Zealand (other than English).

This information is primarily used by Panel Co-Chairs to help with assigning the EP to appropriate panel members and to determine whether elements in an EP should be cross-referred to another panel.

It is the responsibility of submitting TEOs to ensure that all ERE Outputs submitted are accessible to panels for assessment. While some panels may have the capacity and expertise to deal with research in languages other than official Aotearoa New Zealand languages, in particular the Pacific panel, this should not be assumed for all panels. Panels are appointed for their expertise in assessment and their subject area knowledge. Panels are not expected or intended to necessarily have expertise in a range of languages.

We do not require a full translation of non-English language ERE Outputs into English. If a TEO chooses to provide full or part translations, there is no requirement for these to be independently validated. The TEC will not organise or fund translation of research outputs for assessment purposes.

Cross-referrals

Cross-referrals can happen in two different ways:

- › A TEO/staff member can include a cross-referral request in the EP when it is submitted based on the EP containing either Mātauranga Māori or Pacific research. This type of request can only be made for EPs containing Mātauranga Māori or Pacific research.
- › The Co-Chairs of the main panel to which an EP has been submitted can request a cross-referral to another Panel. This can occur between any panels.

In both cases, the decision on whether to accept the cross-referral request sits with the Co-Chairs of the Panel to which the request has been submitted.

When requesting a cross-referral, Co-Chairs must clearly indicate which part or parts of the EP they are cross-referring.

When considering whether to request or accept a cross-referral request, Co-Chairs will consider the EREs and OERs in the EP, as well as the information provided in the Field of Research section.

Completing Mātauranga Māori or Pacific research cross-referral requests

Cross-referrals to the Mātauranga Māori panel and the Pacific Research panel can be requested by the TEO when submitting an EP. This is done by including a Māori research cross-referral request or Pacific research cross-referral request in the EP. TEOs can include both if appropriate.

The cross-referral assessment may relate to part of an EP or to specific items within the EP. If a request is made, the decision on whether it is accepted or declined sits with the Co-Chairs of the Mātauranga Māori Panel or the Co-Chairs of the Pacific Research Panel (or both if both are completed).

After EP submission, the Co-Chairs of other panels can also at their discretion request that parts of any EP are cross-referred to these panels. These requests are subject to the decisions made by the Co-Chairs of the Mātauranga Māori Panel or the Co-Chairs of the Pacific Research Panel about whether to accept or decline the cross-referral request.

If a cross-referral request is accepted, Co-Chairs will need to advise the cross-referral panel member on what part or parts of the EP should be considered in the assessment. The panel member undertaking the cross-referral assessment must

provide a commentary along with the score(s) for their assessment. This commentary must include confirmation of the part or parts of the EP that were assessed and provide a rationale for the component score(s) provided.

Cross-referral assessment to the Mātauranga Māori Panel

If the Mātauranga Māori Panel is not selected as the primary assessment panel, a staff member can choose to indicate that their EP contains some research relevant to this panel by completing the Mātauranga Māori Panel cross-referral in their EP.

The Mātauranga Māori Panel cross-referral section in the EP allows researchers to complete a comment (500 characters) and reference up to five items in total from the ERE and/or CRE components of the EP relevant to Māori research. Commentary may include research based on Māori world views or Māori methods of research.

This information will help the Co-Chairs of the Mātauranga Māori Panel to determine if a cross-referral assessment is appropriate and assign the EP to an appropriate panel member(s). The Co-Chairs of the main panel to which the EP has been submitted will also consider the information provided.

If this request is included, a cross-referral request to the Mātauranga Māori Panel will be created in the system. The Co-Chairs of the Mātauranga Māori Panel will decide whether to accept or decline the cross-referral assessment.

The Mātauranga Māori Panel will normally assess EPs where there is evidence of research based on Māori world views (both traditional and contemporary) and Māori methods of research. TEOs and staff members should refer to the Mātauranga Māori panel-specific guidelines for further details on the coverage of this panel.

The Mātauranga Māori Panel will consider cross-referrals of EPs:

- › where they fit or overlap with the description of panel coverage and/or the definition of research in the Mātauranga Māori panel-specific guidelines
- › where one or more ERE addresses an issue of importance for Māori and clearly shows evidence of involvement with Māori or is specifically relevant to Māori
- › where they are of such a nature that they are able to contribute to the understanding of issues affecting Māori.

EPs that include a Māori component, for example, in their subject area, but that do not involve Māori methodologies will not be assessed by the panel.

The appointment of Māori Co-Chairs to every panel and the appointment of more Māori panel members is expected to reduce the need for cross-referrals to the Mātauranga Māori panel, as every panel will be better equipped to assess Mātauranga Māori research. However, these will be considered on a case-by-case basis to ensure each EP is appropriately assessed.

Note: If the Mātauranga Māori Panel is selected as the primary assessment panel, the Mātauranga Māori Panel cross-referral request in the EP should not be completed.

Cross-referral assessment to the Pacific Research Panel

If the Pacific Research Panel is not selected as the primary assessment panel, a staff member can choose to indicate that their EP contains some research relevant to this panel by completing the Pacific Research cross-referral request in their EP.

The Pacific research cross-referral section in the EP allows researchers to complete a comment (500 characters) and reference up to five items in total from the ERE and/or CRE components of the EP relevant to Pacific research.

This information will help the Co-Chairs of the Pacific Research Panel to determine if a cross-referral assessment is appropriate and assign the EP to an appropriate panel member(s).

If this request is included, a cross-referral request to the Pacific Research Panel will be created in the system. The Co-Chairs of the Pacific Research Panel will decide whether to accept the cross-referral assessment.

The Pacific Research Panel will evaluate all EPs where there is evidence of Pacific-based research methodologies that involve Pacific-centred subject matter and impacts on Pacific communities. TEOs and staff members should refer to the Pacific Research Panel-Specific Guidelines on the TEC website for further detail on the coverage of this panel.

The Pacific Research Panel expects that, where the Pacific Research cross-referral request is included, EPs will contain one or more EREs that:

- › use Pacific research methodologies or involve Pacific-centred subject matter
- › impact on Pacific communities and have significance for the wider community, for example, through influencing the direction of policy or practice
- › is recognised by peers as an important contribution to Pacific knowledge and development, indigenous knowledge and research by indigenous peoples.

Note: If the Pacific Research Panel is selected as the primary assessment panel, the Pacific Research cross-referral request in the EP should not be completed.

Completing the Platform of Research – Contextual Summary section

The Platform of Research – Contextual Summary is a narrative component which provides staff members with the opportunity to present panellists with information that will allow them to contextualise the items submitted in the ERE and CRE components.

It should provide a clear introduction to the research outputs, activities and research-related activity presented within the EP and reflect the staff member's overall platform of research. The focus is on how the staff member's overall platform of research and research activity has contributed to their field, discipline, or area, rather than on indicators of esteem or standing.

Staff members can also use this component to provide relevant information on their research context, which may include, for example:

- › the specific research environment they are working in, such as applied research or professional practice, relevant norms associated with that environment, and how this informs the type of research outputs and activities they produce
- › any changes in the focus of their research within the assessment period
- › any information about relevant activity carried out during the assessment period that is not submitted as an item within the EP but that provides important contextual information
- › an inter- and trans-disciplinary approach bridging multiple fields or multiple subcategories in a panel or across panels; for example, research that combines Mātauranga Māori and Western approaches.

As explained on page 78, 'Outputs with similar content', it is important to avoid including research outputs with overly similar content in an EP. However, if there is if this has been done then the reason for this could be explained in this section. It is unlikely that any rationale for including outputs with identical or near-identical content will be accepted by panels.

Each panel has developed panel-specific guidelines that may provide specific advice on what information should be included in the Platform of Research – Contextual Summary.

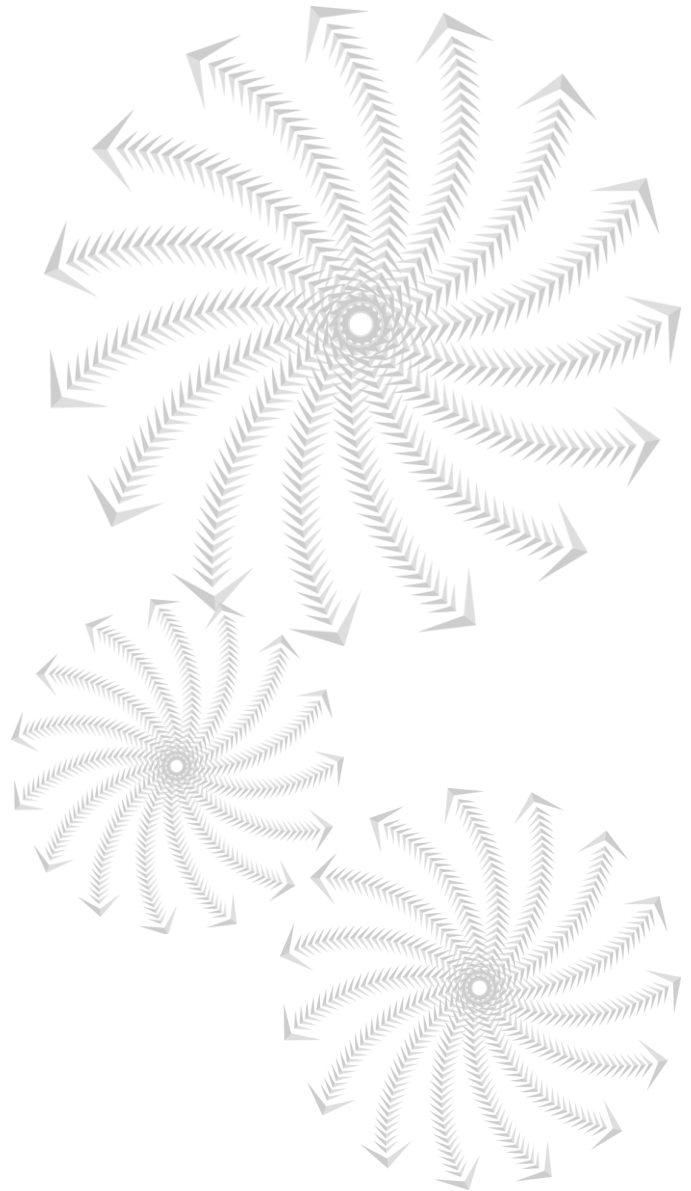
For Quality Evaluation 2026 the Contextual Summary – Platform of Research narrative has a reduced character count relative to Quality Evaluation 2018 (1,500 as opposed to 2,500). This reflects the new EP design, which provides other opportunities to give narrative detail and context through the contextual narrative required for each ERE, as well as through the optional OERE summary narrative.

It also reflects that the Achievement Relative to Opportunity framework means that narrative about being New and Emerging, or Part-Time, is no longer required in this field. Instead, these factors are taken into account via submission requirements.

The information in the Platform of Research – Contextual Summary will also support the panel to make judgements about the EP if it requires a detailed reassessment at the panel meeting.

The detailed reassessment process is primarily for exceptions, for example, where the component scoring may not produce a result that the panel judges correct when all information in the EP is considered together.

The detailed reassessment allows the panel to determine which of the available Quality Categories is most appropriate for an EP, by taking all relevant factors into consideration.



Quality Evaluation 2026

Completing the ERE and CRE components

Completing the Examples of Research Excellence component

The Examples of Research Excellence component (ERE component) is the main basis for the peer review panel's assessment of the quality of research and research activity presented in an EP. The primary focus of assessment is the individual Examples of Research Excellence (EREs).

- › The ERE component has a weighting of 70 percent of the total score for the Evidence Portfolio (EP). Everything submitted in the ERE component is assessed.
- › This component allows staff members to present EREs and OEREs.
- › To be included in the ERE component, research outputs and activities must meet the eligibility criteria for one of the defined types.
- › The eligibility of items in an EP will be subject to the TEC's data checking and verification audit.

What does the ERE component contain?

The ERE component contains two sections: an ERE section and an OERE section.

The ERE section contains between one and three EREs, depending on the submission options or requirements for the staff member. Each ERE contains a contextual narrative, an ERE Output, and up to three optional Supplementary Items.

Supplementary items must be related to the ERE Output and can be either research outputs or research activities. The ERE contextual narrative should explain how the Supplementary Items are connected to the ERE output.

The OERE section contains a single, optional OERE narrative and up to eight OEREs. OEREs can be either research outputs or research activities. The OERE items do not have to be connected to each other.

Assessment of EREs

EREs will be assessed based on their quality:

- › all research activity including activity related to research impact, whether basic, fundamental, strategic, artistic or applied, will be assessed against the same broad indicators of quality
- › all items included in the ERE will inform the assessment. The presence or absence of optional Supplementary Items, or the number of Supplementary Items, will not in and of itself play any role in the assessment of the quality of the ERE
- › it is expected that each ERE will comprise a coherent, holistic example of research excellence.

For most EREs, it is expected that there will be evidence of formal processes of academic peer review or other recognised forms of quality assurance. However, the absence of such review or other formal mechanisms of quality assurance will not in and of itself be taken to imply lower quality.

Each panel has developed panel-specific guidelines that may provide discipline and/or subject area-specific advice on completing the ERE component of EPs.

The Achievement Relative to Opportunity chapter of these Guidelines explains how to determine the number of EREs a staff member needs to submit in their EP. Staff members will not be penalised for having fewer than three EREs in an EP.

The Examples of Research Excellence (EREs) section

For most staff members, the ERE component of an EP will contain **three EREs**.

Each ERE contains:

- › a contextualising ERE narrative of up to 1,500 characters
- › an ERE Output
- › up to three optional Supplementary Items.

The ERE contextual narrative

Each ERE includes a contextualising ERE narrative of up to 1,500 characters. This summarises the nature and significance of the ERE as a whole.

The narrative should contextualise the ERE Output and articulate the links between the output and any Supplementary Items.

The ERE Output

Each ERE must include an eligible ERE Output. All types of ERE outputs will be considered on their merits. No particular type of ERE Output will be considered to be of higher quality than any other simply because of its type.

Submitting ERE outputs

TEOs must provide the following information for each ERE Output listed in an EP.

EP field	Information required	Character limit
Research Output Type	Chosen from the list of 16 research output types.	N/A
Quality Assured	An indicator that shows if the research output has been through a process that meets the definition of quality assured for the PBRF.	N/A
Title	The title of the research output as it appears on the output.	1,000
Authors	Listed in the order and as they appear on the output.	2,000
Year First Available	The year that the output was first publicly available (2018 – 2025 inclusive).	N/A
Output Source	Bibliographic information that can be used to identify where an item is published or made available. It can contain information such as parent document, volume, issue, article, chapter, session number, pagination, publisher, place	1,000

EP field	Information required	Character limit
	(normally the citation), and ISBN or ISSN where relevant. Which edition of a book should also be included, if an earlier edition was assessed in a previous Quality Evaluation.	
Individual Contribution (mandatory)	Researchers provide a clear description explaining their substantial and distinctive contribution unless they are the sole author/creator/producer of the output. <i>Qualitative descriptions will give panels the detailed information they need to assess an individual's contribution to a research output. Some journals require co-authored articles to include a statement on the relative contribution of each author. These statements can be used in the Individual Contribution field if available.</i>	1,000
Description	The nature of the quality-assurance process, particularly where this may not be standard within the discipline for this type of output or where the quality-assurance process can vary or is not easily recognised. If necessary: – a brief description of the research content or how the output meets the PBRF Definition of Research, where this is not evident from the output itself (for example, where it is a textbook) – a brief description of the new research material or aesthetic refinement undertaken during the assessment period where there is an earlier version of the output. Any other information specific to the research output type.	1,000

The information in the Title field and the Output Source field for ERE Outputs can include a translation into English if required.

Supplementary Items

Up to three Supplementary Items can be included in each ERE. These can be eligible research outputs or eligible research activities, or a mix of the two.

Only bibliographic or equivalent data (if a research output) or a brief description (if a research activity) is required for the assessment of Supplementary Items.

Where Supplementary Items are included in an ERE, they must be linked to the ERE Output in some way. It is for the staff member to determine and to articulate

through the contextualising ERE narrative what the nature of that relationship is. No particular type of relationship will be considered to be of higher quality than another.

Submitting research outputs as Supplementary Items

TEOs provide the following information for each research output submitted as a Supplementary Item in an EP.

EP field	Information required	Character limit
Research Output Type	Chosen from the list of 16 research output types.	N/A
Order of Presentation	A number from 1 to 3 to specify the order in which Supplementary Items will be presented for assessment following the ERE Output. <i>The order submitted by the TEO will be how the panel member sees the Supplementary Items when they assess the EP.</i>	N/A
Quality Assured	An indicator that shows if the research output has been through a process that meets the definition of quality assured for the PBRF.	N/A
Bibliographic Details/Description	Only bibliographic information, including that relevant to creative research types, can be included. Information must be entered in a recognised format. This must include the title or name of the output, author, and sufficient location details to enable the TEC to independently verify its production (for example, publication, publisher, publication year and place of publication, or the equivalent details for other output types such as creative works, such as names of galleries or venues and locations, number of pieces exhibited). No additional comments outside the scope of this, such as information on the quality or significance, can be included. <i>The information in the Title field and the Bibliographic Details/Description field for Supplementary Items can include a translation into English if required.</i>	1,000

Submitting research activities as Supplementary Items

TEOs must provide the following information for each Research Activity included as a Supplementary Item. Note: this is the same as for Research Activities submitted as OERs.

Field	Information required	Character limit
Research Activity Type	Chosen from the list of six research activity types.	N/A
Order of Presentation	Supplementary items: A number from 1 to 3 to specify the order in which Supplementary Items will be presented for assessment following the ERE Output. <i>The order submitted by the TEO will be how the panel member sees the research outputs when they assess the EP.</i>	N/A
Description	This should also provide information to evidence the claims, including key details of the activity, such as dates and organisation(s) or others involved. No additional comments outside the scope of this, such as information on the quality or significance, can be included.	1,000

The Other Examples of Research Excellence (OERE) section

The OERE section is part of the ERE component and forms part of the assessment of the EP. The OERE section includes an optional single contextualising narrative and the option to submit up to eight OEREs.

The OERE contextual narrative

If they wish, staff members can choose to complete an optional contextual narrative field of 1,000 characters.

This field provides an opportunity to highlight any relevant links between OEREs and EREs, any relationships between OERE items, or to address any unusual or unique aspects of OERE items relative to disciplinary norms.

The contextualising summary narrative for OEREs is optional. Its presence or absence will not be a factor in the assessment of quality.

Other Examples of Research Excellence items

OEREs may be either eligible research outputs or eligible research activities.

Including OEREs is optional, up to a maximum of eight.

Only bibliographic or equivalent data (if a research output) or a brief description (if a research activity) is required for the assessment of the OEREs.

Submitting research outputs as OEREs

TEOs provide the following information for each research output submitted as an OERE listed in an EP.

Field	Information required	Character limit
Research Output Type	Chosen from the list of 16 research output types.	N/A
Order of Presentation	A number from 1 to 8 to specify the order in which the OERs will be presented for assessment. <i>OERs must be clustered by research output type. The ordering of OERE types and the ordering of the OERs within each type will be in accordance with the staff member's preference.</i> <i>The order submitted by the TEO will be how the panel member sees the research outputs when they assess the EP.</i>	N/A
Quality Assured	An indicator that shows if the research output has been through a process that meets the definition of quality assured for the PBRF.	N/A
Bibliographic Details/Description	Only bibliographic information, including that relevant to creative research types, can be included. Information must be entered in a recognised format. This must include the title or name of the output, author, and sufficient location details to enable the TEC to independently verify its production (for example, publication, publisher, publication year and place of publication, or the equivalent details for other output types such as creative works, such as names of galleries or venues and locations, number of pieces exhibited). No additional comments outside the scope of this, such as information on the quality or significance, can be included. <i>The information in the Title field and the Bibliographic Details/Description field for OERs can include a translation into English if required.</i>	1,000

Submitting research activities as OERs

TEOs must provide the following information for each Research Activity included as an OERE. Note: this is the same as for Supplementary items.

Field	Information required	Character limit
Research Activity Type	Chosen from the list of six research activity types.	N/A

Field	Information required	Character limit
Order of Presentation	A number from 1 to 8 to specify the order in which the OERs will be presented for assessment. <i>OERs must be clustered by research activity type. The ordering of OERE types and the ordering of the OERs within each type will be in accordance with the staff member's preference.</i> <i>The order submitted by the TEO will be how the panel member sees the research activities when they assess the EP.</i>	N/A
Description	This should also provide information to evidence the claims, including key details of the activity, such as dates and organisation(s) or others involved. No additional comments outside the scope of this, such as information on the quality or significance, can be included.	1,000

Choosing research outputs for the ERE component

The Quality Evaluation assesses a wide range of research outputs, including but not limited to:

- › published or otherwise disseminated academic work such as scholarly books, journal articles, Master's or doctoral theses, or presentations
- › published or otherwise disseminated creative work that embodies original research such as works of fiction, artworks, or compositions
- › publicly available or confidential work that embodies original research such as reports, policies, legislation, or designs
- › work published or otherwise disseminated in digital, visual, audio, or other non-print media including computer programs, waiata, carving, buildings
- › other forms of outputs such as granted patents, materials, products, performances, orations, and exhibitions.

These have been classified into 16 types of research output which can be included in the ERE component as ERE Outputs, Supplementary Items, and OERs.

The key factors in selecting research outputs for inclusion in an EP are:

- › only eligible research outputs can be included in an EP
- › TEOs need to classify each research output submitted in an EP under one of the 16 research output types below
- › where the research output has been reproduced in another medium, it should be classified according to the research output type of its original form



Example of eligibility dates for traditional research output types

A journal article where the final version was available online on 30 November 2017 but had an imprint date of 30 March 2018, the eligibility date would be **30 November 2017**. It would not be eligible for inclusion in Quality Evaluation 2026 because it is outside the assessment period.

A journal article where the final version was available online on 30 December 2025 and had an imprint date of 28 February 2026, the eligibility date would be **30 December 2025**.

Example of eligibility dates for non-traditional research output types

An exhibition that opened locally for the first time on 8 October 2017 then opened internationally on 1 May 2025. The date of first public dissemination would be considered to be **8 October 2017**. It would not be eligible for inclusion in Quality Evaluation 2026 because it is outside the assessment period.

An exhibition that opened locally for the first time on 30 January 2018. The date of first public dissemination would be considered to be **30 January 2018**. If that same exhibition then opened internationally on 1 May 2025 the staff member could submit the international exhibition as their research output, but the production date would remain as **30 January 2018** based on the first public dissemination.

- › the research output types are listed in alphabetical order and do not reflect an order of importance.
- › all research outputs will be considered on their merit. This means no one specific type is weighted as being of higher value or quality than another.

Eligibility criteria for ERE component items

A research output is eligible for inclusion as an **ERE Output** in an EP if it meets **all** the following three criteria:

1. it meets the requirements for being a research output under the PBRF Definition of Research
2. the final version of the research output was first made available in the public domain during the assessment period (**1 January 2018 – 31 December 2025**)
3. the actual research output can be submitted for assessment by a peer review panel and can be audited.

A research output is eligible for inclusion as a **Supplementary Item** or as an **OERE** if it meets **all** of the following three criteria:

1. it meets the requirements for being a research output under the PBRF Definition of Research.
2. the final version of the research output was first made available in the public domain during the assessment period (**1 January 2018 – 31 December 2025**)
3. the actual research output can be audited.

Eligible types of research outputs

There are 16 eligible types of research output for ERE Outputs, Supplementary Items, and OEREs. They are:

- › Authored Book
- › Chapter in Book
- › Conference Contribution – Other
- › Conference Contribution – Published
- › Creative Work
- › Discussion/Working Paper
- › Edited Volume
- › Intellectual Property
- › Journal Article
- › Oral Presentation
- › Other Form of Assessable Output
- › Products and processes
- › Report
- › Scholarly Edition/Literary Translation
- › Software
- › Thesis.

Outputs of these types must also meet the eligibility criteria above. Full details about these types are provided in the Appendix.

Choosing Research activities for the ERE component

For Quality Evaluation 2026, submitting staff can choose to include research activities in the ERE component of their EPs. Research activities may be included as supplementary items within an ERE, or as OEREs. Research activities cannot be submitted as ERE Outputs.

Research activities describe activities and outcomes related to the process of designing, carrying out, disseminating, and sharing research, and includes research outcomes such as collaboration, public or other engagement, recognition, uptake, and impact.

The key factors in selecting research activities for inclusion in an EP are:

- › all research activities must be eligible to be included in an EP
- › TEOs/staff members need to classify each research activity under one of the six research activity types. Some activities may fit within multiple types, in which case TEOs/staff members should choose the type that best showcases the item's excellence and best fits how they wish to present their research.
- › the research activity types below are listed in alphabetical order and do not reflect an order of importance.
- › all research activities will be considered on their merit. This means no one specific type will be weighted higher than another.

Eligibility criteria for research activities

A research activity is eligible for inclusion in the ERE component, either as a supplementary item or an OERE, if it meets **all** of the following criteria:

- › it falls within one of the six research activity types below
- › It has taken place in the assessment period between 1 January 2018 and 31 December 2025 inclusive. Where the research activity relates to a particular research output or outputs, the underpinning research output/s do not need to have been first published/publicly disseminated during the assessment period.

Eligible types of research activities

Research activities are a new type for Quality Evaluation 2026. However, they are based upon categories that were eligible for inclusion as Research Contribution types in Quality Evaluation 2018.

Quality Evaluation 2026 will assess a range of research activities, which have been categorised under the following six types:

- › Presentation, dissemination or sharing of research outputs, outcomes, or work in progress in scholarly, industry or sector-based, iwi, community or public fora
- › External support for research projects and activity, including competitive or other funding, contracts or commissions, public or private sector collaborations or partnerships, and community, iwi, or marae support

- › Research fellowships, prizes, awards, or secondments that recognise the quality of research outputs and/or activity.
- › Recognition of research activity and/or outputs in the form of commissions, commendations, citations, other metrics, or other indicators of peer or external esteem
- › Collaboration, outreach and engagement with non-academic communities and stakeholder groups
- › Research uptake or impact demonstrating how non-academic stakeholders and end-users have utilised and benefitted from research outcomes and activity, and flow-on positive changes beyond academia as a consequence.

Determining the date that research outputs are available within the assessment period

The basic principle governing the inclusion or exclusion of a research output concerns **the date when the final version was first made available in the public domain**.

A research output can be included in the ERE component of an EP (either as a ERE Output, a Supplementary Item, or an OERE) when the final version was first made available in the public domain during the assessment period of 1 January 2018 – 31 December 2025. Further details are given below.

Depending on the research output, being ‘first made available’ may involve being published, publicly disseminated, presented, performed, exhibited, or another mode.

*Research outputs can only be eligible in **one** Quality Evaluation assessment period. Research outputs first publicly available before 1 January 2018 or after 31 December 2025 cannot be included for Quality Evaluation 2026.*

Published research output types

The National Information Standards Organization (NISO) standards² will be used to test eligibility of journal articles according to the date on which the first Version of Record was made publicly available by the publisher. These standards will also be applied for other published works, wherever possible (such as, books, edited volumes, conference proceedings, online peer reviewed commentary), to determine the eligibility date for the first Version of Record.

For these types of research outputs, the first Version of Record will be considered the ‘final version’, and the date that the first Version of Record appears in the public domain, regardless of this being in print or online, will be considered the date it is first available.

² NISO RP-8-2008, Journal Article Versions (JAV): Recommendations of the NISO/ALPSP JAV Technical Working Group. Retrieved on 15 February 2016 from <http://www.niso.org/publications/rp/RP-8-2008.pdf>.

This means that if an output is pre-published on or before 31 December 2017 but has an imprint date within the assessment period, it will not be eligible for submission because it will be considered to have been publicly available before the assessment period. Note that the use of the term ‘pre-published’ refers to outputs in their final form that are circulated prior to their imprint date. It does not refer to scientific pre-prints that are shared prior to peer-review.

Any outputs that have imprint dates that fall outside the assessment period but the final version of the output was first publicly available within the assessment period are eligible for submission. This is consistent with previous Quality Evaluations.

Non-published research output types

There are three principles that clarify the eligibility of non-traditional research output types:

1. Where multiple instances of an output occur in different assessment periods then the output can only be counted in the period when it was first publicly disseminated.
2. Where an output has been publicly disseminated multiple times within the assessment period, the researcher may choose which instance of the output is included. It is expected that the most prestigious, rather than the first, dissemination will be listed.
3. An output that introduces significant new research material or aesthetic refinement (during the assessment period) to an earlier version of the output will be considered as a separate research output.

This principle is consistent with other research output types, such as subsequent editions of books that include significant new research material. A brief description of the new research material or aesthetic refinement undertaken to the output would need to be provided in the Description field for such outputs if selected as an ERE Output.



Example of eligibility dates for non-traditional research output types

An exhibition that opened for the first time on 1 October 2017 and ran until 30 January 2019 in multiple locations. The date of first public dissemination would be considered to be 1 October 2017. It would not be eligible for inclusion in Quality Evaluation 2026 because it was first disseminated outside the assessment period.

If there was significant new research material or aesthetic refinement of the work after 1 January 2018, it could be considered a new research output.

A patent was granted for the first time in Aotearoa New Zealand on 30 June 2018. The date of first public dissemination would be considered to be 30 June 2018. If the patent was then granted in Australia in 2019 and the United States in 2021, the staff member could choose any one of the three granted patents as their research output, but the eligibility would remain as 30 June 2018 based on the first public dissemination.

A patent that was granted on 1 October 2017 in Aotearoa New Zealand and then granted in Australia on 30 January 2019 would not be eligible for inclusion in Quality Evaluation 2026. The date of first public dissemination would be considered to be 1 October 2017, which is outside the assessment period. The staff member could include the subsequent granting of the patent in Australia as a Research Activity in the ERE Component of an EP under Supplementary Items or OERs..

*Staff members can explain any **variance in dates** for an ERE Output in the Description field of that ERE Output. Please note that such an explanation is required only for ERE Outputs. It is not required for any of the OERs.*

*TEOs may be asked to provide evidence of the **date of first public availability** for audit purposes.*

*Information in an output's **digital object identifier** should not be considered as evidence of the publication date.*

For the avoidance of doubt:

- › *a **confidential research output** must have been completed and the final version first made available to those who commissioned the research within the assessment period; and*
- › *the eligibility date for **intellectual property** is the date it was granted for the first time, either in Aotearoa New Zealand or another country. Earlier versions of patents, specifically patent applications and provisional patents, may also be publicly available. However, only the granted patent will be accepted as an eligible research output. This means that if a patent application or provisional patent was publicly available in a previous assessment period but granted for the first time in this assessment period, then it would be an eligible research output.*

*Research outputs that are repeated **reprints or new editions of a book, or multiple exhibitions or performances** are not eligible for inclusion unless they include significant new research material. They may be evidence of research-related peer esteem, extended reach or contribution outside academia and can be included as a Research Activity in the ERE Component of an EP under Supplementary Items or OERs .*



Successful completion of the relevant quality-assurance processes is not an eligibility criterion for research outputs.

This means that, for example, a book that successfully completed a quality-assurance process by 31 December 2025, but was not available in its final form in the public domain until 30 March 2026 would not be eligible for inclusion in an EP (as either a quality-assured research output or a non-quality-assured research output).

Panel-specific guidelines also include information on the expected quality-assurance processes for research outputs.

Quality assurance

Each eligible research output included in the ERE component is classified as either quality assured or non-quality assured. Both quality-assured and non-quality-assured research outputs can be included in an EP.

A **quality-assured research output** is defined as any research output that successfully completed a formal quality-assurance process before its final version was first made available in the public domain.

This means the output has been subject to formal, independent scrutiny by those with the necessary expertise or skills or both, to assess its quality. This may include, for example, its rigour, logic, clarity, originality, intellectual significance, impact, applications and artistic merit.

Formal quality-assurance processes vary between different disciplinary areas and output types. They include, **but are not limited to:**

- › peer-review or refereeing processes undertaken by journals and book publishers
- › other review processes employed by editors, editorial committees, publishers, or curators
- › the selection of conference papers or abstracts and the refereeing of conference papers

- › review processes specific to Māori or Pacific research processes or methodologies
- › review processes undertaken by major galleries, museums and broadcasters
- › review processes employed by users of commissioned or funded research (including confidential research) including commercial clients and public bodies.
- › Note that critics' reviews published as journalism or commentary, either in print or online are not considered a form of quality assurance. For example, a review of a book, play or exhibition in a newspaper is not considered to be a form of quality assurance.

If the formal quality-assurance process is not standard within the discipline or for the type of output, then this should be explained in the Description section for the output.

A non-quality-assured research output is one that:

- › has not been subject to a quality-assurance process
- › is currently in the process of being quality assured
- › has been unsuccessful in completing a formal quality-assurance process (for example, it has been peer reviewed and rejected).

A non-quality-assured ERE Output may be subject to greater scrutiny by the panel than a quality-assured ERE Output.

*For Quality Evaluation 2026, **granted patents** are considered to be quality-assured research outputs.*

*A research output can be reviewed in the public domain **after** it becomes available. However, this type of review does not mean that the research output is quality assured.*

*Staff members need to clearly differentiate between a **pre-publication or production review** that results from a formal quality-assurance process for a research output and a **post-publication or production review**.*

Post-publication or production reviews and invitations to review research outputs that are in the public domain can be submitted as a Research Activity in the ERE Component of an EP under Supplementary Items or OERs..

Outputs involving joint research

Joint research is common in the modern research environment, with research resulting from the joint efforts of two or more researchers, and will normally be either co-authorship or co-production.

The principles guiding the PBRF approach to submitting and assessing joint research are:

- › the PBRF Quality Evaluation process assesses the work of individual academics, regardless of whether or not they are the sole authors or producers

- › the PBRF Quality Evaluation process is solely concerned with the quality of the output and the relative contribution of the staff member not with where the other co-authors or producers are based
- › only those joint research outputs for which there is attributed authorship (or equivalent) will be considered in the Quality Evaluation process.

Panels will assess joint research on a qualitative basis. Judgements on a staff member's contribution to a research output are based on information about co-authorship or co-production entered in the Individual Contribution field in the EP.

*The contribution to a joint research output **will not**:*

- *be assessed on the basis of the order in which co-authors or co-producers are listed (order may be an indication of the importance of a contribution, but this is not necessarily the case)*
- *be counted pro rata (for example, five authors will not be taken to imply that each person has contributed the same proportion).*



Co-authorship describes a situation in which a research output has more than one author and normally applies to written outputs, such as journal articles, books and conference papers.

Co-production describes a situation where more than one person produces a research output. It applies more generally to outputs that reflect creative and artistic works, such as a performance, composition, design, exhibition, film and buildings.

Completing the Individual Contribution field for an ERE Output

Completing the Individual Contribution field is mandatory for ERE Outputs. If they are the sole author/researcher then this can be briefly noted by entering 'Sole author'.

If there are other authors/researchers, researchers must provide a clear description explaining their substantial and distinctive contribution. Qualitative descriptions are recommended because they are more likely to give panels the detailed information they need to assess an individual's contribution to a research output. Percentages should be avoided if these do not explain the substantial and distinctive contribution.

Some journals require co-authored articles to include a statement on the relative contribution of each author. These statements can be used in the Individual Contribution field if available.

Where there is more than one author, the Individual Contribution field should include:

- › brief comments on the **significance** of the staff member's contribution to the output, for example, whether they took a leadership role or the extent of their contribution. Comments may include a statement about the status of co-authors (for example, where a co-author is a postgraduate student)
- › the **nature** of the contribution, where this may help support the extent of the contribution made. For example, it might be helpful to include information about whether the contribution was by way of the conceptualisation and design of the research, the field work undertaken, the production of the article or output, or the supervision of other authors.

The names of the authors or producers as listed in the research output should be included in the Author field of the ERE Output. If this exceeds the 2,000 character limit then a record of the number of other authors or producers should also be included in the Author field.

Submitting joint research outputs

In nominating their ERE Outputs, staff members must be aware that only their relative contribution to co-authored or co-produced outputs will be considered. Staff members must decide the value of a co-authored or co-produced work relative to a sole-authored or sole-produced work, when deciding on their ERE Outputs. Panels will recognise that in many disciplines co-authorship or co-production is the norm.

Two or more co-authors or co-producers of a research output can submit the same research output in their own EPs. The quality of the research output is evaluated in each case on the basis of each co-author or co-producer's stated contribution.

Co-authors or co-producers do not need to be formally aware of one another's submissions of the same research output. To ensure, however, that there is no conflict in the information provided by each co-author or co-producer, they are encouraged to check the details of their contribution statements with one another.

Each panel has developed panel-specific guidelines that may provide specific advice on what information should be included in the Individual Contribution section of ERE Outputs.

Outputs with similar content

Staff members should not include research outputs that have virtually identical content as other research outputs in their EP. For example:

- › a journal article may be a slightly revised version of an earlier refereed (or non-refereed) conference paper
- › a book may draw heavily on material previously published by the author(s) in articles, chapters of other books or a thesis
- › the same research output may be published separately in two or more languages.

TEOs need to advise staff members that, when selecting research outputs, those that contain content virtually identical to other research outputs should not be selected. If there is overlap between the research outputs presented in the EP, these should be noted in the Platform of Research – Contextual Summary, or the description field of the relevant research outputs.

Completing the Contributions to the Research Environment component

The Contributions to the Research Environment component (CRE component) of an Evidence Portfolio (EP) describes the research-related contributions the staff member has made to sustaining, developing, and/or growing the research environment and culture.

- › The CRE component has a weighting of 30 percent of the total score for the EP.
- › The CRE component of an EP contains a minimum of one CRE item and may contain up to ten items. Including CRE items is optional for EPs submitted by New and Emerging Researchers but they can also include up to ten CRE items if they wish to.
- › TEOs should help their staff to identify their best research-related activities or outcomes to be recorded as CRE items, and then categorise these items according to the six CRE types.
- › The types are an organising principle only. It is not expected that EPs will include activities in every contribution type. More than one item may be included in any one contribution type.
- › All types of CRE will be considered on their merits. This means no one specific type will be weighted higher than another.
- › All items in the CRE component must describe research-related activities and outcomes that have occurred within the assessment period (**1 January 2018 – 31 December 2025 inclusive**)
- › Each panel has panel-specific guidelines that may provide discipline- or subject-area specific advice on completing the CRE component of EPs.

What does the Contributions to the Research Environment component contain?

The CRE component of an EP contains up to ten CRE items that show the contributions a staff member has made to sustaining, developing, and/or growing the research environment and culture of which they are a part.

An item is eligible for inclusion in the CRE component if it meets all of the following criteria:

- › it is one of the six CRE types described below
- › It took place in the assessment period 1 January 2018 to 31 December 2025 (inclusive).

This component allows for the recognition of activities and outcomes that are indicative of a vital, high-quality, sustainable research environment that may exist across academic, community, industrial, public, and commercial domains.

The underpinning principle is that the CRE component should reflect the broad range of activities and outcomes undertaken and/or achieved by a researcher and be appropriate to an individual's research discipline.

Research environments and the activity that sustains and grows them may be local, regional, national or international in orientation. No quality distinctions will be made solely on the basis of geographical scale or reach.

Types of Contribution to the Research Environment

The CRE component allows staff members to include in their EPs a range of research-related activities and outcomes related to the development and maintenance of the research environment. These are classified using the following six types:

- › Contributions to the research discipline, culture or environment through leadership, advocacy, oversight, or awareness-raising roles and activity
- › Facilitation, network and collaboration activity that contributes to the research environment activities such as setting up or participating in research centres, groups, wananga, fono, or networks
- › Researcher development and capability activity such as mentoring or other staff development roles
- › Reviewing and evaluating activity
- › Student development and support activity which contributes to growing a vibrant and inclusive research workforce
- › Peer esteem and research cognition factors which reflect the staff member's esteem within their field or wider research environment.

All items in the CRE component must describe research-related activities and outcomes that have occurred within the assessment period (**1 January 2018 – 31 December 2025 inclusive**).

The key factors in completing the CRE component are:

- › TEOs need to classify each CRE item submitted in an EP under one of the six research contribution types.
- › The types are listed in alphabetical order and do not reflect an order of importance.
- › All CRE items will be considered on their merit. This means no one specific type will be weighted higher than another.
- › Panel-specific guidelines may provide further examples of discipline-specific, research-related activities and research outcomes.

Submitting CRE items

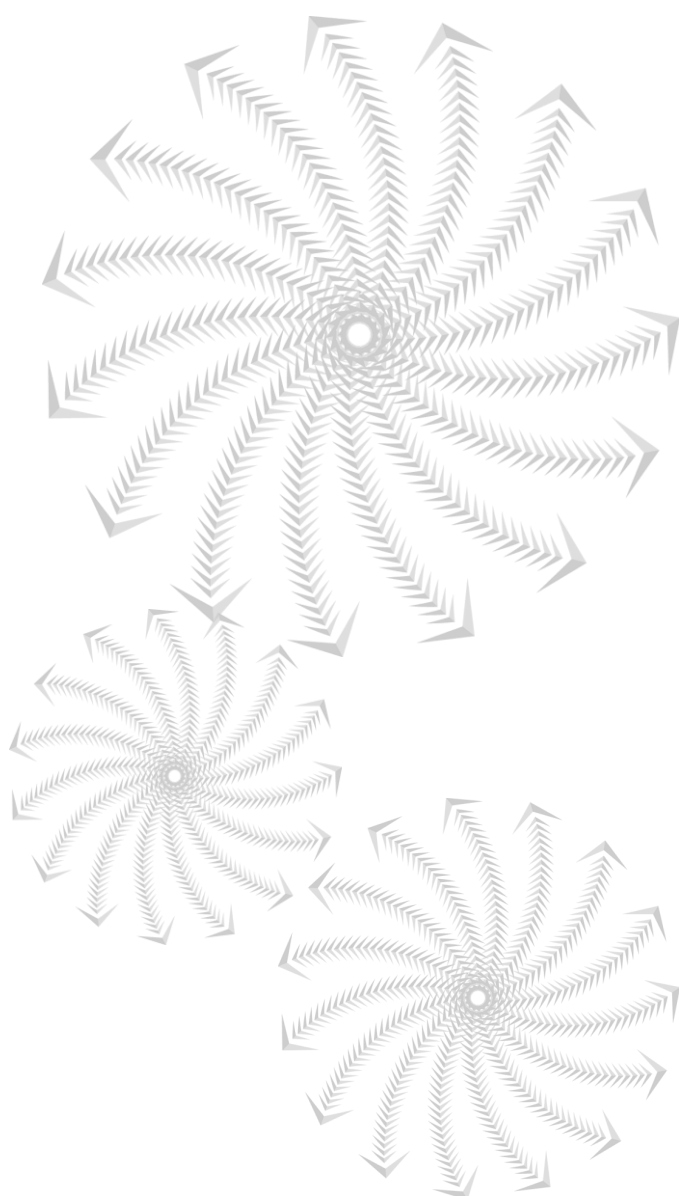
TEOs must provide the following information for each CRE item listed in an EP.

Field	Information required	Character limit
Research Contribution Type	Chosen from the list of six research contribution types.	N/A
Order of Assessment	A number from 1 to 10 to specify the order in which the CRE items will be presented for assessment. <i>CRE items must be clustered by contribution type. The ordering of CRE types, and the ordering of the items within each type, will be in accordance with the staff member's preference.</i> <i>The order submitted by the TEO will be how the panel member sees the CRE items when they assess the EP.</i>	N/A
Description	A comprehensive description of the nature and significance of the item that includes sufficient information and evidence of the quality and prestige of the research-related activity and/or outcomes. This should also provide information to evidence the claims, including key details of the activity, such as dates and organisation(s) or others involved.	1,000

Evidence of CRE items

Information on CRE items may be required for audit purposes only. TEOs are not required to submit evidence of CRE items in the EP.

CRE items will be sampled as part of the audit. Panel members are also able to raise concerns about the eligibility of research contribution items, which the TEC will follow up with the TEO.



Quality Evaluation 2026

Providing ERE outputs

Research output evidence requirements for assessment

Evidence of research outputs may be required for assessment and audit purposes or both.

- › Copies of ERE Outputs are required for assessment.
- › Evidence of Supplementary Items and OERs is required for audit only.

Forms of evidence required for assessment of ERE Outputs

Full copies of ERE Outputs must be provided

Full copies of ERE Outputs are required to allow a panel to assess their quality. Panels are expected to examine a proportion of ERE Outputs so that assessment of quality is based on the quality of the output itself. Without this expectation, panels would be reliant solely on proxies for quality, such as venue and citation information.

The ERE Output must be available in a form that allows panels to make a fair assessment of the quality. For example, a reviewer would not be able to assess the quality of a book only on the basis of a table of contents and bibliographic information.

The following tables set out information on providing different types of ERE Output for assessment.

TEOs ensure that:

- › all ERE Outputs listed in an EP are available for assessment by a panel
- › the actual ERE Output is provided as evidence for this assessment.

The specific evidence requirements for assessing ERE Outputs are detailed in the table below.

Research output type	Evidence for assessing ERE Outputs
Authored Book	Electronic copy of the Authored Book.
Chapter in Book	Electronic copy of the Chapter in Book.
Conference Contribution – Other	Electronic copy (preferred) or print copy of the Conference Contribution (if available).
Conference Contribution – Published	Supporting information An electronic copy of the proceeding's title page, contents page(s) and bibliographic details (including, author(s), editor(s), publisher and publication date) if not included in the copy of the Conference Contribution. A video or audio recording may be supplied if available.
Discussion/Working Paper	Electronic copy of the discussion or working paper.

Research output type	Evidence for assessing ERE Outputs
Edited Volume	Electronic copy of the edited volume.
Intellectual Property	› Electronic copy of the supporting documentation submitted for trademark or patent registration, such as a copy of the patent application form showing the name(s) of the inventor(s), and › The letter confirming the granting of the patents or trademark including the date the patent or trademark was granted.
Journal Article	Electronic copy of the journal article. Supporting information An electronic copy of the journal's bibliographic details (including volume and publication date) if not included in the copy of the journal article.
Oral Presentation	One or more of the following forms are acceptable: › transcription in book, journal, conference proceedings, working paper, slides or presentation file, or other output › audio or visual recording of the presentation, or both. Supporting information › An electronic copy of any independent associated written documentation. This must include the presenter(s), date of the presentation and venue.
Other Form of Assessable Output	For any other research output that is not listed above, the onus is on the staff member to provide research outputs in a form that can be appropriately assessed by the panel. The forms of evidence submitted for other research output types are acceptable. TEOs will need to consider which type most closely aligns to the ERE Output to be submitted. If the TEO intends to submit a form of evidence not used for another research output type then it must receive approval from the TEC before submission. Staff members should provide electronic copies of any written documentation or commentary that demonstrates the presented outputs fall within the PBRF Definition of Research and the quality-assurance process where applicable.
Product and processes	Any of the forms of evidence submitted for other research output types are acceptable.

Research output type	Evidence for assessing ERE Outputs
Report	› Electronic copy of the report, which includes title page, authorship details and delivery or completion date. › An electronic copy of commentary, peer review or similar quality-assurance report from the commissioning body where the research output has been identified as Quality Assured. Supporting information An electronic copy of the request from the commissioning body for the report.
Scholarly Edition/ Literary Translation	Electronic copy of the scholarly edition/literary translation. Supporting information › An electronic copy (if a book or section of a book) of the book's title page, contents page(s) and bibliographic details (including editor(s), publisher and publication date); or › An electronic copy (if a journal article) of the journal's contents page and bibliographic details (including volume and publication date).
Software	Evidence in relation to software should address the uniqueness, impact and innovative nature of the development, rather than supplying the software itself. Supporting information If a view of the software in operation would help in the panel's assessment, a walk through in AVI format with voiceovers or text overlays to identify or emphasise any significant features of the software's operation is recommended. If software that will need to be installed by the reviewer is submitted, all of the following must be supplied: › a copy of the software in a format that allows for installation – this will need to be referenced as a URI to an external repository or site (the TEC does not allow for executable or zip files to be uploaded) › details of the operating system and any other supporting software and firmware required to operate the software › details of the minimum hardware platform required › information on installation of the software › full documentation for the software › any other information that would inform the panel's assessment of the research output (for example, source code, architectural representations or design diagrams) › an electronic copy of any associated written documentation that addresses the uniqueness,

Research output type	Evidence for assessing ERE Outputs
	impact and innovative nature of the development (if not included in the Description section of the EP).
Thesis	Electronic copy of the thesis. In the case of non-print theses such as creative works, the thesis may take the form of a portfolio of outputs.

Providing ERE outputs for assessment – Creative Work

Research output type	Evidence for assessing ERE Outputs
Artwork, Artefact, Object, Craftwork	One or more of the following forms are acceptable: › photograph(s) › audio or video recording › the physical artefact, object or craft item (if there is no alternative). Supporting information Researchers may provide written documentation on how the work involves research and technical information that would help a panel assess the work. An electronic copy of any independent associated written documentation must be provided as supporting evidence. This should include creator(s), names of galleries/venues and locations, opening and closing dates, and co-exhibitors where applicable. If the physical artefact, object or craft item is to be submitted, the TEO must seek agreement for its submission from the TEC and the relevant panel Co-Chairs. An artefact would be accepted only if it is compact and easily transportable.
Composition	One or more of the following forms are acceptable: › musical score as electronic copy, in most cases it is essential to provide a score › audio recording, in the case of an electroacoustic composition, a recording is mandatory and a score or equivalent is optional › if the composition is part of an exhibition, visual documentation such as photographs or video › if the composition is part of a film, a copy of the film (or film clip). Supporting information Explanatory notes and electronic documentation that includes the composer, title of the composition and date of first performance.
Design output	One or more of the following forms are acceptable: › plans and working drawings

Research output type	Evidence for assessing ERE Outputs
	› computer model › animation of model output › photograph or digital image › video recording › interactive and active website, including downloads › electronic copy of an output, for example, journal article, conference paper. Physical models may not be submitted.
<i>Exhibition/curatorial exercise</i>	A video or documentary photographs of the exhibition. Supporting information Electronic copies of accompanying publications including lists of works, room brochures and exhibition catalogues. An electronic copy of any independent associated written documentation. This must include the creator(s), dates of the exhibition, title of the exhibition and venue(s). If not included in the Description section of the EP, the written documentation must also comment on the scale and complexity of the exhibition and, if touring, the extent of the tour (national, international, number of venues and length of tour).
<i>Dramatic and literary texts</i>	Electronic copy of the output.
<i>Film/video</i>	A copy of the film or video (either whole or relevant parts). Supporting information An electronic copy of any independent associated written documentation. This must include the creator(s), date of release or broadcast, role or roles, duration, basis of funding, commissioning body and distributor or broadcaster. If not included in the Description section of the EP, the written documentation must also comment on the scale and complexity of the film or video.
<i>Performance</i>	One or more of the following forms are acceptable: › audio or audio-visual recording › transcription, script or score › attestation of performance or associated written documentation, where appropriate, to authenticate a performance or describe the research. Supporting information

Research output type	Evidence for assessing ERE Outputs
	Electronic copies of accompanying independent publications including programmes. An electronic copy of any associated written documentation. This must include the performer(s), performing forces, date(s) of performance, title, venue(s), location and basis of funding. If not included in the Description section of the EP, the written documentation must (where appropriate) also comment on whether it was a self-promoted concert or given under the auspices of an organisation (to be named), and whether it was recorded for broadcast or for commercial release (for example, a comment on the scale and complexity of the performance).

Submitting ERE Outputs

The expected default is that ERE Outputs are submitted as electronic versions, either via direct link or by uploading to the TEC file-store. In circumstances where a submitting staff member believes that a digital version of a born-physical ERE Output will not enable full and fair assessment, or a digital version cannot otherwise be created, the physical output can be supplied.

The EP requires TEOs to identify how the ERE Output is being supplied. TEOs choose **one** of the three options, which are:

- › a **direct link** to an electronic version of the ERE Output to be assessed. This could be a website, a filestore maintained by the TEO or an external filestore. The link must take the panel member directly to the ERE Output to be assessed not to a landing page that only includes a link to the ERE Output
- › an **upload to the TEC's filestore** of an electronic version of the ERE Output to be assessed
- › where electronic submission is either not possible, or would be prejudicial to a fair and robust assessment, a **physical version** of the research output to be assessed can be provided if requested by the panel member. TEOs must also provide the physical location of the research output if they choose this option.

TEOs are also able to submit up to four additional Uniform Resource Identifier (URI) links of **supporting information** for the ERE Output. This is optional, and panel members are not required to assess this information in the same manner as the main research object.

For each EP, TEOs:

- › ensure ERE Outputs are provided digitally, except where this is not possible or would be prejudicial to fair assessment
- › ensure any large video or sound files are identified. This will allow the panel members accessing the ERE Output to make sure they have high-quality internet access and latest versions of relevant software
- › ensure that if a direct link is provided to an ERE Output, this link does not require the panel member to provide authentication, such as a membership or subscription to the website or login information. If this happens, the TEC

will consider it an invalid evidence submission and panel members will not be required to assess that evidence.

The TEC and the panels' expectation is that ERE Outputs will be available electronically in the majority of cases. Reasonable exceptions may include:

- › the ERE Output is a physical artwork, object, or artefact etc and the submitting TEO does not have the capacity to provide a sufficiently high-quality audio-visual or digital documentation
- › the ERE Output is a physical artwork, object, or artefact etc that has sensory, spatial, or other aspects which cannot be effectively captured through audio-visual or digital documentation
- › the ERE Output is a physical artwork, object, artefact, installation, or building that is location-specific and which requires a site visit in order to be fairly assessed. Note that in such instances, the TEC may not be able to facilitate site visits that require significant travel or logistics. Staff members may wish to consider submitting other outputs.

TEOs are responsible for providing URI links to a website or an external file store that remain a usable link to the ERE Output throughout the period of assessment.

*The following **URI formats** are acceptable:*

- **[ERE Output Location and Name]**

*This shows that the ERE Output was **uploaded to TEC's filestore**.*

- **http:// [ERE Output Location and Name]**

*This shows that the **direct link** to the ERE Output is a non-secure publicly available web location.*

- **https:// [ERE Output Location and Name]**

*This shows that the **direct link** to the ERE Output is a secure publicly available web location.*

ftp:// [ERE Output Location and Name]

*This shows the **direct link** to the ERE Output is a publicly available FTP location.*

More information on the technical aspects of submitting evidence of ERE Outputs can be found in the Evidence Portfolio Schema Definition document on the TEC website.

Evidence of ERE Outputs and copyright

The TEC has a copyright agreement through Copyright Licensing New Zealand. This agreement allows panel members to access, copy and reproduce ERE Outputs provided by the TEOs, for the purposes of Quality Evaluation 2026 only, without breaching copyright. All TEOs participating in Quality Evaluation 2026 will have a similar agreement with Copyright Licensing New Zealand. Any TEO that does not have an agreement in place will need to contact Copyright Licensing New Zealand.

For some output types, such as film, music or games, TEOs will need to review other copyright agreements they hold. While the Copyright Act 1994 does allow for ‘fair dealing’ of copyright material in the case of review, these agreements may also allow sharing of segments of the output. TEOs need to consider these agreements when producing their ERE Output evidence. If segments of an output are allowed, then it is important that the segment(s) are carefully chosen to effectively showcase the salient research aspects of the output.

Storing electronic documentation

Some subscription agreements require users to store publications in a dark archive.³ TEOs can meet this requirement by storing ERE Outputs in a secure repository accessible only to the TEO staff responsible for maintaining the repository before transfer to the PBRF IT System (which is also a dark archive). TEOs must ensure that appropriate safeguards are in place to prevent any unauthorised access.

At the conclusion of Quality Evaluation 2026, all electronic copies of ERE Outputs held by either panellists or within the TEC’s PBRF IT System will be destroyed. Physical copies will be returned to the TEO where requested.

Sharing electronic documents

Some TEOs may have other subscription agreements with individual publishing houses that may prohibit certain activities, for example, storing any archive of information in electronic form that could be used for a research application. TEOs should discuss their subscription agreements with the publishing houses if they have any concerns because these are likely to be contractual rather than copyright issues.

If TEOs are unable to resolve these types of concerns, possible options for providing evidence of ERE Outputs for Quality Evaluation 2026 include but are not limited to:

1. TEOs obtaining electronic versions of ERE Outputs directly from the authors. These can be stored in a dark archive as discussed above until uploaded to the PBRF IT System.
2. Some subscription agreements allow the TEO to source ERE Outputs through their libraries, and upload them to the PBRF IT System since it is a one-off assessment exercise and the documents will not be accessible to the wider academic staff. TEOs will need to review the terms and conditions of relevant agreements.
3. TEOs can provide physical copies of ERE Output evidence to the TEC on request as occurred during previous Quality Evaluations.

TEOs should contact [Copyright Licensing New Zealand](#) if they require a copyright agreement or have questions about their copyright agreement.

³ A dark archive in this context is a data storage archive where access to the data is limited to a set of a few individuals. The TEC’s PBRF IT System is a dark archive because access is restricted by the TEC and the Ministry of Education, with logins only given to the TEO staff involved in coordinating their organisation’s participation in the PBRF Quality Evaluation. The wider academic staff at individual TEOs cannot access any of the information uploaded to the PBRF IT System.



All panel members are bound by confidentiality agreements, and the TEC will ensure that any confidential research is managed appropriately by panel members.

Managing confidential research outputs

Confidential research outputs (for example, research outputs not considered as being in the public domain in a traditional sense) may be listed in an EP if the staff member and TEO can arrange all necessary permissions and make any other arrangements for panel members to access and assess those listed as ERE Outputs. They must also make it possible for the TEC to audit any research outputs included in the EP as required.

Confidential research outputs may include, but are not limited to:

- › commercially sensitive research reports
- › research and evaluations for government agencies that have not been released to the public
- › research for iwi, hapū or whānau that includes material relating to confidential and culturally significant knowledge.

Confidential ERE Outputs can only be identified as a **physical version** of the research output to be assessed. The TEO must provide a hard copy or put them into USB flash drive format and courier them to the TEC. Confidential ERE Outputs cannot be emailed.

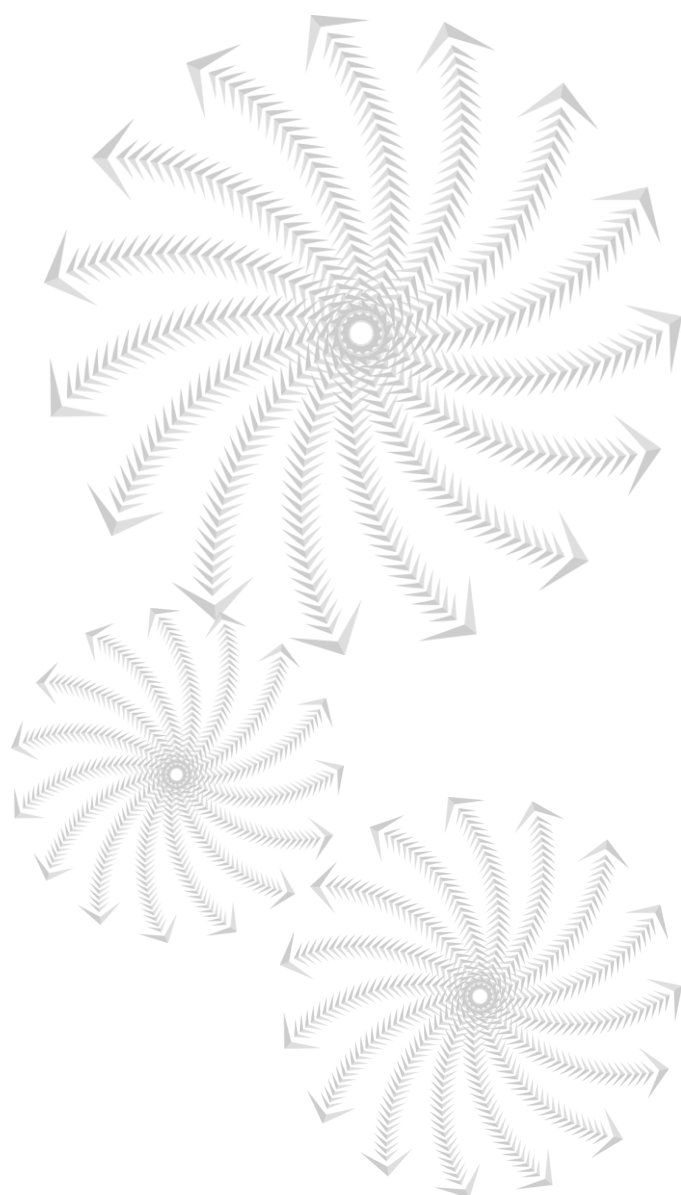
If the ERE Output identified as confidential research cannot be provided for either assessment or audit, it cannot be included in the EP.

Providing physical versions of ERE Outputs for assessment

If the TEO decides to provide a physical version of an ERE Output for assessment, this must be requested by the panel member if they choose to assess that output. These requests are provided through the PBRF IT System and do not identify the panel member requesting the ERE Output. Panellists must make any requests within 15 working days of assignment.

Several conditions apply to TEOs that choose to supply physical copies. These are:

- › The TEO must provide the ERE Output to the TEC within 15 working days of receiving the request. If the ERE Output is not received within 15 working days the ERE Output will not be considered in the panel's assessment of the EP.
- › The TEO will pay the cost of supplying a requested ERE Output to the TEC.
- › TEOs must indicate whether copies of ERE Outputs they provide to the TEC need to be returned to them. The TEC will meet the costs of returning requested ERE Outputs to the TEO.
- › The TEC will insure a requested ERE Output between its arrival at the TEC and its return to the TEO to a maximum value of \$250 per research output. The TEO would need to decide if it insures any requested ERE Outputs that it values in excess of \$250.
- › If an ERE Output is lost or damaged during the assessment process or in transit back to the TEO, the TEO must advise the TEC as soon as the loss or damage has been identified.
- › If an ERE Output is lost in transit to the TEC, the TEO should pursue a claim through the courier company concerned.



Quality Evaluation 2026

Conflicts of interest

Submitting conflict of interest notices for staff members

Tertiary education organisations (TEOs) may submit a notice of conflict of interest in relation to a panel member on behalf of staff members.

The TEC will only accept conflict of interest notices:

- › when they are submitted by a TEO
- › if the staff member has an Evidence Portfolio (EP) being assessed in Quality Evaluation 2026
- › the circumstances giving rise to the conflict fall within the conflict of interest policy.

Any notices received directly from a staff member will be returned to them, explaining that it must be relayed through their TEO.

What is a conflict of interest?

A conflict of interest is any situation where a panellist has an interest that conflicts, might conflict or might be perceived to conflict with the interests of the TEC in running a fair, impartial and effective peer-review process.

In determining whether a conflict is present or not, there are two questions to ask:

- › Would a fair-minded reasonably informed observer have a reasonable apprehension that the panellist's professional judgement would be compromised in evaluating another researcher's Evidence Portfolio?
- › Does the interest create an incentive for the panellist to act in a way that would be contrary to the objectives of a fair, impartial and effective peer review process?

If the answer to either of these questions is 'yes', then a conflict exists.

The full conflict of interest policy can be found in the *Guidelines for the Quality Evaluation 2026 assessment process*.

Submitting a conflict of interest notice

All notices must:

- › be in writing
- › state the name of the panel member the notice relates to
- › include specific information on the circumstances regarding the potential conflict of interest, including dates, location of the events and a comprehensive summary of the actions (or inactions if applicable) leading to the alleged conflict.

Sufficient information must be provided in the notice to enable the panel Co-Chairs or, if required, the Moderators to decide what action, if any, is required to manage the conflict to ensure that the Quality Evaluation process can operate fairly in respect of the staff member concerned.

Notices that do not contain adequate information on the potential conflicts of interest or cite circumstances that do not meet the definition of a conflict of interest will be returned to the TEO. The TEO will have 10 working days to submit an updated notice.

Notices must be emailed to the TEC by **4.00pm 28 July 2026**:

Email: PBRF.Help@tec.govt.nz with the subject line: 'PBRF Quality Evaluation 2026 - Conflict of interest notice'.

Notices received after this date will not be considered.

Consideration of a conflict of interest notice

The Co-Chairs of the panel will notify the panel member that a notice of conflict of interest has been received, giving the name of the staff member and the nature of the conflict. The panel member will be given an opportunity to discuss this with the Co-Chairs if required.

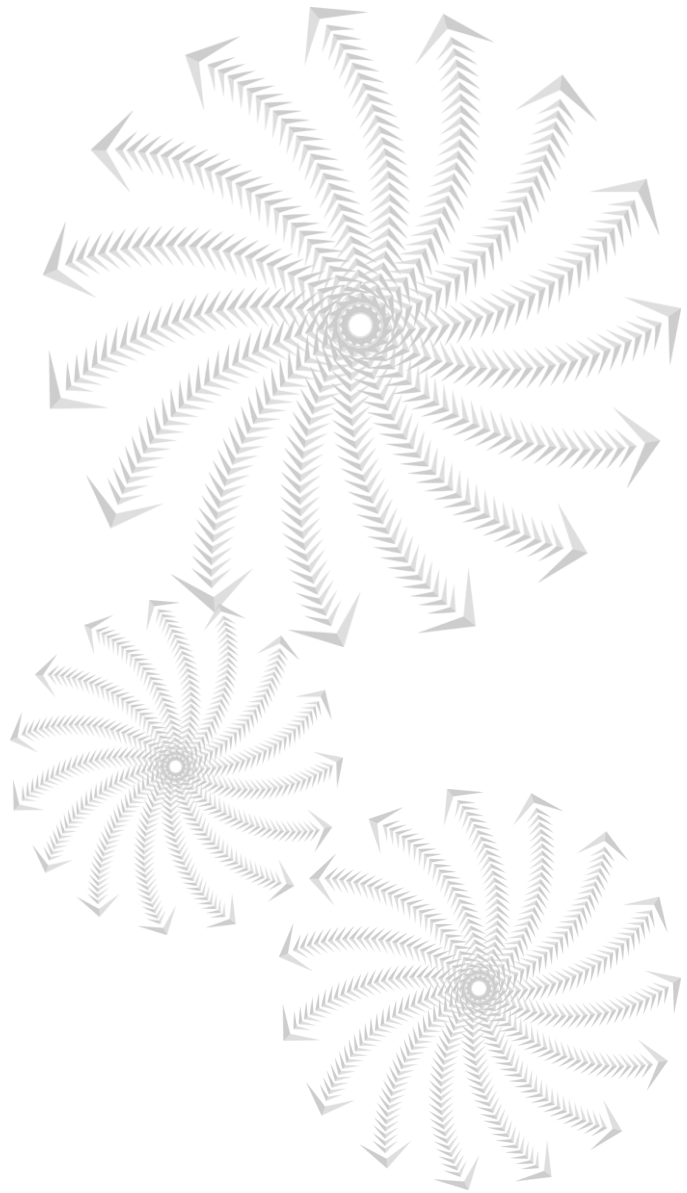
The Co-Chairs of the panel will then determine what action, if any, is required.

If the notice is in relation to a Co-Chair of the panel, it will be considered by the Moderators. The decision on what action, if any, is required will also be made by the Moderators.

The TEC's process assurance auditor will review the conflicts of interest and any required actions, and ensuring that these actions, if any, are taken. This provides assurance that any conflict of interest notices are appropriately managed.

Notification to tertiary education organisations

TEOs will be notified that their conflict of interest notice has been received but the specific outcome of the decision will not be provided. This is because the Quality Evaluation assessment exercise is conducted in a confidential manner. Providing information on which panel members may or may not assess a specific EP has the potential to breach the confidentiality of panel members.



2026 Quality Evaluation

What happens in the audit process?

Auditing process for tertiary education organisations

The tertiary education organisation (TEO) audit process provides comfort that the PBRF guidelines have been consistently and correctly applied and that all information submitted for Quality Evaluation 2026 is accurate and reliable.

- › There are four phases in the TEO audit process. The timing of the TEO audits for Quality Evaluation 2026 is outlined in the table below.

Phase	Timing
Process Assurance	January to December 2025
Declaration of the Vice-Chancellor/Chief Executive Officer	No later than 4.00pm 13 July 2026
Data Evaluation Audit (including follow up and escalation)	13 July to December 2026
Final Reporting	February 2027

- › All TEOs that are eligible to participate in Quality Evaluation 2026 will be contacted by the TEC's audit team.
- › A draft audit methodology has been released for feedback. See the TEC's website for more details.

Underpinning principles of the audit process

The auditing and data validation undertaken in the Quality Evaluation process will support many of the guiding principles of the PBRF, in particular, the principles of consistency, credibility, efficiency, transparency, inclusiveness, and equity.

- › All TEOs will be subjected to the audit processes to ensure there is consistent application of the guidelines across participating TEOs.
- › All types of data submitted for the Quality Evaluation will be subject to audit and validation.
- › All TEOs (and their staff members) are expected to provide accurate data to the TEC.

The TEC auditors recognise that different types of management practices, including systems, processes and controls, are used by those managing the Quality Evaluation process within their TEO to provide assurance to their Chief Executive or Vice Chancellor that they comply with the requirements of the PBRF.

These differing practices, from the TEC auditors' perspective, mean listing all the processes, controls and supporting evidence required to provide assurance is not possible. However, each TEO needs to ensure that it maintains the evidence and information it has used to make decisions about the eligibility of staff, research outputs and research contributions it submits. The TEC auditors will use this information and evidence as the basis of their audit reviews.

All information given to the TEC from TEOs as part of data checking and verification will be treated on a confidential basis. It will be kept by the TEC if required. Where data checking and verification processes are outsourced, these third parties will also be bound by confidentiality and conflict-of-interest policies.

Objectives of the audit process

The objectives of Quality Evaluation 2026 TEO audit process are to:

- › provide comfort to the TEC that all participating TEOs are applying the guidelines in a transparent, fair, and consistent way that adheres to both the principles and letter of the guidelines
- › determine that TEOs have adequate systems and controls in place for:
 - ensuring their preparedness for Quality Evaluation 2026 round
 - determining the eligibility of staff
 - submitting Evidence Portfolios (EPs)
 - submitting the Declaration of the Vice-Chancellor/Chief Executive Officer
- › provide assurance to the TEC that the Examples of Research Excellence (ERE) and Contributions to the Research Environment (CRE) components of EPs, and staff data submitted by participating TEOs, are complete and accurate.



Data validation during submission

During the submission phase of the Quality Evaluation, EP and staff data will be automatically validated by the TEC submission system.

The verification rules are provided by the TEC in the EP schema and Staff Data specification.

TEOs will be able to view all data they have submitted and access a validation report notifying them of any errors that occur in the EP submission.

TEOs are responsible for any changes, including correcting errors, before the final submission date.

Stages of the audit process

There will be two main phases to the TEO audit process:

1. Phase 1: the audit of preparedness of participating TEOs (Process Assurance audit)
2. Phase 2: the audit of data submitted to the TEC for the Quality Evaluation (Data Evaluation audit).

The detailed audit methodology for Quality Evaluation 2026 will be confirmed in November 2023 following sector consultation.

Process Assurance audit

The Process Assurance audit will provide assurance to the TEC that TEOs have adequate systems and controls in place to ensure their preparedness for Quality Evaluation 2026. This audit will include a review of the systems and controls for:

- › determining the eligibility of those staff submitting EPs

- › determining that the Achievement Relative to Opportunity framework has been correctly applied
- › submitting correct and accurate EPs, which will include items in both the ERE and CRE components.

All participating TEOs, including those considering participating, will be required to complete a questionnaire that will be used to assess, evaluate and build an understanding of the maturity of each TEO's internal processes systems and controls, as well as their level of preparedness for the Quality Evaluation.

Information from the questionnaire will be used to undertake a risk assessment that will help the TEC to determine an appropriate level of auditing to be undertaken at each TEO.

Site visits, telephone and video interviews and paper-based reviews will be undertaken during this audit.

Declaration of the Vice-Chancellor/Chief Executive Officer

The Chief Executive or Vice-Chancellor of each participating TEO must submit a declaration confirming they have taken all reasonable steps to ensure the accuracy of information contained in the EPs, the availability of evidence for assessment and audit, and the accuracy of assessment processes within the TEO.

This declaration specifically requests confirmation that:

- › the information within submitted EPs is complete, accurate and complies with the PBRF Quality Evaluation Guidelines
- › all participating staff members whose EPs are being submitted meet the requirements for participation in the PBRF
- › all EPs likely to receive a funded Quality Category have been submitted for assessment
- › all the Examples of Research Excellence items identified in the submitted EPs are available for inspection by the peer review panels if required
- › only staff members with legitimate circumstances have claimed the Researcher Circumstances provision
- › staff data on ethnicity has been collected and reported in line with the Privacy Act 2020.

TEO declarations must be emailed to the TEC no later than **4.00pm 13 July 2026**.

Email PBRF.Help@tec.govt.nz with the subject line PBRF Quality Evaluation 2026 TEO declaration.

Data Evaluation audit

The Data Evaluation audit will provide comfort to the TEC and peer review panels that staff-eligibility data, and the ERE and CRE components of EPs submitted by TEOs, are complete and accurate.

The TEC will conduct random checks of a proportion of staff data and EPs, including some from each TEO. This will use a risk-based sample selection that will be developed as part of the overall audit methodology.

Every participating TEO will be audited. The sample size selected for the audit of EP data will be based on an assessment of risk. In the event that errors are identified, an assessment will be made of the need for an escalated audit.

All aspects of EPs will be open to scrutiny, including data submitted in both the ERE and CRE components.

The PBRF IT System will allow panellists to see which items within an EP have been audited.

Staff eligibility

The staff-eligibility audit will only look at those staff submitting EPs. TEOs will complete and submit the PBRF Staff Data file, along with their EPs, by **4.00pm 3 July 2026**. TEOs have until **4.00pm 9 July 2026** to correct any errors they have found.

The Staff Data file will only include information on those staff members for whom EPs are submitted or who are considered **transferring or concurrently employed** staff.

The staff-eligibility audit will focus on any areas where major discrepancies or inconsistencies were detected during the Process Assurance audit.

Site visits, telephone and video interviews and paper-based reviews will be undertaken during this audit, and TEOs will be required to provide detailed information to auditors. The information needed to confirm staff eligibility would normally include start dates for employment, contract duration, contracted full-time equivalent (FTE), and contracted functions relating to teaching and research. This information would normally be found in employment contracts and position descriptions. Information on an individual staff member's salary would not normally be required.

Follow-up reporting on staff eligibility may also occur before funding is finalised, to ensure that the eligibility requirements have been fully met.

Achievement Relative to Opportunity framework – submission options

TEOs are required to have in place processes to determine submission requirements for staff under the Achievement Relative to Opportunity framework. The audit will consider TEO processes for determining:

- › Which staff meet the criteria to be New and Emerging
- › Which staff meet the criteria to be Part-Time
- › Which staff wish to declare Researcher Circumstances and validating these declarations are legitimate.

A key point is that these are optional accommodations. New and Emerging and Part-Time staff have an option around how many EREs they submit. If a staff member has valid Researcher Circumstances they can opt not to include them in their EP if they wish to submit three EREs instead.

Nonetheless, TEOs need robust and sensitive processes to ensure that where staff do have valid reasons for submitting fewer EREs, they can declare these and have validated the criteria.

Detailed information about Researcher Circumstances is not added to the EP or considered by the panel. The accommodation is that submitting fewer EREs will not disadvantage the staff member.

Research outputs

TEOs are expected to make the majority of ERE Outputs electronically accessible to the TEC through the PBRF IT System. This will allow the audit of research outputs to be undertaken more easily and less intrusively. The TEC will seek specialist support for this audit, to ensure that the process is robust.

To minimise administrative and compliance costs, the audit of research outputs will generally be handled through correspondence rather than site visits. Nevertheless, the TEC reserves the right to visit TEOs to verify data supplied in relation to the PBRF.

A proportion of an EP's research outputs will be cross-checked against a number of publication databases (and other data sources). Primary attention will be on ERE Outputs. However, a proportion of Supplementary Items and OERs listed in EPs will also be investigated.

The main focus will be on those types of outputs that are amenable to such checking processes, such as authored and edited books, journal articles and conference contributions. These types also make up most of the research outputs submitted.

Particular attention will be given to those aspects of the output where inaccurate information could affect perceptions of its quality (for example, the number of authors, location details, pagination). Particular attention will also be given to outputs that bear a date at the limits of the assessment period. Where publication dates appear to be outside the assessment period and no explanation has been supplied in the EP, the relevant research outputs will be investigated. A publisher's letter confirming the actual publication date may also be sought.

Research Activities

Items submitted as Research Activities in the ERE component (either in the Supplementary Items or OERE section) will be included in the TEO audit process. There are six types, with the rest having migrated to the Contributions to the Research Environment (CRE) component.

TEOs are not required to include evidence that supports Research Activities within the EP. A low proportion of Research Activity items will be sampled.

Where possible and relevant, the Research Activities data supplied by TEOs will be reviewed in comparison with other data, such as externally published reports.

An investigation would normally only be undertaken if there were significant discrepancies between submitted data and other information. This approach takes account of the possible differences in data.

Contributions to the Research Environment

Items submitted in the CRE component will be included in the TEO audit process. There are now six types of CRE items, with the rest having migrated to the ERE Component as types of Research Activity that can be included as Supplementary Items and OERs.

TEOs are not required to include evidence that supports CRE items within the EP. A low proportion of research contribution items will be sampled, with the proportion reflecting the weighting of the component.

Where possible and relevant, the data supplied by TEOs will be reviewed in comparison with other data, such as externally published reports.

An investigation would normally only be undertaken if there were significant discrepancies between submitted data and other information. This approach takes account of the possible differences in data.

Panel members' concerns

Panel members are able to note any concerns over the accuracy and reliability of any of the information contained in EPs by flagging an audit concern.

All concerns raised by panels will be investigated by the TEC in the first instance and then escalated to the auditors as required. If escalated to the auditors, the auditors will notify and involve the affected TEO in the audit process.

The result of the investigation will be reported back to the relevant Panel Co-Chairs, the relevant panel members and, if appropriate, all the members of that panel by the TEC.

Nature and categories of errors

The Data Evaluation audit will focus on two broad categories of errors: 'major' and 'minor'.

Major errors

Major errors are those that render staff members ineligible to participate in the Quality Evaluation or make specific research outputs or research contributions ineligible for assessment.

Major errors are likely to include, but are not limited to:

- › staff members not meeting the staff-eligibility criteria, for example:
 - not being continuously employed
 - being based overseas
 - being employed for less than the minimum FTE required
- › incorrect recording of a staff member's FTE
- › incorrect application of the New and Emerging Researcher criteria
- › the final version of a research output being publicly available outside the assessment period for Quality Evaluation 2026
- › a research output not being authored by the person who submitted the relevant EP
- › no evidence confirming the research output's existence
- › a research output that does not meet the PBRF Definition of Research
- › a research activity or contribution not attributed to the staff member submitting the EP
- › a research activity or contribution occurring outside the assessment period for Quality Evaluation 2026.

Minor errors

Minor errors are those that may materially affect a panel member's judgements on the quality of the Evidence Portfolio.

Minor errors are likely to include, but are not limited to:

- › failure to include the names or contributions of co-authors, or both
- › misrepresentation of the contribution of the submitting staff member to a research output, activity, or contribution.
- › a research output that is virtually identical to other research outputs submitted in the EP
- › identification of research outputs as quality assured when they are not
- › incorrect classification of a research output type.

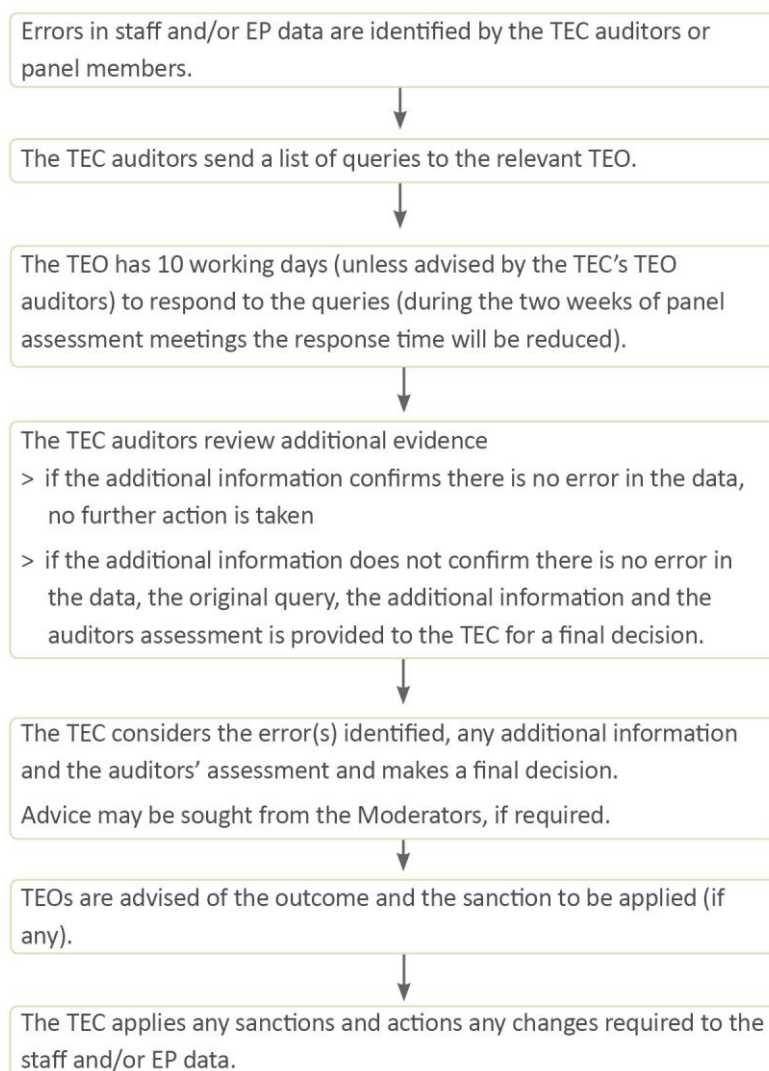


The summary of the outcomes of the process for managing potential errors will be included on the TEC's TEO Information Site to ensure that issues are understood and decisions are transparent.

Information on this process and the outcomes will also be included in the reporting on the audit process.
No confidential information will be provided.

Process for managing potential errors

The following process will be used to manage potential errors in data submitted to Quality Evaluation 2026.



If the error rate is significant, such as, errors are found in numerous EPs or relate to research outputs, activities, and/or contributions, or multiple cases of staff eligibility, then a further examination will be undertaken on other information submitted by that TEO.

Wherever the TEC finds errors or discrepancies that may affect the Quality Categories assigned to EPs, the relevant panel will be informed. Such information will be supplied in advance of the panel meetings.

Significantly high numbers of errors and errors of a systematic nature will also be drawn to the attention of the Co-Chairs of the Moderation Panel and the TEC Board.

Actions

The TEC will determine if and when actions are taken that affect TEOs. The following three principles will apply:

1. The final decision on audit actions will be the responsibility of the TEC, with advice sought from the Co-Moderators as required.
2. Actions will vary according to the magnitude and nature of the issue.
3. In the event that actions are taken, their main impact will be to reduce a TEO's potential PBRF revenue.

It is not possible to identify in advance every situation where action may taken. The following tables, however, shows actions that will be taken in relation to some possible 'major' and 'minor' errors.

Major Errors	Action	Consequence
Staff member is found to be not eligible to participate in the Quality Evaluation.	› EP withdrawn from the assessment process. › The error would be reported.	› EP not included in assessment and/or when calculating funding or reported results.
A research output, activity, or contribution is found to be ineligible for inclusion in the Quality Evaluation, for example, if a research output was produced outside the assessment period, if its existence can't be confirmed, if it has a different author, or because it fails to meet the PBRF Definition of Research.	› Research output or research contribution will not be assessed. › The TEO will not be able to submit a replacement output or contribution. › The error would be reported.	› The exclusion of the research output or research contribution may affect the Quality Category assigned to the EP. › A lower Quality Category score will reduce the revenue a TEO receives from the Quality Evaluation.
Systemic errors or lack of confidence in the data supplied by a TEO.	› Further investigation of errors by TEC and auditors › Errors would be reported.	› Possible exclusion of all EPs submitted by that TEO from the Quality Evaluation process.
Incorrect recording of a staff member's FTE	› TEC will correct the data. › The error would be reported.	› This error would affect the TEO's PBRF revenue.
Incorrectly assigning New and Emerging Researcher status to a staff member	› New and Emerging Researcher status removed from the individual › The error would be reported.	› The staff member's EP would not be eligible for the C(NE) or the R(NE) Quality Categories. › The EP would remain in the assessment process and would be eligible for the other Quality Categories (A, B, C and R). › This error would affect the TEO's PBRF revenue.

Minor Errors	Action	Consequence
Incorrect classification of research output type	› The error would be reported.	› May affect a panel member's judgements on the quality of the EP
A research output that is virtually identical to other research outputs submitted in the EP	› The error would be reported.	› May affect a panel member's judgements on the quality of the EP
Identification of research outputs as quality assured when they are not	› The error would be reported.	› May affect a panel member's judgements on the quality of the EP
Failure to include the names or contributions of co-authors, or both	› The error would be reported. › Item/s could be removed from the EP/not assessed	› EP has missing item/s › The exclusion of the research output may affect the Quality Category assigned to the EP. › A lower Quality Category score will reduce the revenue a TEO receives from the Quality Evaluation.
Misrepresentation of the contribution of the submitting staff member to a research output or research contribution.	Depending on the specific details: › Item/s could be removed from the EP/not assessed, or › If this relates to multiple items, the EP may not be assessed › The error would be reported	› Depending on the specific details: › The exclusion of the research output or research contribution may affect the Quality Category assigned to the EP. › A lower Quality Category score will reduce the revenue a TEO receives from the Quality Evaluation.

An additional consequence of finding major errors is that the auditors will undertake a wider review of the TEO's data, and all errors will be publicly reported at an aggregate level.

Reporting of audits

The TEC will report the results of each of the audits back to the participating TEO.

The TEC will also publicly report on the outcomes of both the Process Assurance audit and the Data Evaluation audit, including the results for each TEO. This will include the errors found and any sanctions applied.

Evidence required for audit

Audit of outputs

There are minimum evidence requirements for the audit of an ERE Output, Supplementary Item, or OERE. Evidence of publication and public dissemination details must be available for any listed item.

This must include independent evidence of key factors, such as date of publication (such as, evidence that it was in the public domain for the first time within the review period) and authorship or producer (such as, evidence that the person claiming the output is indeed an author or producer and that any co-authors or co-producers are correctly identified). Other factors, such as pagination or venue, will be important for different research output types.

Evidence for ERE Outputs

In many cases, the evidence required for assessment and audit of an ERE Output can be met by a single item or file (for example, books usually contain an imprint showing publication date, authorship, title, place of publication and pagination).

In other cases, the full copy of the research provided may meet the needs of panel reviewers assessing quality, but not the needs of auditors confirming eligibility. For instance, a journal article may provide the content, but either has no evidence of the date of publication or there is a variance in the dates (such as, an earlier online publication date when compared with the imprint date relating to the physical publication).

In this case, further evidence would be required if the ERE Output was subject to audit. This could be in the form of a copy of the page(s) of the output, which provides evidence of publication details (for example, date, title, authorship and pagination), or some other form of independent evidence (such as a library catalogue listing), and would need to accompany the full copy of the output.

Evidence for Supplementary Items and OERs

For Supplementary Items and OERs, a full copy of the research is not needed, but confirmation of eligibility is needed. For example, if a chapter in a book is submitted, a copy of the pages of the book that provide evidence of the chapter's bibliographic details would be required for audit.

Evidence needed for audit of Supplementary Items and OERs

Research output type	Independent confirmation of:	Can usually be provided by:
Authored Book	› Date of first publication › Authorship › Pagination › Title › Publisher	› An electronic copy of the book's title page and bibliographic details › A library catalogue record › A letter from the publisher
Chapter in Book	› Date of first publication › Authorship › Pagination › Title of book › Title of chapter › Editor/s › Publisher	› An electronic copy of the book's title page and bibliographic details › A library catalogue record › A letter from the publisher

Research output type	Independent confirmation of:	Can usually be provided by:
Conference Contribution – Other Conference Contribution – Published	› Date of first presentation /publication › Authorship › Pagination › Title of paper › Title of proceedings › Publisher › Editors (where appropriate)	› Conference programme ⁴ › Letter from conference organisers
Discussion/ Working Paper	› Date of first publication › Authorship › Pagination › Title › Publisher › Venue (if applicable).	› An electronic copy of paper's title page and bibliographic details › A library catalogue entry
Edited Volume	› Date of first publication › Editorship › Pagination › Title › Publisher	› An electronic copy of the book's title page and bibliographic details › A library catalogue record › A letter from the publisher
Intellectual Property	› Date of first public availability › Role (for example, inventor) › Granting of patent or trademark	› Letter from granting body › Official online listing
Journal Article	› Date of first publication › Authorship › Pagination › Title › Journal title	› An electronic copy of the journal's bibliographic details or contents page, or both (where applicable) › A library catalogue record › A record on the journal's web page listing › A record in a major bibliographic database source such as Web of Science

⁴ For **Conference Contribution – Other**, the listing of the output in conference handbook, programme or website, along with date and authorship would be applicable. TEOs may also need to verify, on request of the auditors that an output listed as **Conference Contribution – Other** occurred. For example, if a staff member withdraws without presenting at the conference, they may be named on the programme but the output itself would not have occurred.

Research output type	Independent confirmation of:	Can usually be provided by:
Oral Presentation	› Date of first presentation › Authorship (Presenter) › Title of paper › Venue	› Letter from venue or organiser › Press story or review › Electronic copy of attestation by a scholar of acknowledged repute, either in Aotearoa New Zealand or elsewhere (for example, the scholar may be an eminent kaumātua or an academically credentialed expert).
Products and Processes	› Date of first publication/presentation › Authorship or role › Title/name › Commissioning body or sponsor › Scale, if this is claimed as an indicator of quality in the EP. › Basis of funding, if this is claimed as an indicator of quality in the EP	› An electronic copy of the output's title page and bibliographic details › Letter from commissioning and/or granting body or sponsor › Press story or review › Official online listing
Other Form of Assessable Output	› Date of first presentation /publication › Authorship contribution › Pagination (if applicable) › Title › Publisher or Venue (if applicable)	For any other research output that is not listed above, the onus is on the staff member to provide research outputs in forms that can be reviewed by an auditor to verify that the information in the EP is correct and the output meets the PBRF Definition of Research.
Report	› Date of first publication › Authorship › Title › Pagination › Commissioning body where appropriate	› An electronic copy of the report's title page and bibliographic details › Letter from commissioning body › Letter from sponsoring organisation › Online record on web page of commissioning body › A library catalogue record

Research output type	Independent confirmation of:	Can usually be provided by:
Scholarly Edition/ Literary Translation	› Date of first publication › Authorship › Pagination › Title › Publisher	› An electronic copy of the book's title page and bibliographic details › A library catalogue record › A letter from the publisher
Software	› Date of first publication › Authorship › Title › Publisher, if relevant › Scale, if this is claimed as an indicator of quality in the EP.	› Software documentation › Record on publisher website › Letter from publisher or distributor
Thesis	› Date of first publication › Authorship › Title › Awarding institution › Degree (for example, Master's, PhD, or other professional qualification).	› An electronic copy of the title page for the thesis and bibliographic details › A library catalogue record

Evidence needed for audit of Supplementary Items and OERs – Creative Work

Research output type	Independent confirmation of:	Can usually provided by:
Artwork, Artefact, object, craftwork	› Date of work's first public availability › Authorship or contribution › Title › Venue, if applicable › Scale, if this is claimed as an indicator of quality in the EP	› Programme › Letter from gallery › Press story or review
Composition	› Date of work's first public availability › Authorship or contribution › Title › Venue (for performances) › Publisher (for scores) if applicable › Scale, if this is claimed as an indicator of quality in the EP	› Documentation that confirms the details listed as information required for auditing.
Design output	› Date of work's first public availability (opening and closing dates if applicable) › Authorship or contribution › Title › Pagination (if published in a book or catalogue) › Venue (for example, where published or made available)	Documentation that confirms the details listed as information required for auditing. Depending on where design was published, one or more of the following may be acceptable:

Research output type	Independent confirmation of:	Can usually provided by:
	› Sponsor or commissioner if applicable › Scale, if this is claimed as an indicator of quality in the EP › Publisher (if published in a book or catalogue) › Editors (if published in a book or catalogue and applicable)	› If published in a book: copy of imprint, table of contents and so on, or a catalogue entry. › If exhibited: exhibition programme or letter from a gallery. › A letter from a sponsor or commissioner confirming submitted details
<i>Exhibition/curatorial exercise</i>	› Date of work's first public availability (opening and closing dates if applicable) › Authorship or contribution › Title › Venue (for example, gallery) › Sponsor or commissioner if applicable › Scale, if this is claimed as an indicator of quality in the EP	› Catalogue or similar documentation › A letter from a sponsor or commissioner › Letter from gallery › Press story or review
<i>Dramatic and literary texts</i>	› Date of first publication › Authorship › Title › Pagination › Publisher	› An electronic copy of the output's bibliographic details › A library catalogue record › A letter from the publisher
<i>Film/video</i>	› Date of work's first public availability (release or broadcast) › Authorship or contribution - creator(s) and role(s) (for example, evidence that the person claiming the work was involved, and any co-contributors are adequately listed) › Title › Duration › Broadcaster › Scale, if this is claimed as an indicator of quality in the EP	› A library catalogue listing › A letter from the broadcaster › Information provided on a page where the work is hosted online, or within the work itself

Research output type	Independent confirmation of:	Can usually be provided by:
Performance	› Date of work's first public availability (including opening and closing dates if applicable) › Authorship or contribution - role of person claiming the performance as a research output › Title › Venue or location › Basis of funding, if this is claimed as an indicator of quality in the EP › Scale, if this is claimed as an indicator of quality in the EP	› Theatre programme › Letter from producer › Press story or review

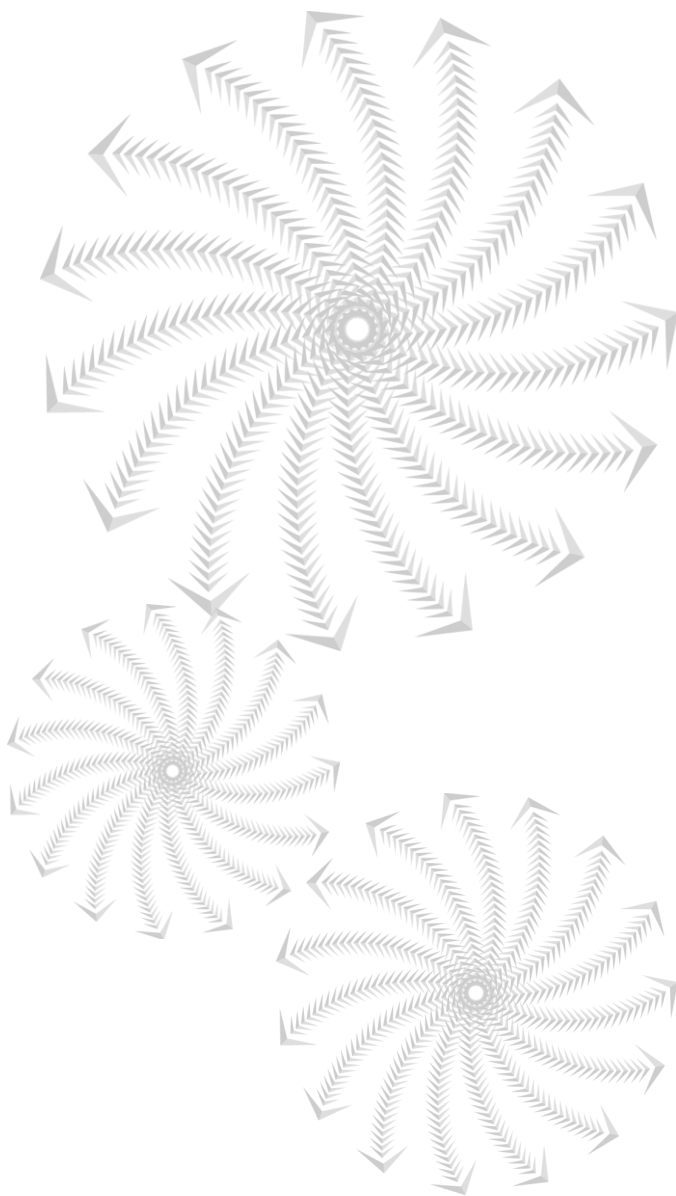
Evidence required for audit of Research Activities and CRE items

The evidence required for Research Activities and CRE component items must be sufficient to validate that the item:

- › occurred within the assessment period
- › can be attributed to the staff member submitting the EP.

It is also expected that the evidence supports the description of the item provided in the EP. The staff member would normally have sufficient information that would allow the TEO to validate the item.

The type of evidence would vary, depending on the activity. The TEC will accept a range of information and evidence, and will not set specific limits on this.



2026 Quality Evaluation

How will the results be reported?

Reporting the results of Quality Evaluation 2026



The main changes to reporting for Quality Evaluation 2026 are:

- removal of the Average Quality Scores (AQS)
- a focus on the areas where changes have been made to the PBRF, such as for Māori and Pacific researchers and research, and the Achievement Relative to Opportunity framework.

Public reporting of Quality Evaluation 2026 results ensures access to a wide range of information relating to the research performance and activities of participating tertiary education organisations (TEOs).

It also improves the ability of stakeholders such as students and potential students, research funders and providers, the Government, and business to make informed decisions. For instance, the reporting of results can help students in making choices about where to study, particularly at the research-degree level.

Purpose of reporting

The purpose of reporting the results of Quality Evaluation 2026 is:

- › to support accurate understanding of the outcomes of the Quality Evaluation
- › to provide meaningful information that is of value to the sector
- › to make the results accessible to a wide general audience.

Principles underpinning the reporting framework

Several broad principles underpin the public reporting of the PBRF results. These include:

- › protecting the confidentiality of an individual staff member's Quality Categories
- › maintaining the confidence and cooperation of the academic community
- › minimising transaction and compliance costs
- › providing an incentive for the consistent application of the framework by all TEOs
- › contributing to international benchmarking of research performance within disciplines (as a tool to inform specific policy and funding decisions)
- › protecting the integrity of long-established academic disciplines while also recognising emerging disciplines and multidisciplinary subject areas
- › having a sufficient level of disaggregation so that the Quality Categories and other published information are useful and meaningful for accountability purposes and for relevant stakeholders (for example, students, research funders)
- › adopting a consistent reporting framework that can facilitate comparisons over time (where possible)
- › providing the information necessary for evaluating the implementation of the PBRF and its impacts on the tertiary education sector (where possible).

Reporting on Quality Evaluation 2026

After Quality Evaluation 2026, an interim report on the overall results will be prepared and publicly released, alongside data visualisations and infographics. Included in the suite of outputs will be the following information:

- › a summary of the Quality Evaluation process
- › commentary on the major findings including on changes to the design of the Quality Evaluation
- › a detailed description of the results and projected funding impacts
- › comparative information from 2003, 2006, 2012, and 2018 Quality Evaluations.

Final reporting outputs, including the written report, will be publicly released following the completion of the complaints process. This will update any results or funding that may have changed if a complaint is upheld.

Information to be included in the reporting outputs

The results of Quality Evaluation 2026 will be reported at the following levels:

- › participating TEO
- › peer review panel
- › subject area at the aggregate level
- › subject area at the TEO level
- › academic unit nominated by participating TEOs
- › Field of Research, if ANZSRC codes are adopted
- › demographic data including ethnicity, gender, age and full-time versus part-time staff.

Only the Quality Category results of staff members who met the PBRF-eligibility criteria (PBRF eligible) and whose Evidence Portfolios (EPs) were assigned a **funded Quality Category** are included in the reporting of results for Quality Evaluation 2026.

The nature of the results reported will vary according to the reporting level (for example, by TEO or subject area).

- › Subject area results at a TEO level will have a 7.0 full-time equivalent (FTE) threshold applied to protect individuals' privacy.
- › Academic units that do not meet the threshold of 7.0 FTEs will be reported under a separate category of 'Other'.
- › Staff data are weighted on an FTE basis when reporting the results of the Quality Evaluation.

The focus of comparative reporting across the four previous Quality Evaluations (2003, 2006, 2012, and 2018) is the Quality Categories awarded; specifically, the numbers and percentages of FTE staff assigned the A, B, C and C(NE) Quality Categories.

The table below outlines the data included in each output and a short description:

Output	Data	Description
2026 Results Report and supplemental reports	› The annual funding allocated to each participating TEO via the PBRF for the: – Quality Evaluation – Research Degree Completion measure – External Research Income measure. › Number and proportion of staff members (weighted on an FTE basis) whose EP received a funded Quality Category by: – TEO – panel – subject area. › Reporting on the changes introduced to the Quality Evaluation. › Demographic information.	The Results Report will take a sector-wide approach, providing an overview of research quality at a system level. It will continue to illustrate the distribution of funded Quality Categories and provide an analysis of trends over the five rounds. The supplemental reports will include: A process report: focus on how Quality Evaluation 2026 was run, noting any changes and the impact of these between 2018 and 2026. Peer review panel reports: the panels' observations on the subject areas and research performance and comments on the differences between the distribution of Quality Categories for different subject areas. The moderation panel's report: recommendations for the TEC Board and a brief discussion of the recommendations from each panel highlighting any issues of significance.
Data visualisation tool (TEO only)	› Number and proportion of staff members (weighted on an FTE basis) whose EP received a funded Quality Category by: – TEO – panel – subject area – aggregate and TEO level – nominated academic unit › Demographic information. › Similar data set from 2003, 2006, 2012, and 2018 rounds.	An online business tool that allows TEOs to analyse their own data. It is designed to allow TEOs to make comparisons across sectors and years, and includes functionality to download the data set.
Data visualisation tool (public)	› Number and proportion of staff members (weighted on an FTE basis) whose EP received a funded Quality Categories by: – TEO	The public application will be an executive summary of the more detailed data available to TEOs.

Output	Data	Description
	– panel – subject area. › Demographic information. › Similar data set from 2003, 2006, 2012, and 2018 rounds.	Includes functionality to filter and analyse the main data set.
Results infographics	Historic infographic: › results from 2003, 2006, 2012, 2018 › Demographic information › Distribution of funded Quality Categories by panel › Summary EP information (for example, total number of EPs submitted). 2026 infographics: › Summary per TEO and/or subsector overview › Funding allocated via the Quality Evaluation › Demographic information › Distribution of funded Quality Categories by panel and subject area.	1-to-2-page visuals that provide summary information on the results of the Quality Evaluations.

Highlighting changes to the design of the Quality Evaluation

Reporting on the results of the Quality Evaluation will include a focus on how changes to the design have affected the process and outcomes.

This will include information on:

- › the introduction of new ethnicity and panel weightings, such as:
 - the number of EPs submitted by Māori researchers
 - the number of EPs submitted to the Mātauranga Māori panel
 - the number of EPs submitted by Pacific researchers
 - the number of EPs submitted to the Pacific Research panel
- › how the new definitions of research, excellence, and impact and new Quality Category descriptors have affected diversity and broader recognition of excellence, such as:

- how many and what types of Research Activities are submitted in EPs, both as Supplementary Items in EREs and as OERs
 - how many and what types of CRE types are included in EPs
 - the number of EPs submitted by Māori researchers (as above)
 - the number of EPs and EREs submitted in Te Reo Māori
 - panel selection by Māori researchers
 - the distribution of scoring for Māori researchers
 - the number of EPs submitted by Pacific researchers (as above)
 - panel selection by Pacific researchers
 - the distribution of scoring for Pacific researchers
- › the new elements of the design of EPs and the underpinning process introduced by the Achievement Relative to Opportunity framework by reporting:
- any differences in the number of EREs and Supplementary Items submitted between groups with different or flexible submission requirements. This would include uptake of the option of reduced submission requirements for New and Emerging Researchers and researchers in Part-Time roles
 - any differences compared to previous rounds in the final score distribution for New and Emerging Researchers, researchers in Part-Time roles, female researchers, Māori researchers, and Pacific researchers, and researchers who have declared Researcher Circumstances
 - any changes to the number/proportion of researchers meeting the new definition of a New and Emerging Researcher
 - any changes to the number/proportion of researchers declaring Researcher Circumstances compared to the previous Extraordinary Circumstances option
- › how changes to the cross-referral process have worked given the changes made to this process and to panels – i.e., the new Co-Chairing arrangements and changes to panel weightings
- › panel composition diversity
- › Co-chairing arrangements in the Moderation team and peer review panels.

Additional information on how the results will be presented

Results that are presented in tables will be ranked alphabetically. This applies to TEO and subject area results.

The results at a TEO level will be banded based on the type of TEO:

- › Te Pūkenga
- › private training establishments
- › universities
- › wānanga.

Reporting PBRF funding allocations

Reporting on Quality Evaluation 2026 will include information on funding allocations. PBRF allocations are based on the results of all three PBRF components:

- › Quality Evaluation
- › Research Degree Completions
- › External Research Income.

Formula and calculations for the Quality Evaluation

Allocations for the Quality Evaluation component are based on:

- › funded Quality Categories assigned to EPs
- › the weighting for the subject area to which EPs have been assigned (including the new weightings for the Mātauranga Māori and Pacific Research panels)
- › ethnicity weightings for Māori and Pacific staff
- › FTE status of the participating TEO's PBRF-eligible staff member as recorded in the PBRF Staff Data File (with the qualifications as outlined below in the section 'FTE status of staff').

Formula for Quality Evaluation funding

$\Sigma \text{ TEO } [(\text{numerical quality category weighting}) \times (\text{FTE status of staff member}) \times (\text{funding weighting for relevant subject area}) \times (\text{funding weighting for ethnicity})]$

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$\Sigma \text{ all TEOs } [(\text{numerical quality category weighting}) \times (\text{FTE status of staff member}) \times (\text{funding weighting for relevant subject area}) \times (\text{funding weighting for ethnicity})]$

×

Total amount of funding available for the Quality Evaluation component of the PBRF

Funded Quality Category weightings

The R and R(NE) Quality Categories are unfunded.

Quality Category	Weighting
A	5
B	3
C	1
C(NE)	2

Subject-area weighting

Subject-area weightings are based on an EP's primary subject area of research.

Subject area	Weighting
Law; history, history of art, classics and curatorial studies; English language and literature; foreign languages and linguistics; philosophy; religious studies and theology; political science, international relations and public policy; human geography; sociology, social policy, social work, criminology and gender studies; anthropology and archaeology; communications, journalism and media studies; education; pure and applied mathematics; statistics; management, human resources, industrial relations, international business and other business; accounting and finance; marketing and tourism; economics.	1
Psychology; chemistry; physics; earth sciences; molecular, cellular and whole organism biology; ecology, evolution and behaviour; computer science, information technology, information sciences; nursing; sport and exercise science; other health studies (including rehabilitation therapies); music, literary arts and other arts; visual arts and crafts; theatre and dance, film and television and multimedia; and design.	2
Engineering and technology; agriculture and other applied biological sciences; architecture, design, planning, surveying; biomedical; clinical medicine; Pacific research; pharmacy; public health; veterinary studies and large animal science; and dentistry.	2.5
Mātauranga Māori (Māori knowledge and development)	3

The weightings for Mātauranga Māori and Pacific research will only apply to EPs submitted to these panels as their main panel. EPs submitted to other panels that are cross-referred to the Mātauranga Māori and Pacific Research panels will not receive these weightings.

Given the introduction of these higher funding weightings, EPs submitted to the Mātauranga Māori and the Pacific Research Panel will no longer have the higher weighting of any other relevant subject areas applied to them.

If an EP was transferred to a panel different from that requested, this information will be given to the TEO along with the reason for the transfer. TEOs should advise the relevant staff member(s) of the transfer when the results of the Quality Evaluation are released. This information will also be included in the report on the assessment of the staff member's EP, which can be requested by the individual staff member.

Weighting for FTE status of staff members

For most staff members, the FTE used in the funding calculation will be that recorded in the PBRF Staff Data file.

Where staff members are concurrently employed by two or more participating TEOs, the TEC will use the FTE recorded in the PBRF Staff Data file of each TEO and proportion the funding to equate to no more than one FTE for a single staff member.

The TEC will calculate an effective FTE (E-FTE) for staff who transfer between participating TEOs using the proportions set out in the staff-eligibility criteria.

Funding allocations for the Research Degree Completion and External Research Income components

These allocations are calculated on an annual basis. The PBRF User Manual provides information on the reporting requirements and funding calculations for these two components.

Individual staff members' Quality Categories

TEOs that have submitted EPs to Quality Evaluation 2026 will be notified of their results shortly before the public release in April 2027. Part of this will be a confidential report on the Quality Categories that the peer review panels have assigned to individual staff members from that TEO.

The main purpose for releasing this information to the TEO is to ensure that the TEC has correctly calculated Quality Evaluation funding and so the TEO can advise staff members of their Quality Category results. It also gives a TEO more information about its areas of strength and weakness. This allows the TEO to take steps to improve the quality of research through targeted internal resource allocation and staff support. This should allow the TEO to:

- › increase the average quality of research produced by the TEO
- › improve the quality of information on research outputs.

There is a recommended protocol for TEOs to ensure that information on staff members' Quality Categories is used appropriately and sensitively. The TEC expects that participating TEOs will use the recommended protocol provided or develop their own version based on those principles and ensure that their staff are familiar with the protocol.

There will be no **public** release by the TEC of the Quality Categories assigned to individual staff members' EPs.

Protocol for tertiary education organisations on the treatment of PBRF Quality Categories

An important aspect of the Quality Evaluation is maintaining the confidentiality of staff member's individual Quality Categories. This protocol was established to ensure that tertiary education organisations (TEOs) maintain the confidentiality of individual Quality Categories for all staff members, and that they have processes and protocols to keep Quality Category information secure.

All participating TEOs are subject to the Privacy Act 1993. The Office of the Privacy Commissioner has provided advice that TEOs are unlikely to breach the Privacy Act as long as they are open and clearly articulate the reasons for collecting PBRF data and the purposes the information will be used for. This transparency can be achieved by a TEO's commitment to the recommended protocol provided, or by developing their own version based on those principles. The Tertiary Education Union has been consulted and supports the intent of this protocol, but it reserves the right to decline its support of institution-developed protocols if these differ markedly from the TEC-recommended protocol.

The TEC expects that participating TEOs have ensured staff members are familiar with the protocol. Any complaints received by the TEC about a TEO's use of individual Quality Categories will be referred back to the relevant TEO.



This recommended protocol for TEOs was developed by the 2012 Quality Evaluation PBRF Sector Reference Group, in consultation with the sector, the Tertiary Education Union and other stakeholders.

Recommended protocol

1. The TEO will establish processes and protocols for maintaining confidentiality of individual Quality Categories for all staff, and processes and protocols to keep this information secure.
2. All staff participating in PBRF Quality Evaluations will be informed by their employing TEO of:
 - a. the processes and procedures by which PBRF data, including individual Quality Categories, will be communicated and to whom
 - b. those people and positions within the TEO who will have access to an individual's Quality Category
 - c. the uses to which individual Quality Categories (and Component Scores, if staff members volunteer this information to their TEO) may be put and the uses to which they may not be put
 - d. this Sector Reference Group (SRG) recommended protocol
 - e. any TEO-developed protocol that relates to the use of Quality Category results and any endorsement by relevant unions.
3. The TEO will advise individual participating staff of their personal Quality Category (and any other data relating to the assignment of the Quality Category relevant to them that is provided to the TEO by the TEC), unless the staff member requests otherwise.

4. The TEO will restrict access to individual Quality Categories to the minimum number of staff necessary to achieve the following purposes:
 - a. validation of the accuracy of the Quality Categories, along with full-time equivalent and subject cost categories for individual staff
 - b. internal management and allocation of financial resources (consistent with the purposes of the PBRF)
 - c. to identify strengths of departments and/or schools
 - d. as an externally validated benchmark to help ensure appropriate internal calibration of assessments of research.

Advice must be given by TEOs to staff members, before their participation in Quality Evaluation 2026, that the TEO may use individual Quality Categories for these purposes. TEOs should ensure that no identification of individual Quality Categories can be made outside this small number of staff.

5. The TEO will, in conjunction with staff and relevant union representatives, seek to establish agreed codes of practice and complaint procedures that govern the behaviour of staff members participating in the PBRF Quality Evaluation. The TEO's code of practice relating to staff participation in the PBRF Quality Evaluation will state that:
 - a. maintenance of the confidentiality of individual Quality Categories (and Component Scores, if staff members volunteer this information to their TEO) is a priority for the TEO
 - b. staff members will not be required to divulge their Quality Categories or Component Scores
 - c. each staff member has an opportunity to discuss their Quality Category with their manager if the staff member wishes
 - d. in the event that a staff member advises a manager of their Quality Category, or Component Scores, or both, that manager will ensure that these are kept private and confidential and will not use that information other than for purposes authorised by the individual staff member concerned and within the restrictions specified in this SRG-recommended protocol.
6. The TEO will not use individual Quality Categories or information leading to the revelation of individual Quality Categories for purposes other than those consistent with this SRG-recommended protocol. In particular:
 - a. the TEO will not use individual Quality Categories as a basis for salary determinations
 - b. the TEO will not request individual Quality Categories for recruitment purposes. Recruitment decisions should be made on the basis of all evidence of teaching, research and service performance as they relate to the specific role, as well as the TEO's overall staff profile (particularly since the offered Quality Category cannot be verified by the TEO)

- c. the TEO will not use individual Quality Categories for performance appraisals or for disciplinary action against staff.
7. The TEO will not divulge individuals' Quality Categories to any third party without the prior authorisation of the individuals concerned. In particular, the TEO will ensure that individual Quality Categories of staff, either employed by the TEO concerned or by another TEO, are not revealed through marketing or advertising activity initiated by the TEO.

Staff requesting their own results

Individual staff members participating in Quality Evaluation 2026, and staff members who participated in previous Quality Evaluations, are able to request more detailed information on the assessment of the Evidence Portfolio (EP) submitted by their employing tertiary education organisation (TEO).

- › TEOs cannot request this information on behalf of their current or previous staff members.
- › A request form will be available to download from the TEC website in April 2027 or can be requested from a TEO's PBRF contact person.
- › Information for requesting Quality Evaluation results from previous rounds is available on the TEC website in the section [Researchers' requests for assessment information](#).

Requesting results

All requests for results must be submitted by individual staff members on the form provided by the TEC.

The form must include the following information for the TEC:

- › full name
- › date of birth
- › PBRF Unique Identifier (provided by the TEO)
- › name of the TEO that submitted the EP
- › contact phone number
- › email address
- › postal address to send the printed report.

This information will ensure that the staff member is correctly identified by the TEC.

Submitting requests for results

The completed 'Request for Evidence Portfolio Information' form can be emailed or mailed to the TEC. Email customerservice@tec.govt.nz with the subject line 'PBRF Quality Evaluation results request'.

Processing of requests

After receiving a completed 'Request for Evidence Portfolio Information' form from a staff member, the TEC will confirm the identity of the individual, prepare the report and forward it to the staff member at the email address provided in the request.

If the TEC has any concerns related to the identity of the staff member, the information will not be released. Staff members may need to check their information with the Research Office of the TEO that submitted the EP.

The TEC aims to process requests within 20 working days from receipt of the form. Requests for results from the 2003, 2006, 2012, and 2018 Quality Evaluations may take longer to process.

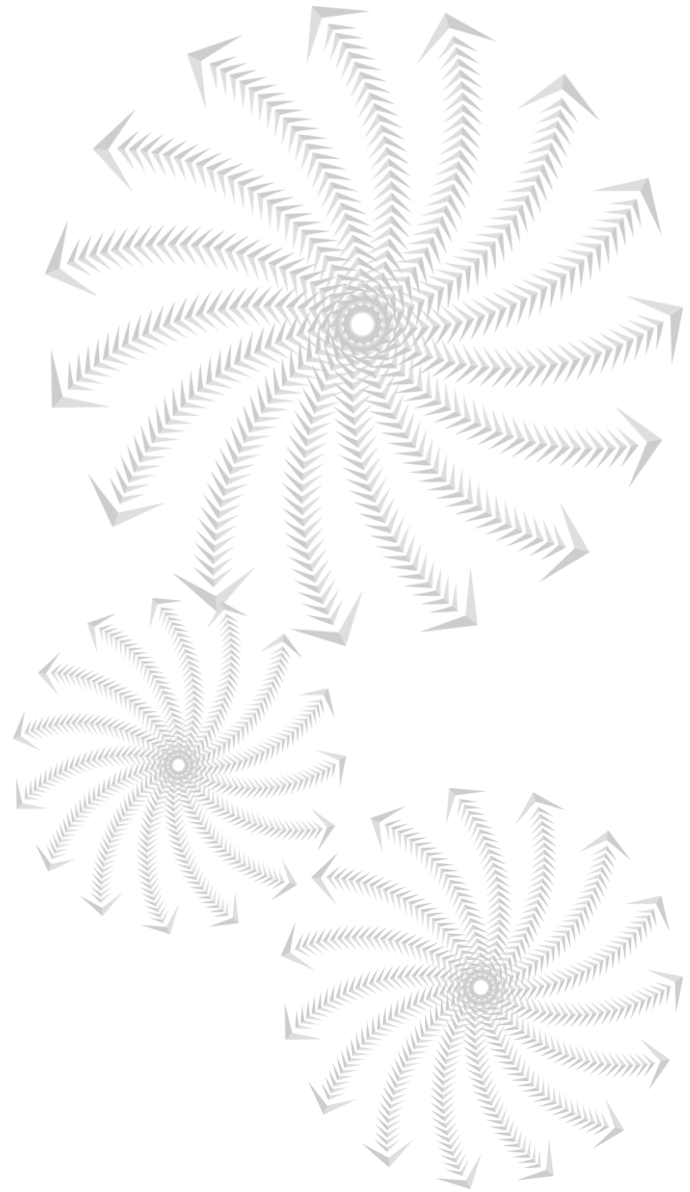
The TEC will not release information on Quality Evaluation 2026 assessment to individual researchers until these results have been received by TEOs. This is expected to be mid-April 2027.

Information that will be released

The following information on Quality Evaluation 2026 assessments will be released to staff members:

- › a list of cross referrals (requested, declined, approved)
- › staff member details as submitted in the PBRF Staff Data file by one or more TEOs
- › actions and observations including transfer of the EP to another panel
- › Calibrated Panel component scores
- › Calibrated Panel Quality Category
- › Holistic Quality Category
- › Final Quality Category.

To preserve the confidentiality of panel members, the names of assessors assigned to any EP will not be released to the staff member or the TEO.



Quality Evaluation 2026

How to make a complaint about errors

Complaints about administrative and procedural errors

The Quality Evaluation processes are set up to ensure fairness as far as possible. Panels are trained to undertake a fair and impartial assessment. The complaints process is designed to ensure that, if there has been a failing of due process, this can be rectified appropriately. This process occurs after the provisional results of the Quality Evaluation are reported in April 2027

The TEC will only accept and investigate complaints concerning possible administrative or procedural errors, for example:

- the failure to assign a Quality Category to an Evidence Portfolio (EP)
- a failure to follow the assessment processes outlined in the PBRF Guidelines.
- › The TEC will not accept or investigate complaints relating to substantive decision making by a peer review panel, including:
 - the criteria for assessing EPs
 - the guidelines on the conduct of the assessment process
 - the composition of a particular peer review panel
 - the judgements made by peer review panels concerning the quality of research or research-related activity presented in the EP.

Making a complaint

All complaints must be submitted:

- › by the staff member's employing tertiary education organisation (TEO)
- › on the template provided by the TEC
- › within 35 working days of the TEO being notified of the Quality Evaluation results.

Complaints must be emailed to the TEC:

Email: PBRF.Help@tec.govt.nz with the subject line 'PBRF Quality Evaluation 2026 complaint submission'.

Each complaint must:

- › state the nature of the error (administrative or procedural, or both)
- › state the part(s) of the Quality Evaluation 2026 Guidelines or panel-specific guidelines that the complaint relates to
- › identify the part(s) of the EP that are affected by the alleged error
- › specify the remedy that the TEO is seeking.

Any associated evidence must be provided at the time the complaint is submitted.

A separate complaint must be submitted to the TEC for each EP the TEO believes may have been affected by an administrative or procedural error.



Complaints from the 2018 Quality Evaluation

The TEC received a total of 16 complaints from six participating TEOs. The complaints related to possible administrative or procedural errors in the 2018 Quality Evaluation process.

The TEC investigated each complaint and sought external advice as needed. This process found no evidence that any administrative or procedural errors had occurred. As a result, none of the complaints were upheld.

Only TEOs can submit complaints. Any complaint received from individual staff members will be referred back to the relevant TEO.

Staff members may need to request their detailed assessment information from the TEC before the TEO can determine if an administrative or procedural error has occurred.

Processing complaints

On receiving a complaint, the appropriate TEC staff will investigate the matter and provide an initial report. Depending on the nature of the complaint, an external person (or persons) may be asked to help or advise the TEC.

The TEC will respond to the TEO within 60 working days of receiving the complaint to advise on the outcome and any action that may be taken in regard to the outcome if appropriate.

Possible outcome from complaints

A complaint will either be:

- › upheld
- › partially upheld
- › not upheld.

If a complaint is upheld or partially upheld then possible actions may include:

- › correcting any data entry errors in the case of a simple administrative error
- › in the case of failures of due process, the EP could be reassessed or panels reconvened.

The TEO is required to pay a fee of \$350 (including GST) for each complaint that is not upheld.

Once the TEC has provided the TEO with the formal response and outcome of the investigation(s), it will not undertake further investigation of a complaint.

TEOs that are unhappy with the TEC's investigation and response to the complaint may seek a judicial review or may complain directly to the Office of the Ombudsman.

Glossary

The glossary contains the broad meanings of commonly used terms. Full descriptions of these can be found in the main body of the guidelines.

Term	Meaning
Achievement Relative to Opportunity framework	This framework provides equity-based accommodations for staff members who are New and Emerging, Part-Time, or who declare valid Researcher Circumstances.
Assessment period	The period between 1 January 2018 and 31 December 2025. Only research produced and research activities and contributions undertaken in this period are eligible for inclusion in an Evidence Portfolio for Quality Evaluation 2026.
Co-authorship	Process by which a research output is produced by more than one researcher.
Component scores	The scores from zero to seven that are assigned to each of the two components of an Evidence Portfolio (ERE component and Contributions to the Research Environment component).
Contract duration period	The period of time a staff member is contracted for.
Co-production	Process by which a research output is produced by more than one researcher.
Course	The smallest component of a qualification that contributes credit toward the completion of the qualification. Other terms used to describe a course including unit, paper or module.
Contributions to the Research Environment (CRE)	A CRE item is evidence that describes the contribution or recognition or impact of a staff member's research and research-related activities. A CRE type is one of the six defined categories for listing research-related activity in an Evidence Portfolio.
Contributions to the Research Environment (CRE) component	The CRE component is one of the two components of an Evidence Portfolio and is weighted at 30 percent of the overall assessment score.
Degree-level course or equivalent	Course or equivalent that leads to a degree or related qualification. Degree-level courses include those at Level 5 or above on the New Zealand Qualifications Framework. Courses taught as part of qualifications, such as certificates or diplomas that can form one or more years of study towards a degree, are included as degree-level courses.
Evidence Portfolio (EP)	TEOs collect information on the research and research-related activity of their PBRF-eligible staff members during the assessment period. This information forms the EP that is submitted by the TEO to the TEC for assessment by a peer review panel.

Term	Meaning
Example of Research Excellence (ERE)	An ERE is a product of research that is evaluated during the Quality Evaluation process. It includes a contextual narrative, an ERE Output, and up to three optional Supplementary Items.
Examples of Research Excellence (ERE) component	The ERE component is one of the two assessed components of an Evidence Portfolio. It includes EREs and OERs. The score for this component is weighted at 70 percent of the overall assessment score.
ERE Output	The research output that is provided as part of an ERE.
Excellence	For the purposes of the Quality Evaluation, research excellence will be assessed in terms of originality, rigour, reach, and significance, with reference to the quality standards appropriate to the subject area and to the unique nature of Aotearoa New Zealand's research cultures and needs.
External Research Income (ERI)	A measure of the income for research purposes gained by a TEO from external sources. ERI is one of the three measures of the PBRF, along with the Research Degree Completion measure and the Quality Evaluation.
FTE	Full-time equivalent.
Interdisciplinary research	Research that crosses two or more academic disciplines or subject areas.
Joint research	Research produced by two or more researchers.
Major role	A staff member contributes at least 25 percent of the delivery of the course and corresponding working time to the design of the course and/or the design of the assessment process.
Moderation Panel	Panel that meets to review the work of peer review panels to ensure that the TEC policy has been followed and the Quality Evaluation process has been consistent across the panels. The Co-Moderators and the Panel Co-Chairs form the Moderation Panel.
New and Emerging Researcher	A PBRF-eligible staff member who is employed to undertake substantive and independent research for the first time during the assessment period and meets the criteria for New and Emerging Researcher status.
Nominated academic unit	The academic unit nominated by the TEO for each of the staff members for whom an Evidence Portfolio is being submitted.
Non-quality-assured research output	A research output that has not completed a formal process of quality assurance.
Other Example of Research Excellence (OERE)	Up to eight research outputs that the PBRF-eligible staff member nominates in their Evidence Portfolio. OERs form evidence of the staff member's platform of research.

Term	Meaning
Overseas-based staff	A staff member who is resident in Aotearoa New Zealand for less than 50 percent of their employment period and employed for less than 0.5 full-time equivalent. Overseas-based staff members are not eligible to participate in Quality Evaluation 2026.
Panel	See peer review panel and Moderation Panel.
Part-Time	A Staff member is considered Part-Time under the Achievement Relative to Opportunity framework if they meet the criteria on page 48. This calculation relates to the overall assessment period, rather than the 12 months around the staff eligibility date.
PBRF staff-eligibility date	11 June 2026. The key date for determining staff eligibility. A staff member must be employed by the submitting TEO on this date to be eligible.
PBRF staff-eligibility period	Any 12-month period that bridges the PBRF staff-eligibility date of 11 June 2026.
PBRF-eligible staff member	A person who is employed by a TEO or otherwise contracted by a TEO on a contract for service in their own right as individuals, an entity or trading name, through their employer, or any other contracting the TEO may have developed, and meets the staff-eligibility criteria.
PBRF IT System	Online information technology system used by the TEC to administer and support the Quality Evaluation process.
PBRF Staff Data File	A file submitted by participating TEOs that provides information on all PBRF-eligible staff members for whom an Evidence Portfolio is being submitted, and any transferring or concurrently employed PBRF-eligible staff members.
Peer review panel	Group of experts who evaluate the quality of research as set out in individual Evidence Portfolios. There are 14 peer review panels, each covering different subject areas or combinations of subject areas.
Points/points scale	The points range used to score each of the two components of an Evidence Portfolio during the first stage in the assessment of an Evidence Portfolio. The points scale ranges from zero (lowest) to seven (highest).
Primary field of research	The research field of the staff member's research activity during the assessment period, and especially that of the EREs selected for their Evidence Portfolio.
Produced	'Produced' in the context of the PBRF means that the final version of the research output was made available in the public domain for the first time during the assessment period of 1 January 2018 to 31 December 2025.
Quality-assurance process	Formal, independent scrutiny by those with the necessary expertise and/or skills to assess quality.
Quality-assured research output	Research output that has been subject to a formal process of quality assurance.

Term	Meaning
Quality Category	A rating of research excellence assigned to the Evidence Portfolio of a PBRF-eligible staff member following the Quality Evaluation process. There are six Quality Categories: A, B, C, C(NE), R and R(NE). Quality Category A signifies researcher excellence at the highest level, and Quality Category R represents research activity or quality at a level that is insufficient for recognition by the PBRF. The A, B, C(NE) and R(NE) Quality Categories are all available for New and Emerging Researchers. The A, B, C and C(NE) Quality Categories are funded Quality Categories.
Quality Evaluation	The process that assesses the quality of research produced by PBRF-eligible staff members, the contribution they have made to the research environment, and the impact their research has had within a given assessment period. The Quality Evaluation is one of the three measures of the PBRF, along with the Research Degree Completion measure and the External Research Income measure.
Research	See the PBRF Definition of Research on page 16 of these Guidelines.
Research Degree Completion (RDC) measure	A measure of the number of research-based postgraduate degrees completed within a TEO where there is a research component of 0.75 equivalent full-time students or more and external moderation. One of the three measures of the PBRF, along with the External Research Income measure and the Quality Evaluation.
Researcher Circumstances	Researcher Circumstances provisions for Quality Evaluation 2026 aim to ensure staff members who have experienced circumstances that have seriously affected the quantity of research outputs and research-related activities during the assessment period are treated equitably. See page 49.
Staff-eligibility criteria	The criteria that staff have to meet to be eligible to participate in the Quality Evaluation.
Subject area	43 subject areas have been defined to represent the range of research disciplines assessed in the Quality Evaluation.
TEC	Tertiary Education Commission.
TEO	Tertiary education organisation.
Tie-points	The standards expected for the scores two, four and six in each of the two components of an Evidence Portfolio.
Total weighted score	The sum of the points allocated to each component of the Evidence Portfolio during the first stage of assessment, multiplied by the weighting for each component.

Term	Meaning
URI	A Uniform Resource Identifier (URI) is a string of characters used to identify a name or a resource on the internet or in the TEC temporary repository of ERE Outputs.
XML	XML (Extensible Markup Language) is a set of rules for encoding documents in machine-readable form. It is defined in the XML 1.0 Specification produced by the W3C.

Tertiary Education Organisation Audit Declaration

Declaration of the Vice-Chancellor/Chief Executive Officer for a tertiary education organisation participating in the Performance-Based Research Fund Quality Evaluation 2026

I, ...

(full name) being the Vice-Chancellor/Chief Executive Officer

of

(organisation name)

1. agree that information required for the purpose of auditing Quality Evaluation 2026 submissions will be provided;
2. confirm that, to the best of my knowledge, all reasonable steps have been taken to ensure that:
 - a) the information contained in the Evidence Portfolios submitted to the Tertiary Education Commission by the above-named organisation is complete, accurate and complies with the PBRF Guidelines issued by the Tertiary Education Commission;
 - b) all the staff members who are being submitted to the Tertiary Education Commission for assessment in the Quality Evaluation meet the requirements for participation in the PBRF;
 - c) the above-named organisation has appropriately applied the PBRF Guidelines to ensure all Evidence Portfolios likely to receive a funded Quality Category have been submitted for assessment in the Quality Evaluation;
 - d) all the Examples of Research Excellence items identified in the submitted Evidence Portfolios are, if necessary, available for inspection by the peer review panels;
 - e) only staff members with legitimate circumstances have claimed the Researcher Circumstances provision;
 - f) staff data on ethnicity has been collected and reported in line with the Privacy Act 2020;

3. confirm that the above-named organisation has complied and will continue to comply with all other relevant PBRF Guidelines.

.....

Signature of Vice-Chancellor/Chief Executive Officer

.....

Dated

Appendix: Eligible EP item types

Research output types

Research output type	Description
Authored Book	A major work of research or scholarship. The author or authors are credited for the entire work, which means authors are not attributed to each chapter and the work would normally be published with an ISBN (in hard copy, bound; and/or e-book format on subscription or fee basis) and be available for sale. Consists mainly of previously unpublished material and makes a contribution to a defined area of knowledge. Includes: › monographs – a book or treatise on a single subject usually written by a specialist in the field. The treatment of the subject is detailed and scholarly › loose-leaf publications where the author(s)/contributor(s) create or update the entire volume. Excludes: › scholarly editions/literary translations (see Scholarly Editions type below) › textbooks with no research component › books published by professional bodies that do not report original research findings but report the results of evaluations, or repackage existing information for the benefit of professionals or practitioners › pamphlets › reports for external bodies, such as government department reports (see Reports type below) › translations of the academic's own work by another person › edited volumes (see Edited Volumes type below) › reprints › updates to a part of a loose-leaf treatise.
Chapter in Book	A contribution to an edited book, consisting of substantially new material. The book should be of a scholarly nature and make a substantial contribution to a defined area of knowledge, and would normally have an ISBN (in hard copy, bound; and/or e-book format on subscription or fee basis) and be available for sale. This contribution is complete in itself but is often linked thematically to the other chapters. It is created or co-created by a single author or multiple authors who share responsibility for the chapter. Includes:

Research output type	Description
	› scholarly introductions of chapter length where the content of the introduction reports research undertaken by the editor and makes a substantial contribution to a defined area of knowledge › critical scholarly texts of chapter length, for example, in music, medieval or classical texts, or critical reviews of current research › updates to a part of a loose-leaf treatise. Excludes: › forewords › appendices › brief introductions › editorials › scholarly editions/literary translations (see Scholarly Editions type below) › pamphlets › reports for external bodies, such as government departments (see Reports type below) › translations of an academic's own work by another person › edited volumes (see Edited Volumes type below) › reprints › conference publications (see Conference Contribution – Published type below).
Conference Contribution – Other	A contribution to a conference that has not been published as a paper or as a published abstract in separate proceedings. An item appearing here cannot also appear in the Conference Contribution – Published category. Note that if a Conference Contribution – Other is included as an ERE Output, an assessable form of the presentation such as a recording or a written form must be submitted. Includes: › an oral presentation at a conference (or symposium, meeting, workshop, forum or summit of national or international importance), with or without an accompanying written form › a poster that appears at a conference as a poster only and that is not published in the proceedings as a paper or abstract › keynote or plenary presentations to a conference, with or without a written form. Excludes: › role as panel or discussion member (or chair) at a conference

Research output type	Description
	› opening or closing addresses that are not keynote or plenary presentations › facilitation of workshops at conferences › presentations at a conference that are summaries of discussions or papers presented at the conference.
Conference Contribution – Published	A conference paper or abstract published in proceedings and available independently of the conference in which it was presented. Proceedings may be published in various formats, for example, a proceedings volume, a book, a special edition of a journal, a normal issue of a journal, USB flash drive or online via the conference website, an organisation's website or a research repository. Although published in a journal or other media, the item is still categorised as a Conference Contribution – Published. Papers or abstracts in proceedings would normally undergo editorial selection to be included in the proceedings. An item appearing here cannot also appear in the Conference Contribution – Other category. Includes: › submission of an unpublished abstract, presentation of the paper and associated or subsequent publication of paper (this is considered one complete publication, not three separate ones) › an abstract published in a proceedings, book of abstracts or journal (or similar publication venue, such as USB flash drive or website) and available independently of the conference at which it was presented. This form of abstract often is the only published version of the output, appearing as a 'mini-paper' containing an introduction/objective and methods, results and conclusions sections. This type of abstract would normally go through a review process and is not the standard type of abstract submitted with a conference presentation. This form of abstract may be more common in certain disciplines, for example, medicine and geology. Excludes: › papers that are provided only to conference participants (in whatever format) and not the general public or more widely (for example, available for purchase) › unpublished conference presentations (see Conference Contributions – Other above).
Creative Work	Outputs resulting from creative practice as research, including the following subtypes. Artwork, Artefact, Object, Craftwork

Research output type	Description
	Artworks, artefacts, objects, or craftworks that have been exhibited, commissioned, or otherwise presented or offered for distribution or sale in the public domain, for example, visual arts, craft and cultural creations. Specific examples include but are not limited to: › paintings, illustration, sculpture, media installations, ceramics, jewellery, metalwork, whakairo, taonga, raranga, or cultural artefacts such as large permanent public sculptures. A collection of artworks displayed together can be entered as Exhibition/Curatorial Exercise where the artist/creator was responsible for the curation/design of the exhibition or display. Composition A published/publicly available score, first performance or first recording by a record label (in physical or digital formats audio or audio-visual or on-demand streaming) of a musical composition. Specific examples include but are not limited to: › compositions created while being played, for example, electronic compositions, jazz improvisation › published/publicly available score › first recordings or recordings of first performances › sound component of a film or video, lyrics, multimedia composition or chant › commissioned works › combinations or developments of the above. Excludes: › repeat performance or repeat recordings of the same work (re-recordings that constitute original research may be submitted under the Audio-Visual subtype; new performances that constitute original research may be submitted under the Performance subtype). Design Output A creative research/problem-solving output in the form of design drawings, books, models, exhibitions, websites, products, installations or built works. This can include (but is not limited) to: › architectural design including wharehenui and specific elements of wharehenui such as whakairo and tukutuku › fashion, textile or artistic design including tāniko, kākahu, and tā moko › graphic design › interior design

Research output type	Description
	› multimedia design › industrial design › other designs
	Dramatic and Literary Texts A work of creative prose, poetry, dramatic text, or a literary essay. Specific examples include but are not limited to: › novel/creative non-fiction – a published/publicly disseminated prose narrative of considerable length › play – a published/publicly available script, first performance or first distributed recording of a play created (or co-created) by the author or authors › poetry – a published poem or collection of poems, or a poetry recital where the work is new (note that if a poetry recital is included as an ERE Output, this would need to include a recording or written form to enable assessment) › screenplay – a published/publicly disseminated screenplay, first public showing of the related film created (or co-created) by the author or authors › short fiction/creative non-fiction or essay – a published/publicly disseminated work of short fiction, creative non-fiction, or essay › short fiction/creative non-fiction or essay collection – a published/publicly disseminated collection of several short works created or co-created by the author or authors › a published/publicly disseminated short literary composition on a particular theme or subject, usually in prose and generally analytic, speculative or interpretative. Exhibition/Curatorial Exercise A curated display of a researcher’s objects/artworks in a public place (museum, art gallery or other public place) or curatorial work undertaken by an academic to form an exhibition (including catalogues, interpretive material, exhibition space design, and/or essays or other creative or intellectual responses). The objects may have historical, cultural or scientific importance, or alternatively possess aesthetic qualities or extraordinary characteristics. The focus should be on the intellectual and creative work of curation, assembly, display and/or interpretation rather than the artworks or objects themselves. The curator may be the creator of the artworks/objects in the exhibition or they may have assembled/arranged/commissioned artworks/objects created by others.

Research output type	Description
	Includes: › exhibitions in regional, national or international galleries, in dealer galleries or other sites of public presentation › site-specific exhibitions, installations, actions, interventions, performances. Excludes: › individual artworks, objects or craftworks (may be submitted as 'Artwork, Artefact, Object, Craftwork' sub-types) › the selection or commissioning of artworks, objects or craftworks to appear in an exhibition/curatorial exercise (including biennales and festivals) where the creator was not responsible for the curation/display (may be submitted as a research activity under the Recognition of Research, Invitation to Present Research, or Uptake and Impact types) Audio-visual Research, creative, or scholarly works in audio-visual form and likely to be first presented in a cinema, on television, radio, online, or as part of an artwork, or exhibition at a gallery or festival. Specific examples include but are not limited to: › ethnographic films › documentaries › short or feature-length films, animations, radio productions, or other creative audio-visual productions or recordings › original contributions to cinematography, sound design, art direction, production and post-production, direction and other areas of specialism within an audio-visual production. › new recordings of compositions, plays, productions etc where the recording itself embodies original research. Excludes: › appearances in commercial programmes, documentaries or interviews unless they contain research. › filmed/recorded presentation of research where the audio-visual medium is not an essential component of the output and does not itself embody original research (for example, filmed conference presentations, filmed demonstrations of a product, process, or device, recording of a performance or composition. Such outputs are eligible under other types such as Composition, Conference Proceedings,

Research output type	Description
	Performance, Products and Processes, or Oral Presentation) Performance A live or recorded performance (by, for example, an actor, musician, dancer, conductor or director) that embodies original research. The research element should be in aspects of the performance itself, rather than the composition, play, script, text or other creative output that is being performed (such outputs can be submitted under Composition or Dramatic and Literary Texts). Includes (but is not limited to): › performance in a play, musical, opera, concert, television or radio production › theatre productions (stage play, mime, circus, puppet show, variety act, comedy show) › concerts and recitals (music or dance) › broadcast performances and other modes of presentation › production of an audio/visual medium (such as CD or DVD recording) › mōteatea, oriori, haka, whaikōrero orations or waiata-a-ringā › artistic direction of a staged production › advisor roles in a theatre production (for example, design, dramaturgy). Excludes: › radio or television interviews › appearances in documentaries.
Discussion/Working Paper	A paper published, circulated or presented for discussion amongst peers (or that seeks public input on ways to address an issue). The paper may be commissioned by an organisation, published for consultation or produced as part of a working paper series to encourage suggested revision before publication.
Edited Volume	A published/publicly disseminated collection of chapters, conference papers, articles or essays by different authors, which have been selected/compiled, organised and/or edited by a single editor or multiple editors. The volume may include chapters, conference papers, articles, essays, introductions or commentaries by the editor(s); the work of soliciting, selecting, organising, and editing the individual chapters / essays / contributions, and the volume as a whole, must embody original research. Includes edited conference proceedings and editing of

Research output type	Description
	special issues of journals where the issue editor is not the regular editor. Would normally have an ISBN or ISSN. Excludes: › individual chapters/papers/articles or essays created or co-created by one or more authors, which should be submitted as appropriate as book chapters, journal articles, conference proceedings etc › regular editorial work as a member of an editorial board, which should be listed as a contribution to the research environment item under the Reviewing, Refereeing and Judging type.
Intellectual Property	Granted patents, copyrights, plant breeder's rights, trademarks, or registered designs on specific products or processes. Patents can have been granted in Aotearoa New Zealand or another country and must have been granted for the first time during the assessment period. The principles for non-traditional research output types apply. Excludes: › multiple rights for the same product or process, or applications for which no determination has been made on patent rights › pending or provisional patent applications (see Products and Processes type).
Journal Article	A substantial work of scholarship published in a scholarly journal that has an ISSN and would normally be peer reviewed. Includes: › original research in a scholarly journal, such as research notes that are refereed, or critical scholarly texts that appear in article format › review articles in scholarly journals that summarise the current understanding of a field › invited papers in journals where the journal's standard practice is to referee contributions › refereed research articles in journals that are targeted to scholars and professionals › articles in a stand-alone series. Excludes: › addenda to previous published journal articles › articles designed to inform practitioners in a professional field, such as a set of guidelines or the state of knowledge in a field unless it clearly contains new research findings › articles in newspapers and popular magazines › editorials or letters to the editor

Research output type	Description
	› book reviews (see Other Form of Assessable Output below) › case histories that are not full journal articles in themselves › commentaries and brief communications of original research › conference proceedings published in journals or special editions of journals › reviews of art exhibitions, concerts, theatre productions or other media. Note: Sometimes special editions of journals appear as stand-alone books. Contributions to special editions of journals may be counted as either book chapters or journal articles but not both. An item with a parent document that has an ISSN should be categorised as a journal article.
Oral Presentation	An oral research or scholarly presentation delivered at an event or venue that is not considered a conference. The event where the presentation occurs must be arranged for the dissemination of academic research or discussion. Note that if an oral presentation is submitted as an ERE Output, a recording or written form needs to be submitted to enable assessment. Includes: › invited lecture in a named series that is prestigious within the discipline › whaikōrero › spoken presentations at hui, wānanga › public or industry seminars, forums, workshops or congresses › poetry or creative fiction or non-fiction reading of the author's own work.
Other Form of Assessable Output	This category is only used for outputs that meet the PBRF Definition of Research but do not fit into any of the other categories. Outputs must be underpinned by research and while they may be included in the list of potential outputs this does not mean that they will automatically meet the PBRF Definition of Research. Staff member's categorising ERE Outputs under Other Form of Assessable Output must provide an explanation of the research component in the Description field and may want to explain why this was the most appropriate form for the research. Includes, but not limited to: › devices › reviews of books, performances, compositions, films

Research output type	Description
	› articles published in daily or weekly newspapers or non-scholarly magazines › editorials, letters to editor › brief introductions or prefaces to edited books › comments, letters in journals › dictionary, encyclopaedia entries › magazine articles › websites › broadcasts › interviews › programme notes, CD insert notes › non-chapter contributions to books, for example, case history, side bar, supplements, summaries and commentaries in books or monographs.
Products and Processes	A product, design, blueprint, or process that embodies or is the result of original research. It may have been commissioned by an external organisation such as a commercial company, professional body, iwi, hapū, or Pacific or other community group to address a specific issue, or it may have arisen as a result of a research programme or project. The product or process may be commercially sensitive or confidential to the commissioning sponsor. Includes but is not limited to: › finished and prototype products, devices, and product designs › architectural, engineering, and industrial designs and blueprints › professional practice guidelines, processes, and policies › commercial and industrial guidelines, processes, and policies. Excludes: › patents, copyrights, and other intellectual property (see Intellectual Property above).
Report	A commissioned, published document written by an individual or jointly by several authors that details the results of a research project or, explores a technical, scientific, policy, or practice-based research problem. A report may include recommendations and conclusions. A report details the results of research carried out for the external organisation or individual sponsor that funded or commissioned the research. A report may be confidential only to those authorised to have access or the commissioning sponsor. External organisations

Research output type	Description
	commissioning reports may include but are not limited to: charities, commercial companies, iwi and hapū, and local, national, or international governmental or non-governmental organisations. Excludes: › submissions to Select Committees › progress or final reports on researcher-initiated projects regardless of funder, for example, progress or final report for a Marsden Fund project › summary reports on activities for a review period, for example, school annual report on activities, or reports relating to consortia activity and performance.
Scholarly Edition/Literary Translation	An edition or translation of another author's original work/body of works or correspondence informed by critical evaluation of the sources (such as, earlier manuscripts, texts, documents and correspondence) often with a scholarly introduction and explanatory notes or analysis on the text and/or original author. This edition may include a translation of the original text(s) as well as significant literature containing interpretations of the text and/or original author and their context. Includes: › critical scholarly texts (for example, literary, music, medieval or classical texts) › translations of a work by another author where the work of translation embodies original research. Excludes: › reprints or subsequent editions which do not contain significant new research or critical evaluation.
Software <i>We welcome feedback on this updated definition. This can be provided via the feedback survey.</i>	Originally researched, created and published or otherwise publicly disseminated software (computer programs and their associated documentation, consisting of a set of instructions written by a programmer) or a curated database of significant research data. These artifacts shall be refined products offered commercially or online or distributed as open source through a recognised publisher or distributor. Includes: System software › operating systems › programming languages › control systems. Application software › data analysis and visualisation

Research output type	Description
	› simulation › machine learning and artificial intelligence systems › collaborative systems › domain specific applications › curated databases. Excludes: › databases of references or material for supporting research programmes of individual researchers.
Thesis	A doctoral thesis that advances an original idea through research and leads to the award of a PhD or equivalent qualification at a recognised Aotearoa New Zealand TEO or equivalent international institution. A Master's thesis of 90 points or above that advances an original idea through research and leads to the award of a Master's or equivalent qualification at a recognised Aotearoa New Zealand TEO or equivalent international institution. Other relevant professional qualification thesis. Excludes: › honorary doctorates › taught doctorates which do not require a single research-based thesis › Master's courses or papers of less than 90 points (for example, research project, dissertation).

Research activity types

Research activity type	Description
Presentation, Sharing, and Dissemination of Research or Similar	Presentation, sharing, and dissemination of research outputs, outcomes, and activity includes events and activities both within and outside of academia. Both the presentation of research and invitations to present research are included. Examples include but are not limited to: › giving a keynote address or plenary, or invitations to be a principal speaker or invited speaker › presentation of research at an academic, professional, or industry conference › presentation of research to professional groups or organisations, industry bodies, community groups or public audiences › participation in overseas research or professional organisations or events › visiting fellowships or other invitations to work in an overseas institution › commissions to create, perform or produce creative work › contributions, including invitations to contribute, to Māori conferences, Māori development panels, Māori research hui and Māori advisory boards › contributions, including invitations to contribute, to Pacific conferences, Pacific development panels, Pacific research fono and Pacific advisory boards › presentation of research, including invitation to present research, to other non-professional groups, community interest groups, ethnic or cultural representatives.
Collaboration, Outreach and Engagement	Projects, activities, or events aimed at engaging or collaborating with stakeholders, groups, and communities outside of academia on research projects or initiatives, or sharing research design, activity, and outcomes with such groups. Outreach and engagement can, but need not, lead to impact, and staff may wish to submit outreach and engagement activities under the Uptake and Impact type where preferred. Examples include but are not limited to: › public or community engagement and outreach activities such as public lectures, talks, seminars, workshops, performances or exhibitions › membership of or participation in an advisory, strategy, reference or working group, task force, or steering committee for an external organisation › co-development of research projects or initiatives with non-academic stakeholders including commercial,

Research activity type	Description
	professional, community or public groups and organisations › co-development of iwi, Māori or Pacific community-based projects or initiatives › developing public awareness and understanding of research topics or outcomes through production of or contributions to publications and other outputs aimed at a popular audience › contributions to public awareness and understanding of research topics or outcomes through media and press engagement or appearances › acting as ‘critic and conscience’ of society and participation in public debate in relation to specific research projects, outcomes, or outputs › media coverage of research projects, outcomes, or outputs.
Recognition of Research Outputs, Outcomes or Activity	Reflects the esteem in which research activity, outcomes, or outputs are held by peers and stakeholders within and outside academia. Indicators of this esteem can include but are not limited to: › positive commendations and/or reviews for the staff member’s research outcomes or activities › metrics that relate to the assessment period, such as citation counts (excluding self-citation) › other metrics, for example, those that relate to different forms of media, such as social media, number of downloads, Google Analytics › acknowledgment by iwi and Māori leaders, kaumātua and kuia of contributions to Māori economic, social and cultural advancement › acknowledgment and support by Pacific stakeholders of contributions to Pacific economic, social and cultural advancement › selection or commission of research outputs to appear in an exhibition, festival, or biennale › reprints of research outputs or repeated or extended exhibitions or performances due to demand. Excluded are indicators of esteem which relate to the researcher’s career as a whole or achievements not linked to specific research programmes, projects, outcomes or outputs. Such items can be submitted as Contributions to the Research Environment under the Peer Esteem type.
Research Funding and Support	Indicates the value ascribed to research projects, activities, or outcomes by research communities, stakeholders, and end-users, and includes all forms of funding and support for research, including non-financial and in-kind support. Examples include but are not limited to:

Research activity type	Description
	› securing external contestable research grants › competitive funding from the staff member's own organisation › funding or in-kind support from external organisations, companies, community or iwi groups, or government bodies to carry out research including contract research and consultancies › start-up or spin-off funding or investment › funding for research facilities or gaining competitive access to facilities › contracts for research › competitive travel grants › in-kind or pro-bono support to facilitate delivery of research projects including expertise, resources, equipment and materials.
Research Prizes, Fellowships, Awards and Appointments	Indicates the esteem in which research activities and outcomes are held by peers and as such should relate to a particular project, activity, or output. Only elected/awarded memberships, fellowships, awards, and appointments etc should be included. Examples can include but are not limited to: › best paper, poster or presentation prizes › prizes, honours or awards for research projects, activities or outputs including creative, industry, or other awards › research fellowships › industry, public sector or third sector secondments › appointments to community, cultural leadership or iwi roles where this relates to a specific research project, activity or outcome. Excluded are: › awards, prizes, fellowships, elected memberships, roles or honours recognising personal esteem or career achievements (as opposed to a particular research project, activity, or outcome). Such items can be submitted as Contributions to the Research Environment under the Peer Esteem type.
Uptake and Impact	Includes activities, items, or outcomes which indicate uptake of the staff member's research by stakeholders or end users outside academia, and/or the impact that has occurred as a consequence. For the purposes of the Quality Evaluation, impact is defined as a positive effect on, change, or benefit to society, culture, the environment, or the economy at any level, outside the research environment. Note: Research impacts must have occurred in the assessment period to be included in the EP, but the

Research activity type	Description
	underpinning research does not need to have taken place within the assessment period. Examples include but are not limited to: › uptake/adoption of research by industry, iwi, Pacific, community, practitioner or professional bodies to inform or change standard practice or policy › providing research-led advice to the public sector, communities and/or the private sector which has demonstrably informed or influenced existing or new policy, practice, guidance or legislation › research findings leading to new or improved commercial products, processes or designs › Demonstrable changes in public perception, understanding, or behaviour in relation to a specific issue or topic, often as a consequence of outreach and engagement activity › Cultural or creative output leading to public or commercial benefit › Economic, social, environmental or health benefits through design and delivery of tools, products, or services › Research commercialisation leading to commercial or public benefits › contributions to Māori social, economic and cultural advancement › contributions to Pacific social, economic and cultural advancement › expert witness or testimony including invitations to provide expert evidence before Select Committee or other government enquiry or commission.

Contributions to the research environment types

Contribution Type	Description
Contribution to Research Discipline, Culture, and Environment	Contribution to research discipline, culture and environment items reflect the staff member's contribution to the development of their discipline or improvements to research capability and/or the research environment inside and/or outside of academia. Examples can include but are not limited to: › developing or contributing to new discipline methodologies, knowledge, standards, or protocols including standard reference publications, encyclopedia entries, or literature reviews/year-in-review publications › developing new laboratories, facilities or equipment, or other research infrastructure › leadership positions that increase capability, for example: › director of a laboratory or research facility › head, deputy head, or other senior role in a school, department, centre or research group with a focus on research development or initiatives in that role › roles or initiatives that are aimed at developing research capability outside of academia and facilitating knowledge exchange, such as developing incubators, commercialisation, engagement, impact, or industry liaison roles › initiatives to grow mātauranga Māori and kaupapa Māori knowledge bases and capacity and to foster links with iwi, hapū, or marae › initiatives to grow Pacific knowledge bases and capacity, including those that build non-Pacific researchers' knowledge and understanding of Pacific research and paradigms › membership of research, research ethics, postgraduate or other committee, at either an institutional or intra-institutional level › support of or advocacy for research and development within professional bodies and industry › Public advocacy, expert opinion, or 'critic and conscience' activity aimed at raising the profile of the discipline, field, or environment › organising or participating in departmental or institutional research seminars.
Facilitation, Networking and Collaboration	Facilitating, networking and collaboration items provide an indicator of the contribution the staff member makes to the research environment specifically through developing and supporting research networks and collaborations that

Contribution Type	Description
	develop their discipline or improve research capability inside and outside of academia. Examples can include but are not limited to: › facilitating or organising conferences or other formal networks, such as symposia, meetings, workshops, seminar series, hui, fono, wānanga, online forums › participating as a conference chair, track chair or session chair › partnering with iwi and Māori entities on shared research priorities or to increase research capability in Māori research and researchers › partnering with Pacific entities and Pacific organisations on shared research priorities or to increase research capability in Pacific research and researchers › membership of a conference programme committee, technical programme committee or conference panel › director of a consortium or research group › member of collaborations and consortia › internal or external research collaboration › fostering internal or external linkages, cooperation, collaborative research and development with other departments or organisations › activities that improve research opportunities, such as working in collaborations or consortia.
Peer Esteem and Research Recognition	Peer esteem and research recognition items indicate the staff members' individual standing and peer esteem either within their discipline, within or outside academia. Examples can include but are not limited to: › Awards, prizes, and honours associated with a career or with a significant research focus advanced over many years › Honorifics and titles, such as named Chairs or other roles, honorifics bestowed by international, national, or local authorities, iwi, hapū, marae, Pacific groups or other groups › invitations to produce a journal article, review paper, chapter or reprints specifically based on the staff member's research reputation › mandated iwi and Māori authority leadership roles › mandated cultural leadership roles (for example, chairperson, church minister or honorific chiefly title) › fellowship of a professional body, for example, Fellow of the Institution of Professional Engineers New Zealand or Fellow of the Royal Society of New Zealand

Contribution Type	Description
	› membership of a society or academy with restricted or elected admission, for example, the British Society of Audiology. Activity as part of a standard membership of a society must be listed under ‘Contribution to research discipline and environment’. Membership of funding committees must be listed under ‘Reviewing, refereeing, judging, evaluating and examining’. Esteem indicators and recognition associated with a specific research project, activity, or outcomes, should be submitted as a research activity within the ERE component of the EP.
Researcher Development, Capability-Building and Mentoring	Researcher development, capability-building and mentoring items reflect the staff member’s contribution to building a sustainable and equitable research workforce and supporting colleagues. Examples can include but are not limited to: › mentoring and supervising other staff members including New and Emerging Researchers at a departmental, institutional, or intra-institutional level › formal mentoring or advocacy/representative roles for specific career stages at a departmental, institutional, or intra-institutional level › initiatives or roles aimed at supporting and developing Māori researchers, and growing the Māori research workforce › initiatives or roles aimed at supporting and developing Pacific researchers, and growing the Pacific research workforce › supervising postdoctoral fellows or research associates › contributions to promotions processes and appointments panels › head of department or other senior role where there is a focus on researcher development activities while in the role › research mentoring.
Reviewing, Refereeing, Judging, Evaluating and Examining	Reviewing, refereeing, judging, evaluating and examining activity demonstrates the staff member’s contributions to developing or sustaining their discipline or field through reviewing, refereeing, judging, evaluating and examining the work of their peers. Invitations to undertake such activity may also indicate the staff member’s standing or peer esteem within the field or discipline. Examples can include but are not limited to: › membership of institutional, national, or international funding committee that reviews or evaluates funding proposals or grant applications

Contribution Type	Description
	› provision of specialist or expert advice, assessment or review to a relevant committee, task force, steering group, community, or iwi group, either within or outside academia › membership of an editorial or commissioning board for a journal, series, publisher, festival, gallery or other institution › external thesis examiner › invitation to edit or guest edit a journal or edited volume › membership of a selection panel, or role as sole judge, for awards and prizes › peer review of a journal article, conference paper, book manuscript › reviewing abstracts (as part of the selection of presenters) and conference proceedings (following selection) › peer or external reviewer for industrial, commercial or government organisations.
Student Development and Support	Student development and support items demonstrate the staff member's contributions to developing or growing research capacity and capability through supervision, mentoring, support, evaluation or review of research students, as well as esteem and recognition factors associated with a staff member's research student supervisees. Examples can include but are not limited to: › attracting, supervising and supporting students including but not limited to: › doctoral, Master's, honours research students › Māori and Pacific students › summer research students and visiting research students › other high-quality postgraduate students › assisting student publishing, exhibiting or performance › arranging or leading research student placements › initiatives aimed at attracting and support Māori research students › initiatives aimed at attracting and supporting Pacific research students › roles related to student progression and support such as head of graduate school, research degrees committee › supporting students to gain scholarships, prizes, awards, or industry or other placements

Contribution Type	Description
	› supporting students to gain positive employment outcomes.



Draft Audit Methodology

For the Performance-Based Research Fund
(PBRF) Quality Evaluation 2026

August 2023



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1. Introduction

1.1 Background Information

Tertiary Education Organisation (TEO) results from the Performance-Based Research Fund (PBRF) will determine the allocation of \$2.2 billion of funding for the seven years starting from 2026. The majority (55 percent) of this funding is allocated through the Quality Evaluation process.

Te Amorangi Mātauranga Matua | The Tertiary Education Commission (TEC) is responsible for administering the PBRF. The TEC implemented the first Quality Evaluation in 2003 as part of introducing the PBRF to the Aotearoa New Zealand tertiary education sector. Quality Evaluations were also completed in 2006, 2012, and 2018.

Additional information on the PBRF Quality Evaluation is published on the TEC website. This includes the references throughout this document to the *Guidelines for tertiary education organisations participating in the 2026 Quality Evaluation* (known as the “PBRF guidelines”).

The purpose of this document is to provide the TEC and TEOs with clarity on the timing, extent, and nature of the audit activities that will be completed during the Quality Evaluation.

1.2 Quality Evaluation 2026 audit objectives

A comprehensive compliance audit programme supports the Quality Evaluation. The objective of this audit programme is to provide comfort to the TEC that the PBRF guidelines have been consistently and correctly applied by all participating TEOs. Specifically, the audit programme will provide comfort that:

- Staff submitting Evidence Portfolios (EPs) meet the staff participation criteria
- The Achievement Relative to Opportunity framework has been correctly applied
- The research outputs and contributions referenced in EPs exist, were published in the correct period to be considered eligible, and are accurately represented.

The audit approach also involves reviewing the preparedness of participating TEOs before the Quality Evaluation (see section 3).

2.1.1 Scope exclusions

The audit methodology outlined in this document does not include reviewing the following:

- Panel Review and Moderation processes
- Aspects of the PBRF funding formula outside of the Quality Evaluation, including:
 - Research Degree Completions
 - External Research Income
 - The formula to calculate annual PBRF funding.

1.3 Quality Evaluation auditors

Following a competitive procurement process, Deloitte was appointed as the auditor for Quality Evaluation 2026. Deloitte’s team has a strong understanding of the PBRF with David Sinkins participating in the last three Quality Evaluations (2006, 2012, and 2018).

2. Key auditing principles

2.1 Guiding principles of the PBRF and the Quality Evaluation audit

The PBRF is governed by 12 principles with six of them underpinning the audit methodology to ensure all TEOs are treated fairly. These are:

Consistency	Evaluations of quality made through the PBRF should be consistent across the different subject areas, and in the calibration of quality ratings against international standards of excellence.
Credibility	The methodology, format and processes employed in the PBRF must be credible to those being assessed.
Efficiency	Administrative and compliance costs should be kept to a minimum, consistent with a robust and credible process.
Transparency	Decisions and decision-making processes must be explained openly, except where there is a need to preserve confidentiality and privacy.
Inclusiveness	The methodology encourages and recognises the full diversity of epistemologies, knowledges, and methodologies to reflect Aotearoa New Zealand's people.
Equity	The methodology reflects the different forms research excellence may take and treats all participants equitably.

This methodology strikes an appropriate balance between compliance costs and the necessary level of review over this important process.

3. Summary of audit approach

This section provides a brief overview of the audit approach, which is similar to that applied in previous periods. The audit approach has been revised to consider:

- Changes to the PBRF guidelines
- Learnings from previous Quality Evaluations
- Feedback the TEC obtained from the Sector Reference Group consultation process.

Phase 1: Process Assurance	
Activity	Timeline
Questionnaire	Jan – Feb 2025
Site visits and remote audits	April – Aug 2025
Reporting	Oct – Nov 2025

Phase 1: Process Assurance

This phase will be completed between January and December 2025. The purpose of this phase is to identify the level of TEO preparedness for Quality Evaluation 2026. The controls and systems in place at each TEO will be understood and reviewed as part of this phase.

Phase 1 starts with an audit questionnaire being sent to all TEOs. Data collected from the questionnaire will form part of the report on overall TEO preparedness for the Quality Evaluation. This will be followed by site visits to the eight universities, Te Pūkenga and other selected TEOs (if they submit over 150 Eps). Those submitting less than 150 EPs will not be subject to a site visit but will be audited remotely. The timing of site visits will be confirmed in March 2025.

This phase will involve:

- Reviewing the information in the questionnaire
- Meeting key personnel from each TEO
- Reviewing process documentation
- Performing a limited amount of sample-based testing to form a view on each TEO's preparedness.

Workshops and webinars will be held in March 2024, in conjunction with the TEC PBRF team. These will introduce the audit process and answer any questions that TEOs may have about the audit.

A brief report will be provided to each TEO highlighting any findings and suggested areas of focus to increase preparedness for the Quality Evaluation. A summary report will be prepared for the TEC, highlighting themes observed across TEOs.

Phase 2: Data Evaluation audit	
Activity	Timeline
Staff participation audit	Jul – Dec 2026
Evidence Portfolio audit	Jul – Dec 2026
Report to the TEC	Feb 2027

Phase 2: Data Evaluation audit

This phase will be completed between July and December 2026 and will provide comfort to the TEC and PBRF Peer Review Panels that staff submitting EPs meet the staff participation criteria, and that research outputs and contribution items within EPs exist, were published in the correct period to be considered eligible, and are accurately represented.

Phase 2 involves extracting the data TEOs submit from the PBRF IT system and selecting samples for review. Evidence TEOs provide is reviewed against the requirements of the PBRF guidelines and queries are raised with TEOs where potential discrepancies have been identified.

TEOs will be asked to respond, with evidence, to address the queries raised. Deloitte will review additional evidence provided in the first instance. Any unresolved queries are referred to the TEC for assessment and decisions on an appropriate course of action.

4. Detailed audit approach

4.1 Phase 1: Process Assurance

4.1.1 Questionnaire

Phase 1 will commence with an audit questionnaire to be sent to all TEOs. The questionnaire seeks to understand the processes TEOs have implemented to ensure all staff submitting EPs meet the requirements in the PBRF guidelines. TEOs will have 21 working days to respond to the audit questionnaire.

4.1.2 Site visits and workshops

TEOs will be selected for a site visit based on the number of EPs they expect to submit. All TEOs expected to submit more than 150 EPs will be visited. Based on the 2018 Quality Evaluation process, Deloitte expects to visit the eight universities and Te Pūkenga.

Those submitting less than 150 EPs will not be subject to a site visit but will be audited remotely. The scope of the site visits and remote audits will be the same.

Deloitte will document, review and test processes the TEO has implemented to meet the PBRF guidelines. This will include understanding how each TEO calculates full time equivalent (FTE) and determines the residency, ethnicity, and status (e.g., new and emerging, part-time) of their staff. How the TEO has identified staff where the Achievement Relative to Opportunity framework applies will also be considered.

Where TEO processes are found to have areas for improvement, Deloitte will follow up with TEOs through late 2025/early 2026 to confirm that gaps are addressed. Additional sample testing may also be performed in Phase 2 (data evaluation audit) to ensure the accuracy of data the TEO submitted.

Deloitte understands that TEOs may not be fully prepared at the time of the process assurance audits. However, this phase has previously been useful to understand how TEOs are applying more complex areas of the PBRF guidelines, and also to identify TEOs that may require more assistance from Deloitte or the TEC to effectively participate in the Quality Evaluation.

Deloitte and the TEC will also facilitate up to four workshops and webinars with the sector to discuss themes from the process assurance phase and answer any questions on the audit methodology.

4.1.3 Reporting

A brief memorandum-style audit report will be prepared for each TEO. This will highlight relevant findings from the process assurance phase and suggested areas on which to focus to ensure the TEO is prepared for the Quality Evaluation. A report on themes and findings from the process assurance phase will also be prepared. It is expected that this report will be published on the TEC website.

4.2 Phase 2: Data Evaluation audit – Staff participation

The audit approach reviews whether staff submitting EPs meet the requirements of the staff participation criteria. The PBRF guidelines set out four criteria that must all be met for staff to participate in the Quality Evaluation. These are:

- They are employed or otherwise contracted (under a contract for service):
 - At any time between 12 June 2025 and 11 June 2026; and
 - Are under one or more agreements or concurrent agreements of paid employment or service with a duration of at least one year on a continuous basis.
- They meet one of the following conditions. They have:
 - A minimum of 0.2 FTE throughout the duration of their employment if they are resident in Aotearoa New Zealand; or

- A minimum of 0.5 FTE throughout the duration of their employment if they are not resident in Aotearoa New Zealand.
- They meet the substantiveness test for teaching or research, or both, by:
 - Fulfilling a 'major role' in the teaching and assessment of at least one degree or postgraduate-level course or equivalent (the substantiveness test for teaching); and/or
 - Being required to undertake one or more of the following:
 - The design of research activity - the preparation of research outputs that is likely to result in being named as an author (or co-author or co-producer) on one or more research outputs; and/or
 - The academic supervision of graduate research students in a primary, joint, or co-supervisor role (the substantiveness test for research).
- Their employment or service contract functions include degree and/or postgraduate-level teaching, or research, or both.

In addition, staff contracted to a TEO from a non-TEO must meet the strengthened substantiveness test for degree-level teaching and research.

This phase will also look at staff who have been identified as New and Emerging and/or who are identified as eligible under the Achievement Relative to Opportunity framework. For staff to be classified as 'new and emerging researchers' they must have become independent researchers on or after the start of the assessment period on 1 January 2018.

As part of the data evaluation audit, the population of staff submitting EPs is extracted from the PBRF IT system. From this, a sample of staff are selected for review. For each staff member in the sample, the TEO is asked to provide evidence to demonstrate that all four criteria in the PBRF guidelines have been met and for any other relevant criteria (new and emerging, achievement relative to opportunity).

4.2.1 Sample size

During the audit, a sample of staff submitting EPs will be selected for review. Deloitte will determine the precise sample size once all data has been submitted in the PBRF IT system.

The sample will be calculated using the formula below.¹ In 2018, a sample of 1,296 staff were selected for audit. The sample size for 2026 will be calculated using the same formula as 2018. It will be based on the actual number of staff submitting EPs.

$$s = \frac{x^2 NP(1 - P)}{d^2(N - 1) + x^2 P(1 - P)}$$

Where:

s	Sample size.
x	The table value of chi-square for 1 degree of freedom at the desired confidence level (95%).
N	Population size
P	Population proportion (assumed to be 0.50 since this would provide the maximum sample size).
D	Degree of accuracy expressed as a proportion (2.5%)

4.2.2 Sampling approach

A sample of staff submitting EPs will be selected using the formula described above to determine its size. The sample selected will ensure coverage of staff from all TEOs and subject area panels. This approach is similar to the approach applied in the 2018 audit. The sample will be weighted to areas of the staff participation criteria considered to be higher risk, specifically staff:

¹ Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement* (30), 607-610.

- Who were employed by, or ceased to be employed by, the TEO on or around the period 12 June 2025 to 11 June 2026;
- Employed at or around 0.2 FTE to deliver degree level teaching or higher when resident in Aotearoa New Zealand, or at or around 0.5 FTE if not resident;
- With a teaching or research presence predominantly outside of Aotearoa New Zealand; and
- Contracted from a non-TEO.

In 2018, all new and emerging researchers were selected for audit. In 2026, only a sample of new and emerging researchers will be audited. The sample size is to be determined based on risks identified from review of submission data, plus any risk indicators from the process assurance reviews.

Consideration will also be given to the EPs of staff who are submitting under the Achievement Relative to Opportunity framework, particularly if they have submitted fewer than three EREs as a result.

Limitations of this approach

As the sample is selected based on risk, it is not possible to draw statistically valid conclusions on the level of non-compliance with the PBRF guidelines. Due to the risk-based sampling approach, a higher rate of non-compliance is expected in the sample than in the total population.

4.2.3 Minimum standards of evidence for the staff participation audit

As part of the PBRF audit, TEOs will be requested to provide evidence to demonstrate that staff members who have submitted EPs meet the requirements of the PBRF guidelines.

For the majority of cases, the audit objectives will be fulfilled by reviewing the relevant staff member's individual or collective employment agreement, or contract for service. To ensure consistency in the audit, all TEOs will be required to provide employment agreements (or the equivalent documentation) on request.

If the auditors cannot form a conclusion based on the requirements in the paragraph above, Deloitte may also request to view the following documentation:

- Position descriptions
- Curricula Vitae*
- HR/Payroll information system records
- Evidence to support residency, for example travel documents
- Teaching timetables and university calendars
- Timesheets (where relevant)
- Leave requests.

*Required for all staff claiming new and emerging status.

For staff employed by a non-TEO or claiming new and emerging status, the above evidence may be sought for prior years (i.e., before 2018).

Staff employed or otherwise contracted by wholly owned subsidiaries such as commercialisation companies and in fully controlled trusts of the TEO may participate in the PBRF (if they satisfy the other participation criteria), as these bodies operate under the controls of the participating TEO. These staff may also be included in the audit sample. The auditors will review the employment agreement (or similar) in place with the employing entity. Providing the TEO's ownership and control of the subsidiary can be demonstrated, the additional requirements for staff contracted from a non-TEO will not apply.

As with previous Quality Evaluations, the auditors will work with TEOs to ensure that information is kept confidential and appropriate safeguards are in place to protect the privacy of participating staff. TEOs may elect to redact sensitive aspects (e.g., salary or address), providing the auditors are still able to verify the calculation of FTE.

4.3 Phase 2: Data Evaluation audit – Evidence Portfolios

The structure of EPs for Quality Evaluation 2026 consist of two main components:

- The ERE Component.
 - One to three Examples of Research Excellence (EREs).
 - Each ERE may contain up to three supplementary items.
 - Up to eight Other Examples of Research Excellence (OEREs), along with a single contextualising summary narrative.
- THE CRE Component.
 - Up to ten Contributions to the Research Environment (CREs).
 - This component describes the research related contributions the staff member has made to sustaining, developing and/or growing the research environment and culture.

The objective of this aspect of the data evaluation audit is to assess whether research excellence and research environment contributions:

- Exist
- Were first made publicly available in the correct period to be considered eligible (1 January 2018 to 31 December 2025 inclusive)
- Are accurately represented.

4.3.1 Sampling approach for the ERE Component

Consistent with the calculation of the total weighted score assigned to an EP, sample selection will be split approximately 70 percent to EREs and 30 percent for CREs.

The ERE audit will be primarily focused on ERE Outputs, as these are given particular scrutiny during the Quality Evaluation and their impact on the score awarded to an EP.

In 2018, participating staff (approximately 8,300) could submit four Nominated Research Outputs. The maximum number of ERE Outputs that can be submitted is three.

For the purposes of determining draft sample sizes, we have assumed the number of participants remains largely consistent and that all participants submit the maximum number of pieces of evidence.

The audit sampling approach will involve reviewing an estimated:

- 7.5% of EREs (including ERE Outputs and Supplementary Items) (based on a 95% confidence level and 2% margin of error) – approximately 1,870 ERE Outputs.
- 1% of OEREs (non-statistical sample) – approximately 660.
- 1% of CREs (non-statistical sample) – approximately 830.

This represents a total of 3,360 items within EPs. Panel members are able to request the auditors to review specific items and these will be included in the sample sizes above.

Note the above sample sizes are draft based on initial estimates. The exact sample sizes will be determined once all data has been submitted in the PBRF IT system.

All types of research evidence and contributions will be assessed during the audit, e.g., including those not written in the English language. Samples will be selected randomly.

4.3.2 Testing approach for the CRE Component

The CRE items selected for sampling will be reviewed in comparison with publicly available sources. An exact match to the data sources will not necessarily be expected because of possible differences in the nature of the data. Accordingly, queries will only be raised with TEOs in the event of significant variances.

Although TEOs are not required to submit evidence of CREs for panel review, it is expected that each TEO will have implemented processes to provide a basic level of assurance that CREs are accurately represented in EPs.

Deloitte will send the audit sample for CREs to TEOs shortly after the close off date for submitting EP data. This will allow TEOs to collect evidence to support CREs from their participating staff.

A random sample of EPs will be chosen for audit. The CRE likely to have the greatest impact on an EP will be audited.

4.3.3 Minimum standards of evidence for the Evidence Portfolio audit

Evidence must be available to support the existence and accuracy of all aspects of the bibliographical information provided in EPs for all research outputs. Evidence is to be submitted in electronic format by default.

Where a TEO has elected to supply physical (rather than electronic) copies of research outputs, these should be made available to the auditors upon request and at the TEO's cost within 10 working days. The auditors will only review physical evidence at the request of the Moderation Panel. If required, the auditors will review physical research evidence at the TEC's premises to meet the insurance coverage set out in the PBRF guidelines.

The section 'Research output evidence requirements for assessment and audit' in the PBRF guidelines (Pages 139 to 155 of the August 2023 version) sets out the minimum standards of evidence for items in the EP that TEOs must provide for audit.

5. Managing and reporting errors

5.1 Investigating potential errors

To investigate and manage potential errors identified during the data evaluation audit the following process will be applied. This process starts once Deloitte has reviewed the initial information a TEO has provided and potential discrepancies have been identified. For example, if an ERE Output cannot be confirmed as publicly available then the following approach will be applied:

- Send a list of identified queries to the TEO. Efforts will be made to batch queries as much as possible.
- Inform the TEO of the ten working days requirement to respond to the queries and provide the relevant information.
- Deloitte will review the information provided and if no error is identified, no further action will be taken.
- If a conclusion on whether there is an error in the data cannot be reached based on the additional information provided, the information will be provided to the TEC for a final decision. This will include making a final decision on the outcome and the actions it will take. Advice may be sought from the Moderators, if required.
- The TEC will advise the TEO of the outcome.
- The TEC will action any changes required to the staff and/or EP data.

5.2 Reporting errors

As set out above, Deloitte will report to the TEC the nature and extent of validated errors identified during the data evaluation audit. The TEC will determine the actions, if any, it may take in response to each error.

The PBRF guidelines separate errors into two categories 'major' and 'minor'. A high-level framework is also provided that sets out the actions likely to be applied for major and minor errors.

6. TEO declaration

The Chief Executive or Vice-Chancellor of each participating TEO must submit a declaration confirming they have taken all reasonable steps to ensure:

- The information within submitted EPs is complete, accurate, and complies with the PBRF guidelines.
- All participating staff members meet the requirements for participation in the Quality Evaluation.
- All EPs likely to receive a funded Quality Category have been submitted for assessment.
- All items within EPs are available for inspection by the peer review panels if required.
- Only staff members with legitimate circumstances have claimed the researcher circumstances provision.

This declaration must be provided to the TEC within 24 hours of the final submission date – no later than 4:00pm on 13 July 2026. The declaration to be completed is provided within the PBRF guidelines.

7. Reporting on audit findings

Deloitte will prepare reports on audit findings. It is expected that the reporting format will be similar to the approach followed for the Quality Evaluation 2018. The following sections describe the reporting on audit findings for Phases 1 and 2.

7.1 Phase 1: Process Assurance

- A brief memorandum-style audit report for each TEO highlighting relevant findings from the process assurance audit and suggested areas of focus to ensure the TEO is prepared for the Quality Evaluation.
- A report on themes and findings from the process assurance phase. It is expected that this report will be published on the TEC website. This report will include a brief summary of Deloitte's assessment of each TEO's level of preparedness.

7.2 Phase 2: Data Evaluation

- A report on themes and errors identified during the data evaluation phase. This will include specific observations for each TEO. It is expected that this report will be published on the TEC website.

8. Communication between the auditors and the sector

8.1 Key contacts

Each TEO is required to nominate a contact person with whom the Quality Evaluation auditors will communicate on a day-to-day basis. This role will be known as the 'PBRF audit coordinator'.

Throughout the audit, Deloitte will communicate with the nominated PBRF audit coordinators and the appointed senior manager responsible for research (as appropriate). Communication will be predominantly through email and Teams/Zoom.

The TEC will share general communications and announcements at key times during the audit via email or on the TEC's website.

8.2 Queries from TEOs around the interpretation of the PBRF guidelines

As with previous Quality Evaluations, the **Quality Evaluation** auditors expects to receive a small number of queries from TEOs seeking clarity on specific clauses in the PBRF guidelines and regarding the treatment of specific staff or specific elements of EPs. Deloitte will review each query against the requirements in the PBRF guidelines and where necessary, consult with TEC staff or the PBRF moderators before responding. All queries or clarifications will be anonymised and the TEC may share both the question and answer to inform the TEOs.

9. Escalation and complaints

9.1 Complaints about the audit process

Complaints regarding the activities or behaviours of an auditor should be made in writing to the TEC.

The relevant contact details are:

Dan Haines Cohen

Principal Advisor PBRF

Tertiary Education Commission

PO Box 27-048

Wellington 6141

Email to: dan.hainescohen@tec.govt.nz

9.2 Anonymous reporting of complaints about the behaviour of TEOs

A process will be established by TEC to manage the anonymous reporting of complaints about the behaviour of TEOs. Any party will be able to make an anonymous report. The details of this will be added to the confirmed methodology.

Deloitte will investigate all complaints and inform the TEC of the outcome, who will be responsible for determining the actions (if any) to take.



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Unitec New Zealand Limited

Meeting of Te Komiti Rangahau o Unitec | Unitec Research Committee

Date of Meeting: 14 September 2023

Title	2023-2024 School Research Plans
Provided by:	Arun Deo, Research Advisor
For:	INFORMATION

Recommendation

That the committee receives School Research Plans for the period 2023-2024 and the visual schematic of research groups at Unitec.

Purpose

The Committee asks that Schools report annually against the Research Plans they originally developed in 2020. Because we are more than halfway through the year, the attached plans cover the period 2023-2024.

A visual schematic of all Unitec's research groups has been created from information contained in each of the Research Plans.

Information/Background

Rather than creating fresh plans each year, Tūāpapa Rangahau asks Schools to add to and/or edit their original Research Plans as a way of updating the committee on progress towards their goals and KPIs. Extra fields/rows/columns, with annotated prompts, are added to Schools' current Research Plans for this purpose. Tūāpapa Rangahau does, where it can, pre-populate some of the sections of the Plans in order to minimise the effort required of Schools.

Attachments

- Summary of Research Groups at Unitec
- 2023/2024 School of Applied Business Research Plan
- 2023/2024 School of Architecture Research Plan
- 2023/2024 School of Building Construction Research Plan
- 2023/2024 School of Community Studies Research Plan
- 2023/2024 School of Computing Electrical and Applied Engineering Research Plan
- 2023/2024 School of Creative Industries Research Plan
- 2023/2024 School of Environmental and Animal Sciences Research Plan
- 2023/2024 School of Healthcare and Social Practice Research Plan

Unitec Research Groups by School

School of Building Construction

Sustainability in the Architecture, Engineering and Construction Sector (AEC)

Construction and Engineering Technology

Environmental Engineering

Construction Management & Economics

Digital Technologies

Lean and Waste Management

Industry & Academia Collaborations

Construction and Engineering Education

School of Computing, Electrical & Applied Technology

Electromagnetic Measurements and Non-Destructive Sensing

Automotive

Cyber Security and Networking

Power Systems

Intelligent Systems and Data Science

Software Engineering

Internet of Things (IoT) and Sensor Networks

School of Healthcare & Social Practice

Nurse Education and Future Workforce Development

Anatomy

Medical Imaging Practice

Indigenous Studies

Social Practice and Social Justice

Social Work, Community Development and Narrative Practice

School of Environmental & Animal Sciences

Animal Behaviour and Welfare

Taxonomy and Applied Ecology

Veterinary Nursing

Biosecurity

School of Architecture

Te Hononga & Māori Housing

Environment & Sustainability

Conservation & Heritage

Technology & Fabrication

Urban & Housing

Social

Art & Culture

School of Creative Industries

Creativity and Culture

Design and Contemporary Arts

Performing and Screen Arts

School of Community Studies

Student ECE Kaiako Hauora Collaborative Research Project

Culturally Inclusive Pedagogy and Equity in Early Childhood

School of Applied Business

Applied Learning

Accounting

Supply chain

School Research Plan – School of Applied Business

1 Introduction and current state

The School of Applied Business offers degrees in two main areas: Business and Accounting. Researchers are grouped in two research groups 1. Supply Chain and 2. Applied Learning, with a third group emerging 3. Accounting, which is based on an existing collaboration but may lead to a cluster in the future.

Number of degree teaching staff (as at June 2022)	16
Total research FTE allocated	2.3
Current Research Traffic Light rating (Percentage of green lit staff)	69%
PBRF history (Number of PBRF rated staff in 2018)	13

The School of Applied Business offers a suite of undergraduate and postgraduate programmes from level 4 to level 9 as follows: New Zealand Certificate in Real Estate (Salesperson), New Zealand Certificate in Business (Level 4), New Zealand Diploma in Business (Level 5), Bachelor of Business (Accounting, Marketing, Management), Graduate Certificate and Graduate Diploma in Professional Accountancy, Graduate Diploma in Business (Marketing, Human Resource Management, Operations Management), Postgraduate Certificate and Postgraduate Diploma in Applied Business (Digital Marketing, Advanced HR, Business Analytics, Leadership and Supply Chain & Logistics), Master of Applied Business (Digital Marketing, Advanced HR, Business Analytics, Leadership and Supply Chain & Logistics) and Master of Professional Accounting.

The School of Applied Business actively promotes research-led teaching by providing time allocation in workloads and the appointment of research leaders to support and mentor research activities. This includes the creation of research groups and clusters; whereby new and emerging researchers are given the opportunity to collaborate on research projects within a supported environment. Furthermore, research activity is promoted during biannual ADEP meetings, where research plans are discussed and developed in a proactive manner. These processes contributed to 100% of the degree teaching staff being research active in 2022. The School reaffirms its commitment to academic research, which is evidenced by the data in table above.

The School also teaches research practice courses (BSNS6371 and BSNS8004) and engages in the supervision of a wide range of research projects associated with the various programmes. Lecturers also share their research whilst teaching research practice. For example, in the BSNS8004 and ACTY9045 courses, students are asked to critique the peer reviewed published papers authored by the lecturer.

Research findings are used in classroom teaching as case studies and reading resources. An example is the published case study projects used to develop assessments for BSNS6162. This use of recent research ensures that cases are current and authentic, describing contemporary New Zealand projects. Developing a database of research outputs that could be used as teaching materials could help share these resources within the School (refer to action 1).

Research undertaken by lecturers also enables the introduction of emerging concepts and theories into the curriculum. This ensures currency of discipline and enables the application of emerging theory to examine contemporary issues, which in turn enriches classroom teaching. For example, impact of AI innovations in process improvement discussed in BSNS6350.

A cluster of staff is researching authentic assessment and applied learning, which has a direct impact on pedagogy and teaching methods. The findings are also shared through research seminars and internal workshops and help improve teaching practices within the School. This is illustrated under the research clusters and projects section.

Research in collaboration with industry creates networking opportunities and connections useful for both research and teaching. For example, in BSNS7350, students' group projects fed into research ideas, and research collaboration fed into further student projects. A further example is the School's continuous collaboration with industry partners, resulting in two real-time projects for our Master of Applied Business. In addition, staff from the School have worked as consultants on "developing a corporate social responsibility (CSR) strategy" for a multi-national corporation in a New Zealand organisation. This project also resulted in research contributions for Unitec. Such collaboration will be more productive as newly formed clusters progress in their projects.

Research also enhances programme development. Continuous research activities within the School have grown the skills required to systematically investigate market needs and stakeholders' expectations for future courses and programmes. Programme development activities also expose staff to ideas and opportunities for future research projects. New research capability within the School resulted in the development of two new Master's specialisations; Business Analytics and Supply Chain & Logistics and the embedding of applied research into their curriculum. This encourages students to engage with the research and provides opportunities for student/staff applied research collaborations, including industry-partnered research.

The Unitec Research Strategy 2020 – 2024 states: Priority 1 is that Research that is aligned with Te Tiriti o Waitangi and Goal One is: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes and governance.

1.1 Describe how School Research is aligned with Te Tiriti o Waitangi?

There are trainings and workshops for lecturers to learn about and be aware of the bicultural context in which businesses operate. The majority of staff have been working on the Te Rito (Mātauranga Māori) Suite of badges. Student research courses at the postgraduate level include kaupapa Māori methodology and guest speakers with knowledge and experience in Mātauranga Māori.

1.2 What the school is planning in the area of research to achieve the goal and key project (leadership roles, recruitment, prioritisation, opportunity and partnership development)?

- » Plans to appoint staff with Māori research expertise (Mātauranga, Kaupapa Māori etc): The School has recruited for a small number of vacant positions in 2023 but has been unsuccessful in appointing any Māori staff because there are no Māori candidates.
- » Plans to partner with a Māori organisations, iwi or key Māori individuals in a discipline relevant to your school on research projects.
- » Plans to partner with Nga Wai a te Tūi.
- » Plans to professionally develop Māori staff into leadership roles: The School unfortunately does not have any Maori staff.
- » Plans to offer studentships or other student integrated research with a Māori focus.

2 School of Applied Business Goals and KPIs

There are six KPIs for research:

1. **Quality Assured (QA) Research Outputs** - recognised research outputs that have been peer reviewed or have been specifically commissioned. This is presented as a ratio of the number of QA outputs to FTE of degree teaching staff.
2. **Research Productivity** - measure of staff teaching on degree programmes who meet the agreed levels of research in the Research Traffic Light. This is measured as the ratio of research active staff to the total number of staff on a degree programme.
3. **External Research Income (ERI)** - income received from external sources for research purposes, calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars.
4. **Industry Funded Projects** - research and enterprise projects Unitec is receiving funding for, where the services provided are applied contract research or consultancy, excluding any governmental contestable funding sources. This is measured as a count of the number of projects.
5. **Student Integrated Research** - a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). This is measured as a count of the number of research outputs.
6. **Rangahau Māori Productivity** - productivity in this context would be aggregated as - QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori Rangahau professional development achievements and Rangahau Māori research stories in the media.

The School of Applied Business has the following current goals.

- **Quality Assured Research Outputs:** Maintaining the quality assured research outputs to at least 1.5 output per research active FTE¹.
- **Research Productivity:** Work towards maintaining green traffic light status with 75% or more staff who meet the agreed levels of research in the research traffic light.
- **External Research Income:** The school will strive to lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects.
- **Industry Funded Projects:** Maintain industry-funded projects at 1-3 projects per year
- **Student Integrated Research:** The school will strive to develop research Student Integrated Research projects in line with the definition of this KPI.
- **Rangahau Māori Productivity:** The school will strive to increase Māori Rangahau Productivity in line with the definition of this KPI.

¹ Research active FTE – staff FTE involved in teaching and/or supervising degree programmes.

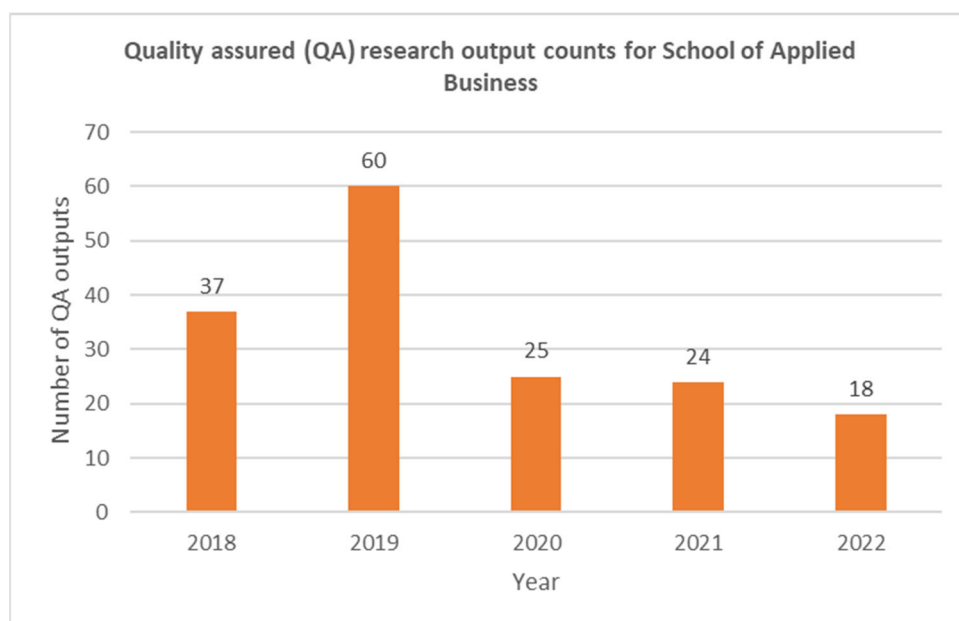


Figure 1: School of Applied Business Quality Assured Research Outputs

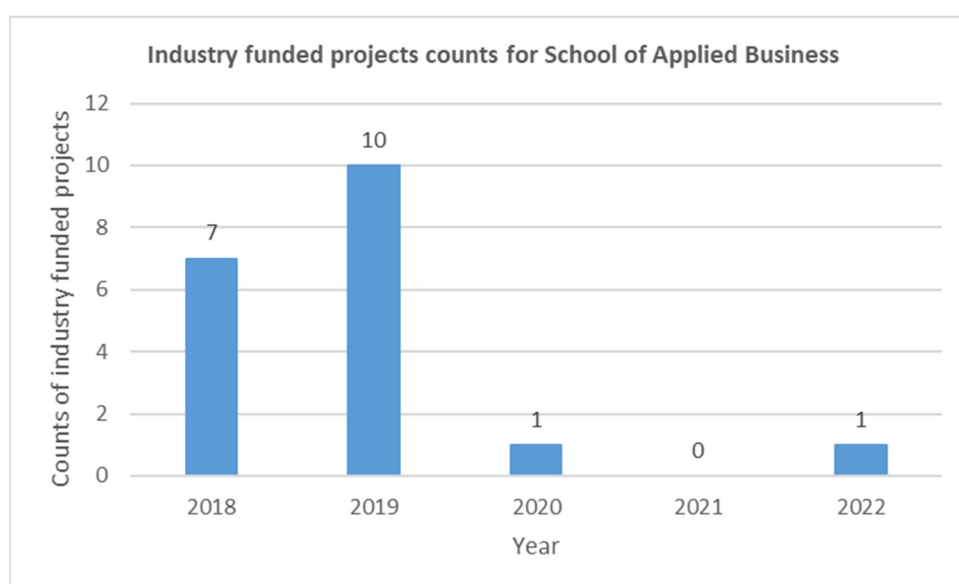


Figure 2: School of Applied Business Industry Funded Projects

Note: There was a slight change in the definition of industry funded projects in 2018 to include public sector and applied contract research or consultancy. Prior to this only funding from private sector was included. Thus, the 2018 figures reported are comparatively higher than 2016 and 2017.

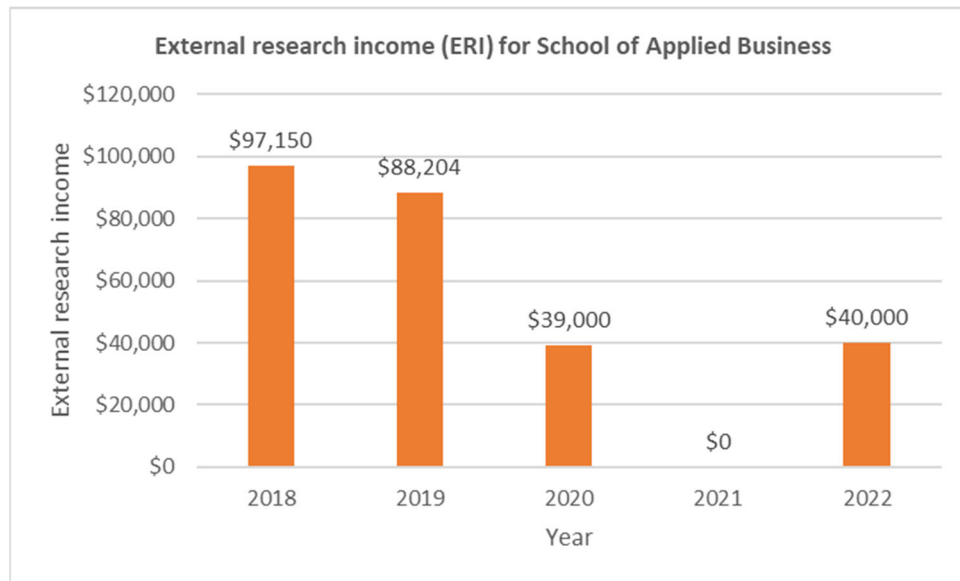
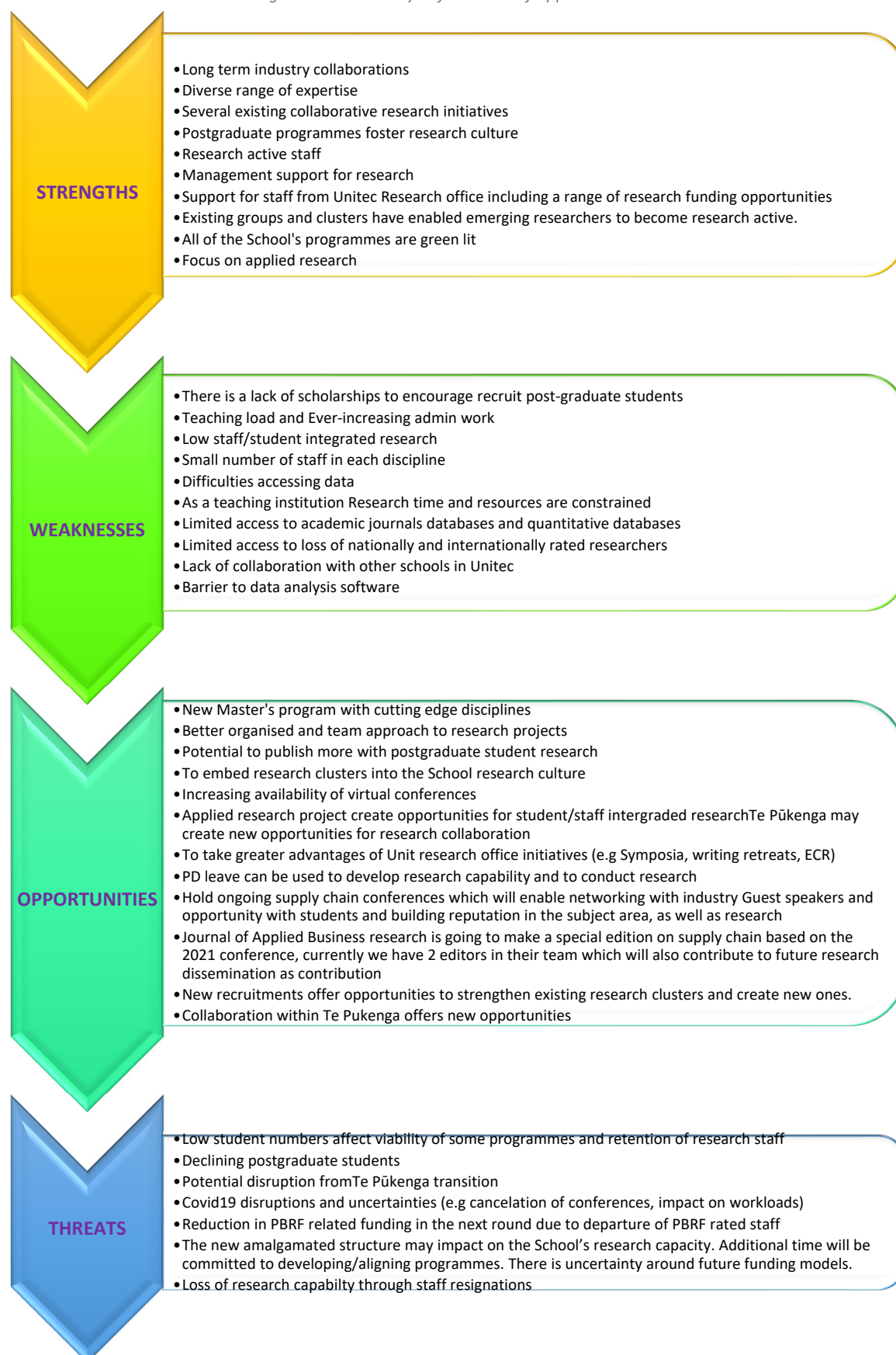


Figure 3: School of Applied Business External Research Income

3 SWOT analysis for research in School of Applied Business

Figure 4: SWOT analysis for School of Applied Business



4 Research Groups and projects (consider the Te Tiriti Priority One goal in the Research Strategy)

A successful technique for achieving goals and efficient utilisation of resources is working in synergistic collaboration. Unitec supports group projects and encourages the development of research clusters between and across School by prioritizing funding for collaborative endeavours.

The School of Applied Business has a number of research groups who partner with external funders to win funding/grants (External Research Income (ERI)). Below are the external research partners who funded projects over the last 5 years.



Figure 4: School of Applied Business external research partners who funded projects over the last 6 years

Note: School of Applied Business has gone through considerable staff turnover in the past 18 months, and this is continuing with three new recruits expected. The school is currently being merged with the Business School at MIT. Due to this, the school does not have a clearer picture of their research capabilities and plans at this stage. They will have this later in the year. It is also likely they will have a combined Unitec/MIT research team by 2024. This will hopefully provide new opportunities for research groups and general research collaboration. Thus, the research groups and goals presented below are tentative for now and it will change as progress is made.

4.1 Research Group one – Supply chain

Statement of purpose

Research in this group is directed towards topics including:

- » Supply chain analytics
- » Future of supply chain
- » Change management and technology adoption in supply chains

Members of this group include:

- » Alan Lockyer
- » Mitra Etemaddar
- » Nicholas Kearns
- » Sanjeev Ranganathan

2023-2024 Goals

Goal 1: Motivate and maintain the number of research-active staff					
Action	Responsible	Deadline	Resources needed	Desired result	Progress on the goals
Initiate staff research support groups	Research leader	November 2023	Time allocation (0.1 as minimum)	All staff research active	Multiple new initiative through MIT and Te Pūkenga
Support staff to attend writing retreats	APMs	As per Research Office schedule	Tūāpapa Rangahau support	To have some SAB staff attend	Awaiting Retreat dates from Research Office
Mentor students engaged in industry-based projects	Members in the research cluster	November 2023	Industry based coordinator and academic supervisors	Authentic industry-based assessments	Being achieved with students engaged in industry-based projects.

Goal 2: Increase external research income					
Action	Responsible	Deadline	Resources needed	Desired result	Progress on the goals
Identify key research opportunities (including external partnerships) and plan external funding applications	Members in the research cluster or group	Ongoing	Research Office support with research contracts	Secure funding/grants for at least one project.	No funded research project as of July 2023

4.2 Research Group Two – Applied Learning

Statement of purpose

Research in the area of Applied Learning is directed towards topics including:

- » Authentic assessment

- » Industry based learning
- » Teamwork
- » Peer feedback

Members of this group include:

- » Denisa Hebblethwaite
- » Nicholas Kearns
- » James Prescott
- » Liz Rainsbury
- » Sanjeev Vellore Ranganatha

2023-2024 Goals

Goal 1: Maintain and equip research-active staff in the Applied Learning field					
Action	Responsible	Deadline	Resources needed	Desired result	Progress on the goals
Periodic SAB research seminars	Research leaders	Ongoing	Research time allocation in workloads	Foster research culture in SAB and contribute to quality assured research outputs	Achieved at SAB meeting (Two seminars as of May 2023)
Support staff to attend writing retreats	APMs	TBD	Tūāpapa Rangahau support	Some staff to attend a retreat	Awaiting schedule for writing retreats

4.3 Research Group Three – Accounting

Statement of purpose

Research in the area of Accounting is directed towards:

- » Sustainability reporting
- » Financial reporting

The School of Applied Business research seminar series will be used as an incubator for developing this potential cluster by inviting accounting staff to present their current research projects. We anticipate this will promote discussions between staff and lead to joint research projects. The departure of key research active staff in 2022 has enabled the recruitment of several new hires in 2022 and 2023.

Accounting staff have undertaken collaborative research projects, including the impact of COVID19 on student engagement, the impact of key audit matters and sustainability. These projects have included Associate Professor Liz Rainsbury, who is leading the teams in the pursuit of research outputs. Given the small number of academic staff and limited time to conduct research it is important that

collaborative projects are initiated with new staff members to maintain outputs. Sustainability research will be a popular area for academics as New Zealand moves to mandate climate-related disclosures in financial reports.

2023-2024 Goals

Goal 1: Develop and support research capability in accounting				
Action	Responsible	Deadline	Resources needed	Desired result
Explore research interests and expertise of newly appointed staff	Incumbent Accounting staff	Ongoing but soon after new appointments	Research time allocation in workloads	To establish research support for new staff and to encourage research collaboration
Initiate collaborative research	Accounting staff	Annually and at conclusion of a project, however multiple projects may run at the same time	Research time in workloads	One research project initiated
Promote ECR research grants	Research Leaders and ECR staff	As per date set by Research Office	Workload time allocation	To have participation by ECRs
Accounting staff to look at producing research outputs in collaboration with MPA students	Accounting staff supervising MPA student's dissertations	Each Semester		To support student and staff research and produce research outputs

School Research Plan – School of Architecture 2023

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1 Introduction and current state

The Department of Architecture was founded in 1994, the same year that Building One was first used as a teaching building for Unitec. The Department of Landscape Architecture was set up in 2000. In 2004, the Department of Architecture and Landscape Architecture merged into one school and was named School of Architecture and Landscape Architecture (ScALA). In 2010, when faculty structures were created at Unitec, Architecture and Landscape Architecture were separated again under departments into the Faculty of Creative Industries and Business. In 2016, Unitec adopted Network and Pathway structures. Architecture and Landscape Architecture merged again into one Pathway named Architecture. Then in 2019, when the new school structures were created at Unitec, the Architecture Pathway became the School of Architecture.

The School offers degrees in two areas: Architecture and Landscape Architecture and offers five degree programmes. The School's researchers are grouped across seven research groups [1] Te Hononga & Māori Housing, [2] Art & Culture, [3] Environment & Sustainability, [4] Conservation & Heritage, [5] Social Topics, [6] Technology & Fabrication and [7] Urban & Housing. These groups are closely aligned to help the Master of Architecture (Professional) students identify areas of expertise for their ARCH 9111 year-long Research Projects.

The School of Architecture maintains a vibrant and active research culture. This has been so for more than a decade and is on-going. Our research is scientific and scholarly, practice-based and theoretical, investigating design teaching and fundamental theoretical questions. All of this research is tightly connected to teaching in the Bachelor of Architectural Studies (BAS) as well as in the Master of Architecture (Professional) (MARCP), and in the Landscape programmes. It is perhaps useful to point out that the BAS is generally seen as preparation for the MARCP, which is more heavily based on research – both in terms of staff research as students' own research.

Three different kinds of research are conducted in the School of Architecture:

- Research by students (predominantly through ARCH 9111 – the 120 credit Research Project course),
- Research by staff,
- Collaborative research by staff and students. This is often directly incorporated with teaching, for example by Min Hall, Renata Jadresin-Milic, Yusef Patel, Christoph Schnoor and Graeme McConchie.

Twenty-one staff from the school submitted a portfolio for the 2018 PBRF round, all of which received a funded quality category grade. This is the biggest number of any of the schools at Unitec and demonstrates the linkages of research and collaboration through the undergraduate and postgraduate programmes as well as across disciplines.

Number of degree teaching staff	27
Total research FTE allocated	4.62
Current Research Traffic Light rating (Percentage of green lit staff)	89%
PBRF history (Number of PBRF rated staff in 2018)	21

Notes from external examiners of the School of Architecture include:

Staff noted higher outputs in 2020 due to online presentation opportunities; but looking ahead, the landscape for ongoing research outputs was uncertain and with staff being time-poor the means for

them to continually generate high-quality research needed to be identified and thorough. A clear research strategy would therefore:

- » include a peer-to-peer benchmarking process for staff research outputs and ensure staff are supported in terms of time and resources to maintain competitive, relevant alignment with University peers. This is also critical for staff retention and development and staff recruiting.
- » Include support for external research grants to extend research at a higher level. While it is done, it does not always seem clear how it is accessed or prioritised.
- » ensure the polytechnic management overlay does not inhibit discipline-specific research.
- » identify a useful scaffold/roadmap for early career staff.

1.1 Teaching and research inform each other:

BAS (Bachelor of Architectural Studies):

Methods of undertaking research are taught in the BAS from early on: since design is seen as a research activity (TEC's definition), students are systematically prepared for thorough, in-depth investigations of site, technologies, design strategies from Year 1 onwards. This begins with a course like Design Communication and equally by connecting students to the academic support services at Unitec from first year onwards. As such, students are preparing themselves for more in-depth self-directed research-based design in the MARCP. Elements of scholarly research are taught in the Critical Studies Strand in History 1 and 2 and in Architectural Theory 1 and Urban Design; they are also taught in Studio (precedent studies, site investigations, issue of plagiarism). Undertaking searches into architects and buildings, evaluating judgements on architecture, methods of essay writing, referencing and the like are taught consistently throughout the BAS.

MARCP (Master of Architecture (Professional)):

Research Methods is one of the first-year MARCP courses, preparing students for their candidature for ARCH 9111 course and for the combination of scholarly and design research they will be undertaking in their year-long project. A connection between Research Methods and Design Studio fosters the development of a design research approach to prepare for the final 'thesis' Research Project. Teaching staff¹ apply their own experience of having supervised many MARCP Research Projects to foster students' understanding of methods and approaches to diverse research questions.

Professional Business Management (ARCH 8511), critically examines issues of ethics and professionalism. Architectural Theory (ARCH 8311) continues to develop students' capability in researching and formulating complex theories while linking these to the analysis of buildings via the means of drawing. Electives foster the development of research capability in specific interest areas for students – often the electives are chosen directly as preparation for the final year Research Project.

In the final year, the individual supervision of ARCH 9111 is often driven directly by staff's own research area and expertise, at times resulting in joint outputs by staff and students (in writing and publishing papers as well as in making prototypes etc.).

Bachelor of Landscape Architecture / Master by Project:

Negotiated Studies, a year 4 (final year) course, pursues a research-driven agenda for the capstone professionally accredited programme. The Master of Landscape Architecture and Master of Architecture (Professional) are grounded in project-based design research investigations and are driven by staff's own research expertise. A pathway for Māori practitioners has been recently established with

¹ Dr Christoph Schnoor (course-coordinator), with Kerry Francis, Dr Yusef Patel, Rau Hoskins, Semisi Potauaine and Graeme McConchie as supporting staff.

the help of Dr Diane Menzies. Dr Menzies has helped to develop mātauranga Māori protocols around research presentation. All workshops now begin with a karakia and a whakawhanaungatanga. Māori students are encouraged to use Kaupapa Māori Research methods. Connection to industry-based research projects is an important part of the Master of Landscape programme. A recent research collaboration has been with Beca, a multidisciplinary and international engineering consultancy, and a Pacific student on a water flood remediation project in Apia, Samoa.

Recent student successes have included the development of a GIS mapping system for a Hokianga hapu. The successful graduate has recently been accepted into the PhD programme at Auckland University. Another successful applied research project is being completed. The candidate is researching traditional Māori garden practice. The outcome will be the construction of a series of Māori gardens at Pourewa, the ancestral land of Ngata Whātua Orākei. The project has received funding and begun construction in 2021. A sterling example of applied research using Kaupapa Māori Research methods.

1.2 Teaching informed by staff research:

Teaching material in the research courses are informed directly by the research activities of the respective lecturers. A few annotated examples of staff research that has influenced teaching in the BAS and the MARCP programme are:

- » Te Hononga is our Māori Design Research Lab, led by Rau Hoskins. The mātauranga gained here over more than 20 years feeds across several aspects of the programme, from first year (Architecture and Context) to post-graduate supervision (Research Project).
- » Semisi Potauaine is a Pacific researcher and practitioner teaching first year Design Studio and Architectural Technology 1. He provides specific teaching and support for our large Pacific cohort of ākonga, ensuring that their attention is captured at the outset of their studies with concepts of the Pacific introduced and developed in their work from first year to post-graduate Research Projects. Specific examples of research-led teaching include Maui's Catch in 2023 which explores Matariki through a bicultural lens, and results in students designing and fabricating large-scale installations for public display.
- » Dr Cesar Wagner and Dr Lucia Melchioris on Urban Housing. Auckland Council research into Urban Housing elective.
- » Dr Christoph Schnoor on Ernst Plischke (SAHANZ 2011, 2014, 2015, 2020) into ARCH 7626 New Zealand Architectural History.
- » Min Hall's research on low-carbon materials and design practices is directly related to teaching in Tech 1 course and in her elective.
- » Peter McPherson on digital technologies into his elective.
- » Dr Yusef Patel on digital fabrication (CNC) into his elective.
- Architectural Theory: both staff teaching Architectural Theory (Christoph Schnoor; Renata Jadresin-Milic for ARCH 8311) directly feed their research into teaching – this includes published writing on theories by Vitruvius, Le Corbusier, Ernst Plischke and others.
- » Renata Jadresin Milic, ARCH7624 Digitalisation of Heritage is directly related to her prior and teaching (INTBAU Italy International Architectural Programme Cultural Landscape and Heritage Skills in Lizoni, June 2018).

1.3 Research through teaching:

Teaching also develops research through student-led research and/or industry partnership. Some examples include:

- » Dr Renata Jadresin-Milic – digital scanning elective ARCH7624 Digitalisation of Heritage (funded with ECR grant in 2020/21). ARCH 7611 Negotiated Studies: *Digitalisation of Heritage* (funded

with ECR grant; Auckland Council grant; MHUD grant). Establishment of Research Centre based on this research.

- » Dr Christoph Schnoor in ARCH 7626 New Zealand Architectural History – Publication *The Vertical Picturesque* (2019), 2021 research on Ted McCoy's *Southern Modernism* in Dunedin, currently preparing publication.
- » Rau Hoskins, in particular through Te Hononga Māori Studio, and externally funded research projects. Discussions underway with MIT Tech Park to produce Tiny Homes for Papatūānuku Marae, part of a Ngā Wai a te Tui project.
- » Dr Hamish Foote's connection with ADHB (Auckland District Health Board), which facilitates real-world input into ARCH 9111 Research Projects
- » Practice-based design research for small groups of 1st yr MARCP students happens through their design studio placement with several Auckland-based architectural practices, such as PeddleThorpe and Jasmax (4 students each per year).
- » We also have a profession/industry-edited edition of *Asylum* published in 2023.

1.4 Industry-connected research

A series of industry connected projects related to digital fabrication, run by Dr Yusef Patel and Peter McPherson. The projects below are a series of research based, industry connected projects that have led to traditional research outputs in national and international conferences.

- » Waiheke Gateway Pavilion for Headland Sculpture on the Gulf – a collaboration with architect, engineer, and builder. 2017 project received an NZIA national award for small projects.
- » Tech Futures fitout.
- » The Living Pod – a series of phases for a prefabricated, modular dwelling.
- » PrefabNZ and Carter Holt Harvey Woodproducts (plus ProClima and others) - ongoing collaborations for public events and roadshows highlighting digital fabrication techniques and processes.
- » Min Hall has led industry connected research into bio-based materials for the construction industry, and recently won, with Magda Garbarczyk,

2 School of Architecture Goals and KPIs

The School of Architecture has set itself a number of goals. These are:

- Increase the number of student-related collaborative research projects. This is being achieved through links to courses, involvement of students in authoring papers, etc.
- Increase externally funded income.
- Steadily increase the higher degrees of staff. Eleven staff currently hold a PhD degree (Matthew Bradbury, Hugh Byrd, Hamish Foote, Lucia Melchioris, Renata Jadresin-Milic, Yusef Patel, Christoph Schnoor, Bin Su, David Turner, Cesar Wagner, Sameh Shamout), while Annabel Pretty, Xinxin Wang and Gina Hochstein are enrolled into a PhD programme.
- Encouraging staff to produce more collaborative co-authored research outputs and generate outputs like *Asylum* and books like *The Vertical Picturesque* and similar.
- Encouraging staff to publish more research outputs like journal articles and book chapters.
- Looking at the possibility of establishing another research centre or two.

There are six KPIs for research:

1. **Quality Assured (QA) Research Outputs** - recognised research outputs that have been through a peer review process or have been specifically commissioned. This is presented as a ratio of counts of the number of QA outputs to FTE of degree teaching staff.

2. **Research Productivity** - measure of staff teaching on degree programmes who meet the agreed levels of research in the research traffic light. This is measured as the ratio research active staff to the total number of staff on a degree programme.
3. **External Research Income (ERI)** - income received from external sources for research purposes calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars.
4. **Industry Funded Projects** - research and enterprise projects Unitec is receiving funding for, where the services Unitec is providing is applied contract research or consultancy from all funders excluding any governmental contestable funding sources. This is measured as a count of the number of projects.
5. **Student Integrated Research** - a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). This is measured as a count of the number of research outputs.
6. **Rangahau Māori Productivity** - productivity in this context would be aggregated as - QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori rangahau professional development achievements and rangahau Māori research stories in the media.

The School of Architecture has the following current goals.

- **Quality Assured Research Outputs:** Maintaining the quality assured research outputs to at least 1.5 output per research active FTE².
- **Research Productivity:** Work towards maintaining green traffic light status with 75% or more staff who meet the agreed levels of research in the research traffic light.
- **External Research Income:** The school will strive to lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects.
- **Industry Funded Projects:** Maintain industry-funded projects at 1-3 projects per year
- **Student Integrated Research:** The school will strive to develop research Student Integrated Research projects in line with the definition of this KPI.
- **Rangahau Māori Productivity:** The school will strive to increase Māori Rangahau Productivity in line with the definition of this KPI.

² Research active FTE – staff FTE involved in teaching and/or supervising degree programmes.

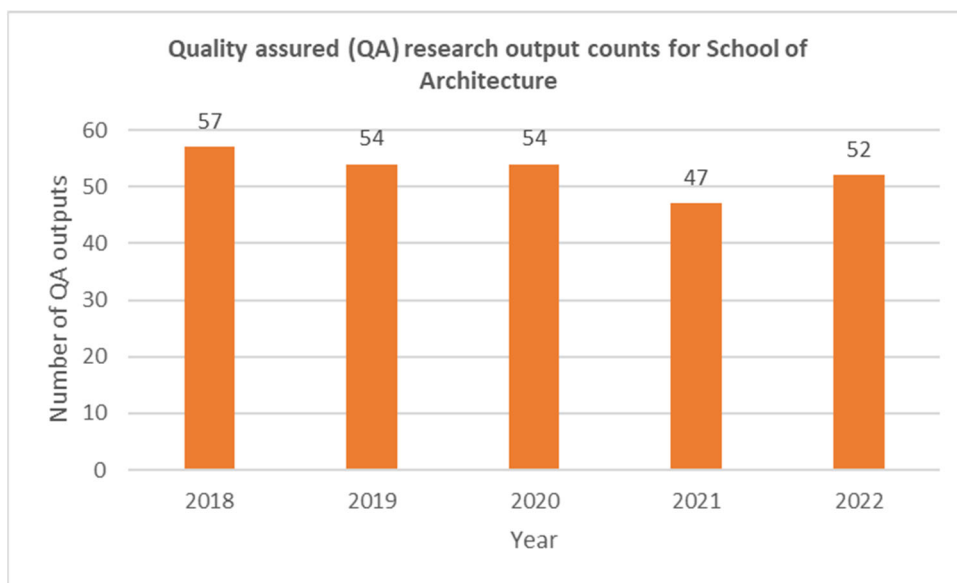


Figure 1: School of Architecture Quality Assured Research Outputs

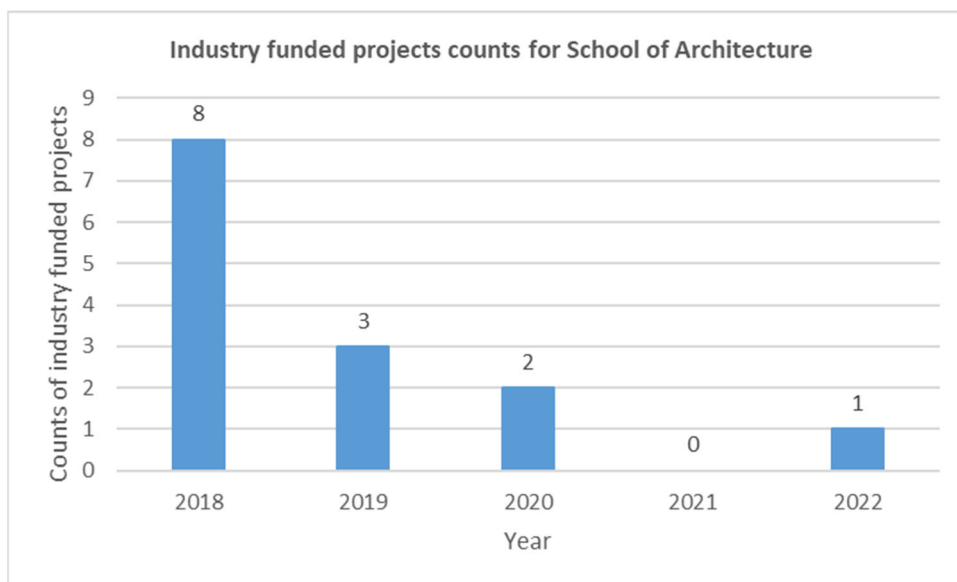


Figure 2: School of Architecture Industry Funded Projects

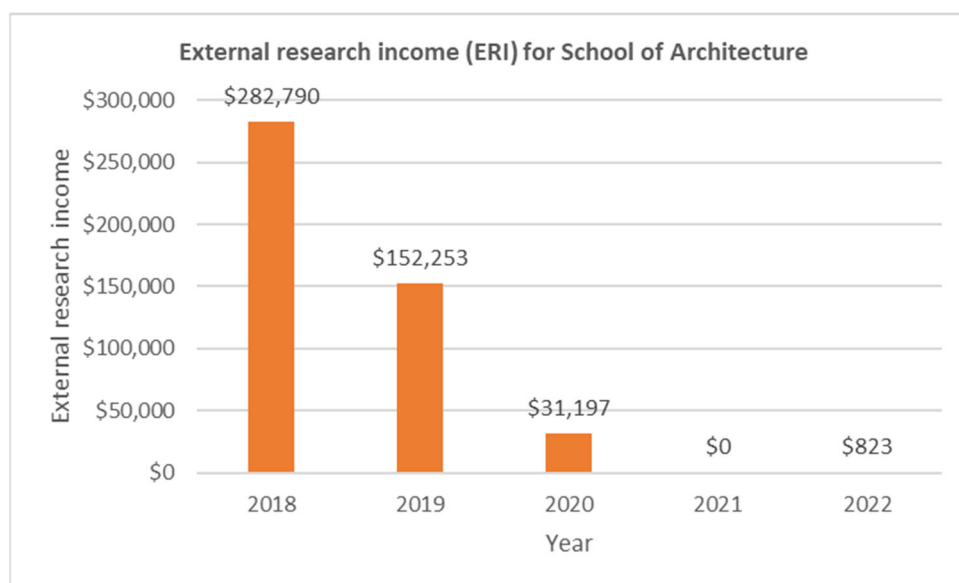


Figure 3: School of Architecture External Research Income

Note: There was a slight change in the definition of industry funded projects in 2018 to include public sector and where the services Unitec is providing is applied contract research or consultancy. Prior to this only funding from private sector was included. Thus, the 2018 figures reported are comparatively higher than that of 2016 and 2017.

2.1 What is the school planning to increase research diversity?

On a School level, the next generation of Māori researchers are being fostered and helped to grow into roles of responsibility. Two recent graduates of the Master of Architecture programme, Maia Ratana and Kelsey Metcalfe, are examples of this.

The School also give a high priority to the development of capability in the area of Pacific research. To mention here are architect, artist and lecturer Semisi Poutaouine and 'next generation' - recent graduates Venus Mataia and Tuputau Lela'ulu.

We are also collaborating with others, such as Professor Regan Potangaroa (Massey University), to give breadth to other research projects such as the Digital Heritage work.

3 SWOT analysis for research in School of Architecture



4 Research Groups and projects

The School of Architecture currently has seven research groups [1] Te Hononga & Māori Housing [2] Art & Culture, [3] Environment & Sustainability, [4] Conservation & Heritage, [5] Social, [6] Technology & Fabrication, [7] Urban & Housing. These groups – or clusters – have been defined to help students in the Master's degree programme to identify their area of focus in line with the staff research expertise.

They have, however, not been formed to pigeonhole staff research because it is very apparent in this School that staff research across topics covered by these clusters. Therefore, research projects solely run by staff may more often than not stretch across these clusters.

Technology and Fabrication have been establishing funding mechanisms on projects in 2022 with a view to establishing a research centre in 2023. Research Groups have been shared nationally as part of Te Pūkenga, particularly with respect to Otago Polytechnic's school of architecture and aligning and developing their research culture.

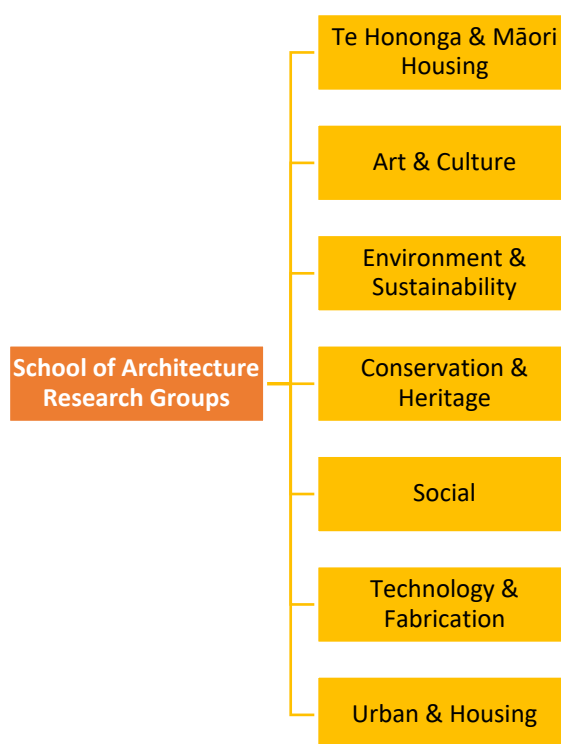


Figure 4: School of Architecture seven research groups

The above research groups partner with external funders and win funding/grants, which Unitec calls as External Research Income (ERI).

Below are the external research partners who funded projects over the last 4 years.



Figure 5: School of Architecture external research partners who funded projects over the last 7 years

4.1 The School of Architecture overall

Research in the School of Architecture aligns with the Unitec Research Strategy 2020 – 2024, Te Tiriti priority. On an individual level, numerous research projects are being undertaken with iwi, for Māori community groups etc.

On a School level, the next generation of Māori researchers are being fostered and helped to grow into roles of responsibility. Two recent graduates of the Master of Architecture programme, Maia Ratana and Kelsey Metcalfe, are examples of this. They have provided pastoral care to students and Maia has moved to the level of primary supervisor for post-graduate students in 2023. Maia has enrolled into PhD studies and continues as a researcher with Jenny Lee-Morgan.

The School also gives a high priority to the development of capability in the area of Pacific research. To mention here is architect, artist and recently tenured lecturer Semisi Poutauaine. Semisi brings a broad understanding of the Pacific to all areas of the architecture programme. In addition, the school has cultivated and supported the development of graduates for several years and is proud to see the establishment of MAU Studio, a Pacific architecture and design practice co-founded by Unitec graduate and part-time lecturer Tuputau Lela'ulu and comprising several Unitec architecture graduates. MAU has provided pastoral support for ākonga, and taught at various levels across the programme (eg. Venus Mataia).

Research happens within the clusters, but equally across the clusters.

We have worked to establish Research Groups in the School with the dual aim to focus student research in areas aligned to academic staff research interests, and to increase the quality of outputs and collaboration between researchers. The Research Groups bring a focus to areas to attract research funding and additionally create opportunities for collaboration across the groups where specialist knowledge and skills can enhance research outcomes.

The biggest new development is the establishment of a Research Centre at the School of Architecture, the Digital Heritage Research Centre (see below) – involving Dr Renata Jadresin-Milic, Graeme McConchie (Heritage) and Peter McPherson (Technology) on the Building 1 Digitisation project (where technical knowledge helps to inform outcomes of a heritage/conservation focused project).

Further examples of this can be seen in the work of Dr Yusef Patel and his work with Panuku Development Auckland which has recently seen external funding and cross-School collaboration with Dr Bobby Hung for student-led and community-based research.

These Research Groups are not considered as definitive for the location of individual's research interests and indeed interests and expertise may occur across groups. They exist as a place to guide and organise research in the School with the intention to develop research capability and higher level outputs.

Future plans for the School include focusing on research outputs that contribute to the professional architecture environment.

These can be considered in a number of ways, including recent examples such as:

- » Dr David Turner's commentary on urban housing appearing across several architecture and news publications, and
- » Dr Christoph Schnoor and Graeme McConchie's series of NZ Architecture History publications that incorporate student-led research examining the work of significant but underrated NZ architects.

The *Asylum Design Research Journal* is a further example of this that has the intention to support the publication and dissemination of non-traditional (non-written) research outputs. This type of publication can enable the examination of broader architectural ideas such as, for example, drawing practice, which has the potential to attract input from students, academics, and practitioners alike. In 2023, *Asylum* is publishing a profession-led editor edition in collaboration with The Urban Advisory and Dr. Natalie Allen.

Several prominent graduates from the programme operating at a high level of practice are interested in contributing to a 30-year programme anniversary edition of *Asylum*.

Opportunities exist for deeper engagement with the profession to create research centres of excellence that support practice-focused research and development to explore issues facing the profession. These include topics such as urban housing, climate and ecological change, zero carbon building and the issue of construction waste. Issues of social and cultural change cannot be underestimated either for their impact on how we consider our built environment. The School is well placed to develop leadership in this area which can already been seen in the work of Rau Hoskins in collaboration with Ngā Wai a Te Tui.

The School is exploring the possibility of recording and publishing the history of Te Hononga, Māori Studio, led by Rau Hoskins and Carin Wilson, with the assistance of Jade Kake

The transition to Te Pūkenga under RoVE has created opportunities for collaboration with other architecture programmes across ITPs. The first element to this is providing support and guidance to develop post-graduate programme(s) at those already offering undergraduate architecture programmes (Otago Polytechnic and Ara), with Otago Polytechnic now approved with the first students enrolled in 2023.

The intention here is to support the programme across Unitec and Otago Polytechnic, including supporting the development of research supervision capability. Additionally, the current Unitec SoA Research Groups have been proposed as part of a national research group aligned to construction and architecture. For Otago this means that their staff can begin to align their research and contribute to these areas. It also means that they can contribute to Unitec established research dissemination forums such as the *Asylum Design Research Journal*.

Research Clusters School of Architecture JUNE 2023

Te Hononga & Maori Housing	Art & Culture	History & Conservation	Environm. & Sustainability	Social	Technology & Fabrication	Urban & Housing
Rau Hoskins Maurits Kelderman	Christoph Schnoor Ainsley O'Connell Julian Rennie Kerry Francis Semisi Potauaine Gina Hochstein	Renata Jadresin-Milic Graeme McConchie Cam Moore Christoph Schnoor Jeanette Budgett	Bin Su Min Hall Matthew Bradbury Xinxin Wang	Hamish Foote Annabel Pretty David Chaplin Sue Wake	Yusef Patel Sameh Shamout Jeanette Budgett Nikolay Popov Peter McPherson	David Turner Cesar Wagner Lucia Melchioris
	Graeme McConchie Hamish Foote Renata Jadresin-Milic		Sameh Shamout		Kerry Francis Min Hall	Bin Su Matthew Bradbury Xinxin Wang

4.2 Research Group One – Te Hononga & Māori Housing

Statement of purpose

This cluster promotes architectural research towards Māori Housing and Culture. The lead staff member is Rau Hoskins.

Rau Hoskin's current research, which is carried out through the Ngā Wai a Te Tūi Māori and Indigenous Research Centre, centres on strengthening urban marae through a focus on whare (built environment and housing solutions), wai (potable and storm water quality), whānau (community engagement) and whai rawa (business development). I am also particularly interested in urban papakāinga innovations including whare kāhui (nano whare clusters) which can benefit from access to existing marae based communal facilities while being relatively affordable emergency, transitional and long term housing solutions.

Rau Hoskins has signalled a potential shift in his engagement to support the broader programme and move away from the Māori Studio paradigm, with others like Maia Ratana and Kahurangi Eruera moving into that space.

4.3 Research Group Two – Art & Culture

Statement of purpose

This cluster promotes research projects that engage with the history, theory and practice of artistic or cultural phenomena. The lead staff member is Dr Christoph Schnoor.
Engaged in this group: Graeme McConchie

For MARCP Research Projects, this could include research:

- » at the intersection between art and architecture;
 - » that investigates design theory and practice;
 - » into the production of art and craft, dealing with traditional or contemporary, material or immaterial culture;
 - » studying cultural practices from a local, global or indigenous point of view;
 - » that is interested in historical or contemporary instances of 'pop', 'high' or counter-culture.
- Projects include, but are not limited to museums, educational institutions that explore the specifics of a culture, performance venues or dwellings related to art practice, or critiques of urban phenomena related to cultural issues.

Three areas of research have been established:

- 1) the role of modernist architecture in post-war New Zealand
- 2) Research on indigenous architecture in Samoa (and Tonga)
- 3) Research on (pre- and post-) colonial architecture in the Pacific, particularly Samoa

2023/24 Goals

Goal 1: Develop and support research capability in Art & Culture				
Action	Responsible	Deadline	Resources needed	Desired result/outcome
Co-organise symposium on	CS, with Michael Falser (TU Munich)	Late June 2022.		Symposium was a good success, bringing together

colonial architecture in the Pacific				Pasifika scholars and international scholars virtually/at Unitec.
Publish outcomes as edited volume with reputable publisher	CS, with partners from UoA	Planning 2023, publication 2024	Publication fees	
Foster research in the School through this symposium	CS			Jeanette Budgett and graduand Krause Keil (co-) presented papers.
Foster young researchers through co-authoring	CS, with recent graduate Catherine Collingwood	June 2023	Funding already granted for Springer publication	Book chapter on Disaster Relief in Samoa, published in RRAU volume

Goal 2: To lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects in Art & Culture

Action	Responsible	Deadline	Resources needed	Desired result
Establish a new project aiming to restore an early 20 th century timber building in Samoa	CS, with Dr Christian Reepmeyer (DAI) and Dr Matiu Matuvai Tautunu (NUS)	First scoping trip to Samoa in July 2023 was successful Application for funding of the first project phase in August 2023 For a project start in early 2024	Support from Brenda Massey for writing of grant application	Over several years, to restore and adaptively reuse the Residence of the former Head of State, Tui'atua, Samoa Engage students in research Broaden the project for touristic use in the longer run

Goal 3: To develop outputs based on student research in the field of architectural history

Action	Responsible	Deadline	Resources needed	Desired result
Publication of 2021 student work on Dunedin-based architect Ted McCoy	CS, with Graeme McConchie and Carl Salas	August 23		Printed book
Publication of 2023 student work on Christchurch-based architect Paul Pascoe	CS, with Graeme McConchie and Carl Salas	Late 2024	TBA	Printed book

Goal 4: To foster trans-Tasman research on the role of modern architecture in AUS/NZ

Action	Responsible	Deadline	Resources needed	Desired result
Co-organise symposium on modern architecture in AUS/NZ	CS, with Julie Collins (Univ. of SA, Adelaide)	Planned for February 2024 in Adelaide	n/a	Discussion, dissemination of ideas: publication; further coordinated

	and AASA Modernism group (Deborah Ascher Barnstone et al.)			research undertaken by AASA Modernism group
		Late 2024	TBA	Printed book with outcomes of symposium

4.4 Research Group Three – Environment & Sustainability

Statement of purpose

This cluster promotes research towards environment and sustainability. The lead staff member is Prof Bin Su.

ESD (environmentally sustainable design) is all about building for the future. It is underpinned by a concern for the depletion of natural resources and also for climate change. We currently tend to design buildings with little consideration to their 'embodied energy' (the value of the resources to construct, recycle or dispose of) and their operational energy (the value of the resources to keep a building running). Both constructing and operating result in the production of 'greenhouse gases' (GHGs) that warm the climate. ESD is about utilising resources that are renewable for both construction (e.g. timber that is managed so that it does not deplete) and operation (e.g. using the sun's energy rather than fossil fuels) and minimising GHG production.

For architects, this means designing by 'passive' means (maximising the energy in the natural environment) with the aim of achieving 'free-running' or 'zero-energy' buildings or even 'regenerative' buildings that produce more energy than they consume. This has implications on the shape and form of buildings (and cities) as well as utilising 'disruptive technologies'.

Environmental sustainability underpins both social and economic sustainability since, without resources, society and economy would collapse. Sustainability in this context is defined as the aim of maintaining a system (e.g. a building) indefinitely.

2023-2024 Goals

Goal 1 Bin Su:

Field study of evaluating indoor thermal and health conditions of Matekuare Whanau Trust new house development in Tāwhitiwhiti, Minginui and Waireporepo and Māori occupants' health survey.

The field study data and occupants' health survey results of the new houses can be used to compare with the previous research data of existing old houses with poor living conditions, previously funded by the National Science Challenge, which has been reported (https://www.buildingbetter.nz/wp-content/uploads/2022/12/Emery_McLean_Eds_2019_Toitu_te_kainga.pdf) and published in Int J Environ Res Public Health (<https://www.mdpi.com/1660-4601/17/22/8340> or doi: 10.3390/ijerph17228340).

Activities Matthew Bradbury

The great Auckland flood of January 27 2023, and the subsequent Cyclone Gabrielle has suddenly made the prediction of the effects of climate change very real for many Aucklanders. Dr Matthew Bradbury has been writing about the connection between climate change and urban development for a number of years. His publications include *Water City; Practical Strategies for climate change*. As the effect of the great flood has become apparent, Matthew's option on building resilience to the effects of flooding has become sought after.

Writing

- "Flood undermines widespread multi-storey housing plan." Matthew Bradbury, Feb 6, 2023 Newsroom.
- Interviews
- "Analysis: The three most significant lessons from Auckland's historic floods" Jamie Morton 2 Feb 2023 NZ Herald
- "Auckland floods: Tens of thousands of homes across Auckland are prone to floods, water and wastewater constraints and coastal erosion" Bernard Orsman 11 Feb 2023 NZ Herald

Two interviews with Katheryn Ryan Nine to Noon

- "Should Auckland let its hidden waterways see daylight?" RNZ Nine To Noon, 9:32 am on 10 March 2023. Interview with Katheryn Ryan
- Auckland's billion-dollar flood recovery programme Nine To Noon, 9:20 am on 18 May 2023 RNZ Interview with Katheryn Ryan

Invitations by Community Groups

Stormy Water: How do we prepare for the next flood? March 11 2023 Grey Lynn 2030. Panel discussion 'What it takes to be a climate prepared city' -Fabian Society meeting . Julie Fairey & Matthew Bradbury March 11 2023.

Further activities

- » The international RRAU Conference, held at Unitec in late April 2023, was convened by Sameh Shamout, Yusef Patel, Matthew Bradbury and Peter McPherson. 43 papers were presented both in person and online. Work is underway to publish a book containing papers from the conference.
- » Matthew Bradbury is involved in planning for the NZILA 50th Conference in 2022, including a student design charrette.
- » Matthew Bradbury on collaboration for a sustainable community of practice "Across the Te Pūkenga network, researchers in diverse disciplines are working to uncover these new stories, developing transformative and transdisciplinary practice with the common goal of making the world a better place. It is the nature of transdisciplinary research that researchers and practitioners can feel isolated from their discipline - particularly where their research demands disciplinary transformation. So, the SCoP aims to provide a complementary network of support, connection and collaboration for sustainability researchers across the Te Pūkenga network."
- » **Min Hall's** current activities:
Work on Project Pātūtū: developing a sustainable prefabricated timber and strawbale wall panel, continues.
Recent developments are:
 - ✓ Being shortlisted for the Intbau Design Challenge with a design, Strawlines, for an urban pocket neighbourhood using the panels in collaboration with Finline Architecture. <https://challenge.intbau.org/>.

- ✓ Carrying out a hygrothermal analysis using a variety of cladding and lining materials with MARCP student Jayna Patel.
 - ✓ Exploring the possibility of building a small prototype house with a local hapu.
 - ✓ Looking at funding options and potential industry partnerships to develop this further.
- My other research area is working on a history of building with earth in Aotearoa New Zealand. I am looking to advance this in 2023 by writing a draft chapter, looking for contributing authors and publishers.

4.5 Research Group Four – Conservation & Heritage

Statement of purpose

This cluster promotes research towards Conservation and Heritage. The lead staff member is Dr Renata Jadresin-Milic.

The Conservation & Heritage Research cluster explores the theory and practice of heritage conservation and adapting historic places, as well as incorporating new design into heritage environments, both internationally and in Aotearoa New Zealand. This research (cluster) addresses conservation, future use and development of historic and modern buildings, from preservation through to adaptive reuse – how they were built, how to assess their heritage value and how they can be preserved or adapted in our contemporary world to regenerate, maintain and enhance the local character and sense of place. Students engaged in this research (cluster) will be prepared to conduct ‘applied’ or ‘real world’ research in collaboration with industry, community, iwi or other external partners.

As example:

1. ARCH7624 (2020) and ARCH7611 (2021) Digitalisation of Heritage – teaching and research project.
2. ARCH8629 Building Conservation (2016-2021) – teaching and industry connections (Adam Wild, Archifact – architecture & conservation; Pip Cheshire, Cheshire Architects; Robin Byron, Heritage NZ; Pamela Dziwulska, Salmond Reed Architects and ICOMOS NZ Chair).

Industry partners in the “Digitalisation of Heritage in NZ” research project in 2020 and 2021 - national and international professionals in the field:

- » Salmond Reed Architects (Mari McKee, Tracey Hartley)
- » AsBuilt Digital (Jason Blac, Freddie Nodalo)
- » Survis (Malcolm Archbold)
- » Global Survey (Tim Jervis)

Local community and government organisations interest and connections established in 2020, developed in 2021:

- » Pt Chev Social Enterprise Trust
- » Auckland Council, Heritage Unit, Plans and Places Department, Chief Planning Office ([Albert Eden Local Grant in 2020](#))
- » Ministry of Housing and Urban Development (Grant in 2021)
- » Heritage New Zealand

Existing and possible partners internationally:

INTBAU Italy and Politecnico di Milano – (grant for PI (50% scholarship) from INTBAU Italy and Fondazione Antonio Meneghetti, Switzerland towards the participation of the Unitec students and PI);

Iowa State University, Project Parametric Research of the Studenica Church: Questioning the use of physics in medieval domed churches.

2023/24 Planning

The Research group Conservation & Heritage established the Digital Heritage Research Centre, which was approved in July 2022. The Centre is still being developed (<https://www.unitec.ac.nz/research-and-enterprise/digital-heritage-research-centre>); however, here are some of our co-ordinated research projects started in 2022 and still ongoing in 2023.

1. The part of the existing project involving Building One (Old Carrington Hospital) has culminated in a visual output through the interactive online model-sharing platform 'sketch fab'. The sketch fab model allows for an interactive 3D movement of the external site with high (great) visual detail in the textures and geometries that form the building. Linked within this model are a series of clickable annotation nodes; these can be clicked from within the sketch fab interface to which will take the viewer to visual outputs such as sections, plans and elevations which are relevant to the area where the node has been placed. This will also be used in part to summarise and portray text information of the site in order to educate the public on the significance of portions of Building one.
2. Wilson's Cement Works heritage site (Warkworth) point cloud possibilities – some explorations for future presentation.
3. The reintegration of never built past – first explorations though the elective course and paper "Digital Modelling of Heritage Buildings: The Process of using Point Clouds versus Historic Drawings" ("The Civic Centre", *Auckland Star*, Volume LV, Issue 242, published October 11, 1924).
4. The Virtual Reality project, Unitec Research Office, Digital Heritage Research Centre, School of Architecture and Wesley Primary School.
5. *St David's Memorial Church* on Khyber Pass Road in Auckland. In 2023, community and industry engagement with the St David's community "Friends of St David's" and Wood and Partners Consultants.
6. Working network expanded to include Heritage NZ and Auckland City Council – Heritage Unit, which have resulted in 2023: First, capturing detailed images and data of the historic Colonial Ammunition Company Shot Tower in Mount Eden, Auckland before it had to be demolished, therefore not only preserving an important piece of Auckland's history but also demonstrating the value of using cutting-edge technology to document and understand our past. Second, a decision to establish a *Digital Heritage Taskforce* that will be highly based on Jadresin-Milic's existing network with industry professionals and community groups for better advocating for heritage preservation. Having a working network like this significantly increases the success of our projects since it links and connects professionals hailing from every angle of the heritage sector.
7. We formalised (ethics) and extended engagement and conversations with architects, engineers, surveyors from the sector, councils, government organisations. The Survey investigated what is being practised by heritage professionals and the architectural/building industry. The research included conversations and interviews with architects and engineers from the sector, district councils, and government organisations, with the primary aim to learn how New Zealand could and may benefit from some modifications in policies it has at the moment; to gain an understanding of what would be valuable for all stakeholders to help heritage buildings be retained and adaptively reused, and not demolished. Next step has been focus groups, conducted in May; the results are being transcribed and analysed.
8. Research Project "Gummer and Ford" (Cameron Moore, Project Leader); in 2023 Remuera Library - Community Group engagement and lecture series.

4.5.1 How are you embedding Mātauranga Māori in your research group?

In the research project proposals for national funding applications for contestable funds from the central government organisation the Research Group and the Digital Heritage Research Centre have developed so far, we demonstrated that our diverse team is always co-led by a Māori scientist, Prof Regan Potangaroa (Massey University), who directly contributes his tangata whenua knowledge, expertise, and advocacy for preserving Māori architectural heritage. In our work, we will be guided by a Kāhui Māori who will ensure the projects' aspirations around Vision Mātauranga are realised. If our proposals are successful and we are approved to continue our work, the tools that will be developed will assist with the Raetihi community's aspirations for the future of their town and its heritage. This aspect of the project will involve engagement with Ngāti Uenukumanawawiri of Ngāti Uenuku and Ngāti Rangi hapu. The hapū will be supported to actively co-design the creation of augmented reality heritage stories, allowing them to store their traditional knowledge and utilise and securely share their mātauranga in an online space.

Appropriate management of all mātauranga is an integral component of our work. Agreements will be sought from the outset, ensuring the IP and cultural safety of our Māori knowledge holders is recognised and protected. The team will abide by the Nagoya Protocol (2011) and acknowledge that sharing biological, ecological, and environmental data in support of innovation and generative economic opportunities must address the rights of Indigenous peoples.

Jadresin-Milic and Potangaroa (Ngāti Kahungunu ki Wairarapa) work closely together and have co-developed the project proposals. They operate as equal partners under pre-agreed values. The whole Research Centre team is committed to honouring and upholding Māori perspectives and knowledge systems with profound reverence for Te Ao Māori, particularly as it relates to heritage and te taiao.

With Maia Ratana initially in 2021 and 2022, and with Regan Potangaroa gradually in 2022 and 2023, we continued to explore/discuss/draft papers and proposals, and find opportunities for Māori postgraduate students to engage with topics such as:

- Mātauranga Māori and digital storytelling;
- Analyse the ways in which digital technologies can be used in the representation and preservation of Māori heritage sites and buildings.

4.5.2 What mentoring and/or support for new and emerging researchers is occurring?

- Mentoring new research associates and research assistants: Viola Vadász, Iman Khan, Rohan Sadhu.
- Mentoring for new and emerging researcher in his application for the 2023 Marsden Fund: Sameh Shamout.
- Permanent support for researchers working on the same and different research projects: Cameron Moore, Maia Ratana.
- Permanent support and mentoring for young researchers: Jaspreet Kaur, Samuel Vivian, Sian Singh, Thomas Reutlinger, Elise Alexander.

4.5.3 What opportunities for student partnered dissemination and/or scholarships, including Industry Partner Scholarships are being undertaken?

Students have been actively involved in this work. Postgraduate students have always been coordinating with industry partners while working on their research projects: 2021: Laura Action, engagement with DPA Architects, Auckland – Dave Pearson and Geometria. 2021: Lorraine

Kapurubandara, engagement with asBuilt Digital and Pt Chev Social Community Trust. 2021: Rimo Ribechini, engagement with asBuilt Digital and Survis Ltd. 2021: Dilukshi Thuraiarah, engagement with Survis Ltd – Malcolm Archbold and Auckland Airport. 2022: Julia Hamilton, engagement with Ōtākaro Limited, Christchurch – Olivia Thompson. 2023: Rohan Sadhu, Samuel Vivian and Hannah Adolph.

One recent example is a joint contribution for the Resilient & Responsible Architecture and Urbanism (RRAU) – 5th Edition (our student Xingru Song is the first author):

- Xingru Song, Paul Baragwanath, Sameh Shamout, Renata Jadresin-Milic. The power of communities as a Means of Preserving Heritage - The case of St. David, Auckland, New Zealand.

4.6 Research Group Five – Social Topics

Statement of purpose

This cluster promotes research towards society or its organization. The lead staff member is Dr Hamish Foote.

Social research is that which ‘relates to society or its organization’. As such, facilities that fall within its scope include, but are not limited to: hospitals, rest and funeral homes, childcare and mental health centres, hospices, schools and prisons.

A Memorandum of Understanding (MOU) between Unitec and the Auckland District Health Board (ADHB) has enabled this research cluster to identify real-world issues and gain access to a variety of ADHB facilities, managers, specialists and other key stakeholders. As student’s research develops, close ties with industry professionals such as Jasmax Architects provides an opportunity for professional input into student-led projects.

2023 Goals

Our collaboration with the ADHB is ‘on ice’, due to the pandemic. We have had some success with other research avenues, refugee camps e.g., recent graduate Myint San Aung winning the Student Design Awards in 2021.

This research group will be developed and grown across 2022-2023, establishing specific goals and targets over time.

4.7 Research Group Six – Technology & Fabrication

Statement of purpose

This cluster promotes architectural research towards Technology and fabrication. The lead staff member is Dr Yusef Patel.

Technology is allowing researchers to engage in the design and production of novel architectural outcomes. Large emphasis is placed in developing ideas and concepts through iterative prototyping technologies.

The research stream places a large emphasis on working with industry stakeholders such as Futurebuild LVL, Pro Clima, James Hardie, and Panuku Development Auckland.

A large majority of the research focusses on adding value to everyday construction materials to create novel architectural outputs.

RRAU Conference. In total we had 19 papers from Unitec submitted to the conference. We also gained \$7500 + GST worth of funding for the conference from Tourism NZ.

As a group, we have the following projects underway:

1. EDFAB 5.0 Research House – Peter McPherson, Semisi Potauaine, and Yusef Patel are working on the project. We have the student Kyah Suckling supporting activities. Funding to be determined.
2. Toutai-à-Maui: Maui's Catch for Whau Arts Festival – YP, SP, PM and KS worked on this project. We received \$1,000 worth of funding and material sponsorship from Abodo Wood.
3. We plan to complete the Ngākōroa School Feature Piece, South Auckland - \$5000 of Research Funding and Product Sponsorship by Laminex Group. YP, KS, ARCH 7621 and ARCH 8618 students worked on the project.
4. We will start and complete the "Understanding and Redirecting Waste in Residential Construction Scoping study" complete this year. We received \$12,000 Research Funding. PM, Anna Bulkeley, postgrad student Alexia Peng and YP will be working on this project.
5. Digitally produced sculpture out of recycled Abodo wood to be produced for the Avondale Business Association – It is expected to be worth \$10,000 in research funding. 6 Students from DS2 is to work on this project with PM, SP, YP and Keith Mann. The project will research upcycling of waste timber.
6. Abodo Circular Economy Handles to be produced with postgrad students Adam Collett and Rahul Garad, YP and Brett Orams – Funding to be determined. The project will see us working with Abodo to add value to it's manufacturing waste.
7. We are developing a design build project with the Avondale Business Association's Woven Festival - Funding and project to be determined. The project will be completed in association with Laminex Group.
8. Aurnaga Abodo Pavilion for Drury is to be produced. It has received \$9000 Funding and material sponsorship from Abodo Wood. The project will investigate the upcycling of waste timber. YP, KM, Carl Salas and Glenna are working on the project. A number of students from ARCH 7621 course are working on it.
9. Tall Hut project. This work will involve CS, KM, PM and YP. ARCH 7621 and ARCH 8618 students are working on the project. The project seeks to research how to make a parametric tower out of Abodo wood. Partners of the project are Abodo, Moller Architects and Holmes consulting.

4.7.1 How you are embedding Mātauranga Māori in your research group;

The following projects embedded Mātauranga Māori into the research:

1. Toutai-à-Maui: Maui's Catch for Whau Arts Festival – The project celebrated Maui's journey from a Pacific and Maori world view.
2. We plan to complete the Ngākōroa School Feature Piece, South Auckland – The project embedded themes of Awa into its design.
3. Digitally produced sculpture out of recycled Abodo wood to be produced for the Avondale Business Association – the design and research reviews the themes of Matariki.

4. We are developing a design build project with the Avondale Business Association's Woven Festival. The project is to review Māori, Pacific and Asian themes.

4.7.2 What mentoring and/or support for new and emerging researchers is occurring;

Senior lecturers are mentoring younger lecturers and students on the following:

1. Conference/journal/Book chapters
2. Developing skills to enable design-process lead research
3. Exhibiting/curation opportunities
4. Set up of research goals, aims and projects
5. Setting up industry collaborations

4.7.3 What opportunities for student partnered dissemination and/or scholarships, including Industry Partner Scholarships are being undertaken;

The projects planned for this year lead to the following scholarships:

6. Abodo Studentship (potential for multiple)
7. BRANZ studentship
8. Laminex/ Ngākōroa Studentship

4.7.4 What the plans are for externally funded research income;

See notes above.

4.7.5 What community/professionally partnered research activity is occurring:

- Moller Architects
- Holmes consulting
- Made group
- Laminex Group
- Abodo wood
- BRANZ
- AUT University
- Oculus engineering
- Alistair Munro Design
- SwiftPro
- Eke Panuku & Auckland Council
- Whau The People
- Avondale business association
- Takapuna beach Association

4.8 Research Group Seven – Urban & Housing

Statement of purpose

This cluster promotes architectural research towards Urban and Housing. The lead staff member is Dr David Turner.

2023 Planning

Summary of current programme

- All current research is work in progress, following study of urban housing, focusing on Auckland and the Auckland Region but now maintaining an interest in satellite cities (Tauranga, Whangarei, Hamilton) due to the 2021 Housing Amendment Act's broad reach.
- This Act has been condemned by everyone in the housing field except dyed-in-the-wool neoliberal economists (who were also its main authors), and has been suspended while its alignment with existing regulations are studied; Parliamentary support has been withdrawn by the National Party; its future is in doubt but for the time being it is the current planning law for urban housing.
- The archive of post-2016 developments regulated by the Auckland Unitary Plan (AUP) is now in final drafts for 85 sites, with about 7 others in consideration for inclusion.
- Archived data consists of a folder with backstory materials (photos, notes, AC records where available on line, Agent's brochures) + a single summary data sheet with details of numbers, density, typology, developer, illustrated with plans & key photos.
- All completed drafts are now being proofed before they are referred to Unitec's lawyers for approval.
- These data will be sent on to AC planning staff, who we are in frequent contact with; their use of the (critical) materials will be discreet but, we hope, decisive in their development of consenting procedures. This influence has been registered through participation in their workshops for the 120 planning officers working with consents in Auckland.
- The research has provided the base material for 2 papers published in Asylum (2021, 2022) and a paper to RRAU23 (submitted for referee comments this month) and will be consolidated in another report to be submitted to Asylum 2023 later this year.
- Parallel and abbreviated versions of both Asylum papers published in the last 2 years have been placed on line by Architecture Now editors and have attracted widespread comment (mostly positive).
- David Turner is now seeking a firm date to follow up an invitation to talk to the AC Planners as a full group, to introduce the main conclusions we draw from this analysis of intensified housing and its regulation:
 - **essentially**, documented evidence that
 - the AUP rules are not producing affordable durable mass housing in volume to meet market demand, and that
 - (b) the 2021 Amendment Act will aggravate the housing supply process rather than improve it.

5 Appendix

5.1 Appendix – Staff Interests

Staff Name	Research outputs (2018-2022)	Research Interests
Ainsley O'Connell	2-Artifact/ Object/ Craftwork, 12-Exhibition – Group, 1-Exhibition – Solo, 1-Presentation (non-conference)	Sculpture

Annabel Pretty	5-Conference Contribution- Abstract, 2-Conference Contribution- Oral Presentation, 6-Conference Contribution- Paper in published Proceedings, 3-Journal Article	Follies-Pavilions, speculative/paper architectural representation/s, social architecture
Bin Su	1-Conference Contribution- Oral Presentation, 3-Conference Contribution- Paper in published Proceedings, 2-Conference Contribution- Poster Presentation, 2-Journal Article, 2-Report	Architectural science and technology, Building indoor thermal and health conditions, Building passive design and energy efficiency
Cameron Moore	1-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 4-Journal Article	Urban planning for housing, neo-classical architecture
Cesar Wagner	1-Awarded Doctoral Thesis, 1-Book Chapter, 2-Conference Contribution- Paper in published Proceedings, 2-Journal Article	Sustainable urban development; urban and regional planning; metropolisation; gentrification; urban morphology; housing policies; community development projects
Christoph Schnoor	2-Book Authored, 2-Book Chapter, 2-Conference Contribution- Abstract, 2-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 2-Edited Book/Volume, 3-Journal Article, 1-Presentation (non-conference)	History/ theory of modern architecture: perception and design of arch./urban space (Le Corbusier), architecture and emigration (Ernst Plischke); cultural transfer (Samoa)
David Chaplin		Design process
David Turner	1-Book Review (Unitec only), 1-Conference Contribution- Paper in published Proceedings, 1-Essay - Published (Unitec only), 6-Journal Article, 1-Presentation (non-conference), 1-Report	urban design: medium density housing theory and practice in New Zealand
Duncan Long		Visual arts
Graeme McConchie	1-Book Chapter, 1-Conference Contribution- Abstract, 2-Conference Contribution- Oral Presentation, 1-Edited Book/Volume, 2-Journal Article	history of New Zealand architecture, heritage conservation in NZ
Hamish Foote	1-Conference Contribution- Oral Presentation, 1-Discussion/Working Paper (Published), 3-Exhibition – Group, 2-Journal Article	Fine art, landscape architecture and biological science with a focus on the relationship between exotic and native species of flora and fauna in the New Zealand environment
Hugh Byrd	2-Book Chapter, 5-Conference Contribution- Oral Presentation, 7-Journal Article	Architecture, environmental performance, climate change,

		ecological footprint, low-energy design
Jeanette Budgett	1-Book Chapter, 1-Conference Contribution- Oral Presentation, 2- Edited Book/Volume, 3-Journal Article	Pacific Architecture, Urban Heritage, Architectonics, architectural pedagogy
John Pusateri	5-Exhibition - Curatorial Exercise, 8- Exhibition – Group, 2-Exhibition - Solo	Contemporary fine art practice exploring museology and natural history, Collaborative research through printmaking and lithography
Julian Rennie	3-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 1-Edited Book/Volume, 2-Journal Article	Architectural Pedagogy, NZ Coloured Light, Christchurch Earthquake temporalities, Venetian temporalities, NZ Architectural Details
Kerry Francis	3-Conference Contribution- Oral Presentation, 3-Conference Contribution- Paper in published Proceedings, 1-Journal Article	Design pedagogy; creative work: drawing; New Zealand architecture
Lucia Melchioris	1-Awarded Doctoral Thesis, 1-Book Authored, 2-Book Chapter, 4-Conference Contribution- Oral Presentation, 3-Conference Contribution- Paper in published Proceedings, 4-Journal Article, 2-Presentation (non-conference)	Urban design: metropolitan governance
Maia Ratana	1-Awarded Masters Thesis, 1-Book Authored, 1-Book Chapter, 4-Conference Contribution- Oral Presentation, 2-Journal Article, 1-Report	Māori architectural practice
Margot Hall	1-Book Chapter, 1-Book Review (Unitec only), 2-Conference Contribution- Oral Presentation, 6-Conference Contribution- Paper in published Proceedings, 1-Exhibition - Curatorial Exercise	History of earth building in Aotearoa, Low carbon construction techniques
Matthew Bradbury	1-Awarded Doctoral Thesis, 2-Book Authored, 1-Book Review (Unitec only), 7-Conference Contribution- Oral Presentation, 3-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 2-Journal Article, 1-Other, 2-Presentation (non-conference)	Climate change and urban design
Nikolay Popov		Digital landscape design
Peter McPherson	1-Conference Contribution- Abstract, 1-Conference Contribution- Oral Presentation, 5-Conference Contribution- Paper in published	Design education (of architects) and the influence of technology on architectural practice, including BIM,

	Proceedings, 1-Edited Book/Volume, 4-Journal Article, 1-Other,1-Report	design and manufacture, descriptive geometry
Rau Hoskins	2-Book Authored, 3-Book Chapter, 1-Conference Contribution- Oral Presentation, 1-Other, 1-Report	Māori architectural practice / guidelines for bi-cultural planning and building practice
Renata Jadresin-Milic	1-Book Chapter, 4-Conference Contribution- Abstract, 8-Conference Contribution- Oral Presentation, 8-Conference Contribution- Paper in published Proceedings, 1-Edited Book/Volume, 13-Journal Article, 4-Other	Role of arch. history/theory in arch. design and prof. practice today; theory and practice of heritage conservation; methods of presentation and Utilisation of historic sites
Sameh Shamout	1-Book Authored, 2-Book Chapter, 2-Conference Contribution- Paper in published Proceedings, 1-Journal Article	Engineering and architecture for resilience in the era of climate change?
Susan Wake	2-Book Chapter, 2-Conference Contribution- Oral Presentation, 4-Conference Contribution- Paper in published Proceedings, 1-Journal Article, 2-Presentation (non-conference)	Children environments
Xinxin Wang	4-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 1-Edited Book/Volume, 4-Journal Article, 1-Presentation (non-conference), 1-Report	Urban Design: integrated green-grey infrastructure / the intersection of landscape and urban design
Yusef Patel	6-Artifact/ Object/ Craftwork, 1-Awarded Doctoral Thesis, 2-Conference Contribution- Abstract, 1-Conference Contribution- Oral Presentation, 6-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 4-Design Output, 5-Journal Article, 1-Other	Digital Fabrication, Social enterprise, prefabrication, Industry and community design

School of Building Construction Research Plan 2023-24

-final draft vs 28/7/23

1. Introduction and current state (or executive statement)

The School of Building Construction offers the Bachelor of Construction (first delivered in 1992), and Bachelor of Engineering Technology degree (first delivered 2009) as well as NZ Diplomas across these disciplines. Research across the School is primarily focused on eight research focus groups: Sustainability in the Architecture, Engineering and Construction, (AEC) sector; Construction and Engineering Technology; Industry & Academia Collaboration; Construction Management & Economics; Construction and Engineering Education; Lean and Waste Management; Environmental Engineering and Digital Technologies.

This Research Plan reports on the current research status of the School as at July 2023 and reports on 2022 and looks forward to the next 12 months. Of note is the proposed NZIST (Te Pūkenga) which will certainly impact on our School and our programmes at some point, during 2023 and through till -2026 potentially at Unitec. The Head of School (HOS) Paul Jeurissen is responsible for the leadership and management of the School of Building Construction (which is an alliance between the School of Construction and School of Civil Engineering & Surveying, since 2019) in terms of the delivered programmes, and the responsibility for all of the staff (whether Construction or Engineering) to ensure common accountability, and goals- and especially in regards to research.

Given that the School is made up of an alliance essentially of what were, and to a large extent still are, two essentially separate yet collaborating schools - this Research Plan is presented in sections that either demonstrate the common philosophies and approaches for the combined disciplines and staff cohorts, (Construction and Engineering), or split into discrete and detailed sections that are specific to Engineering or specific to Construction - whether that is by programme, delivery, staffing, research outputs, grants and/or future research prospects. In 2019, the Environmental Solutions Research Centre was formed, and launched, to pursue applied transdisciplinary research across Building Construction and Engineering research investigations and outputs. The success of this centre after two years of its inception is apparent from the academic, commercial and industry partnerships, external research income won (over \$1 million in external funding), publications, and student opportunities it has provided, and achieved so far. The majority of the degree delivery academic staff in the School are research-active (to meet the requirement of all staff delivering more than 0.2 of their workload into degree courses have to be research active).

	Construction Cohort	Engineering Cohort	Overall
Number of degree teaching staff as at February 2022	10	13	23
Total research FTE allocated as at February 2022	1.62	1.71	3.33
Current Research Performance Traffic Light (RPTL) rating (Percentage of green lit staff -2022)	80%	62%	70%
PBRF history (Number of PBRF rated staff in 2018 round)	6	3	9

The Unitec Research Strategy 2020 – 2024 states: Priority 1 is that Research that is aligned with Te Tiriti o Waitangi and Goal One is: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes and governance.

1.1 Describe how School Research is aligned with Te Tiriti o Waitangi?

Research in the school is focused and guided by the value of Kaitiakitanga- Guardianship.

Whakauria te mahi tahi: ukaukatia te matauranga. He kaitiaki katoa tatau:

“ Everyone is a kaitiaki (guardian) tasked with maintaining beneficial relationships / work methods and sustaining the knowledge we work with.”

Guardianship of all aspects of what we do, particularly knowledge/ processes we are sharing and how we deliver them.

Through our school research team, we provide authentic applied research which enhances our teaching and learning practice for our taura as well as contributing to the technical communities of practice we serve.

At the centre of our research we acknowledge papatuenuku and its natural resources air, water, energy and the importance of caring for the whenua.

Extensive examples of how the school its staff and students align our research with the Treaty of Waitangi are demonstrated in the research outputs documented from 2019 through to 2023- see Appendices

The School draws on the extensive knowledge of our maori staff at Unitec and Marae Ngakau Mahaki to help direct us in our journey in honouring our commitment with Te Tiriti o Waitangi

1.2 What the school is planning in the area of research to achieve the goal and key projects

- Appoint staff with Māori research expertise (mātauranga, Kaupapa Māori etc) wherever possible
- Work to partner with a Māori organisations, iwi or key Māori individuals in a discipline relevant to the School on research projects
- Encourage and support student integrated research with a Māori focus
- To continue to build and expand our applied research with impact on the industry and wider communities

School of Building Construction Goals and KPIs

1. **Quality Assured (QA) Research Outputs** - recognised research outputs that have been through a peer review process or have been specifically commissioned. This is presented as a ratio of counts of the number of QA outputs to FTE of degree teaching staff. [Refer Appendices for ROMS report\(s\) 2019 to 2023 \(so far\)](#)
2. **Research Productivity** - measure of staff teaching on degree programmes who meet the agreed levels of research in the research traffic light. This is measured as the ratio research active staff to the total number of staff on a degree programme- [Refer Section 1 of this Research Plan](#)
3. **External Research Income (ERI)** - income received from external sources for research purposes calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars. [Info/graphs be supplied by Tuapapa Rangahau- see appendices](#)
4. **Industry Funded Projects** - research and enterprise projects Unitec is receiving funding for, where the services Unitec is providing is applied contract research or consultancy from all

fundors excluding any governmental contestable funding sources. This is measured as a count of the number of projects. **Info/graphs be supplied by Tuapapa Rangahau- see appendices**

5. **Student Integrated Research** - a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). **This is measured and evidenced in ROMS as part of the number of research outputs during 2021 /2022.**
6. **Rangahau Māori Productivity** - productivity in this context would be aggregated as - QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori rangahau professional development achievements and rangahau Māori research stories in the media.
We have one Maori academic staff member and a range of Pacifica staff – but no level 9 or 10 maori staff supervisors or post grad students as we have no pors grad programmes in the School as yet.

1.3 What the school is planning for increasing research diversity

This will depend on Te Puukenga's plans for the professoriate, all academic researchers and for research foci going forward with resultant research activity outputs and diversity.

1.3.1 SWOT analysis for research in School of Building Construction]

Strengths = Applied industry impactful research

Weaknesses = No post grad programmes in the SOBC

Opportunities = Co research collaborations with other Schools at Unitec and with established External Industry partners and External tertiary academic researchers

Threats= Research Grants often preferably awarded to /won by Universities (nothing new there SWOT wise)

1.4 Research Groups – Aspirational and already informally active in some cases

After such a challenging 3 years of the covid pandemic teaching and research environment here in Auckland in particular -at Unitec - it has been important to collaborate and support each other to do research by furthering and supporting groups and their projects. This is an essential strategy when it comes to achieving goals and finding efficiencies. Currently, the School of Building Construction has eight active and/or aspirational research groups:

- Sustainability in the Architecture, Engineering and Construction Sector (AEC)
- Construction and Engineering Technology
- Industry & Academia partnered Collaborations
- Construction Management & Economics
- Construction and Engineering Education
- Lean and Waste Management
- Environmental Engineering
- Digital Technologies

All of these areas are highly relevant to the New Zealand economy and society. These Research Groups partner (or have already partnered) with external funders to win funding/grants (External

Research Income (ERI). Below are the external research partners who funded projects over the last four years

1.4.1 2023/2024 School Research Group Goals

- Promote Te Tiriti alignment.
- Promote Pacific research, diversity and inclusiveness.
- Promote collaborative research.
- Assist with the alignment of learning and research.
- Increase student integrated research.
- Increase industry and community partnership.
- Focus research (potentially toward Research Centre).
- Increase research impact.

Appendices 1-3

1. SOBC Staff and their Research Topics and Expertise
2. SOBC ROMS Report 2021- June 2023
3. SOBC ROMS Report 2019-June 2022
4. SOBC Research KPI Data

Staff Name	Key Research Topics
Afjalur Rahman	Completing PhD, Collaboration in industry
Amos Clarke	Digital technologies; Construction Technologies (working with ESRC)
Anna Kimaro	Procurement, Construction economics; Housing affordability
Babar Mahmood	Stream Health Assessments and treatment for fats, oils and greases in wastewater
David Phillips	Civil, Environmental and Coastal Engineering, Erosion and Sediment Control, Infrastructure, Surfing Science
Duaa Al Shadli	Coastal erosion and digital heritage recording
Edward Chai	Civil Engineering, Highway Engineering, Student performance in Dip/B ENG Tech
Hugh Wilson	Micro-credentials, engineering graduate roles, engineering credential structure, engineering education
Jonathan Leaver	Energy-economic systems analysis and modelling
Kathryn Davies	Adoption of BIM Tech transfer and dissemination best practice, MATES worker wellbeing; H&S
Linda Kestle	Academia/Industry partnerships; Sustainable design construction & development in AEC sector; Productivity; Risk, Lean ; Waste Management Minimisation; Digital Technologies
Lusa Tuleasca	Detailed Seismic Assessment Reports, building structural performance (earthquakes), concrete performance
Lydia Kiroff	Property and Urban Development, Urban Regeneration, Adaptive Reuse of Buildings, Housing affordability, Pre Fabrication and Digital Technologies in Construction Education.
Malachy McGarrigle	Virtual Desktop Infrastructure for Architects & Engineers,

Rashika Sharma	Education and Professional Development, Employment Issues
Roger Birchmore	Research Houses-Impacts of MVHR energy consumption, IEQ; Science and Building Physics
Sadegh Aliakbarlou	Value Management; Prefabrication Construction Procurement; Productivity; Disaster reconstruction
Taija Puolitaival	Digital technologies for competence in industry, BIM; VDC; CPD (left unitec June '22) but still co researching and publishing with Linda Kestle
Terri-Ann Berry	Asbestos bioremediation, occupational asbestos health risks, erionite health hazards, coastal erosion, indoor air quality, construction waste minimisation
Wei Yuen Loo	Detailed Seismic Assessment Reports, building structural performance (earthquakes), concrete performance

ROMS Report – Staff teaching into Bachelor of Construction Programme as at 18-07-2023

2021

Conference Contribution- Abstract

- » Davies, K., & Vaire, M. (2021, May). Pathways to success within the construction management profession. Paper presented at AUBEA 2021: Construction Education – Live the Future, Virtual Conference, Deakin University, Australia.

Conference Contribution- Oral Presentation

- » Birchmore, R., Berry, T., Wallis, S.L., Hernandez, G., & Tsai, S. (2021, December). Thermal Performance and Indoor Air Quality in New, Medium Density Houses. Paper presented at the MIT-UNITEC Research Symposium 2021, On line.

Conference Contribution- Paper in published Proceedings

- » Karia, N., Sharma, R., & Aliakbarlou, S. (2021). Improving Productivity of Construction Labour in the Republic of Kiribati. Construction Education: Live the Future, Australasian Universities Building Education Association Conference (pp. 285-296).
- » Kestle, L., Hernandez, G., Berry, T-A., Low, J., & Wallis, S. (2021). "Plastic Minimisation in Construction: A Pilot Study identifying and quantifying the composition of C&D plastic in construction waste". In Imriyas Karmadeen & Anthony Mills (Ed.), AUBEA 2021- 27-29 October 2021 (pp. 316-325).
- » Massod, R., Samarsinghe, D., Moradibistouni, M., & Aliakbarlou, S. (2021). Identification of Offsite Construction Skills and Profiles. OPSITARA Research Conference. (pp. 40).
- » Puolitaival, T., & Kiroff, L. (2021). Digital technologies in construction management education: A digital natives' perspective. In Sylvain Kubicki (Ed.), Proceedings of the 38th International Conference of CIB W78, Luxembourg, 13-15 October (pp. 650-658).

Discussion/Working Paper (Published)

- » Berry, T-A., & Kestle, L. (2021). BUILD 188 magazine article - December 2021 edition "Cutting Construction Waste". 74-75. New Zealand: BUILD.
- » Kerai, U., Kiroff, L., & Sharma, R. (2021). The Response of Auckland Construction Firms to Recent Technological Changes. Occasional and Discussion Papers Series (2021:1). Auckland: Unitec ePress. <http://www.unitec.ac.nz/ePress>.

Journal Article

- » Aliakbarlou, S., Wilkinson, S., Costello, S.B., & Jang, H. (2021). Comparing Client Values between Business-as-Usual Construction and Postdisaster Reconstruction. *Natural Hazards Review*, 22(3), 04021017. doi:10.1061/(ASCE)NH.1527-6996.0000463
- » Kiroff, L., & Puolitaival, T. (2021). Fun is serious business: Digital natives and digital technologies in construction education. *Journal of Higher Education Theory and Practice*, 21(1), 75-90.

Presentation (non-conference)

- » Kestle, L., Berry, T-A., Hernandez, G., Day, A., Burden, S., & Roberts, J. (2021, April). Plastic Minimisation Construction Project. Presentation conducted at the Building Out Waste Symposium 2021 - Auckland City Council, Auckland.

2022

Book Chapter

- » Birchmore, R., Blakely, J., Chai, E., Leaver, J., Loo, W., McMullan, R., Phillips, D., Tuleasca, L., & Wilson, H. (2022). Collaboration Across Aotearoa New Zealand ITPs: The Bachelor of Engineering Technology Three-Year Engineering Degree Programme as an Exemplar. In Chan, S., Huntington, N. (Eds.), *Reshaping Vocational Education and Training in Aotearoa New Zealand Vol 34* ed. (pp. 251-277). Cham: Springer.

Conference Contribution- Abstract

- » Rehan, M., Sadegh, A., Luban, C., & Jess, T. (2022, July). Uptake of Offsite Construction in NZ – A Non-Supplier viewpoint. Paper presented at OPSITARA Research Conference, Otago Polytechnic.

Conference Contribution- Oral Presentation

- » Berry, T.A., Low, J., Wallis, S.L., Birchmore, R., Gremillon, H., Rameirez Prado, G., Blanchon, D., Baling, M., Doyle, E., Tang, T., & Hernandez, G. (2022, December). Assessing the impact of mechanical ventilation on indoor air quality in homes in subtropical New Zealand. Paper presented at the MIT-Unitec Reserach Symposium, Online.
- » Khodabakhshian, A., Puolitaival, T., & Kestle, L. (2022, November). Deterministic and Probabilistic Risk Management Methods in Construction Projects. Paper presented at the 45th AUBEA Conference, Western Sydney University Australia.
- » Masood, R., & Aliakbarlou, S. (2022, December). Skill Matrix for Prefabricated Construction. Paper presented at the ITP Research Symposium, Invercargill, Southern Institute of Technology.
- » Masood, R., Aliakbarlou, S., Chan, L., & Teo, J. (2022, July). Uptake of Offsite Construction in NZ –A Non-Supplier viewpoint. Paper presented at the OPSITARA Research Conference, Otago Polytechnic.
- » McGarrigle, M J. (2022, February). Consideration Watchpoints When Using " Archicad" Software Across a VDI Network. Paper presented at the 7th NZBERS Symposium 17-18 Feb. 2022, Massey University , Auckland , New Zealand.
- » Sreymom, U., Sadegh, A., Rehan, M., & Luban, C. (2022, November). Skills Shortage in New Zealand prefabricated construction. Paper presented at the ITP Research Symposium, Southern Institute of Technology.

Conference Contribution- Paper in published Proceedings

- » Berry, T-A., Low, J., Hernandez, G., Kestle, L., & Wallis, S. (2022). Determining the feasibility of a circular economy for plastic waste from the Construction Sector in New Zealand. Helsinki Finland SBFin Conference 2022 (pp. 205-213).
- » Khodabakhshian, A., Puolitaival, T., & Kestle, L. (2022). Deterministic and Probabilistic Risk Management Methods in Construction Projects: A Systematic Literature Review and Comparative Analysis. In Srinath Perera and Mary Hardie (Ed.), GLOBAL CHALLENGES IN A DISRUPTED WORLD: Smart, Sustainable and Resilient Approaches in the Built Environment, AUBEA Conference 2022 (pp. 317-327). doi:10.26183/a6pq-mg06
- » Mohammad Afjalur, Rahman. (2022). BIM-LEAN RELATIONSHIP ASSESSMENT FRAMEWORK: A CONCEPTUAL ESTABLISHMENT. In In: Sandanayake, Y.G., Gunatilake, S. and Waidyasekara, K.G.A.S. (eds). (Ed.), Proceedings of the 10th World Construction Symposium, 24-26 June 2022, Sri Lanka. [Online]. (pp. 185-197). doi:<https://doi.org/10.31705/WCS.2022.16>. Available from: <https://ciobwcs.com/2022-papers/> Retrieved from https://ciobwcs.com/downloads/papers22/WCS2022_Proceedings_16.pdf
- » Wilson, L., & Kestle, L. (2022). "The cost-benefit implications of low-emissions' concrete for exterior concrete works"- . In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), 7th NZBERS 2022- Creating capacity and capability for the future of the built environment (pp. 432-436). doi:ISBN 8978-0-473-62031-8

Journal Article

- » Birchmore, Roger., Wallis, Shannon L., Hernandez, German., Tsai, Steve., & Berry, Terri-Ann. (2022). Thermal Performance and Indoor Air Quality in New, Medium Density Houses – Auckland, New Zealand. International Journal of Building Pathology and Adaptation, 1, 11. doi:10.1108/IJBPA-08-2021-0110
- » Hernandez, G., Low, J., Nand, A., Bu, A., Wallis, S., Kestle, L., & Berry, T-A. (2022). "Quantifying and Managing Plastic Waste Generated from Building Construction in Auckland, New Zealand". Waste Management & Research : the journal for a sustainable circular economy, 3(7), 42-54. doi:<https://journals.sagepub.com//doi.org/10.1177/0734242X221105425>
- » Puolitaival, T., Kahkonen, K., & Kestle, L. (2022). The framing of construction management responsibilities in job advertisements in the UK and the USA. CME (Construction Management and Economics), 11(1), 16ps awaiting vol and issue as only published 15 dec'2222. doi:DOI: 10.1080/01446193.2022.2156569
- » Singh, S., Kiroff, L., & Sharma, R. (2022). Brownfield land redevelopment strategies in urban areas: Criteria contributing to the decision-making process. International Journal of Environmental Science & Sustainable Development, 7 (2), 1-17. doi:10.21625/essd.v7i2.919

2023

Journal Article

- » Khodabakhshian, A., Puolitaival, T., & Kestle, L. (2023). Deterministic and Probabilistic Risk Management Approaches in Construction Projects: A Systematic Literature Review and Comparative Analysis. Buildings Journal, vol 13, 1-26. doi:doi: 10.3390/buildings13051312

School of Building Construction Research Outputs from 2019-2022

2019

Awarded Doctoral Thesis

- » Sharma, R. (2019). Creating a Green Culture in TVET: A New Zealand Perspective (Unpublished Doctoral Thesis). Deakin University, Melbourne, Australia.

Awarded Masters Thesis

- » Etherington, P. M. (2019). Closing the Performance Gap (Unpublished Master Thesis). Massey University, Auckland.

Book Chapter

- » Chancellor, W., Abbott, M., & Carson, C. (2019). Measuring construction industry activity and productivity: The impact of shadow economy. In Best, R. & Meikle, J. (Eds.), *Accounting for Construction: Frameworks, Productivity, Cost and Performance* (pp. 75-85). New York, USA: Routledge.
- » Chancellor, W., Abbott, M., & Carson, C. (2019). Productivity and levels of output in the construction industry. In Best, R. & Meikle, J. (Eds.), *Accounting for Construction: Frameworks, Productivity, Cost and Performance* (pp. 87-99). New York, USA: Routledge.

Conference Contribution- Abstract

- » Mahmood, B. (2019, November). Use of Socrative Tool to Effectively Engage & Assess Diverse Learners – Sharing an Experience. Paper presented at Talking Teaching, Unitec Institute of Technology, Mt Albert Campus, Auckland.
- » Puolitaival, T., & Kiroff, L. (2019, 28th-29th November). Digital natives and digital technologies in construction education. Paper presented at Talking Teaching 2019, Ako Aotearoa, Academy of Tertiary Teaching Excellence, Unitec Institute of Technology, Auckland.

Conference Contribution- Oral Presentation

- » Aliakbarlou, Sadegh. (2019, 16 - 18 October). Modular Construction and Prefabrication for Post Disaster Reconstruction Projects: Case Studies and Clients' Perspectives <http://claridenglobal.com/conference/modcon-nz/agenda/>. Paper presented at the Search Results Web results 4th NZ Modular Construction and Pre-Fabrication Forum 2019, New Zealand.
- » Berry, T-A., & Wallis, S.L. (2019, November). Managing Asbestos Waste – Potential for Treating Asbestos. Paper presented at the Asbestos Management Conference, Wellington.
- » Borna, K., Moore, A., Bollard, B., & Ghobakhlou, A. (2019, September). Application of Vector Agents to Weed detection from UAV imagery. Paper presented at the GeoComputation, Queenstown.
- » Davies, K., Kestle, L., Laing, N., & Bryan, A. (2019, November). Balancing the seesaw – the ups and downs of delivering vocational training programmes. Paper presented at the Ako Aotearoa Academy of Teaching Excellence - Talking Teaching 2019, Unitec Institute of Technology.
- » Davies, K., Kestle, L., Laing, N., & Bryan, A. (2019, November). Balancing the seesaw – the ups and downs of delivering vocational training programmes. Paper presented at the Talking

Teaching 2019 - Diverse Learners, Inclusive Teaching, Unitec Institute of Technology, Auckland.

- » Davies, K., Kestle, L., Laing, N., & Bryan, A. (2019, November). Balancing the Seesaw-The ups and downs of delivering vocational training programmes. Paper presented at the Ako Aotearoa-Talking Teaching Conference, Ako Aotearoa Talking Teaching Conference.
- » Leaver, J. D. (2019, August). Hydrogen and New Zealand's Heavy Vehicle Fleet. Paper presented at the 16th International Conference of Institute of Road Transport Engineers NZ, Rotorua.
- » Leaver, J. D. (2019, August). Modelling with Hydrogen: A Holistic Challenge. Paper presented at the IEA – H2TCP Task 41: Hydrogen Data and Modelling Workshop, Brussels, Belgium.
- » Leaver, J. D. (2019, May). International Energy Agency (IEA) strategic initiatives and activities for hydrogen. Paper presented at the NZ Hydrogen Association Workshop, Wellington.
- » Loo, W Y. (2019, April). Marketisation and managerialism in vocational education: Unitec TEU member's views on RoVE. Paper presented at the QPEC (Quality Public Education Coalition) 2019 Forum, St Columba, Vermont St, Ponsonby.
- » Lucchese, P., Ohira, E., & Leaver, J. (2019, September). IEA Hydrogen Technology Collaboration Program (TCP) End of Term Report 2015-2020 and Strategic Plan 2020-2025. Paper presented at the 76th Meeting of Working Party on Renewable Energy Technologies, Helsinki, Finland.
- » McGarrigle, M J. (2019, November). Augmenting industry collaboration with architectural practices through design and development of productive internship schemes. Paper presented at the Ako Aotearoa Academy of tertiary teaching excellence, Unitec- Auckland.
- » McGarrigle, M. (2019, November). Inclusive and consistent assessment of architectural drawings across teaching teams on Architectural Technology courses. Paper presented at the Ako Aotearoa Academy of Teaching Excellence - Talking Teaching 2019, Unitec Institute of Technology.
- » Puolitaival, T., & Kiroff, L. (2019, 28th - 29th November). Digital natives and digital technologies in construction education. Paper presented at the Talking Teaching 2019, Ako Aotearoa, Academy of Tertiary Teaching Excellence, Unitec Institute of Technology, Auckland.
- » Sharma, R. (2019, 28-30 November). Sustainability learning opportunities through campus research projects: When student involvement matters. Paper presented at the Talking Teaching 2019 - Diverse Learners: Inclusive Teaching, Unitec Institute of Technology.
- » Steinhorn, G., Berry, T-A., & Wallis, S.L. (2019, April). Building collaborative research networks to tackle asbestos waste with a circular economy approach. Paper presented at the ITP Research Symposium, Napier.
- » Wilson, H. (2019, February). What Civil Engineering Graduates actually do. Paper presented at the NZBED Forum, Christchurch.

Conference Contribution- Paper in published Proceedings

- » Adafin, J., Rotimi, J.O.B., Wilkinson, S., & Mbachu, J. (2019). An assessment of risk factors impacting budget variability in New Zealand commercial construction projects. In Gorse, C &

Nelson, C.J. (Ed.), Proceedings of the 35th Annual ARCOM Conference (pp. 44-53).

- » Aliakbarlou, Sadegh., Nishan, Fernando., Bakhshi, Javad., & Hosseini, Reza. (2019). Investigating Construction Workers Health and Safety Risks in Sustainable Building Projects. CIB World Building Congress 2019 (pp. 21. Ab0495).
- » Alshadli, D., & Chong, A. (2019). Correlating foot posture with foot mobility using a high-accuracy foot measurement system. 2019 IEEE International Instrumentation and Measurement Technology Conference (I2MTC) (pp. 1-6). doi:10.1109/I2MTC.2019.8827146
- » Brook, M., Berry, T-A., Black, P., Dirks, K., Salmond, J., Steinhorn, G., Adam, L., & Patel, J. (2019). Zeolitic erionite in the Auckland region and implications for tunnelling and excavations. In Kamp, PJJ and Pittari, A (Ed.), Geoscience Society of New Zealand Miscellaneous Publication, Geosciences 2019, Hamilton, New Zealand. , Vol. 154A (pp. 28).
- » Carson, V., & Davies, K. (2019). Managing company responsibility for mental health in the New Zealand construction industry. CIB World Building Congress 2019 Constructing Smart Cities , Vol. 03 Smart Planning, Design & Construction (pp. 11pp). Retrieved from <http://www.wbc2019.hk/>
- » Davies, K. (2019). Professional pathways in BIM and digital construction. In B. Kumar, F. Pour Rahimian, D. Greenwood & T. Hartmann (Ed.), Advances in ICT in Design, Construction and Management in Architecture, Engineering, Construction and Operation (AECO) Proceedings of the 36th CIB W78 2019 Conference (pp. 475-487).
- » Loo, W. Y., & Tuleasca, L. (2019). A simple and rapid approach for the numerical simulation of non-linear elements and examples of its application. In Computational Civil Engineering Conference (CCE2019) (Ed.), Iasi (pp. 2-8).
- » Loo, W., & Tuleasca, L. (2019). A simple and rapid approach for the numerical simulation of non-linear elements and examples of its application. In CCE 2019 Computational Civil Engineering (Ed.), Iasi, Romania (pp. 2-8).
- » Look, M., Holmes, W., & Birchmore, R. (2019). Reliability of wireless sensors using low cost WiFi chipsets for Structural Monitoring. The 18th International Conference on Electronics, Information, and Communication (pp. 227-230).
- » Puolitaival, T., Davies, K., & Kähkönen, K. (2019). Digital technologies and related competences in construction management in the era of fast-paced digitalisation. CIB World Building Congress 2019 Constructing Smart Cities , Vol. 08 Smart Services (pp. 11pp). Retrieved from <http://www.wbc2019.hk/>
- » Puolitaival, T., Davies, K., & Kähkönen, K. (2019). Digital technologies and related competences in construction management in the era of fast-paced digitalisation. CIB World Building Congress 2019 Constructing Smart Cities , Vol. 8 (pp. 11). doi:Retrieved from <http://www.wbc2019.hk/>
- » Tiareti, A. A., & Mahmood, B. (2019). Sea Level Rise Impact on Underground Freshwater Lens – A Case Study. Proceedings of Water New Zealand (pp. 1-19).
- » Tuleasca, L., & Loo, W. (2019). Assessing the earthquake performance of existing buildings of various material types and configurations in New Zealand. In Computational Civil Engineering 2019 (Ed.), Iasi, Romania (pp. 2-8).
- » Tuleasca, L., Loo, W., & Wardak, I. (2019). Assessing the earthquake performance of existing buildings of various material types and configurations in New Zealand. In Materials Science and Engineering (Ed.), Computational Civil Engineering Conference, Iasi, Romania , Vol. 586

- (2019) 012022 (pp. 1 to 8). doi:10.1088/1757-899X/586/1/012022 Retrieved from <http://www.cce.ci.tuiasi.ro/>
- » van de Linde, S., & Kestle, L. (2019). THE CURRENT STATE OF PRODUCTIVITY IN THE NZ CONSTRUCTION INDUSTRY. In Bill Zhao (Ed.), AUBEA Conference 2019 - Built to thrive (pp. 648-661).
 - » Wilson, H., & Hay, M. (2019). Use of online on-demand microcredentials to provide an alternative learning pathway for an engineering diploma programme. Proceedings of the AAEE 2019 30th Annual Conference (not yet published) (pp. 1-7).
 - » Zaiat, M., Laing, N., & Kestle, L. (2019). COLLABORATION IN THE NEW ZEALAND COMMERCIAL CONSTRUCTION SECTOR – A CASE STUDY OF A MEDIUM SIZED CONSTRUCTION COMPANY. In Bill Zhao (Ed.), AUBEA Conference 2019 - Built to thrive (pp. 299-310).

Conference Contribution- Poster Presentation

- » Munoz, D., Podemska, A., & Kestle, L. (2019, June). Feasibility of additive manufacturing techniques as sustainable construction method for Antarctica. Poster presented at NZ Antarctic Science Conference 2019-Our Future in Focus, Christchurch NZ.

Journal Article

- » Atkin, E. A., Mead, S.T., & Phillips, D. (2019). Investigations of Offshore Wave Preconditioning. *Journal of Coastal Research*, SI 87, 78-90.
- » Brook, M.S., Black, P.M., Salmond, J., Dirks, K.N., Berry, T-A., & Steinhorn, G. (2019). Exposure to erionite: health effects and implications for geotechnical risk management in the New Zealand construction sector. *New Zealand*, 98, 78-81.
- » Chowdhury, T., Adafin, J., & Wilkinson, S. (2019). Review of digital technologies to improve productivity of New Zealand construction industry. *Journal of Information Technology in Construction*, 24, 569-587. doi:10.36680/j.itcon.2019.032
- » Dolci, F., Thomas, D., Hilliard, S., Fu´nez Guerra, C., Hancke, R., Ito, H., Jegoux, M., Kreeft, G., Leaver, J., Newborough, M., Proost, J., Robinius, M., Weidner, E., Mansilla, C., & Lucchese, P. (2019). Incentives and legal barriers for power-to-hydrogen pathways: An international snapshot. *International Journal of Hydrogen Energy*, 1, 1-8. doi:10.1016/j.ijhydene.2019.03.045
- » Kenley, R. (2019). CME Forum: a response to “Construction flow index: a metric of production flow quality in construction. *Construction Management and Economics*, 37(2), 112-119. doi:DOI: 10.1080/01446193.2018.1535712
- » Quarton, C.J., Tlili, O., Welder, L., Mansilla, C., Blanco, H., Heinrichs, H., Leaver, J., Samsatli, N.J., Lucchese, P., Robinius, M., & Samsatli, S. (2019). The curious case of the conflicting roles of hydrogen in global energy scenarios. *Sustainable Energy and Fuels*, 9 Oct, 1-17. doi:10.1039/C9SE00833K
- » Shafiei, E., Davidsdottir, B., Stefansson, H., Ingi Asgeirsson, E., Fazeli, R., Halldór Gestsson, M., & Leaver, J. (2019). Simulation-based appraisal of tax-induced electro-mobility promotion in Iceland and prospects for energy-economic development. *Energy Policy*, 133, 110894. doi:10.1016/j.enpol.2019.110894
- » Wallis, S., Hernandez, G., Poyner, D., Birchmore, R., & Berry, T. (2019). Particulate matter in residential buildings in New Zealand: Part I. Variability of particle transport into unoccupied spaces with mechanical ventilation. *Atmospheric Environment X*, 2, 1-10. doi:10.1016/j.aeaoa.2019.100024
- » Wallis, S., Hernandez, G., Poyner, D., Holmes, W., Birchmore, R., & Berry, T-A. (2019). Particulate Matter in Residential Buildings in New Zealand: Part II. The Impact of Building

- Airtightness, Mechanical Ventilation using Simulated Occupancy. *Atmospheric Environment X*, 2, 1-11. doi:10.1016/j.aeaoa.2019.100026
- » Wallis, S.L., Hernandez, G., Holmes, W., Birchmore, R., & Berry, T-A. (2019). Particulate Matter in Residential Buildings in New Zealand: Part II. The Impact of Building Airtightness, Mechanical Ventilation using Simulated Occupancy. *Atmospheric Environment X*, 2, 1-11. doi:10.1016/j.aeaoa.2019.100026
 - » Wallis, S.L., Hernandez, G., Poyner, D., Birchmore, R., & Berry, T-A. (2019). Particulate matter in residential buildings in New Zealand: Part I. Variability of particle transport into unoccupied spaces with mechanical ventilation. *Atmospheric Environment X*, 2, 1-10. doi:10.1016/j.aeaoa.2019.100024
 - » Wallis, S.L., Hernandez, G., Poyner, D., Birchmore, R., & Berry, T-A. (2019). Particulate matter in residential buildings in New Zealand: Part I. Variability of particle transport into unoccupied spaces with mechanical ventilation. *Atmospheric Environment: X*, 2, 1-10. doi:10.1016/j.aeaoa.2019.100024
 - » Wallis, S.L., Hernandez, G., Poyner, D., Holmes, W., Birchmore, R., & Berry, T-A. (2019). Particulate Matter in Residential Buildings in New Zealand: Part II. The Impact of Building Airtightness, Mechanical Ventilation using Simulated Occupancy. *Atmospheric Environment X*, 2, 1-11. doi:10.1016/j.aeaoa.2019.100026
 - » Watabe, A., Leaver, J., Ishida, H., & Shafiei, E. (2019). Impact of low emissions vehicles on reducing greenhouse gas emissions in Japan. *Int. J. Hydrogen Energy*, Volume 130, Pages 227-242. doi:10.1016/j.enpol.2019.03.057

Presentation (non-conference)

- » Leaver, J. (2019, February). IEA Hydrogen Forum - New Zealand Update. Presentation conducted at the HYDROGEN TODAY: Global Trends and Outlook - A Forum of the International Energy Agency, Millenium Resort and Spa Hotel - Rotorua.
- » Wilson, H. (2019, October). Microcredentials: meeting the needs of learners and employers. Presentation conducted at the Unitec Teaching and Learning Symposium, Auckland.

2020

Book Chapter

- » Aliakbarlou, Sadegh., Wilkinson, Suzanne., Costello, Seosamh., Jang, Hyounseung., & Aliakbarlou, Hamid. (2020). Producing Work-Ready Graduate for the Construction Industry. In Roggema, Rob, Roggema, Anouk (Eds.) (Eds.), *Smart and Sustainable Cities and Buildings* (pp. 607-617). Switzerland: Springer.

Composition

- » Leaver, JD. (2020). Challenges for the Use of Hydrogen. [Composition]. Auckland: Unitec.

Conference Contribution- Abstract

- » Puolitaival, T. (2020, November). BIM education: Balancing act of multiple factors. Paper presented at New Zealand BIM Education Symposium, online.

Conference Contribution- Oral Presentation

- » Alshadli, D., Borna, K., & Lador, C. (2020, November). Development of Unified and Dynamic Geometric Framework for Modelling Plant Leaf Spots. Paper presented at the Symposium on Pattern Recognition and Applications, Rome, Italy.

- » Borna, K., & Alshadli, D. (2020, December). Automating Image Classification: a Geometry-led Data Structure. Paper presented at the Unitec Research Symposium, Auckland.
- » Borna, K., Alshadli, D., & Moore, A. (2020, November). Analysing Construction Cost Estimation Factors as a Map. Paper presented at the AutoCart2020: the 23rd International Research on cartography and GIScience, United States.
- » Borna, Kambiz., & Alshadli, D. (2020, December). Automating Image Classification: a Geometry-led Data Structure. Paper presented at the Unitec Research Symposium, Auckland.
- » Chai, E. (2020, February). The performance of ex New Zealand Diploma in Engineering (NZDE) Civil Engineering students in BEngTech programme at Unitec. Paper presented at the 2020 NZDE/ BENGTECH Teaching & Research Forum, Hamilton.
- » Kerai, U., Kiroff, L., & Sharma, R. (2020, 7 December). The response of the Auckland construction industry to recent technological changes. Paper presented at the 2020 Unitec Research Symposium, Unitec Institute of Technology.
- » Kerai, U., Kiroff, L., & Sharma, R. (2020, December). The response of the Auckland construction industry to recent technological changes. Paper presented at the UNITEC RESEARCH SYMPOSIUM 2020, Auckland.
- » Kestle, L., Berry, T-A., Hernandez, G., Day, A., & Burden, S. (2020, December). Plastic Minimisation Construction Project. Paper presented at the Unitec Research Symposium, Unitec.
- » Kiroff, L., & Puolitaival, T. (2020, 7 December). Construction students' experiences and engagement with digital technologies. Paper presented at the 2020 Unitec Research Symposium, Unitec Institute of Technology.
- » Kiroff, L., & Puolitaival, T. (2020, December). Construction Students' Experiences and Engagement with Digital Technologies. Paper presented at the Unitec Research Symposium, Auckland, New Zealand.
- » Leaver, J.D. (2020, August). UniSyD and UniTrac Modelling of the Impact of Hydrogen on the New Zealand Energy Economy. Paper presented at the Progress Meeting - Smart Idea UOCX1905 Hydrogen Production and CO2 Capture from Biomass Gasification, University of Canterbury.
- » Leaver, J.D. (2020, February). ExCo Member Update: New Zealand. Paper presented at the 82nd IEA Hydrogen Executive Committee Meeting, Paris.
- » Leaver, J.D. (2020, July). Hydrogen Focussed Research: A Unitec Update. Paper presented at the Hydrogen R&D Strategy Meeting, Wellington and Zoom.
- » Loo, W. Y., & Tuleasca, L. (2020, December). The performance of a diverse cohort of civil engineering students at Unitec Institute of Technology (2015-2019). Paper presented at the Whaowhia te kete mātauranga – Fill the basket of knowledge UNITEC RESEARCH SYMPOSIUM 2020 PROGRAMME – Day Two, Unitec Institute of Technology, Mt Albert, Auckland.
- » Loo, W., & Tuleasca, L. (2020, December). The performance of diverse cohort of civil engineering students at Unitec Institute of Technology (2015-2019). Paper presented at the Unitec Research Symposium, Auckland - Mt Albert.
- » McGarrigle, M.J. (2020, December). Digital poverty and other watchpoints for consideration when teaching with software applications across Unitec's Virtual Desktop Infrastructure. Paper presented at the Unitec Research Symposium 2020, Unitec- Auckland.
- » McGarrigle, M.J. (2020, November). WATCHPOINTS FOR CONSIDERATION WHEN UTILISING "ArchiCAD "BIM SOFTWARE ACROSS A VDI NETWORK. Paper presented at the New Zealand

BIM Education Symposium 2020 (online), Zoom link:
<https://auckland.zoom.us/j/98998404250>.

- » Rishna, B., & Mahmood, B. (2020, December). Assessment of Grease Traps Used in Food Services Sector in Auckland. Paper presented at the Unitec Research Symposium, Mt Albert Campus of Unitec, Auckland, New Zealand.
- » Wallis, S.L. (2020, October). Disposal or Treatment: Future Considerations for Solid Waste from the Construction and Demolition Industry. Paper presented at the Annual Unitec Research Symposium, Unitec Institute of Technology, New Zealand.
- » Wilson, H. (2020, February). Microcredentials - now and in the future. Paper presented at the NZDE/BEngTech Forum, Hamilton.

Conference Contribution- Paper in published Proceedings

- » Birchmore, R.C., Wallis, S.L., Hernandez, G., Pivac, A., & Berry, T. (2020). Air Tightness, Friend or Foe?. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), Proceedings – New Zealand Built Environment Research Symposium , Vol. 6 (pp. 119-128). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » Brown, G., Sharma, R., & Kiroff, L. (2020). Insights into the New Zealand prefabrication industry. In Ali Ghaffarianhoseini, et al (Ed.), Imaginable Futures: Design Thinking, and the Scientific Method. 54th International Conference of the Architectural Science Association (ANZASCA) 2020, Auckland University of Technology (pp. 630-639). Retrieved from <https://www.asa2020.net/>
- » Dimyadi, J., Fernando, S., Davies, K., & Amor, R. (2020). Computerising the New Zealand Building Code for Automated Compliance Audit. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), Proceedings – New Zealand Built Environment Research Symposium , Vol. 6 (pp. 39-46). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » Humphrey, L., & Kestle, L. (2020). CLIMATE CHANGE ADAPTATION LEGISLATION AND THE CONSTRUCTION SECTOR. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), Proceedings – New Zealand Built Environment Research Symposium , Vol. 6 (pp. 276-279). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » Kestle, L., & van de Linde, S. (2020). Has NZ's Construction Industry's Productivity Related GDP Contribution Increased by the Productivity Commission's Target of 20% by 2020. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), Proceedings – New Zealand Built Environment Research Symposium , Vol. 6 (pp. 251-253). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » McGarrigle, M., & Kestle, L. (2020). Reliable Assessment of Drawings on Architectural Technology Courses. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), Proceedings – New Zealand Built Environment Research Symposium , Vol. 6 (pp. 254-257). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » McGarrigle, M., & Puolitaival, T. (2020). Augmenting industry collaboration with architectural practices through design and development of productive internship schemes. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), Proceedings – New Zealand Built Environment Research Symposium (pp. 259-261).

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- » McGarrigle, M., & Puolitaival, T. (2020). Augmenting industry collaboration with architectural practices through design and development of productive internship schemes. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), *Proceedings – New Zealand Built Environment Research Symposium*, Vol. 6 (pp. 258-261). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » Puolitaival, T., & Kähkönen, K. (2020). Individual Competence Requirements for Digital Technologies in Construction Management. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), *Proceedings – New Zealand Built Environment Research Symposium*, Vol. 6 (pp. 262-266). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » Ryder, K., & Kestle, L. (2020). Urban Resolutions - Auckland and Vancouver comparisons. In Wajiha Mohsin Shahzad, Eziaku Onyeizu Rasheed, James Olabode Bamidele Rotimi (Ed.), *Proceedings – New Zealand Built Environment Research Symposium*, Vol. 6 (pp. 228-240). Retrieved from <http://nzbers.massey.ac.nz/wp-content/uploads/2020/03/Proceedings-NZBERS-Feb2020.pdf>
- » Wallis, S.L., Lemckert, C., Hardy, R., & Berry, T.-A. (2020). Disposal or Treatment: Future considerations for solid waste from the construction and demolition industry. *WIT Transactions on Ecology and the Environment. Wessex Waste Management.*, Vol. 247 (pp. 171-183). doi:10.2495/WM200161
- » Wallis, S.L., Lemckert, C., Hardy, R., & Berry, T.-A. (2020). Disposal or Treatment: Future Considerations for Solid Waste from the Construction and Demolition Industry. In Wessex Institute (Ed.), *Waste Management and the Environment X, Transactions on Ecology and the Environment*, Vol. 247 (pp. 170-183).

Conference Contribution- Poster Presentation

- » Aliakbarlou, SA., & Chan, LC. (2020, December). Determining the way by which clients perceive value from procured services. Poster presented at Unitec Research Symposium, Mt Albert Campus, Auckland.
- » Chan, LC., & Aliakbarlou, SA. (2020, December). Exploring and Categorising Construction Client Values and Qualities. Poster presented at Unitec Research Symposium, Mt Albert Campus, Auckland.
- » Hernandez, G., Low, J., Wallis, S., Birchmore, R., Ramirez Prado, G., de Groot, C., Gremillion, H., Lee Morgan, J., Blanchon, D., Bayling, M., Doyle, E., & Berry, T.-A. (2020, October). The Development of a Transdisciplinary Team to Investigate Indoor Air Quality Issues in New Zealand. Poster presented at Unitec, Mt Albert, Auckland.
- » Hernandez, G., Low, J., Wallis, S., Birchmore, R., Ramirez-Prado, G., de Groot, C., Gremillion, H., Lee-Morgan, J., Blanchon, D., Baling, M., Doyle, E., & Berry, T. (2020, November). The development of a transdisciplinary team to investigate indoor air quality issues in New Zealand. Poster presented at Unitec Research Symposium, Mount Albert Campus, Unitec.
- » Hernandez, G., Low, J., Wallis, S., Birchmore, R., Ramirez-Prado, G., De Groot, C., Gremillion, H., Lee-Morgan, J., Blanchon, D., Baling, M., Doyle, E., & Berry, T.-A. (2020, October). The Development of a Transdisciplinary Team to Investigate Indoor Air Quality Issues in New

Zealand. Poster presented at Unitec Research Symposium, Mount Albert Campus, Unitec.

- » Hernandez, G., Low, J., Wallis, S., Birchmore, R., Ramirez-Prado, G., De Groot, C., Gremillion, H., Lee-Morgan, J., Blanchon, D., Baling, M., Doyle, E., & Berry, T-A. (2020, October). The Development of a Transdisciplinary Team to Investigate Indoor Air Quality Issues in New Zealand. Poster presented at Unitec Research Symposium, Unitec Institute of Technology.
- » Lapwood, T., Alshadli, D., & Borna, K. (2020, December). Cartographic whakapapa: a case study from the Port Waikato region. Poster presented at Unitec Research Symposium, Auckland.
- » Lapwood, T., Alshadli, D., & Borna, K. (2020, December). Cartographic whakapapa: a case study from the Port Waikato region. Poster presented at Unitec Research Symposium, Mount Albert Campus, Unitec.
- » Phillips, D.J., Berry, T.A., Wairepo, D., Edmonds, T., Myre, R., & Hynds, A. (2020, October). Ō-Tara Kia Kotahi Tau - Ōtara We Are One. Otara Waterways and Lake Restoration Feasibility Study. Unitec NZ Environmental Research Solutions Centre. Auckland. Poster presented at Unitec Research Symposium, Mt Albert, Auckland.
- » Phillips, D.J., Mead, S.T., & Emeny, M. (2020, October). Options for Lyall Bay Coastal and Stormwater Remediation. Poster presented at Unitec Research Symposium, Mt Albert, Auckland.
- » Rehan, Masood., Don, Samarsinghe., & Sadegh, Aliakbarlou. (2020, September). MAKING A CASE FOR UPSKILLING THE NEW ZEALAND WORKFORCE FOR OFFSITE CONSTRUCTION. Poster presented at IPT Research Symposium, Online.
- » Wallis, S., Blanchon, D., De Lange, P., Doyle, E., & Berry, T-A. (2020, October). Remediation of Asbestos Contaminated Soil: An Alternative to Landfill Disposal. Poster presented at Unitec Research Symposium, Unitec Institute of Technology.
- » Wallis, S.L., Blanchon, D., De Lange, P., Doyle, E., & Berry, T-A. (2020, December). Remediation of Asbestos Contaminated Soil: An Alternative to Landfill Disposal. Poster presented at Unitec Research Symposium, Unitec Institute of Technology.
- » Discussion/Working Paper (Published)
- » Leaver, JD. (2020). Challenges for the Use of Hydrogen. White paper for Task 38 – Power to X. International Energy Agency Hydrogen Technology Partnership. 1. Challenges for the Use of Hydrogen. New Zealand: French Alternative Energies and Atomic Energy Commission (CEA).
- » Lucchese, P., Mansilla, C., Tilli, O., Prost, J., Samsatli, S., Leaver, J., Dickinson, R., Grand-Clement, L., & Funez, C. (2020). Power-to-Hydrogen and Hydrogen-to-X: System Analysis of the techno-economic, legal, and regulatory conditions. Paris: IEA Hydrogen Technology Programme. <https://www.ieahydrogen.org/task/task-38-power-to-hydrogen-and-hydrogen-to-x/>.

Journal Article

- » Brook, M.S., Black, P.M., Dirks, K.N., Salmond, J., Berry, T-A., & Steinhorn, G. (2020). Erionite in Auckland bedrock and malignant mesothelioma: an emerging public and occupational health hazard?. *New Zealand Medical Journal*, 133, 73-78.
- » Hernandez Herra, G.A., Graves, I., Birchmore, R., Wallis, S., Narain, S., & Berry, T. (2020). The Effect of Ventilation on Volatile Organic Compounds Produced in Residential Buildings Under Simulated Occupancy. *Atmospheric Environment X*, 6, 1-11.

- » Hernandez, G., Graves, I., Birchmore, R., Wallis, S.L., Narain, S., & Berry, T-A. (2020). The Effect of Ventilation on Volatile Organic Compounds Produced in Residential Buildings Under Simulated Occupancy. *Atmospheric Environment X*, 6, 1-11.
- » Hernandez, G., Wallis, S.L., Graves, I., Narain, S., Birchmore, R., & Berry, T.A. (2020). The effect of ventilation on volatile organic compounds produced by new furnishings in residential buildings. *Atmospheric Environment: X*, 6, 1-10.
doi:<https://doi.org/10.1016/j.aeaoa.2020.100069>
- » Hernandez, G., Wallis, S.L., Graves, I., Narain, S., Birchmore, R., & Berry, T-A. (2020). The Effect of Ventilation on Volatile Organic Compounds Produced in Residential Buildings Under Simulated Occupancy. *Atmospheric Environment X*, 6, 1-11.
- » Kiroff, L. (2020). Nexus between creative industries and the built environment: Creative place making in inner Auckland. *Frontiers of Architectural Research*, 9(1), 119-137.
doi:<https://doi.org/10.1016/j.foar.2019.08.004>
- » Low, J. K., Wallis, S.L., Hernandez, G., Cerqueira, I.S., Steinhorn, G., & Berry, T-A. (2020). Encouraging Circular Waste Economies for the New Zealand Construction Industry: Opportunities and Barriers. *Frontiers in Sustainable Cities - Open Access*, 2(35), 1-7.
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- » Low, J.K., Wallis, S.L., Hernandez, G., Cerqueira, I.S., Steinhorn, G., & Berry, T-A. (2020). Encouraging Circular Waste Economies for the New Zealand Construction Industry: Opportunities & Barriers. *Frontiers in Sustainable Citie*, 2(35), 1-7.
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- » Low, J.K., Wallis, S.L., Hernandez, G., Cerqueira, I.S., Steinhorn, G., & Berry, T-A. (2020). Encouraging Circular Waste Economies for the New Zealand Construction Industry: Opportunities & Barriers. *Frontiers in Sustainable Cities*, 2(35), 1-7.
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- » Low, J.K., Wallis, S.L., Hernandez, G., Cerqueira, I.S., Steinhorn, G., & Berry, T-A. (2020). Encouraging Circular Waste Economies for the New Zealand Construction Industry: Opportunities and Barriers. *Frontiers in Sustainable Cities - Open Access*, 2(35), 1-7.
doi:10.3389/frsc.2020.00035
- » Schunke, A.J., Hernandez, G.A., Padhye, L., & Berry, T-A. (2020). Energy Recovery in SWRO desalination: Current Status and New Possibilities. *Frontiers in Sustainable Cities*, 2, 1-7.
- » Spittler, N., Davidsdottir, B., Shafiei, E., Leaver, J., Asgeirsson, E.I., & Stefansson, H. (2020). The role of geothermal resources in sustainable power system planning in Iceland. *Renewable Energy*, 153, 1081-1090. doi:10.1016/j.renene.2020.02.046
- » Wallis, S.L., Emmett, E.A., Hardy, R., Casper, B.B., Blanchon, D.J., Testa, J.R., Mendes, C.W., Gonneau, C., Jerolmack, D.J., Seiphoori, A., Steinhorn, G., & Berry, T-A. (2020). Challenging Global Waste Management – Bioremediation to Detoxify Asbestos. *Frontiers in Environmental Science*, 8, 20. doi:10.3389/fenvs.2020.00020
- » Wallis, S.L., Emmett, E.A., Hardy, R., Casper, B.B., Blanchon, D.J., Testa, J.R., Menges, C.W., Gonneau, C., Jerolmack, D.J., Seiphoori, A., Steinhorn, G., & Berry, T-A. (2020). Challenging Global Waste Management – Bioremediation to Detoxify Asbestos. *Frontiers in Environmental Science*, 8, 20. doi:10.3389/fenvs.2020.00020
- » Watabe, A., Leaver, J.D., Shafiei, E., & Ishida, H. (2020). Life cycle emissions assessment of transition to low-carbon vehicles in Japan: combined effects of banning fossil-fueled vehicles and enhancing green hydrogen and electricity. *Clean Technologies and Environmental Policy*, Online, 19. doi:10.1007/s10098-020-01917-9

Presentation (non-conference)

- » Berry, T-A., & Wallis, S.L. (2020, November). Asbestos and Asbestiform Research. Presentation conducted at the Asbestos Awareness Week by New Zealand Demolition and Asbestos Association (NZDAA), Unitec.
- » Berry, T-A., & Wallis, S.L. (2020, November). Asbestos and Asbestiform Research. Presentation conducted at the Asbestos Awareness Week: Asbestos Forum 2020, Unitec Institute of Technology.
- » Berry, T-A., Wallis, S.L., & Tohill, S. (2020, August). Asbestos Risks - From Cradle to Grave. Presentation conducted at the Environmental Science, Risk and Society (EnvSci303), University of Auckland.
- » Berry, T-A., Wallis, S.L., & Tohill, S. (2020, October). Asbestos Risks: from cradle to grave. Presentation conducted at the University of Auckland, Environmental Course ENVSCI303, University of Auckland.
- » Leaver, J.D. (2020, Septemeber). Task 41: Analysis and Modelling of Hydrogen Technologies: A Personal Perspective. Presentation conducted at the Task 41 Analysis and Modelling of Hydrogen TechnologiesOnline Meeting, MS Teams Online.

2021

Conference Contribution- Abstract

- » Leaver, J.D. (2021, November). System Dynamics Integrated Assessment Modelling with UniSyD: Keynote address. Paper presented at 15th OERC Symposium 2021 – The Challenge of Net Zero by 2050,- 18-19 November, Dunedin.

Conference Contribution- Oral Presentation

- » Berry, T.A., Steinhorn, G., Massey, B., Hernandez, G., Low, J., & Wallis, S.L. (2021, December). The highs and lows of developing a transdisciplinary Research Centre and the importance of applied research. Paper presented at the MIT/Unitec Research Symposium - Rangahau Horonuku Hou - New Research Landscapes., Unitec, Auckland.
- » Berry, T-A., & Wallis, S.L. (2021, May). Hazardous Mineral Wastes and Options for Bioremediation: New Zealand Research. Paper presented at the New Zealand Land & Groundwater Conference 2021, Online.
- » Berry, T-A., Steinhorn, G., Massey, B., Hernandez, G., Low, J., & Wallis, S.L. (2021, December). The highs and lows of developing a transdisciplinary Research Centre and the importance of applied research. Paper presented at the MIT/Unitec Research Symposium, Unitec, Auckland.
- » Berry, T-A., Steinhorn, G., Massey, B., Hernandez, G., Low, J., & Walllis, S.L. (2021, December). The highs and lows of developing a transdisciplinary Research Centre and the importance of applied research. Paper presented at the MIT/Unitec Research Symposium, Unitec.
- » Birchmore, R., Berry, T., Wallis, S.L., Hernandez, G., & Tsai, S. (2021, December). Thermal Performance and Indoor Air Quality in New, Medium Density Houses. Paper presented at the MIT-UNITEC Research Symposium 2021, On line.
- » Chen, J. (2021, December). Forecasting Public Housing Tender Price in Auckland Market. Paper presented at the 2021 MIT/Unitec Research Symposium, Auckland, New Zealand.
- » Hernandez, G., Low, J., Wallis, S.L., Lador, C., & Berry, T-A. (2021, December). Inconsistencies and Inequalities: Why the World Needs a More Unified Approach to Air Pollution. Paper presented at the MIT/Unitec Research Symposium, Unitec.

- » Leaver, J.D. (2021, November). International hydrogen community needs from Policymakers and Public and Private Investors. Paper presented at the Project Progress Meeting: Hydrogen Production and CO₂ Capture from Biomass Gasification– 16 November 2021, Online.
- » Low, J., Hernandez, G., Kestle, L., Wallis, S.L., & Berry, T-A. (2021, December). Understanding the Plastic Component of Construction and Demolition Waste to Increase Landfill Diversion. Paper presented at the MIT/Unitec Research Symposium, Unitec.
- » Phillips, D.J. (2021, December). Taupaki Aged Care Facility On-site Wastewater Treatment and Disposal. Paper presented at the MIT-Unitec, Auckland.
- » Waidyartne, B., & Phillips, D. (2021, December). Analysing and Forecasting Daily Water Level Fluctuations in Water Supply Dams. Paper presented at the MIT-Unitec, Auckland.
- » Wallis, S.L., Lemckert, C., Hardy, R., & Berry, T-A. (2021, December). Pilot Bioengineered Treatment Processes for Hazardous Waste. Paper presented at the MIT/Unitec Research Symposium, Unitec.
- » Wallis, S.L., Pau, F., Blanchon, B., & Berry, T-A. (2021, December). Processes for Low-Level Asbestos Contamination in Occupied Workplace Buildings. Paper presented at the MIT/Unitec Research Symposium, Unitec.

Conference Contribution- Paper in published Proceedings

- » Karia, N., Sharma, R., & Aliakbarlou, S. (2021). Improving Productivity of Construction Labour in the Republic of Kiribati. Construction Education: Live the Future, Australasian Universities Building Education Association Conference (pp. 285-296).
- » Karia, Nnakina., Sadegh, Aliakbarlou., & Rashika, Sharma. (2021). Improving Productivity of Construction Labour in the Republic of Kiribati. AUBEA 2021 Melbourne: Construction Education – Live the Future’ (pp. 285-295).
- » Kestle, L., Hernandez, G., Berry, T-A., Low, J., & Wallis, S. (2021). “Plastic Minimisation in Construction: A Pilot Study identifying and quantifying the composition of C&D plastic in construction waste”. In Imriyas Karmadeen & Anthony Mills (Ed.), AUBEA 2021- 27-29 October 2021 (pp. 316-325).
- » Kestle, L., Hernandez, G., Berry, T-A., Low, J., & Wallis, S. (2021). Plastic Minimisation in Construction: A Pilot Study identifying and quantifying the composition of C&D plastic in construction waste. In Deakin University (Ed.), Australasian Universities Building Education Association (AUBEA) Annual Conference (pp. 1-10).
- » Kestle, L., Hernandez, G., Berry, T-A., Low, J., & Wallis, S.L. (2021). Plastic Minimisation in Construction: A pilot study identifying and quantifying the composition of C&D plastic in construction Waste. In Deakin University (Ed.), Proceedings of the 44th AUBEA conference, 27-29th October (pp. 1-10).
- » Loo, W., & Tuleasca, L. (2021). The performance of diverse cohort of civil engineering students at Unitec Institute of Technology (2010-2019). In ePress (Ed.), Unitec Research Symposium 2020 9 October and 7 December , Vol. 1 (pp. 54-72). doi:ISBN 978-0-473-59389-6 Retrieved from <https://www.unitec.ac.nz/eypress/index.php/unitec-research-symposium-proceedings-2020/>
- » Loo, W.Y., & Tuleasca, L. (2021). The Performance of a Diverse Cohort of Civil Engineering Students at Unitec Institute of Technology (2010 to 2019). In Evangelia Papoutsaki and Marie Shannon (Ed.), Unitec Research Symposium Proceedings 2020. Auckland, New Zealand (pp. 54–72). Retrieved from <https://www.unitec.ac.nz/eypress/index.php/unitec-research-symposium-proceedings-2020/>

- » Mahmood, B., & Bogati, R. (2021). Assessment of Grease Traps Used in the Small-scale Food Industry: A Pilot Study. Unitec Research Symposium Proceedings 2020 (pp. 6-21).
- » Puolitaival, T., & Kiroff, L. (2021). Digital technologies in construction management education: A digital natives' perspective. In Sylvain Kubicki (Ed.), Proceedings of the 38th International Conference of CIB W78, Luxembourg, 13-15 October (pp. 650-658).

Discussion/Working Paper (Published)

- » Berry, T-A., & Kestle, L. (2021). BUILD 188 magazine article - December 2021 edition "Cutting Construction Waste". 74-75. New Zealand: BUILD.
- » Kerai, U., Kiroff, L., & Sharma, R. (2021). The response of Auckland construction firms to recent technological changes. 1-22. Unitec ePress Occasional and Discussion Papers Series, ISSN 2324-3635: 2021(1).
- » Kerai, U., Kiroff, L., & Sharma, R. (2021). The Response of Auckland Construction Firms to Recent Technological Changes. Occasional and Discussion Papers Series (2021:1). Auckland: Unitec ePress. <http://www.unitec.ac.nz/epress>.

Journal Article

- » Aliakbarlou, S., Wilkinson, S., Costello, S.B., & Jang, H. (2021). Comparing Client Values between Business-as-Usual Construction and Postdisaster Reconstruction. *Natural Hazards Review*, 22(3), 04021017. doi:10.1061/(ASCE)NH.1527-6996.0000463
- » Borna, Kambiz., Moore, Tony., Azadeh, Noori Hoshyar., & Pascal, Sirguy. (2021). Using Vector Agents to Implement an Unsupervised Image Classification Algorithm. *Remote Sensing*, 13, 4896. doi:<https://doi.org/10.3390/rs13234896>
- » Ibrahim, A., Zukri, N.A.Z.M., Ismail, B.N., Osman, M.K., Yusof, N.A.M., Idris, M., Rabian, A.H., & Bahri, I. (2021). Flexible Pavement Crack's Severity Identification and Classification using Deep Convolution Neural Network. *Journal of Mechanical Engineering*, 18(2), 193-201.
- » Kiroff, L., & Puolitaival, T. (2021). Fun is serious business: Digital natives and digital technologies in construction education. *Journal of Higher Education Theory and Practice*, 21(1), 75-90.
- » Watabe, A., & Leaver, J. (2021). Comparative economic and environmental benefits of ownership of both new and used light duty hydrogen fuel cell vehicles in Japan. *International Journal of Hydrogen Energy*, Volume 46, Issue 52, 26582-26593. doi:10.1016/j.ijhydene.2021.05.141

Presentation (non-conference)

- » Berry, T.A., Day, A., & Roberts, J. (2021, April). Building Out Waste- taking on plastic waste in construction. Presentation conducted at the Building Out Waste, Unitec, Auckland.
- » Berry, T-A., & Wallis, S.L. (2021, April). Asbestos Awareness. Presentation conducted at the Asbestos Awareness Webinar, Online.
- » Kestle, L., Berry, T-A., Hernandez, G., Day, A., Burden, S., & Roberts, J. (2021, April). Plastic Minimisation Construction Project. Presentation conducted at the Building Out Waste Symposium 2021 - Auckland City Council, Auckland.
- » Mahmood, B. (2021, February). Online Collaborative Moderation – A Futuristic Approach. Presentation conducted at the Diplomas Joint Engineering Forum/Conference, Manukau Institute of Technology, Auckland, NZ.

2022**Book Chapter**

- » Birchmore, R., Blakeley, J., Chai, E., Leaver, J., Loo, W., McMullan, R., Phillips, D., Tuleasca, L., & Wilson, H. (2022). Collaboration Across New Zealand ITPs: The BEngTech Three-Year Engineering Degree Programme as an Exemplar. In Chan S. & N. Murray (Eds.), *Innovations in Aotearoa-NZ VET: Vocational education and training (VET)* 1 ed. (pp. 1-20). Switzerland: Springer.
- » Leaver, J., Blakely, J., Loo, W., Tuleasca, L., Phillips, D., Chai, E., McMullan, R., Wilson, H., & Birchmore, R. (2022). Collaboration Across New Zealand ITPs: The Bachelor of Engineering Technology Three-Year Engineering Degree Programme as an Exemplar. In Chan S. (Eds.), *Innovations in Aotearoa-NZ vocational education and training (VET)* 1st ed. (pp. 1-20). NZ: Springer.

Conference Contribution- Oral Presentation

- » Berry, T-A. (2022, February). Keynote Presentation: Creating Capacity and Capability for the Future of the Built Environment: The Importance of Applied Research. Paper presented at the 7TH NEW ZEALAND BUILT ENVIRONMENT RESEARCH SYMPOSIUM 2022, Massey University.
- » Borna, Kambiz. (2022, June). Interpolation of Financial Time Series Data in a Virtual Geographic Environment. Paper presented at the NZAE2022/the New Zealand Association of Economists, Wellington.
- » McGarrigle, M J. (2022, February). Consideration Watchpoints When Using " Archicad" Software Across a VDI Network. Paper presented at the 7th NZBERS Symposium 17-18 Feb. 2022, Massey University , Auckland , New Zealand.

Conference Contribution- Paper in published Proceedings

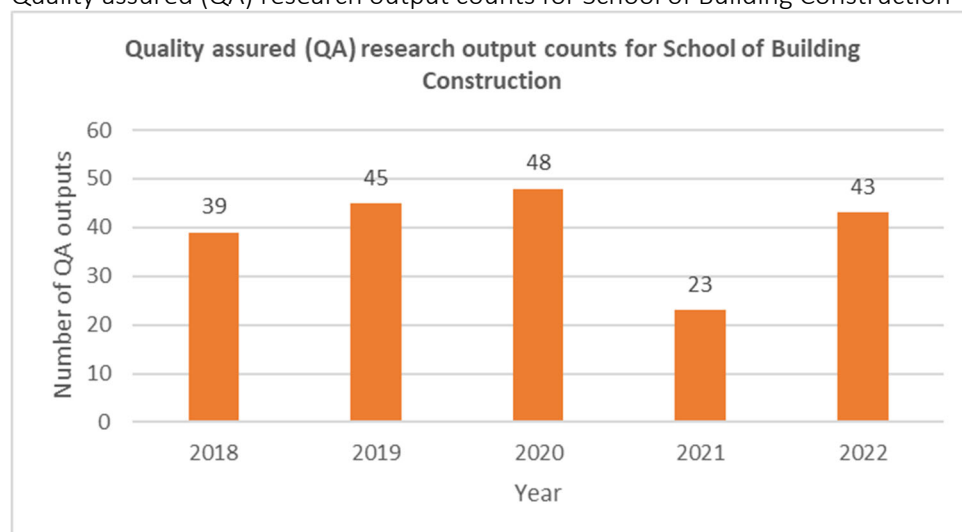
- » Berry, T-A., Low, J., Hernandez, G., Kestle, L., & Wallis, S. (2022). Determining the feasibility of a circular economy for plastic waste from the Construction Sector in New Zealand. Helsinki Finland SBeFin Conference 2022 (pp. 15-25).
- » Berry, T-A., Low, J.K., Wallis, S.L., Kestle, L., Day, A., & Hernandez, G. (2022). Determining the Feasibility of a Circular Economy for Plastic Waste from the Construction Sector in New Zealand. In International Council for Research and Innovation in Building and Construction (CIB) (Ed.), *SBeFin 2022 – Emerging Concepts for Sustainable Built Environments* 23-25 November, 2022 Helsinki , Vol. xx (pp. x).
- » Chen, J., Domingo, N., & Rotimi, J. (2022). Understanding the Factors Affecting Accuracy of New Zealand Public Housing Project Tender Price. In Wajiha M. Shazad, Eziaku O. Rasheed, James O. B. Rotimi (Ed.), *7th New Zealand Built Environment (NZBERS) Symposium* (pp. 226-236).
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Journal Article

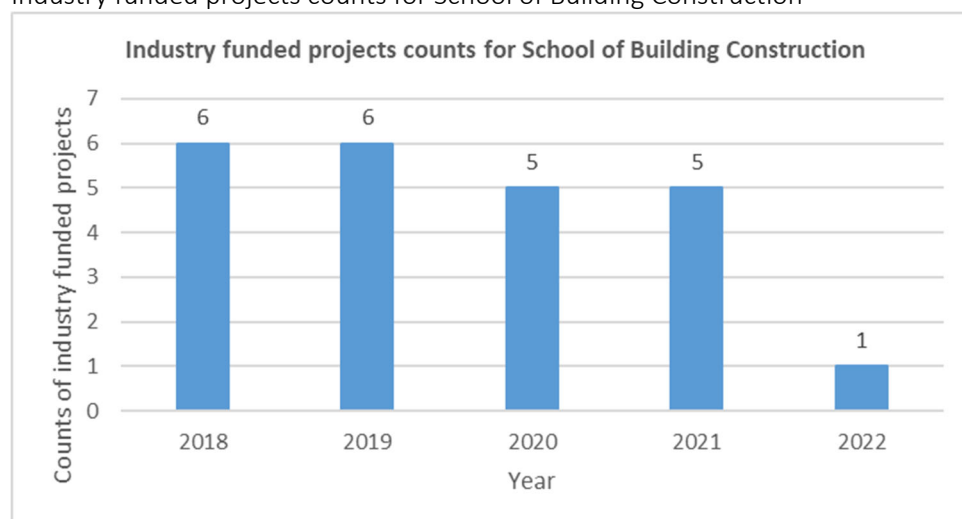
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SOBC Research KPI Data

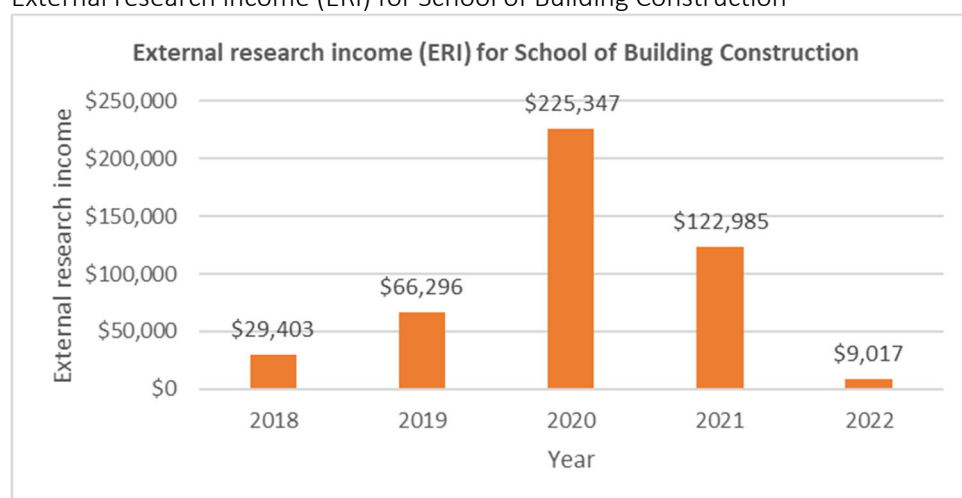
Quality assured (QA) research output counts for School of Building Construction



Industry funded projects counts for School of Building Construction



External research income (ERI) for School of Building Construction



School Research Plan – School of Community Studies

Ko te manu e kai ana i te miro nōnā te ngahere
Ko te manu e kai ana i te mātauranga nōnā te ao

The bird that consumes the miro berry owns the forest
The bird that consumes knowledge owns the world

1 Introduction and current state

The School of Community Studies was formed in 2018. The School offers qualification and degree in the areas of: Bachelor of Teaching (ECE) and Sport, Recreation & Exercise. The plan primarily covers the research narratives of one degree program in the school: Early Childhood Education Program. Researchers are grouped into two research groups [1] Culturally Inclusive Pedagogy and Equity in Early Childhood, [2] Student ECE Kaiako Hauora Collaborative Research Project.

Unitec is now a part of Te Pūkenga, New Zealand's national network of polytechnics, and institutes of technology. There are many challenges and some opportunities as Unitec becomes a part of Te Pūkenga. This is also reflected in the field of research.

Number of degree teaching staff	9
Total research FTE allocated	1.05
Current Research Traffic Light rating (Percentage of green lit staff)	78%
PBRF history (Number of PBRF rated staff in 2018)	6

The Unitec Research Strategy 2020 – 2024 states: Priority 1 is that Research that is aligned with Te Tiriti o Waitangi and Goal One is: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes, and governance.

1.1 Describe how School Research is aligned with Te Tiriti o Waitangi?

A distinctive feature of school of community Studies is our commitment to Mātauranga Māori. Teaching team are guided by the principles of Te Noho Kotahitanga and the use of Te Whare Tapa Wha model of wellbeing to support hauora.

Staff and students are encouraged to undertake research that aligns to Te Tiriti o Waitangi and has transformative outcomes for the communities in Aotearoa. The school continues to embed a flourishing, diverse and sustainable research culture, weaving strong, enduring community partnership-

The school guided by its values has a priority to recruit Māori lecturers whenever possible. We are fortunate to have three Māori kaiako on our Early Childhood Education (ECE)teaching team, led by our kaiārahi, with the use of a Whare Tapere (specialist learning classroom) for our kete courses and Mātauranga Māori content and tikanga.

Staff have also collaborated with colleagues in other institutions and established collaborative research projects. For example, the Student ECE Kaiako Hauora Collaborative Research Project targeting early childhood kaiako and taura at present.

The school supports the development and capability of our people by empowering them toward transformative outcomes for our communities by encouraging research independence. Guided by Te Tiriti and Te Noho Kotahitanga principles, school provides inclusive opportunity for the diverse cultures and individuals from our school.

Furthermore, our staff prioritise te reo Māori as a living language, and te ao Māori as a living and relevant culture. Our teaching practice and work with students is founded on the principles and values of whanaungatanga. Mātauranga Māori is woven throughout the learning, sitting on a kaupapa of Te Noho Kotahitanga, Unitec's values. Staff have set up their own goals in learning Mātauranga Māori and are actively working towards achieving them.

Staff in the School are research-active and enjoy a variety of focuses. Teaching is "research-informed" and current thinking and field-relevant knowledge is embedded into the curriculum. Examples range from the inclusion of recently published research in taught content, teaching students practical research skills, helping students to develop a research-based mindset to be critical and reflective thinkers. Staff also support students to develop and carry out their own research projects.

During the curriculum development, a conscious effort is made to weave Mātauranga Māori and Pacific content in each course. This is informed by research into the field. The team are committed to continue their te reo me ngā tikanga journey and guide each other through sharing new knowledge and finding opportunities to enhance their pedagogy and practice.

1.2 What the school is planning in the area of research to achieve the goal and key project (leadership roles, recruitment, prioritisation, opportunity and partnership development)

- » Prioritising Mātauranga Māori capability in recruiting new staff
- » ECE Rautaki team supporting team capability with regards to Mātauranga Māori principles.

Unitec's Te Tipare Strategy and our new programme Rautaki have been a further focus of kaiako professional development, some of this through the professional development badges. This has helped kaiako to weave in Mātauranga Māori content into all courses.

- » Appointment of Māori Champion for the school: Chantal Baker.
- » Building staff capability to undertake research aligned with the principles of Te Tiriti o Waitangi: Staff are supported to complete different badges to build staff capability and understanding of the principles of Te Tiriti o Waitangi. A number of our staff completed the Te Noho Kotahitanga badge in 2022. This will continue in 2023.
- » A flourishing, collaborative research culture with other Institutes in Te Pūkenga for example with MIT. This has created new research opportunities and collaboration within ITPs.

Staff in the School are research active. Teaching is "research-informed" and is embedded into the curriculum. Current literature and research in tertiary education informs teaching pedagogy and pastoral care approaches for the students in different programs. For example: Literature and research in cultural diversity and curriculum in ECE is used to directly inform teaching material.

Research is included in the course work as either taught or supplementary content in all the courses. Students acquire or develop skills in finding relevant recent research to complement lecturer-provided materials. This helps students to develop a research-based mindset and to be critical and reflective thinkers.

Some examples of where research-active staff incorporate research outcomes into teaching include:

- » Lee-Anne Turton: EDUC 6008 Informed Professional experience and other Practicum Courses
- » Yvonne Culbreath: EDUC 6004 Māori and Pacific Learners in ECE Contexts
- » Andrew Lenton SPOR5105 Coaching in Action

Staff enjoy sharing their professional experience, their research, and their expertise at conferences and through workshops to contribute to the sector. Staff have collaborated with colleagues in university institutions who have more time to research (e.g., AUT) to establish collaborative projects drawing on the particular strength each display. For example, the Student ECE Kaiako Hauora Collaborative Research Project targeting early childhood kaiako and taurā. The research aims and questions are as follows:

Evaluate the impact of weaving wellbeing strategies into delivery of teacher education curriculum.

Research questions:

- » How do student ECE teachers develop sustainable wellbeing strategies for study and practice?
- » How does an innovative teaching and learning environment support hauora?

The project is part of a multidisciplinary team initiated by Catherine Powell of Healthy Families Waitakere she is their Lead Systems Innovator. The research group consists of: Andrew Gibbons AUT, Rebecca Hopkins AUT, Rainie Yu AUT, Yo Heta-Lensen AUT, Kiri Gould UoA, Jacoba Matapo UoA, Justine O'Hara Gregan UoA, Mary-Liz Broadley Open Polytechnic, Pauline Bishop Unitec Te Pūkenga and Cathie Powell.

Other projects: “**Professional Learning for Osteopaths: The New Zealand Context**” Cancelled as the School of Osteopathy program is closed.

2 School of Community Studies Goals and KPIs

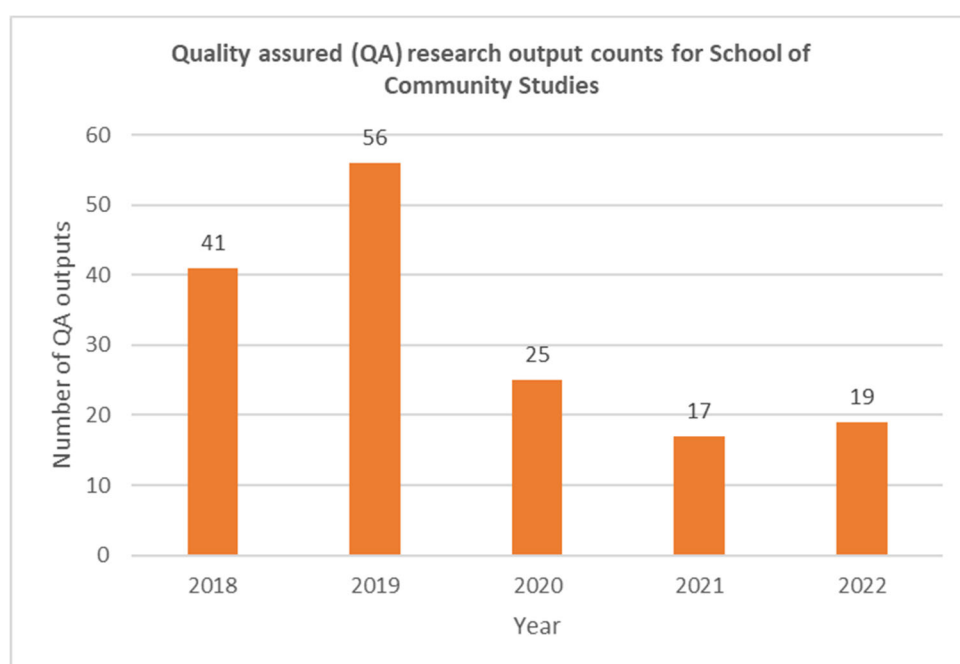
There are six KPIs for research:

1. **Quality Assured (QA) Research Outputs** - recognised research outputs that have been through a peer review process or have been specifically commissioned. This is presented as a ratio of counts of the number of QA outputs to FTE of degree teaching staff.
2. **Research Productivity** - measure of staff teaching on degree programmes who meet the agreed levels of research in the research traffic light. This is measured as the ratio research active staff to the total number of staff on a degree programme.
3. **External Research Income (ERI)** - income received from external sources for research purposes calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars.

4. **Industry Funded Projects** - research and enterprise projects Unitec is receiving funding for, where the services Unitec is providing is applied contract research or consultancy from all funders excluding any governmental contestable funding sources. This is measured as a count of the number of projects.
5. **Student Integrated Research** - a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). This is measured as a count of the number of research outputs.
6. **Rangahau Māori Productivity** - productivity in this context would be aggregated as - QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori Rangahau professional development achievements and Rangahau Māori research stories in the media.

The School of Community Studies has the following current goals.

- **Quality Assured Research Outputs:** Maintaining the quality assured research outputs to at least 1.5 output per research active FTE¹.
- **Research Productivity:** Work towards maintaining green traffic light status with 75% or more staff who meet the agreed levels of research in the research traffic light.
- **External Research Income:** The school will strive to lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects.
- **Industry Funded Projects:** Encourage and maintain industry-funded projects at 1 project per year.
- **Student Integrated Research:** The school will strive to develop research Student Integrated Research projects in line with the definition of this KPI.
- **Rangahau Māori Productivity:** The school will strive to increase Māori Rangahau Productivity in line with the definition of this KPI.



¹ Research active FTE – staff FTE involved in teaching and/or supervising degree programmes.

Figure 1: School of Community Studies Quality Assured Research Outputs

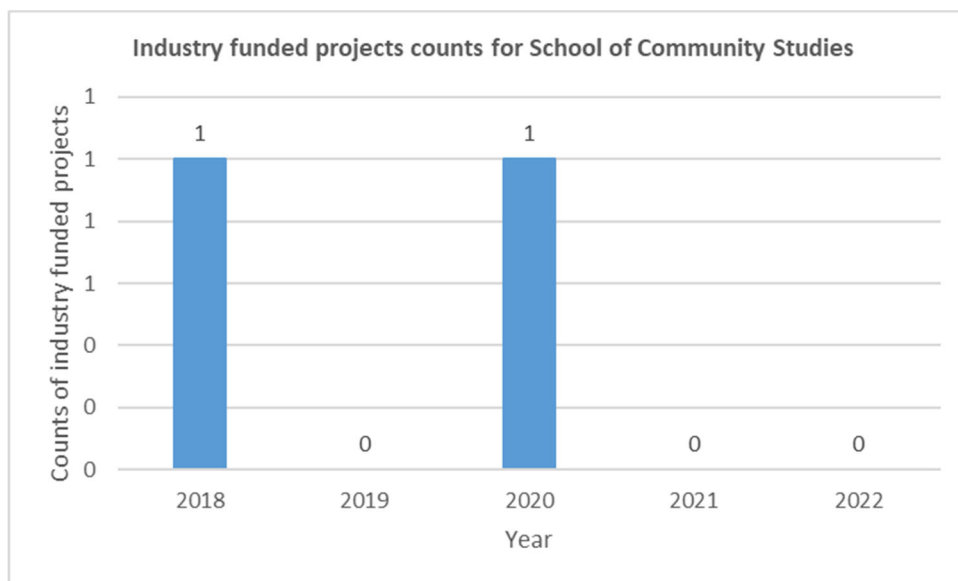


Figure 2: School of Community Studies Industry Funded Projects

Note: There was a slight change in the definition of industry funded projects in 2018 to include public sector and where the services Unitec is providing is applied contract research or consultancy. Prior to this only funding from private sector was included. Thus the 2018 figures reported are comparatively higher than that of 2016 and 2017.

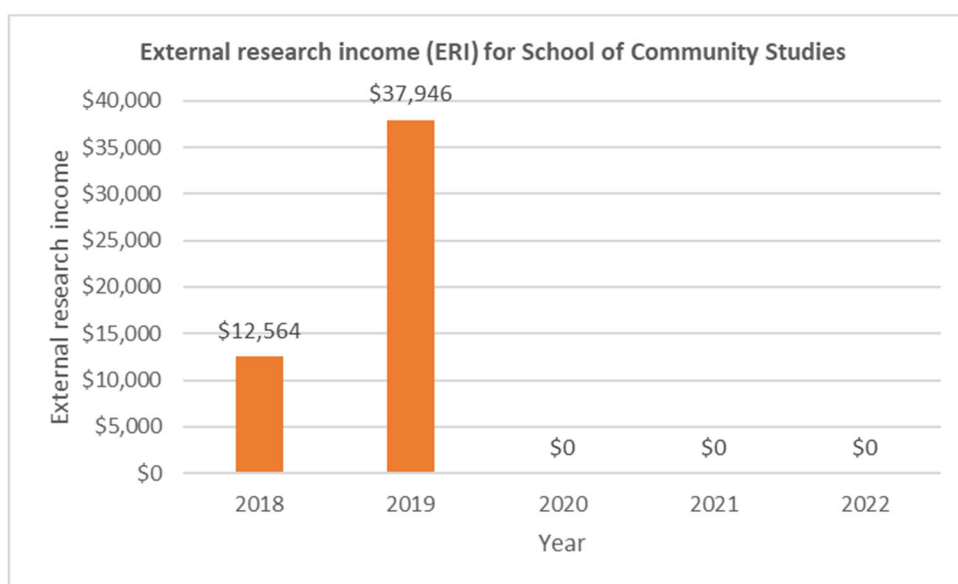


Figure 3: School of Community Studies External Research Income

2.1 What the school is planning for increasing research diversity?

School is exploring to collaborate with Supportive learning team at Bridgepoint around the area of neurodiversity. School is guided by the value of strengths-based approach to create learning opportunities that allow students to experience success and develop confidence in their diverse abilities. School hopes to encourage staff whose research interest focuses on diversity. For example,

Tahera Afrin from Early Childhood Education program is looking at exploring a research project: 'Special or additional needs of tamriki in the context of teacher education programmes in Aotearoa New Zealand'.

Researchers from diverse background are research active and contributing to the body of knowledge in Teaching and Learning. For example, Yvonne Culbreath a Pacific nations lecturer and Lata Rana researcher from India are preparing to submit a PBRF portfolio in 2025. Yvonne's research interest are: Indigenous cultures; inclusive pedagogies. Lata is focusing on: Cultural diversity; culturally responsive and inclusive pedagogy; teacher education; globalisation and developments in Education; indigenous identities and culture.

Another researcher, Chantal Baker from Sports program is working on the Oral History Project, ***"The tale of the rugby ball and me: The whakapapa of female rugby in Aotearoa,"***. She has been awarded the Pacific Scholarship Award by Ako Aotearoa. Chantal has contributed to community sport and New Zealand rugby and touch rugby scenes for two decades, as a player, coach, and facilitator at provincial and national level. Chantal presented at the 8th International Women's Group (IWG) World Conference in Sport and Women, held in Auckland Nov. 2022, where she shared her Oral History Project. The project will lead to more collaborations with other Pacific and Māori academics and practitioners, to grow the resources of indigenous research.

Chantal has started an external community rugby project recently for NZ Rugby – 'The Future of rugby project. Doe this count?' This will inform teaching and learning about current circumstances in the industry.

Researcher Andrew Lenton from Sports program is currently working on a qualitative study that focuses on recently retired New Zealand elite athletes' perspectives of the "Athlete Life" programme and its dual career support services. Specifically, it explores the programme's accessibility and usage, what and how services were provided, and importantly, the impact it had on the athletes' preparation for retirement and adjustment to the retirement transition.

The ECE team in the school is planning to write an E- book for publication. The purpose of this book is to address and reveal various perspectives and aspects of early childhood education in Aotearoa, New Zealand. The book presents a critical lens to different issues related to teaching and learning in Early childhood with specific focus on changing identities, well-being, Hauora and professional teaching practice and pedagogy of Early Childhood. The book will also provide an in-depth analysis of relevant political, historical, and socio-cultural issues relating to the context of early childhood education in Aotearoa and internationally. Early Childhood education in New Zealand is guided by the principles of Treaty of Waitangi and *Te whāriki* the New Zealand early childhood curriculum document. The book recognises the values and principles of the treaty and the curriculum document. At present staff are finalizing the proposal to put to Tuapapa Rangahau/ Research office. Staff will be collaborating with other staff/academics in the school and other tertiary institutes/university. Researchers from Tātai Aho Rau CORE Education, Open Polytechnic and Auckland University of Technology have shown interest to contribute to the e-book.

3 SWOT analysis for research in School of Community Studies



4 Research Groups and projects (consider the Te Tiriti Priority One goal in the Research Strategy)

One of the key techniques for achieving goals and finding efficiencies while having fun along the way, is to work together. Unitec cannot afford to support discreet research trajectories for every individual teaching on degree programmes and this approach is equally unlikely to result in impactful research for our industries and communities.

The school is guided by strong Māori research capability to tell stories of Māori research projects, outcomes and success. Students and staff are guided by these projects and success to incorporate Vision Mātauranga Māori. Staff are also supported to incorporate the values of the Te Tiriti in their research and teaching through professional development opportunities and being involved in badges.

The School of Community Studies has two research groups [1] Culturally Inclusive Pedagogy and Equity in Early Childhood, [2] Student ECE Kaiako Hauora Collaborative Research Project.

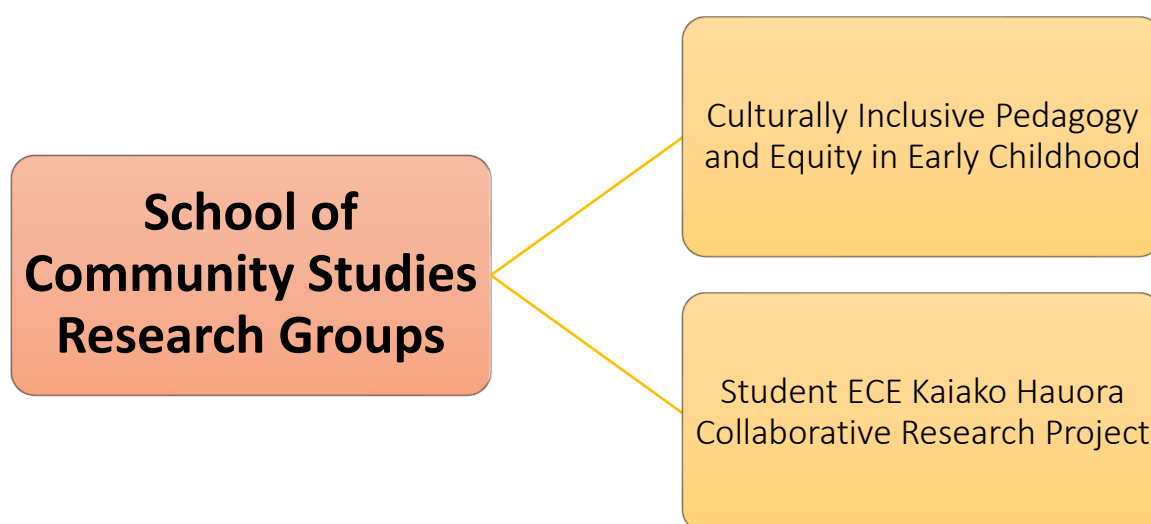


Figure 4: School of Community Studies research groups

The above research groups partner with external funders and win funding/grants, which Unitec calls as External Research Income (ERI).

4.1 Research Group One – Culturally Inclusive Pedagogy and Equity in Early Childhood Statement of purpose

Research in this area explores culturally inclusive pedagogies of care to achieve more equitable outcomes for those at the margins of our education system. The project focuses on teachers' narratives of teaching and learning experiences with students in the tertiary education setting that includes Maori, Pasifika, Pākehā, Asian and Indian students. The team includes lecturers (Pasifika and Indian origin

teachers) from ECE team at Unitec and Manukau Institute of Technology, and two Early childhood centres in Auckland region. The team is finalising the data collection and will begin data analysis.

The aim is to explore our experiences as teachers (Pacific and other cultures) in a diverse and multi-ethnic city in New Zealand. The findings related to culturally inclusive pedagogies will build the resilience of Maori, Pacific and other communities in New Zealand. The research thus, ***promotes Pacific research, diversity and inclusiveness***.

This project recognizes the importance of engaging with teachers' cultural identities and how they engage with children while acknowledging the importance of holding consultation with Maori to ensure that Maori principles are being considered in accordance to the Treaty of Waitangi.

Research team: Lata Rana; Yvonne Culbreath (Lecturers Unitec); Anamua (MIT Lecturer); Rose Penn (Independent researcher); Taokia Gill (ECE centre manager); Amy Fraser (ECE centre manager).

This research speaks to the following purpose of Unitec Research groups:

- » Promotes Te Tiriti alignment.
- » Promotes Pacific research, diversity and inclusiveness.
- » Promotes collaborative research.
- » Assist with the alignment of learning and research.
- » Increase industry and community partnership.
- » Focus research (potentially toward Research Centre).
- » Increase research impact.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Data collection from ECE centre.	Research team including Yvonne Culbreath and Dr Lata Rana	July 2023	Funds to hold meetings/Wananga and collect data	Building relationships with Early childhood Centres to inform ECE pedagogy.
Data analysis	Research team including Yvonne Culbreath and Dr Lata Rana	July 2023		Building knowledge about inclusive culturally responsive pedagogy.

Goal 2: Develop research opportunity in [Culturally Inclusive Pedagogy and Equity in Early Childhood] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Connecting with other Early	Yvonne Culbreath and Dr Lata Rana	On going	Funds to hold meetings and	Contributing to Early childhood

childhood centres			network.	pedagogy and advocating for culturally inclusive practices in ECE centres and higher education institutes.

Goal 3: Grow industry and community connectedness

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
Building on going connection with the ECE centres in New Zealand.	Yvonne Culbreath and Dr Lata Rana	On going	Funds to hold meetings and network	Connecting with ECE sector to contribute to their practices.

4.2 Research Group 2 – Student ECE Kaiako Hauora Collaborative Research Project

Statement of purpose:

Research in the area of Hauora and wellbeing in Early childhood is directed towards:

Evaluating the impact of weaving wellbeing strategies into delivery of teacher education curriculum.

Research questions:

- » How do student ECE teachers develop sustainable wellbeing strategies for study and practice?
- » How does an innovative teaching and learning environment support hauora?

The project is part of a multidisciplinary team initiated by Catherine Powell of Healthy Families Waitakere she is their Lead Systems Innovator. The research group consists of Andrew Gibbons AUT, Rebecca Hopkins AUT, Rainie Yu AUT, Yo Heta-Lensen AUT, Kiri Gould UoA, Jacoba Matapo UoA, Justine O'Hara Gregan UoA, Mary-Liz Broadley Open Polytechnic, Pauline Bishop Unitec, and Cathie Powell.

The first phase of the project where a survey was conducted from early childhood student teachers has been completed in 2020. Phase two was modified to include a survey of students from Early childhood Education Course at Unitec Te Pūkenga. Currently the research team is focusing on dissemination of their research findings.

This research speaks to the following purpose of Unitec Research groups:

- » Promotes Te Tiriti alignment.
- » Promotes diversity and inclusiveness.
- » Promotes collaborative research.
- » Assist with the alignment of learning and research.
- » Increase student integrated research.
- » Increase industry and community partnership.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Journal Publication	Researcher (P.B.)	Sept. 2023	Research time	Publication
Book Chapter	Research team	Dec. 2023	Research time	Publication
Presentation at Conference	Researcher	Dec. 2023		Publication
Manifesto	Research Team	August 2023		Publication

Goal 2: Develop research opportunity in Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Connecting with ECE centres	Research team	ongoing	Research funds	Research project

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Curriculum Dev. For ECE	Research team	ongoing	In -house resources and Research time	Research informed course of study.

Research team is cross institutional, developing courses for Initial Teacher Education (ITE) program on Hauora.

5 Appendix

Below are the data of the current staff members in terms of their research outputs over the last five years and their research interests.

Staff Name	Research outputs (2018-2022)	Research Interests
Andrew Lenton	5-Journal Article	Sports Management; Retirement experience of athletes
Galina Stebletsova	1-Conference Contribution- Oral Presentation, 5-Journal Article	Global citizenship; Perceptions of Play in ECE; Children's hauora.
John MacFarlane	1-Book Chapter, 1-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Journal Article, 1-Presentation (non-conference)	Authentic and Legitimate forms of organisation and governance for actions/lifestyle sports
Katie Farrimond	1-Conference Contribution- Poster Presentation	Professional practice in ECE
Lata Rana	1-Conference Contribution- Abstract, 12-Conference Contribution- Oral Presentation, 2-Journal Article	Cultural diversity; culturally inclusive pedagogies, globalisation and developments in higher education; indigenous identity and cultures.
Lee-Anne Turton	6-Conference Contribution- Oral Presentation, 1-Journal Article, 1-Other, 1-Presentation (non-conference)	ECE visual arts pedagogy; Digital Technologies in Education
Michelle Johnson	2-Conference Contribution- Oral Presentation	Literacy theory and practice in Early childhood; whanaungatanga
Pauline Bishop	7-Conference Contribution- Oral Presentation, 1-Discussion/Working Paper (Published)	Student ECE Kaiako Hauora
Rangi Nathan	1-Report	Mātauranga Māori, bicultural practice
Siobhan Nathan		Te Reo and Mātauranga Māori
Tahera Afrin	3-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 2-Journal Article, 1-Presentation (non-conference)	Diverse needs of tamariki; cultural diversity
Wesley Verhoeff	1-Conference Contribution- Paper in published Proceedings, 2-Journal Article	Sports -exercise
Yvonne Culbreath	8-Conference Contribution- Oral Presentation, 1-Journal Article	Indigenous cultures; inclusive pedagogies; Early childhood education

School Research Plan – School of Computing, Electrical & Applied Technology

1. Introduction and current state

The School of Computing, Electrical, and Applied Technology was formed in 2020 by merging School of Computing and Information Technology with part of School of Engineering and Applied Technology.

The School offers a suite of programmes from level 5 to level 9 covering various areas in computing, information technology, electrical engineering, electronics and automotive. There are six-degree programmes offered by this school: Bachelor of Applied Technology (BAT), Bachelor of Computing Systems (BCS), Bachelor of Engineering Technology- Electrical (BEngTech), Postgraduate Diploma in Computing (PGDCG), Master of Computing (MCOMP), and Doctor of Computing (DCOMP [Teach out]). Staff in the School are research active across the full spectrum of levels, with early career researchers as well as established and expert researchers across the various disciplines.

The researchers in the school are grouped in seven research groups: [1] Intelligent Systems and Data Science, [2] Cyber Security and Networking, [3] Software Engineering, [4] Internet of Things and Sensor Networks, [5] Electromagnetic Measurements and Non-Destructive Sensing, [6] Power Systems, and [7] Automotive.

	Computing Cohort	Engineering Cohort	Applied Technology Cohort	Overall
Number of degree teaching staff	13	7	5	25
Total research FTE allocated	1.96	1.1	0.6	3.66
Current Research Traffic Light rating (Percentage of green lit staff)	92%	100%	100%	96%
PBRF history (Number of PBRF rated staff in 2018)	14	0	0	14

Fourteen staff achieved funded ratings in the recent 2018 PBRF assessment round (3Bs, 11Cs), however, seven of them have left Unitec in the past 2-3 years.

The Unitec Research Strategy 2020 – 2024 states: Priority 1 is that Research that is aligned with Te Tiriti o Waitangi and Goal One is: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes and governance.

1.1 Describe how School Research is aligned with Te Tiriti o Waitangi?

In addition to items in 1.2, the School of Computing, Electrical, and Applied Technology is aligned with Te Tiriti o Waitangi by:

- » Providing equal opportunity for research for Maori students and staff
- » Ensuring Unitec policy of Living Te Noho Kotahitanga
- » Computing school has research projects for last year's Bachelors Maori/Pacific students, they will also get support, for research projects if they choose to do Postgrad study. Currently, one Pacific student completing his Masters's research work.

1.2 What the school is planning in the area of research to achieve the goal and key project (leadership roles, recruitment, prioritisation, opportunity and partnership development)

To achieve the goal, whenever there is the opportunity, the School of Computing, Electrical, and Applied Technology is:

- » Encouraging and involving Māori students in research
- » Encourage staff to partner with a Maori organisation
- » Planning to professionally develop Māori staff into leadership roles
- » Planning to offer studentships or other student integrated research with a Māori focus
- » Encouraging staff to include Maori related research
- » Encouraging Māori students to do research related post-grad courses

2 School of Computing, Electrical & Applied Technology Goals and KPIs

There are six KPIs for research:

1. **Quality Assured (QA) Research Outputs** - recognised research outputs that have been through a peer review process or have been specifically commissioned. This is presented as a ratio of counts of the number of QA outputs to FTE of degree teaching staff.
2. **Research Productivity** - measure of staff teaching on degree programmes who meet the agreed levels of research in the research traffic light. This is measured as the ratio research active staff to the total number of staff on a degree programme.
3. **External Research Income (ERI)** - income received from external sources for research purposes calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars.
4. **Industry Funded Projects** - research and enterprise projects Unitec is receiving funding for, where the services Unitec is providing is applied contract research or consultancy from all funders excluding any governmental contestable funding sources. This is measured as a count of the number of projects.
5. **Student Integrated Research** - a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). This is measured as a count of the number of research outputs.
6. **Rangahau Māori Productivity** - productivity in this context would be aggregated as - QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori rangahau professional development achievements and rangahau Māori research stories in the media.

The School of Computing, Electrical, and Applied Technology understands the importance of embedding relevant and informed applied research into our learning and teaching professional practice. To this end, the School has developed the current goals.

- **Quality Assured Research Outputs:** Maintaining the quality assured research outputs to at least 1.5 output per research active FTE¹.

¹ Research active FTE – staff FTE involved in teaching and/or supervising degree programmes.

- **Research Productivity:** Work towards maintaining green traffic light status with 75% or more staff who meet the agreed levels of research in the research traffic light.
- **External Research Income:** The school will strive to lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects.
- **Industry Funded Projects:** Maintain industry-funded projects at 1-3 projects per year
- **Student Integrated Research:** The school will strive to develop research Student Integrated Research projects in line with the definition of this KPI.
- **Rangahau Māori Productivity:** The school will strive to increase Māori Rangahau Productivity in line with the definition of this KPI.

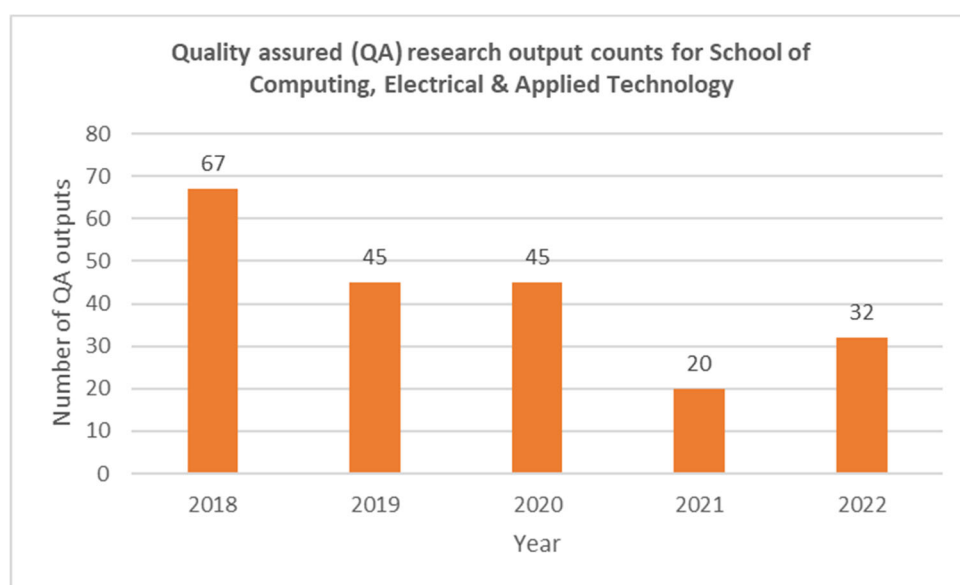


Figure 1: School of Computing, Electrical & Applied Technology Quality Assured Research Outputs

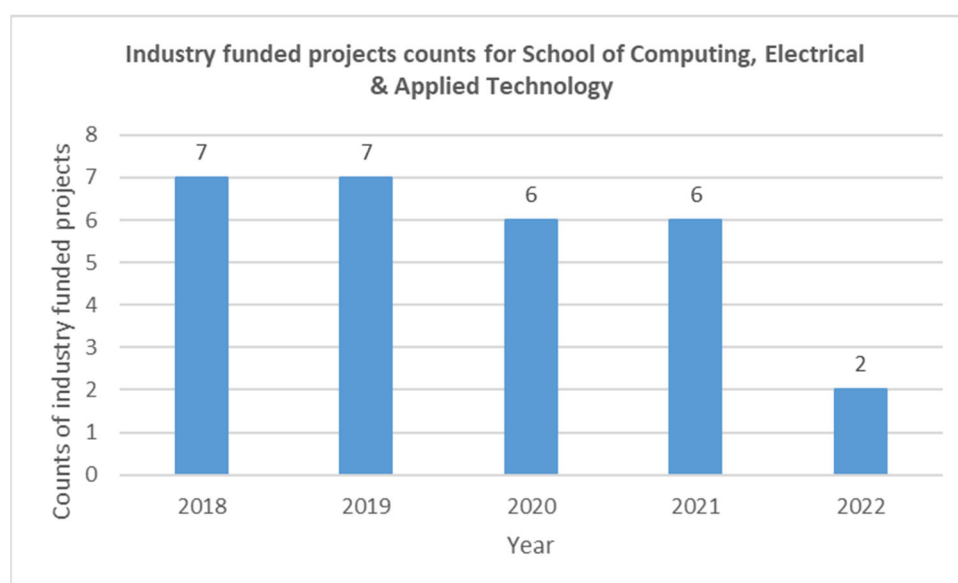


Figure 2: School of Computing, Electrical & Applied Technology Industry Funded Projects

Note: There was a slight change in the definition of industry funded projects in 2018 to include public sector and where the services Unitec is providing is applied contract research or consultancy. Prior to this only funding from private sector was included. Thus the 2018 figures reported are comparatively higher than that of 2016 and 2017.

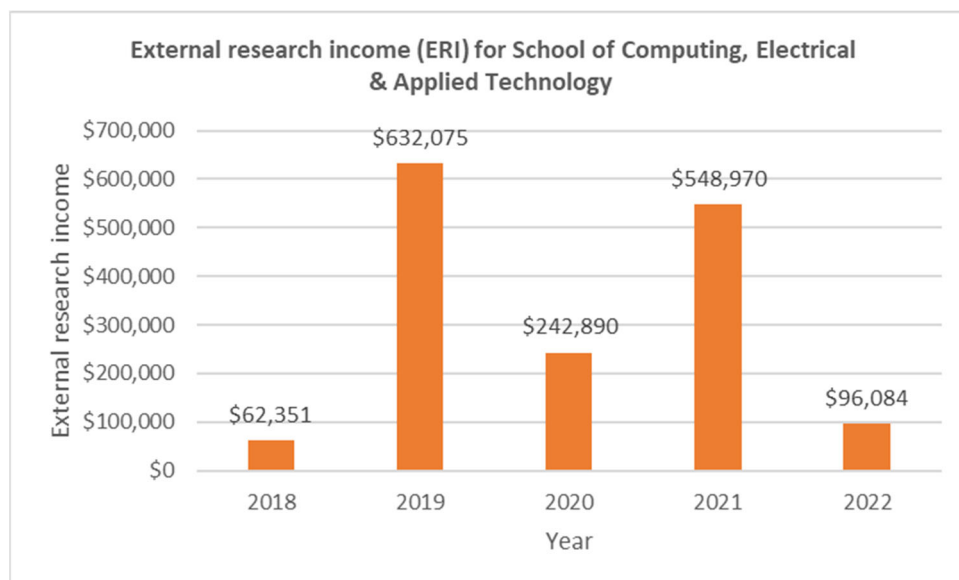


Figure 3: School of Computing, Electrical & Applied Technology External Research Income

2.1 What the school is planning for increasing research diversity

The school is increasing research diversity. The school encourages Maori and Pacific islanders to do post-graduate research. Many Maori and Pacific students have been part of teams doing research as part of their final year capstone projects. School currently, has a Pacific researcher doing his Master's degree in wireless communications.

The school has many Pacific, Maori, Chinese, Indian, Middle eastern, and students from other ethnicity doing post-graduate study that has research as an integral part of it. Although most of our other ethnicity postgraduate students are Indian and Chinese students.

The school also liaises with the International office to attract more international students.

3 SWOT analysis for research in School of Computing, Electrical and Applied Technology

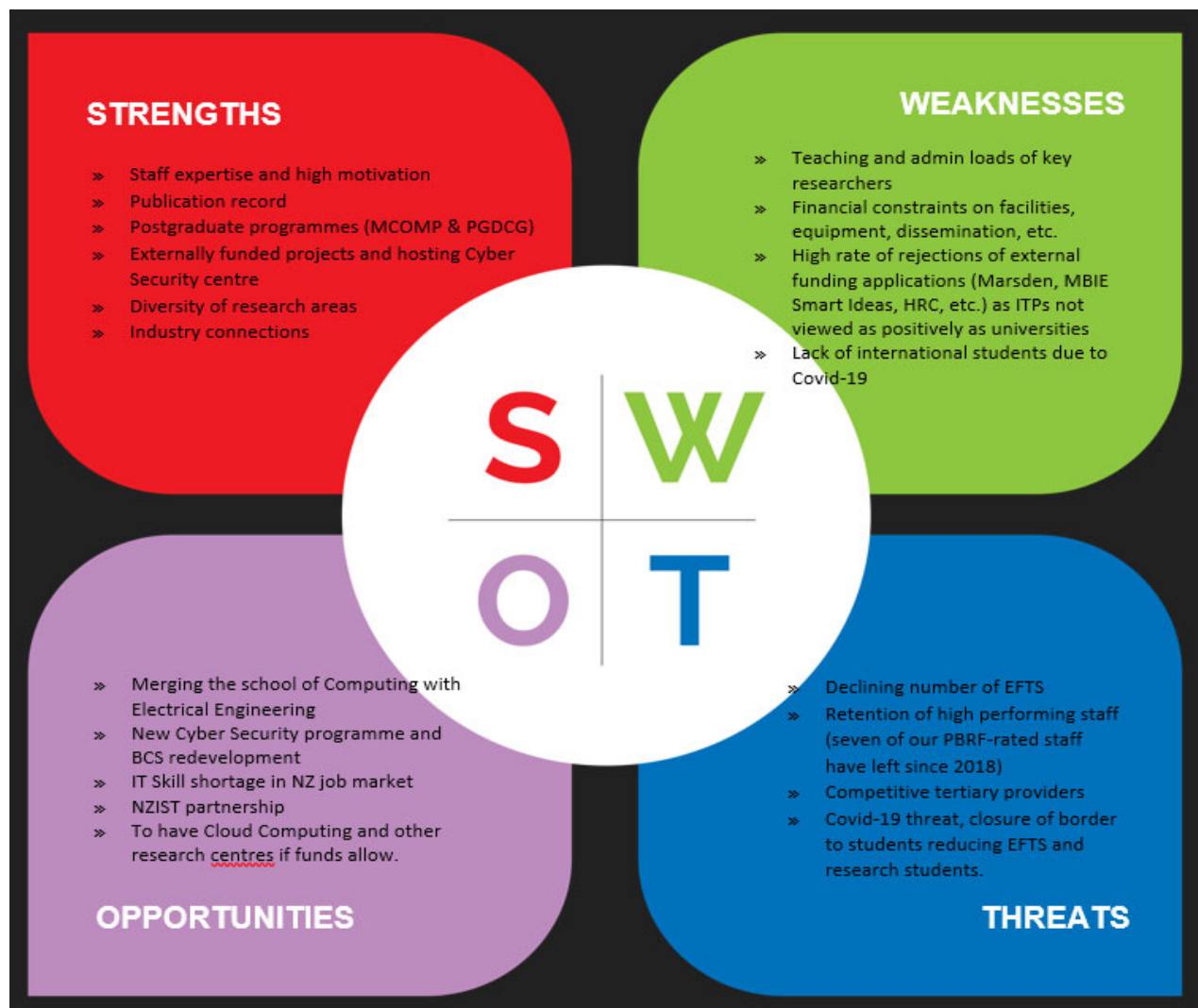


Figure 4: SWOT analysis for School of Computing, Electrical, and Applied Technology

4 4. Research Groups and projects (consider the Te Tiriti Priority One goal in the Research Strategy)

One of the key techniques for achieving goals and finding efficiencies while having fun along the way, is to work together. Unitec cannot afford to support discreet research trajectories for every individual teaching on degree programmes and this approach is equally unlikely to result in impactful research for our industries and communities.

[1] Intelligent Systems and Data Science, [2] Cyber Security and Networking, [3] Software Engineering, [4] Internet of Things (IoT) and Sensor Networks, [5] Electromagnetic Measurements and Non-Destructive Sensing, [6] Power Systems, and [7] Automotive.

The School of Computing, Electrical & Applied Technology has seven research groups (Intelligent Systems and Data Science; Cyber Security and Networking; Software Engineering; Internet of Things and Sensor Networks; Electromagnetic Measurements and Non-Destructive Sensing; Power Systems; Automotive) and hosts a research focus (Cybersecurity).

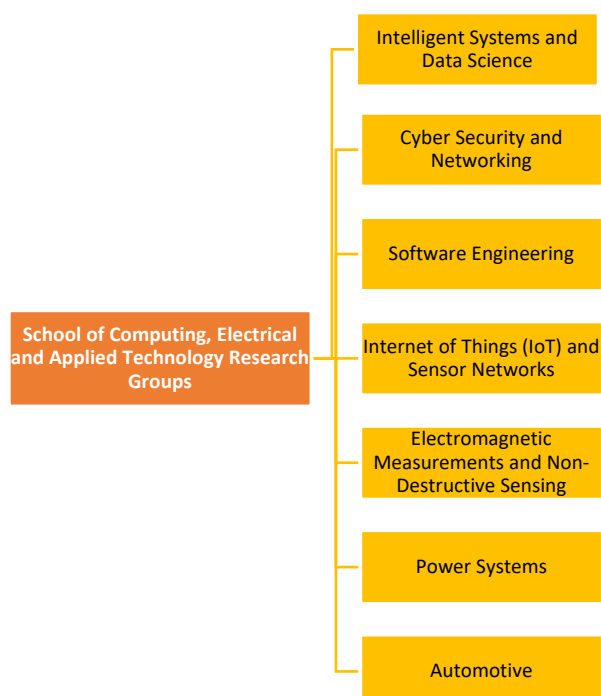


Figure 4: School of Computing, Electrical & Applied Technology seven research groups

The above research groups/centre partner with external funders and win funding/grants, which Unitec calls it External Research Income (ERI). Below are the external research partners who funded projects over the last 6 years.

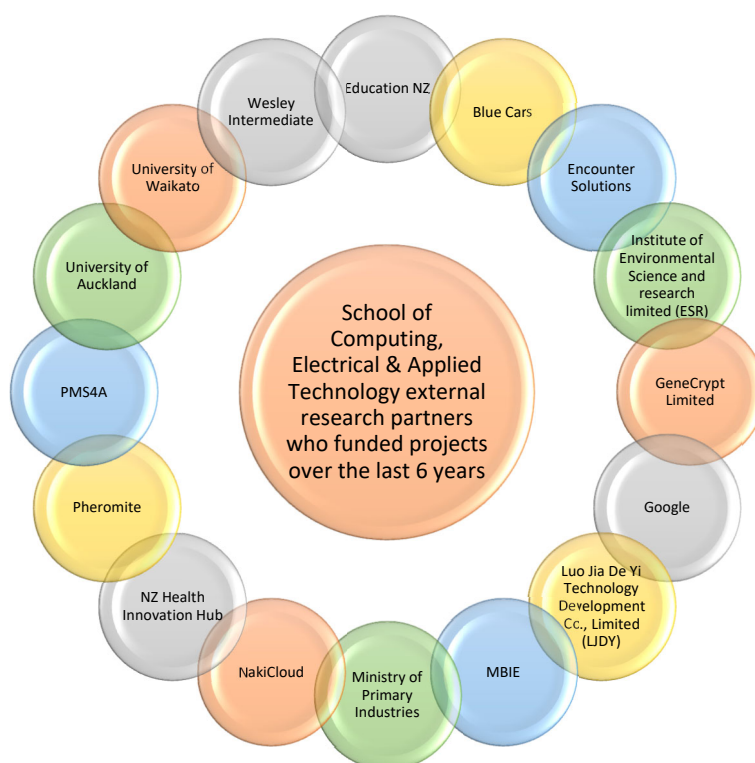


Figure 5: School of Computing, Electrical & Applied Technology external research partners who funded projects over the last 6 years

4.1 Research Group One – Internet of Things and Sensor Networks

Statement of purpose

Research in the area of Internet of Things (IoT) and Sensor Networks is directed towards:

- » Developing technologies for smart homes and elder care
- » Configuration and analysis of wireless sensor networks
- » Designing and utilising embedded systems and microprocessors
- » Exploring IoT applications in various areas from healthcare to industry and agriculture
- » Further integration of IoT research in teaching and learning activities such as curriculum/programme/course design

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u> , (Internet of Things and Sensor Networks)					
Action	Responsible	Deadline	Resources needed	Desired result	
Increase research outputs.	Research Lead, RL	Focus30/12/2023	Finance	Outputs, all staff are research active and green-lit.	
Increase joint research outputs	Research Lead, RL	Focus30/12/2023	Staff	More outputs	

Goal 2: Develop research opportunity in [Internet of Things and Sensor Networks] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>					
Action	Responsible	Deadline	Resources needed	Desired result	

Group to meet to discuss projects and funding opportunities.	Research Focus Lead, RL	1/12/2023	Finance, Staff	Staff have met, and discussed the possibilities and actions.

Goal 3: Grow industry and community connectedness, (Internet of Things and Sensor Networks)

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
The industry liaison person to discuss with industry	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Industry liaison person , discussed the possibilities, and actions.
Group to meet to discuss industry and community project opportunities. The liaison person to suggest industries	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Staff have met, and discussed the possibilities, and actions.

4.2 Research Group Two – Intelligent Systems and Data Science

Statement of purpose

Research in the area of Intelligent Systems and Data Science is directed towards:

- » Developing smart technologies using artificial intelligence and machine learning
- » Developing smart systems based on data science and big data analysis
- » Exploring wide range of artificial intelligence applications in various areas from healthcare to industry, education, business, security, etc.
- » Further integration of artificial intelligence research in teaching and learning activities such as curriculum/programme/course design.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase research outputs.	Research Focus Lead, RL	30/12/2023	Finance	Outputs, all staff are research active and green-lit.
Increase joint research outputs	Research Focus Lead, RL	30/12/2023	Staff	More outputs

Goal 2: Develop research opportunity in [Name of Research Group] Research Group

This could be to develop a project, a funding application or a studentship programme.

Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities.	Research Focus Lead, RL	1/10/2023	Finance, Staff	Staff have met, and discussed the possibilities and actions.

Goal 3: Grow industry and community connectedness

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
The industry liaison person to discuss with industry	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Industry liaison person, discussed the possibilities, and actions.
Group to meet to discuss industry and community project opportunities. The liaison person to suggest industries	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Staff have met, and discussed the possibilities, and actions.

4.3 Research Group Three – Software Engineering

Statement of purpose

Research in the area of Software Engineering is directed towards:

- » Design and development of software including mobile apps, web applications, computer games, databases, web programming, etc.
- » Human computer interaction and user interfaces
- » Utilising cloud computing/services, programming languages, and compilers
- » Further integration of software engineering research in teaching and learning activities such as curriculum/programme/course design.

2023-2024 Goals

Goal 1: Demonstrate <u>Vision Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase research outputs.	Research Focus Lead, RL	30/12/2023	Finance	Outputs, all staff are research active and green-lit.
Increase joint research outputs	Research Focus Lead, RL	30/12/2023	Staff	More outputs

Goal 2: Develop research opportunity in [Name of Research Group] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities.	Research Focus Lead, RL	1/10/2023	Finance, Staff	Staff have met, and discussed the possibilities and actions.

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
The industry liaison person to discuss with industry	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Industry liaison person, discussed the possibilities, and actions.
Group to meet to discuss industry and community project opportunities. The liaison person to suggest industries	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Staff have met, and discussed the possibilities, and actions.

4.4 Research Group Four – Cyber Security and Networking

Statement of purpose

Research in the area of Cyber Security and Networking is directed towards:

- » Malware analysis, ethical hacking, security breaches, cryptography, data resiliency and recovery
- » Architecture, testing, and management of computer networks, routers, switches for deployment of next generation networks, software defined networks, mobile communications, etc.
- » Further integration of Cyber Security and Computer Networks research in teaching and learning activities such as curriculum/programme/course design.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase research	Research Focus	30/12/2023	Finance	Outputs, all staff are

outputs.	Lead, RL			research active and green-lit.
Increase joint research outputs	Research Focus Lead, RL	30/12/2023	Staff	More outputs

Goal 2: Develop research opportunity in [Name of Research Group] Research Group

This could be to develop a project, a funding application or a studentship programme.

Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities.	Research Focus Lead, RL	1/10/2023	Finance, Staff	Staff have met, and discussed the possibilities and actions.

Goal 3: Grow industry and community connectedness

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
The industry liaison person to discuss with industry	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Industry liaison person, discussed the possibilities, and actions.
Group to meet to discuss industry and community project opportunities. The liaison person to suggest industries	Research Focus Lead, Industry liaison person, RL	1/12/2023	Staff	Staff have met, and discussed the possibilities, and actions.

4.5 Research Group Five – Automotive

Statement of purpose

Research in the area of Automotive is directed towards:

- » Assessments in Trades based vocational education (Teaching practice)
- » Estimating the rubber compound emission from tyre tread wear of motor vehicles (Sustainability / Environmental)
- » Automotive plastic waste: A case study of Nissan Leaf (Sustainability)
- » A case study of small automotive service centres in Auckland, New Zealand (Industry collaboration)
- » Further integration of Automotive research in teaching and learning activities such as curriculum/programme/course design.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase research outputs.	Research Focus Lead, RL	30/12/2023	Finance	Outputs, all staff are research active and green-lit.

Goal 2: Develop research opportunity in [Name of Research Group] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities	Research Focus Lead, RL	1/10/2023	Staff	Staff have met, and discussed the possibilities and actions.

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities	Research Focus Lead, RL	1/10/2023	Staff	Staff have met, and discussed the possibilities and actions.

4.6 Research Group Six – Electromagnetic Measurements and Non-Destructive Sensing

Statement of purpose

Research in the area of Electromagnetic Measurements and Non-Destructive Sensing is directed towards:

- » Developing intelligent sensing and measurement systems such as Intelligent light driven imaging (visible and NIR) for natural products (applications in pastoral agriculture and medicinal cannabis)
- » Structural monitoring using electromagnetic resonant structures
- » Remote monitoring (beehive monitoring)
- » Further integration of Electromagnetic Measurements and Non-Destructive Sensing research in teaching and learning activities such as curriculum/programme/course design.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase research outputs.	Research Focus Lead, RL	30/12/2023	Finance	Outputs, all staff are research active and green-lit.

Goal 2: Develop research opportunity in [Name of Research Group] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities	Research Focus Lead, RL	1/10/2023	Staff	Staff have met, and discussed the possibilities and actions.
Strengthen relationship with UoW	Research Focus Lead, RL	1/12/2023	Staff	Joint MBIE fund bid

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Investigate contract research opportunities with industry	Wayne Holmes Gregor Stienhorn	1/12/23	Staff time	New Projects scoped
Strengthen relationship with Maori owned Businesses	Wayne Holmes Gregor Stienhorn	1/12/23	Staff time	Further research projects

4.7 Research Group Seven – Power Systems

Statement of purpose

Research in the area of Power Systems is directed towards:

- » Applications of Power Electronics, Integration of Distributed Generation, and Microwave Heating and processing
- » Distribution Systems such as Protection, Automation and Control, State Estimation, Observability and Reconfiguration, Power Quality
- » Energy Management Systems, Micro-grids, Integration of Distributed Generation and Storage Systems

- » Power Systems Technologies such as Electric Machines, Transmission (Conductors, PMUs, Substations, Communication, Storage Systems, etc.), Distribution (Smart Grid Technologies, EVs, ICT, etc.)
- » Further integration of Power Systems research in teaching and learning activities such as curriculum/programme/course design.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase research outputs.	Research Focus Lead, RL	30/12/2023	Finance	Outputs, all staff are research active and green-lit.

Goal 2: Develop research opportunity in [Name of Research Group] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities	Research Focus Lead, RL	1/10/2023	Staff	Staff have met, and discussed the possibilities and actions.

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Group to meet to discuss projects and funding opportunities	Research Focus Lead, RL	1/10/2023	Staff	Staff have met, and discussed the possibilities and actions.

5 Appendix

Below are the data of the current staff members in terms of their research outputs over the last five years and their research interests.

Staff Name	Research outputs (2018-2022)	Research Interests
Anura Bakmeedeniya	4-Conference Contribution- Oral Presentation, 3-Report	Emission Treatment, Vehicle Control

Jone Tawaketini	4-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 1-Discussion/Working Paper (Published)	Educational Practices, Vehicle Service and Support
Niranjan Singh	4-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 1-Discussion/Working Paper (Published), 1-Journal Article	Educational Practices, Vehicle Dynamics
Paul Oke	2-Conference Contribution- Abstract, 1-Conference Contribution- Oral Presentation, 1-Journal Article	Control system design and analysis; System identification; Reinforcement learning control; Mechatronic system integration
Roman Kudin	2-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 1-Discussion/Working Paper (Published), 2-Report	Engineering Material, Failure Analysis
Andrew David	4-Conference Contribution- Oral Presentation 2-Conference Contribution- Paper in published Proceedings	Computer networks
Bahman Sarrafpour	9-Conference Contribution- Paper in published Proceedings, 2-Journal Article	Cyber security, AI, Computer Architecture, IoT
Eltahir Kabbar	6-Conference Contribution- Oral Presentation, 4-Conference Contribution- Paper in published Proceedings, 3-Journal Article, 1-Presentation (non-conference)	Smart government, qualitative research, Structured Equation Modelling (SEM)
Guillermo Ramirez-Prado	1-Book Chapter, 5-Conference Contribution- Oral Presentation, 4-Conference Contribution- Paper in published Proceedings, 5-Conference Contribution- Poster Presentation	Networking and security, Smart homes, Control systems
Hamid Sharifzadeh	2-Conference Contribution- Oral Presentation, 23-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 1-Discussion/Working Paper (Published), 5-Journal Article, 3-Presentation (non-conference)	Machine Learning, Digital Signal Processing (Speech and Image Processing), Embedded Operating Systems
Iman Ardekani	1-Awarded Doctoral Thesis, 1-Conference Contribution- Oral Presentation, 17-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 6-Journal Article, 1-Presentation (non-conference)	Digital Signal Processing, Statistical Optimisation, Adaptive Systems
Lei Song	3-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 2-Journal Article	Cloud, Data Analysis, Sensor networks
Maryam Erfanian	1-Conference Contribution- Oral Presentation, 4-Conference Contribution- Paper in published Proceedings	Acoustic Measurements, Databases and Data Mining, Human Computer Interactions
Masoud Shakiba	4-Conference Contribution- Oral Presentation	RFID Technology, IoT

Sachin Sen	1-Conference Contribution- Oral Presentation, 6-Conference Contribution- Paper in published Proceedings, 1-Journal Article	Computer networks
Samad Kolahi	1-Book Chapter, 2-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 2-Journal Article	Performance evaluation of networks Wireless networks Cyberattack and defences
Shiu Ram		Ergonomics, Moderation, Information Systems
Soheil Varastehpour	1-Awarded Doctoral Thesis, 1-Book Chapter, 2-Conference Contribution- Oral Presentation, 9-Conference Contribution- Paper in published Proceedings, 1-Discussion/Working Paper (Published)	Machine Learning, Image Processing
Deepinder Sidhu	5-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Discussion/Working Paper (Published)	Machine learning, Image processing, Robotics
Han (Ashley) Yan	2-Conference Contribution- Oral Presentation, 2-Conference Contribution- Poster Presentation, 2-Presentation (non-conference), 1-Report	Modelling, Energy Management Systems (Smart Homes), Integration of Distributed Generation and Storage Systems
Momen Bahadornejad	8-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 1-Journal Article, 2-Presentation (non-conference)	Integration of Distributed Generation, Electricity Market, Protection, Automation and Control, Innovative Teaching
Morgan Look	6-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 2-Conference Contribution- Poster Presentation	Instrumentation/measurement, data capture and communication, FPGA
Nigel Yee	4-Conference Contribution- Oral Presentation, 1-Design Output1-Report	Integration of Distributed Generation, Application of Digital Signal Processing, Energy Management Systems (Smart Homes)
Wayne Holmes	5-Conference Contribution- Oral Presentation, 4-Conference Contribution- Paper in published Proceedings, 2-Conference Contribution- Poster Presentation, 2-Journal Article, 1-Presentation (non-conference)	Electromagnetic and dielectric modelling, Electromagnetic sensing of natural products, Radio/microwave systems, Imaging systems, Hyperspectral imaging
Bashar Barmada	3-Conference Contribution- Oral Presentation, 6-Conference Contribution- Paper in published Proceedings, 5-Conference Contribution- Poster Presentation, 2-Journal Article	Networking, Security and IoT applications

School Research Plan 2023

School of Creative Industries - Te Kura o Ngā Mahi Auaha

‘He toi whakairo, he mana tangata.’
‘Where there is artistic excellence, there is human dignity’.

1 Introduction and current state

The School of Creative Industries/Te Kura O Ngā Mahi Auaha was formed in 2016 to merge the already-established Departments of Design & Contemporary Arts and Performing & Screen Arts. The School offers a suite of programmes from levels 5 to 9; the Bachelor of Design and Contemporary Arts (BDCA: with pathways in Design, Visual Art and Digital Media), the Bachelor of Performing and Screen Arts (BPSA: with pathways in Acting, Dance and Screen) and the Master of Creative Practice Suite (MCP, PGDCP, PGCCP). Researchers belong to one or more of the following research clusters: [1] Design & Contemporary Arts, [2] Performing & Screen Arts and [3] Creativity & Culture.

The School promotes research focusing on applied practice within the creative arts (acting, dance, screen and contemporary art) and design (graphic, product and digital), contributing to and enriching cultural life in Aotearoa, New Zealand. The School is committed to supporting and developing creative research relevant to Māori and Pacific peoples. It is well-networked in the local region, being the only tertiary provider currently involved with the Creative West Precinct development in Auckland. In partnership with Te Pūkenga’s network of creative providers, the School advances research into creative success to better define vocational pathways in the sector.

Number of degree teaching staff	23
Total research FTE allocated	3.15
Current Research Traffic Light rating (Percentage of green-lit staff)	96%
PBRF history (Number of PBRF-rated staff in 2018)	12

Staff in the School are research active across the full spectrum of levels, with beginning and expert researchers across the various disciplines. Twelve staff achieved funded ratings in the 2018 PBRF round (1A, 3Bs, 8Cs). Research across the School aims to:

- *Generate new thinking and practice through local, national, and international collaboration to move our creative industries disciplines forward;*
- *Challenge pre-existing notions of value through creative research;*
- *Achieve impact through innovation and excellence.*

The Unitec Research Strategy 2020 – 2024 prioritises research that is aligned with Te Tiriti o Waitangi.

Goal One: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes and governance.

1.1 Describe how School Research is aligned with Te Tiriti o Waitangi?

The School actively engages with Te Tiriti o Waitangi through teaching and research. Staff complete parity badges as part of their professional development, including courses on “Living Te Noho Kotahitanga” and “Te Tīpare - Embedding Mātauranga Māori” and through this learn to embed Māori knowledge and tikanga within programmes. Staff actively seek out and take up opportunities to support

Māori research, for example, collaborating with Ngā Kaitiaki and Ngāti Awa ki Te Awa o Te Atua (descendants of Wairaka) on a public art trail highlighting Te Wai Unuroa o Wairaka as a culturally significant ecological feature of the campus. <https://artsdiary.co.nz/167/3846a.html>

1.2 What the School is planning in the area of research to achieve the goal and key projects (leadership roles, recruitment, prioritisation, opportunity and partnership development)?

The School employs Māori MCP students and graduates in undergraduate teaching as well as postgraduate supervision, building on a tuakana-teina model for teaching and learning. School staff are currently engaged in inter- and trans- disciplinary research in partnership with Ngā Wai a Te Tūi and MAIA staff, and have mentored a Māori MCP graduate and MAIA staff member to successfully apply for the Early Career Project Fund in 2022. In these ways, the School contributes to developing Māori academics and researchers in the Creative Industries. School staff actively partner with organisations such as Awhina Mai Tatou Katoa Trust, Lifewise and Auckland City Council in applied research addressing homelessness among Māori in the CBD. In 2022, the School also partnered with Ngā Kaitiaki and Ngāti Awa ki Te Awa o Te Atua on Te Pātaka Art Trail.

1.3 Research Informed Teaching and Learning

Most of the research in the School takes the form of practice-based or practice-led¹ outputs; staff research occurs primarily as an outcome of engagement in advanced practice within the fields of performance, dance and acting, screen and visual arts and crafts and graphic, product and digital design. Advanced *practice-as-research* is embedded throughout the teaching and learning approaches and curricula of the School, which is mostly at degree level. Examples range from the inclusion of current industry approaches and standards in project courses, technical and skill-based application in studio classes, practice-led research skills, and teaching and supporting students to develop and carry out their own practice-based/led research projects at degree and postgraduate levels.

Teaching staff train and mentor students to achieve creative practice based/led outputs in the form of public facing and industry partnered course projects (ICIB 7002, 7012, 8005, 8007, 9003 and BPSA 7223, 7213, 7214, 7304). The efficacy of research informed teaching in the School is reviewed during programme evaluation and planning and is also reflected in student, graduate and alumni success in industry placements and awards in the creative industries in Tāmaki Makaurau and beyond.

Examples of research informed teaching and learning in the School include;

- Photography lecturers Allan McDonald and Yvonne Shaw work with BCE (ICIB 7002, 7012) and MCP students (ICIB 8005, 9003) to realise contributions to the Auckland Festival of Photography annually;
- Contemporary arts and design staff mentor students (ICIB 7002, 7012, 8005, 8007, 9003) in the development of projects that go on to win industry awards (Eden Art Schools Award, Molly Morpeth Canaday Award, Wallace Art Award, ECC Craft / Design Award, NZ Arts Foundation Award) and gallery representation, e.g. at the Auckland Art Gallery, Two Rooms, Trish Clark Gallery and Föenander Gallery;
- Performing and screen arts staff mentor students (PASA 7223, 7213, 7214, 7304) in the development of projects which go on to win professional awards, residencies, and placements in the Auckland Fringe Festival, Tempo Dance Festival, Pop Up Globe Theatre, Auckland Theatre Company, Aloalii and Friends, Tautai Pacific Art Trust, ATEED and Power Rangers, New Zealand International Film Festival, Atamira Dance Company, New Zealand Dance Company, Dance Aotearoa NZ, etc.

Examples of where research-active staff incorporate outputs into teaching include;

- » Leon Tan: ICIB 5201, DCAD 6202, ICIB 8071 and 8072 – decolonizing art, craft and visual culture education.
- » Becca Wood: PASA 5903 and 6903, ICIB 8071 and 8072 social and site-based choreography – choreoauratics.

1.4 Industry Funded and Partnered Research

Research-active staff have extensive industry links, some of which manifest as industry funded research projects. Industry funding in the creative industries typically takes the form of commissioned, curated and funded practice-based/led outputs, where the costs of realising and publicising a performance or exhibition are paid for, partially or fully, by the commissioning organisation. Researchers in this field are typically curated or commissioned on the basis of a national or international track record of advanced practice, and it is this advanced practice that informs applied (project-based) education in the creative arts and design.

Examples of industry funded and partnered research from 2022;

Ferguson, G. (Curator). (2022). Stories in the Landscape. Public art exhibition. The Sculpture Park, Waitakaruru Arboretum, Hamilton, 12 November to 26 February.

Gorman, K. (artist). (2022). Room Tones. Solo exhibition. Curated by Jonathan Smart, Jonathan Smart Gallery.

Hung, W.T. (Artist), & Diva Productions. (Video producer). (2022). Art Stories In Aotearoa: Street art and design. [Film/Video]. Auckland, New Zealand: Diva Productions / Radio New Zealand.

Hung, B. (Curator), Renata, H. (Curator), Tan, L. (Curator), White, T. (Curator), Wood, B. (Curator), & Woodruffe, P. (Curator). (2022). Te Pātaka Art Trail. Te Pūkenga Unitec Campus: Auckland, New Zealand, 27 October to 16 December.

Hung, W.T. (2022). South Sea Spray roll call. Invercargill, New Zealand: South Sea Spray Trust.

Hung, W.T. (artist). (2022). Group exhibition. Curated by Milarky, Resident Gallery, New Plymouth, 22 July 2022-22 August 2022.

McDonald, A. (artist). (2022). Walls to Live Beside, Rooms to Own. Group exhibition. Curated by Natasha Conland, Auckland Art Gallery, Auckland.

McDonald, A. (artist). (2022). Material World. Curated by Anna Miles, Anna Miles Gallery, Auckland, New Zealand, 23.4.22 – 21.5.22 21.

Smith, E. (2022). Wednesday, 19 January 2022. Ngā Uruora / The Groves of Life. In Cristina Barton, Anna Miles (Eds.), *Delirium Crossing* 1 ed. (pp. 89). Published by Te Pātaka Toi Adam Art Gallery at Te Herenga Waka— Victoria University of Wellington; Anna Miles Gallery, Auckland; and Ramp Gallery at Wintec's School of Media Arts, Waikato Institute of Technology, Hamilton.

Smith, E., & Roberts, K. (2022). Firmament. Group exhibition. Curated by Reece King, Auckland.

Wood, B. (Director), Mullen, M. (Director), & Patuwai, T. (Advisor). (2022). Unearthing Frequencies: Stone Stories. Site-based – Stonefield, Maungarei, Tamaki Makaurau, New Zealand, 16-18 September, Auckland Fringe Festival.

Woodruffe, P. (2022). Poptones. Curated by J. Brown, E. Foenander, Foenander Galleries, Auckland, New Zealand.

School of Creative Industries research is informed and supported by industry and professional networks including educators and creative practitioners in the field as well as professional organisations and venues (e.g. Creative West Precinct, Women in Film and Television, Dance Aotearoa NZ, The NZ Writers Guild. The Actors Guild, Tautai, NZ Institute of Architects, Design Assembly, Designers Institute of NZ, Auckland Art Gallery, Wellington Art Gallery, WeCreate, CreaTer, CUMULUS, Routledge, Taylor &

Francis, Public Art Dialogue). The School aspires to become a hub of creative arts and design leadership and research excellence in Tāmaki Makaurau.

1.5 Programme Development and Review

Programme development and review are informed by the interconnection of advanced practice, research and teaching in the School. Specifically, this means that due consideration is given to the scaffolding of studio/project courses across levels 5-7 (undergraduate) and levels 8-9 (postgraduate). This approach supports students in developing their practice towards public-facing exhibitions, performances and screenings and design projects with live briefs and clients, in a staggered process that introduces complexity and raises the stakes incrementally. Student progression into postgraduate research is facilitated through the inclusion of different pathways at level 7, one orienting students towards employment and the other towards postgraduate research.

2 School of Creative Industries Goals and KPIs

There are six KPIs for research at Unitec/ Te Whare Wānanga O Wairaka:

1. **Quality Assured (QA) Research Outputs** – recognised research outputs that have been through a peer review process or have been specifically commissioned. This is presented as a ratio of counts of the number of QA outputs to FTE of degree teaching staff.
2. **Research Productivity** – measure of staff teaching on degree programmes who meet the agreed levels of research in the research traffic light. This is measured as the ratio research active staff to the total number of staff on a degree programme.
3. **External Research Income (ERI)** – income received from external sources for research purposes calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars.
4. **Industry Funded Projects** – research and enterprise projects Unitec is receiving funding for, where the services Unitec is providing is applied contract research or consultancy from all funders excluding any governmental contestable funding sources. This is measured as a count of the number of projects.
5. **Student Integrated Research** – a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). This is measured as a count of the number of research outputs.
6. **Rangahau Māori Productivity** – productivity in this context would be aggregated as – QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori rangahau professional development achievements and rangahau Māori research stories in the media.

The School of Creative Industries has the following current goals:

- **Quality Assured Research Outputs:** Maintaining the quality assured research outputs to at least 1.5 outputs per research active FTE¹.
- **Research Productivity:** Work towards maintaining green traffic light status with 75% or more staff who meet the agreed levels of research in the research traffic light.

¹ Research active FTE – staff FTE involved in teaching and/or supervising degree programmes.

- **External Research Income:** The School will strive to lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects.
- **Industry Funded Projects:** Maintain industry-funded projects at 1-3 projects per year
- **Student Integrated Research:** The School will strive to develop research Student Integrated Research projects in line with the definition of this KPI.
- **Rangahau Māori Productivity:** The School will strive to increase Māori Rangahau Productivity in line with the definition of this KPI.

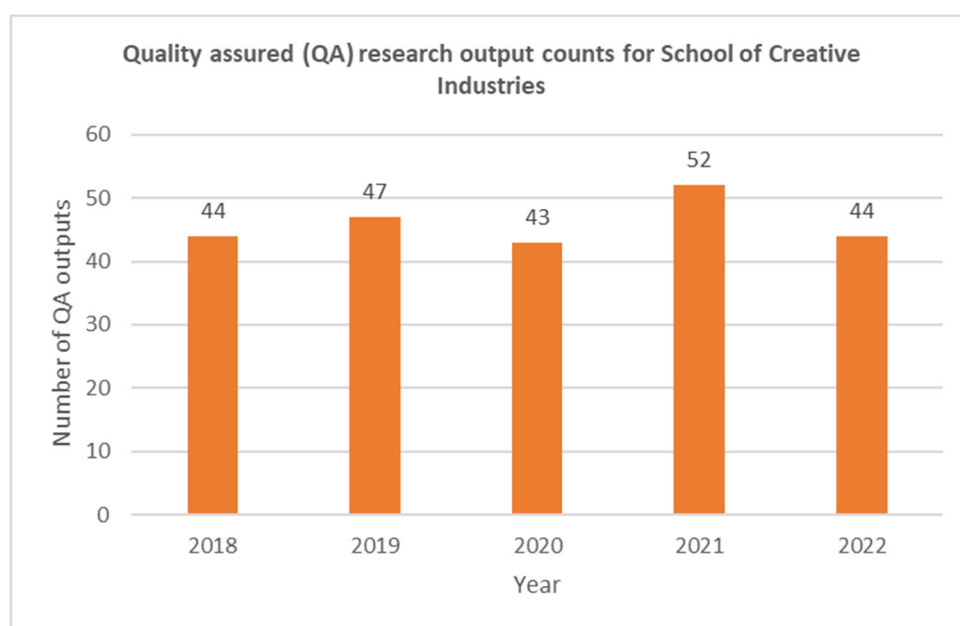


Figure 1: School of Creative Industries Quality Assured Research Outputs

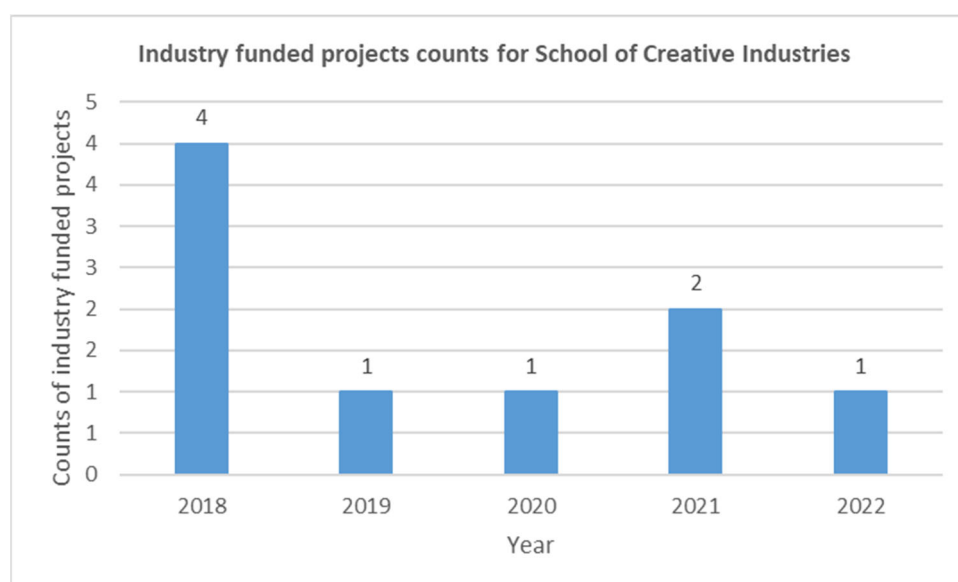


Figure 2: School of Creative Industries Industry Funded Projects

Note: There was a slight change in the definition of industry funded projects in 2018 to include public sector and where the services Unitec is providing is applied contract research or consultancy. Prior to this only funding from private sector was included. Thus the 2018 figures reported are comparatively higher than that of 2016 and 2017.

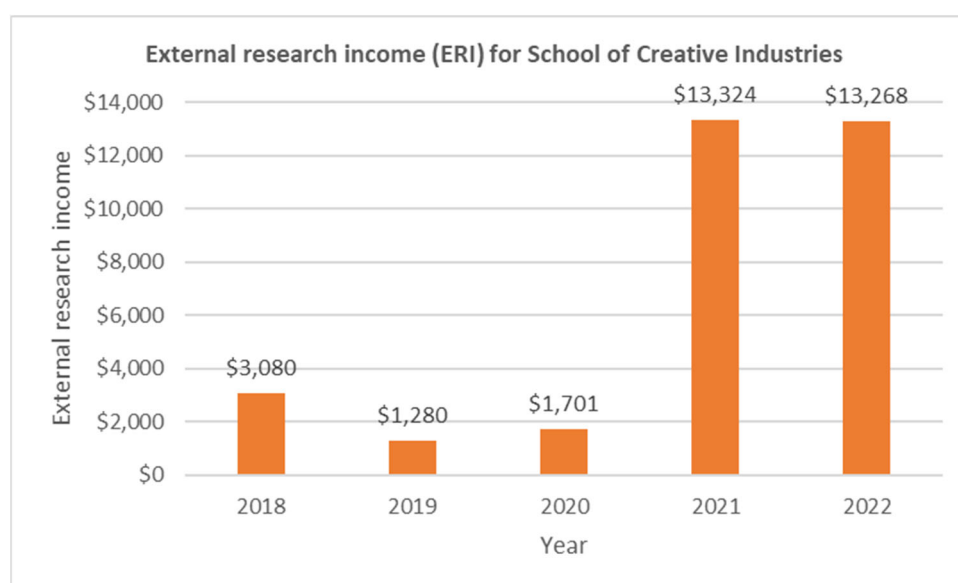


Figure 3: School of Creative Industries External Research Income

2.1 What the School is planning for increasing research diversity?

The School plans for increasing research diversity in a number of ways. Firstly, this is done by supporting Māori and Pacific students to progress into postgraduate research. The Master of Creative Practice programme has mentored and advanced the practice-led research of numerous graduates. For e.g., a Pacific MCP graduate recently secured a position at the Auckland Museum as Manager of the Pacific Collection while a Māori MCP graduate received the Art Foundation's Springboard Award (2022).

Secondly, increasing research diversity is achieved by partnering on collaborative research with diverse communities and organisations as detailed earlier in the plan.

Thirdly, the School supports a growing International postgraduate community, including students from Russia, China, Philippines and Iran, whose MCP projects contribute to increasing research diversity.

3 SWOT analysis for research in School of Creative Industries



Figure 4: SWOT analysis for School of Creative Industries

4 Research Groups and projects (consider the Te Tiriti Priority One goal in the Research Strategy)

One of the key techniques for achieving goals and finding efficiencies while having fun along the way, is to work together. Unitec cannot afford to support discreet research trajectories for every individual teaching on degree programmes and this approach is equally unlikely to result in impactful research for our industries and communities.

The School of Creative Industries has three research groups [1] Design and Contemporary Arts and [2] Performing and Screen Arts, and a third group that captures interdisciplinary projects across Creative Industries [3] Creativity and Culture.

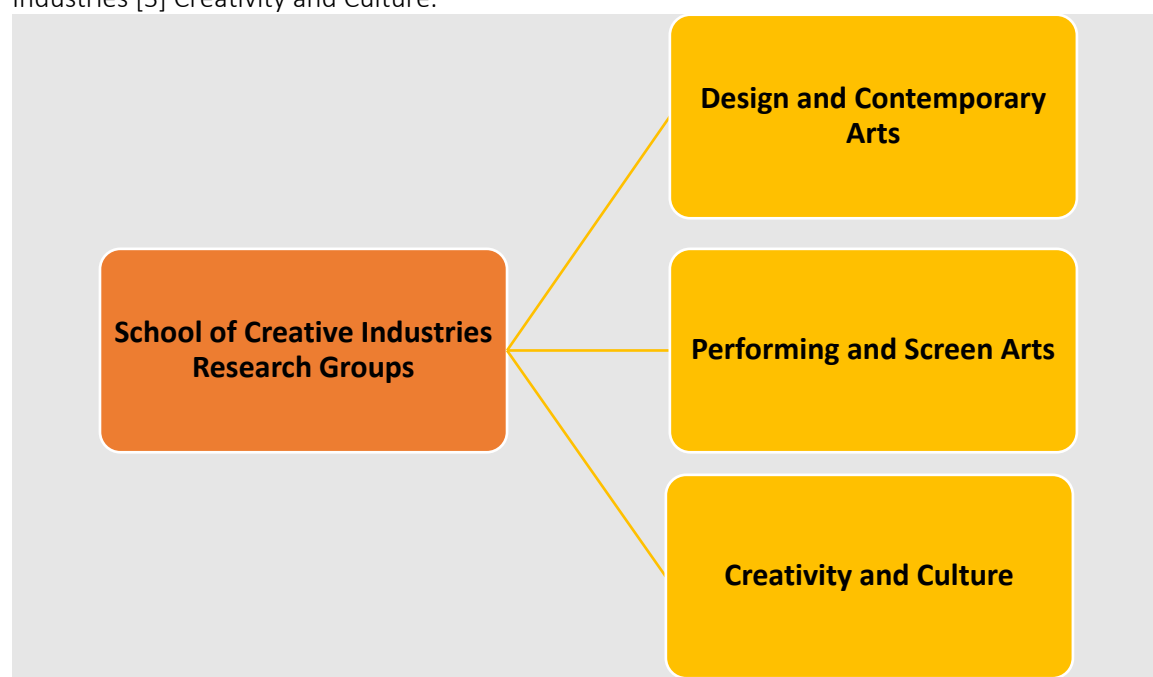


Figure 5: School of Creative Industries research groups

The above research groups partner with external funders and win funding/grants, which Unitec calls External Research Income (ERI). Below are the external research partners who funded projects over the last 5 years.

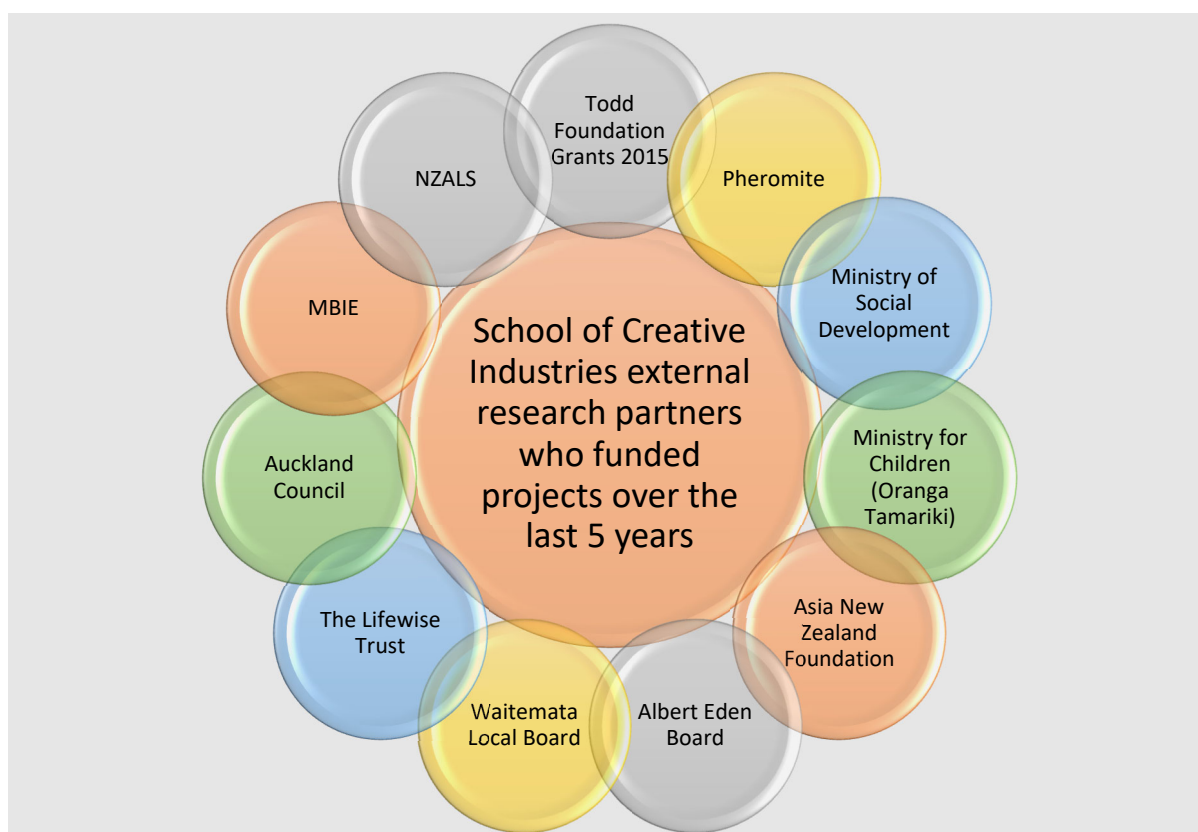


Figure 6: School of Creative Industries external research partners who funded projects over the last 5 years

4.1 Research Group One – Design and Contemporary Arts

Statement of purpose

Research in the area of Design and Contemporary Arts is directed towards:

- » Understanding the changing nature of creative arts and design and its impacts on society;
- » Developing or contributing to new methods and modes of production, distribution and reception in the creative arts and design;
- » Applying artistic and design processes to create impact by solving community or commercial problems;
- » Promoting Te Tiriti alignment through the integration of indigenous (Māori) values and methodologies specific to the South Pacific region in creative practice-based research;
- » Contributing to and enriching cultural life and recreation in Aotearoa, New Zealand.

2022 Goals:

Goal 3: Grow industry and community connectedness - Design and Contemporary Arts Research Group				
<i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Support industry / community responsive research	RL and HoS	Dec 2022	School research dissemination fund	Support a range of relevant projects – Achieved and commended by MCP Suite Monitor

2023-2024 Goals

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Support industry/community responsive research	RLs and HoS	May 2024	RDF and other funds as relevant	Impactful research outputs achieved

4.2 Research Group Two – Performing and Screen Arts

Statement of purpose

Research in the area of Performing Arts and Screen Arts is directed towards:

- » Develop meaningful and collaborative relationships both within the performing and screen arts community, creative industries community and across other sectors;
- » Contribute to the alignment of research and learning through new methods and modes of creating and delivery in performance and screen arts.
- » Promoting critical commentary, radical intervention and leadership in arts education as vital to contemporary society in Aotearoa, New Zealand and beyond;
- » Innovation for the sustainability of performing and screen arts; in community, health and welfare, commercial and professional projects;
- » Expanding awareness and value of creative arts practices through impactful research;
- » Fostering alignment with Te Tiriti and indigenous values and methodologies specific to the South Pacific region in creative practice-led research;
- » Contributing to and enriching cultural life and recreation in Aotearoa, New Zealand
- » Developing student integrated research.

2022 Goals:

Goal 3: Grow industry and community connectedness - Performing and Screen Arts Research Group <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Support industry / community responsive research	HoS/RL	December 2022	School research dissemination fund	Support a range of relevant projects Achieved and commended by MCP Suite Monitor

2023-2024 Goals

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Support industry/community responsive research	RLs and HoS	May 2024	RDF and other funds as relevant	Impactful research outputs achieved

4.3 Research Group Three - Creativity, Culture and Collaboration

Statement of purpose

Research across the School of Creative Industries is directed towards:

- » Building meaningful and collaborative partnerships across the Creative Industries and other sectors;
- » Applying creative and cultural methodologies towards community, health and welfare, commercial and sustainable development goals;
- » Promoting Te Tiriti alignment, cultural diversity and inclusiveness.

2022 Goals:

Goal 2: Develop research opportunity in [Creative Praxis and Culture] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Support collaborative and/or interdisciplinary research	Research Leaders and interested staff	Dec 2022	RL time allocation; contestable funding support	Secure internal/external research funding for collaborative project (public art trail) – Successfully delivered on externally funded art trail (noted earlier in plan)

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Engage in collaborative research with Ngā Kaitiaki	RL and interested staff	May 2024	Time allocation and funding	Apply for funding for placemaking and storytelling research relating to the campus'

				culturally significant ecological features

Goal 2: Develop research opportunity in [Name of Research Group] Research Group

This could be to develop a project, a funding application or a studentship programme.

Action	Responsible	Deadline	Resources needed	Desired result
Support research in the interdisciplinary space of creativity and culture	RLs	May 2024	Time allocation and funding	Apply for funding to build on the success of Te Pātaka Art Trail

5 Appendix

5.1 Appendix – Staff Interests

Below are the data of the current staff members in terms of Principal Investigator (PI) for external grants, PI for Industry funded projects and research outputs over the last five years.

Staff Name	Research outputs (2018-2022)	Research Interests
Alexandra Whitham	4-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 2-Other, 5-Performance, 1-Presentation (non-conference)	Mātauranga Māori and bicultural approaches to teaching & learning, karanga, pedagogy, voice & acting training .
Allan McDonald	1-Edited Book/Volume, 2-Exhibition - Curatorial Exercise, 4-Exhibition – Group, 2-Exhibition - Solo	Photography and typologies of natural and built forms in New Zealand.
Becca Wood	2-Book Chapter, 1-Conference Contribution- Abstract, 5-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Design Output, 1-Edited Book/Volume, 2-Exhibition - Curatorial Exercise, 2-Journal Article, 3-Performance	Choreography, social-choreography, somatic practice, participatory performance, site-based performance, practice-led research, performance art and interdisciplinary practice.
Bobby (Wing-Tai) Hung	12-Artifact/ Object/ Craftwork, 1-Awarded Doctoral Thesis, 1-Book Authored, 1-Book Chapter, 2-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Discussion/Working Paper (Published), 7-Exhibition - Curatorial Exercise, 9-Exhibition – Group, 2-Film/video, 2-Journal Article, 1-Other, 3-Presentation (non-conference)	Education, pedagogy, visual arts, visual culture, knowledge, street art, graffiti, illustration, public art, arts based research and methodologies.
Cris DeGroot	4-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 2-Design Output, 1-Presentation (non-conference)	Product design, industrial design, business-focussed design, creativity, creative entrepreneurship.

Daniel (Dan) Wagner	1-Book Chapter, 2-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings	Re-framing screen education for a constantly evolving digital landscape; curricular change.
Elizabeth Hawthorne	1-Conference Contribution- Oral Presentation, 7-Film/video1-Performance	Acting for film and theatre, performance.
Emma Smith	1-Book Chapter, 1-Conference Contribution- Oral Presentation, 13-Exhibition – Group, 1- Exhibition - Solo1-Journal Article	Painting, visual art, contemporary art.
Gina Ferguson	3-Artifact/ Object/ Craftwork, 2-Conference Contribution- Oral Presentation, 1-Exhibition - Curatorial Exercise, 7-Exhibition - Group	Sculpture, craft, installation practice, public art.
Jonty Valentine	3-Book Chapter, 1-Design Output, 1-Exhibition - Group	Graphic design, publication design, design history.
Katie Burton	2-Conference Contribution- Oral Presentation, 5-Performance	Choreography, collaborative performance making, feminist performance
Larry Justice		Screen production
Leon Tan	4-Book Chapter, 3-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 1-Conference Contribution- Poster Presentation, 1-Design Output, 1-Edited Book/Volume, 1-Essay - Published (Unitec only), 1-Exhibition - Curatorial Exercise, 1-Journal Article, 1-Other, 1-Presentation (non-conference)	Public art, participatory art, participatory design, art history, cultural studies, interdisciplinary collaboration, psychoanalysis, psychotherapy, mental health, urbanism.
Michael Miller	2-Conference Contribution- Oral Presentation, 1-Film/video	Directing, scriptwriting, creative, editing, compositing, education.
Paul Woodruffe	3-Artifact/ Object/ Craftwork, 1-Book Authored, 4-Conference Contribution- Oral Presentation, 3-Design Output, 4-Exhibition - Curatorial Exercise6-Exhibition – Group, 3- Exhibition – Solo, 2-Journal Article, 1-Other, 1- Performance, 1-Presentation (non-conference)	Visual art, public art, design for social innovation.
Paul Young	1-Composition, 1-Conference Contribution- Oral Presentation, 2-Exhibition - Curatorial Exercise, 1-Exhibition – Group, 1-Other, 2- Performance	Contemporary dance and contemporary dance technique, choreography, performance.
Pedro Ilgenfritz	1-Book Chapter, 1-Conference Contribution- Abstract, 6-Conference Contribution- Oral Presentation, 2-Journal Article, 2-Performance	Theatre, performance, mask, movement for actors, acting, physical theatre, theatre pedagogy, improvisation, dramaturgy.
Richard Fahey	1-Essay - Published (Unitec only)3-Exhibition - Curatorial Exercise11-Other1-Presentation (non-conference)	New Zealand craft, ceramics, visual art, visual art education, curating.
Peeti Lamwilai	1-Awarded Masters Thesis, 1-Conference Contribution- Poster Presentation, 1- Film/video	Graphic Design; Digital Design; Motion Graphics;

		Animation and Visual Effects
Kristy Gorman	1-Exhibition – Group, 2-Exhibition - Solo	Gorman’s work focuses on abstract form and investigates how luminosity and space can influence perception. I am interested in how painting might embody stillness while simultaneously invoking notions of the transitory
Will Wallace	1-Conference Contribution- Oral Presentation, 7-Film/video	Acting, performance for screen
Tamsin Russell	1-Exhibition - Curatorial Exercise, 1-Performance	Choreography, Contemporary dance performance, practice-led research, Interdisciplinary practice, performance.
Vanessa Byrnes	8-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 1-Exhibition – Group, 3-Film/video, 1-Journal Article, 1-Other, 2-Performance, 2-Presentation (non-conference)	Director studies; contemporary performance discourse; performances ecologies; acting; directing; production practice; creative practice; New Zealand arts practice.

¹ See Candy and Edmonds (2018) for definitions of practice based and practice led research:
https://www.mitpressjournals.org/doi/pdf/10.1162/LEON_a_01471

School Research Plan

- School of Environmental & Animal Sciences

1 Introduction and current state

The School of School of Environmental & Animal Sciences was formed in 2008 as part of the Faculty of Social and Health Sciences. The School offers three degrees: Bachelor of Applied Science (with majors in Biodiversity Management and Animal Management and Welfare), Bachelor of Veterinary Nursing and Master of Applied Sciences (Biodiversity Management). Researchers are grouped in four research groups: Biodiversity, Applied Ecology and Taxonomy, Animal Behaviour and Welfare, Veterinary Nursing and the Applied Molecular Solutions Research Centre.

Number of degree teaching staff (BASCI, BVN and MASCI)	21
Total research FTE allocated	3.3
Research Traffic Light rating (Percentage of green lit staff) BASCI 2023	82%
Research Traffic Light rating (Percentage of green lit staff) BVN 2023	60%
Research Traffic Light rating (Percentage of green lit staff) MASCI 2023	100%
Current Research Traffic Light rating (Percentage of green lit staff)	71%
PBRF history (Number of PBRF rated staff in 2018)	12

Staff in the School are highly research-active. Twelve staff achieved ratings in the latest (2018) PBRF round (1A, 4 Bs, 4 Cs and 3 C(NE)s), and the Bachelor of Applied Science and the Bachelor of Veterinary Nursing are green-lit in the Unitec Research Productivity Traffic Light.

1.1 Describe how School Research is aligned with Te Tiriti o Waitangi?

The Unitec Research Strategy 2020 – 2024 states: Priority 1 is that Research that is aligned with Te Tiriti o Waitangi and Goal One is: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes and governance.

Many EAS staff are associated with Māori communities engaged in protection and restoration of te taiao, the natural world. School researchers actively seek out and take up opportunities to support Māori research and researchers in order to uphold commitments under Te Tiriti. All research groups in the School have the goal of fostering the integration of indigenous values and methodologies specific to the South Pacific region in creative practice research.

The appointment of a Mātauranga Māori champion staff member to EAS is still underway.

1.1 Research Informed Teaching and Learning

Research is embedded within teaching and learning approaches and the curriculum, particularly at the degree level. Examples range from the inclusion of recently published research in taught content, teaching students practical research skills, helping students to develop a research-based mindset (critical and reflective thinking, ethics), including student involvement in lecturer and stakeholder/industry-led research, and student supporting to develop and carry out their own research projects. The success or otherwise of these activities is reviewed at the completion of every degree course in a moderation process which feeds into Course and Programme Evaluation and Planning Reports (CEPs and PEPs).

Examples of where research-active staff incorporate research outcomes into teaching include;

- » Peter de Lange: *NSCI6735 Concepts in biodiversity* – plant taxonomy;
- » Glenn Aguilar: *NSCI7736 Applied GIS* – climate change modelling;

- » Diane Fraser: NSCI6746 *Environmental risk management* – invasive species spread in NZ
- » Laura Harvey: NSCI 7101 *Global Issues in Animal Welfare Science* – compassion fatigue
- » Lauren Prior: NSCI5712 *Introduction to veterinary clinic practice* – vet nursing environment;
- » Mel Galbraith: NSCI7104 *Restoration ecology* – socio-ecology.

Research is frequently a staff-student collaboration, particularly through the 30-credit level 7 research course (NSCI7731 *Negotiated research*), which is a core compulsory course for both the Bachelor of Applied Science and Bachelor of Veterinary Nursing. Staff/student co-publishing may result from this collaboration; for example (staff in **bold**, students in **blue**):

2023

- » **Baling M**, **McKenzie DJM**, **Scott RK**, Chisholm HT, **van Vugt LH**, **de Lange PJ** (accepted). Observations of avifauna on Rēkohu / Wharekauri / Chatham Island, Chatham Islands group, in February 2023. *Perspectives in Biodiversity*.
- » **Briden KA**, **Adams NJ**, **Cameron KE**. (2023). Hierarchical structure and feeding behaviours of free-range hens (*Gallus gallus domesticus*). *International Journal of Comparative Psychology*, 36.
- » **de Lange PJ**, Blanchon DJ, Marshall AJ, **Schmid LMH**. (2023). *Lepra erythrella* (Pertusariaceae) – a new addition to the lichenized mycobiota of the Aotearoa / New Zealand archipelago. *Ukrainian Botanical Journal* 80(1): 94–97. <https://doi.org/10.15407/ukrbotj80.01.094>
- » **de Lange PJ**, **Schmid LMH**. (2023). *Lithothelium australe* Aptroot et H.Mayrhofer (Pyrenulaceae) rediscovered on the Chatham Islands. *Trilepidea* 227: 6-9.
- » **Fraser DL**, **Alach JM**, **Adams NJ**, **Aguilar GD**. (2023). Day-time roost patterns of new and previously translocated North Island brown kiwi (*Apteryx mantelli*). *Diversity* 15(2):190. <https://doi.org/10.3390/d15020190>

2022

- » **de Lange PJ**, Marshall AJ, **Schmid LMH**, Graham S. (2022). The biota and geology of Ngārango Otainui: A mixed indigenous / naturalised vegetation association of the Māngere Inlet, Manukau Harbour. *Perspectives in Biosecurity* 7. pp. 5–33. <https://doi.org/10.34074/pibs.00702>
- » **de Lange PJ**, **Schmid LMH**. (2022). New combinations in *Pentapogon* R.Br. for Aotearoa / New Zealand taxa earlier placed in *Deyeuxia* Clarion ex **P.Beauv.** (Poaceae). *Ukrainian Botanical Journal*, 79(2): 73–76. <https://doi.org/10.15407/ukrbotj79.02.073>
- » **Sadler, H.**, **Harvey, L. C.**, & **Prior, L.** (2022). Identifying the prevalence and implications of bullying in the Aotearoa New Zealand veterinary nursing industry. *Perspectives in Animal Health and Welfare*, 1 (1), 5-18. doi:<https://doi.org/10.34074/piahw.001102>

2021

- » **Beetham L**, **Cameron KE**, **Harvey LC**. (2021). Compassion fatigue, compassion satisfaction and burnout during a pandemic. *The Veterinary Nurse* 12(9): 426-443. <https://doi:10.12968/vetn.2021.12.9.436>
- » **Da Silva J**, **Prior L**. (2021). Availability and utilisation of a range of anaesthetic monitoring devices by veterinary nurses in New Zealand. Poster presented at MIT-Unitec Research Symposium. Online, December 2021.
- » **Dyson N**, **Fraser D**, **Page N**, **Thorne J**, Parsons T, Zangger C. (2021). The knowledge, behaviour and motivations of people walking dogs on Te Henga / Bethells Beach. Presentation at MIT-Unitec Research Symposium. Online, December 2021.
- » **Fajardo W**, **Naden, K**, van Winkel, D, **Baling M**. (2021). *Diversity of endoparasites in exotic herpetofauna*. Presentation at Society for Research on Amphibians and Reptiles in New Zealand conference, Auckland. Online, February 2021.
- » **Page A**, **Gear R**. (2021). The current involvement, desire for involvement, self-assessed knowledge and competence of veterinary nurses in the care of diabetic patients in New Zealand. Poster presented at MIT-Unitec Research Symposium. Online, December 2021.
- » Prasad M, **Schmid LMH**, Marshall AJ, Blanchon DJ, Renner MAM, Baba Y, Padamsee M, **de Lange PJ**. (2022). Ecological communities of Aotearoa / New Zealand species threatened by myrtle rust (*Austropuccinia psidii* (G. Winter) Beenken): The flora and mycobiota of the endemic genus *Lophomyrtus* Burret. *Perspectives in Biosecurity* 7. pp. 34–70. <https://doi.org/10.34074/pibs.00703>

- » Schmid L, Large M, Galbraith M, de Lange P. (2021). Observation of western honeybee (*Apis mellifera*) foraging urediniospores from myrtle-rust infected maire tawake (*Syzygium maire*), Ōwairaka/Mt Albert, Tāmaki Makaurau/Auckland, New Zealand. *Perspectives in Biosecurity* 6: 1–7.

Research-active staff have extensive industry links, some of which involve externally-funded research projects. Results of research collaborations with external industry partners and stakeholders are frequently incorporated into teaching; e.g.:

- » NSCI7736 *Applied GIS* – remote sensing; partner Reconnecting Northland.
- » NSCI7104 *Restoration ecology* – citizen science; partner Supporters of Tiritiri Matangi (Inc.)
- » NSCI7107 *Biosecurity* – biological control of invasive plants; partner Auckland Council.
- » NSCI7106 *Applied Animal Behaviour Science* – testing sparrow repellent using behaviour (partner KEY Industries).

2 School of Environmental & Animal Sciences Goals and KPIs

There are six KPIs for research:

1. **Quality Assured (QA) Research Outputs** - recognised research outputs that have been through a peer review process or have been specifically commissioned. This is presented as a ratio of counts of the number of QA outputs to FTE of degree teaching staff.
2. **Research Productivity** - measure of staff teaching on degree programmes who meet the agreed levels of research in the research traffic light. This is measured as the ratio research active staff to the total number of staff on a degree programme.
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5. **Student Integrated Research** - a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). This is measured as a count of the number of research outputs.
6. **Rangahau Māori Productivity** - productivity in this context would be aggregated as - QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori rangahau professional development achievements and rangahau Māori research stories in the media.

The School of Environmental & Animal Sciences has the following current goals:

- **Quality Assured Research Outputs:** Maintaining the quality assured research outputs to at least 1.5 output per research active FTE¹.
- **Research Productivity:** Work towards maintaining green traffic light status with 75% or more staff who meet the agreed levels of research in the research traffic light.
- **External Research Income:** The school will strive to lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects.

¹ Research active FTE – staff FTE involved in teaching and/or supervising degree programmes.

- **Industry Funded Projects:** Maintain industry-funded projects at 20-25 projects per year
- **Student Integrated Research:** The school will strive to develop research Student Negotiated Research projects in line with the definition of this KPI.
- Increase the annual number of peer-reviewed journal articles to 25 by 2023 (School/discipline-specific goal).
- Increase the number of EAS staff who have published peer-reviewed journal articles to 20 by 2023 (School/discipline-specific goal).

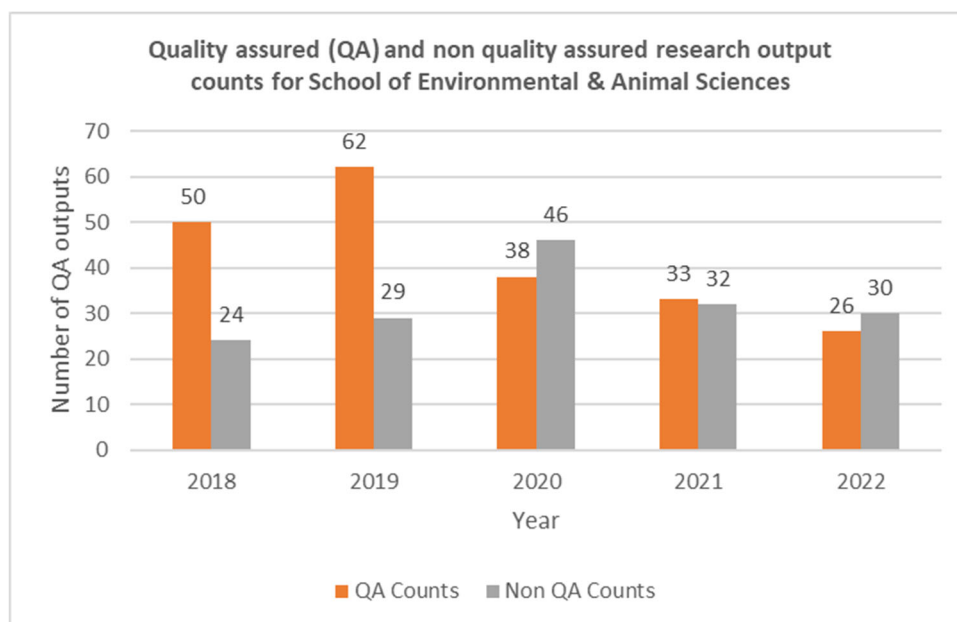


Figure 1: School of Environmental & Animal Sciences research outputs

Note: The 2020-22 levels reflect the impact of Covid-19, particularly the loss of research time and access to field research, and the cancellation of conferences.

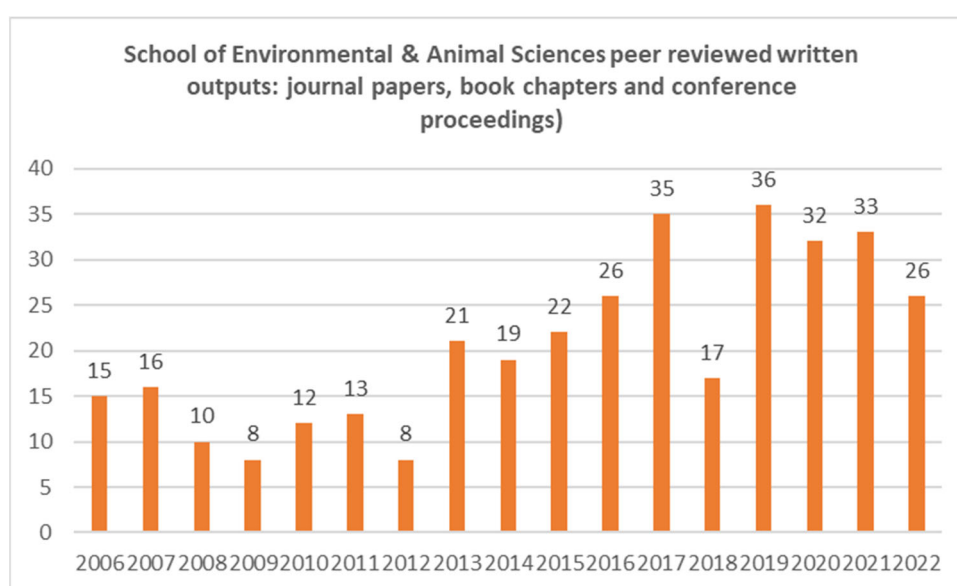


Figure 2: School of Environmental & Animal Sciences peer reviewed outputs

Note: Peer reviewed journal articles, conference proceedings and book chapters are included here as a discipline-specific internal measure of research productivity for EAS researchers. There was a peak in output in 2017 due to pre-PBRF publishing activity, and overlap between the departure of two highly-productive researchers (Lefort and Boyer) and the arrival of two more highly productive researchers (Veale and de Lange). The 2020-22 levels reflect the impact of Covid-19 restrictions. The general target for EAS is to publish 20-25 peer-reviewed journal articles per year.

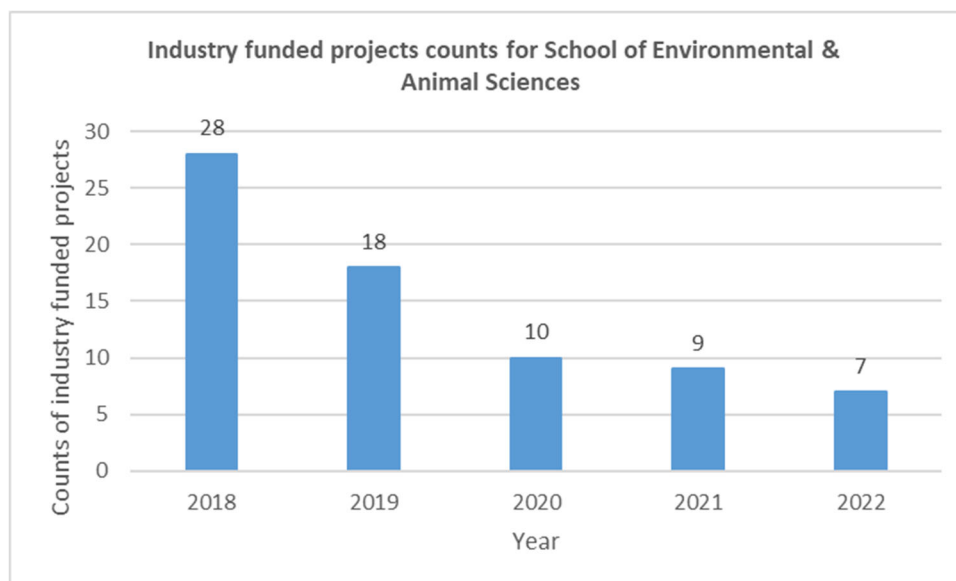


Figure 2: School of Environmental & Animal Sciences industry funded projects

Note: There was a slight change in the definition of industry funded projects in 2018 to include public sector and where the services Unitec is providing is applied contract research or consultancy. Prior to this only funding from private sector was included. Thus the 2018 figures reported are comparatively higher than that of 2016 and 2017. The 2020-22 levels reflect the impact of Covid-19 restrictions.

External Research Income (ERI) - income received from external sources for research purposes calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars.

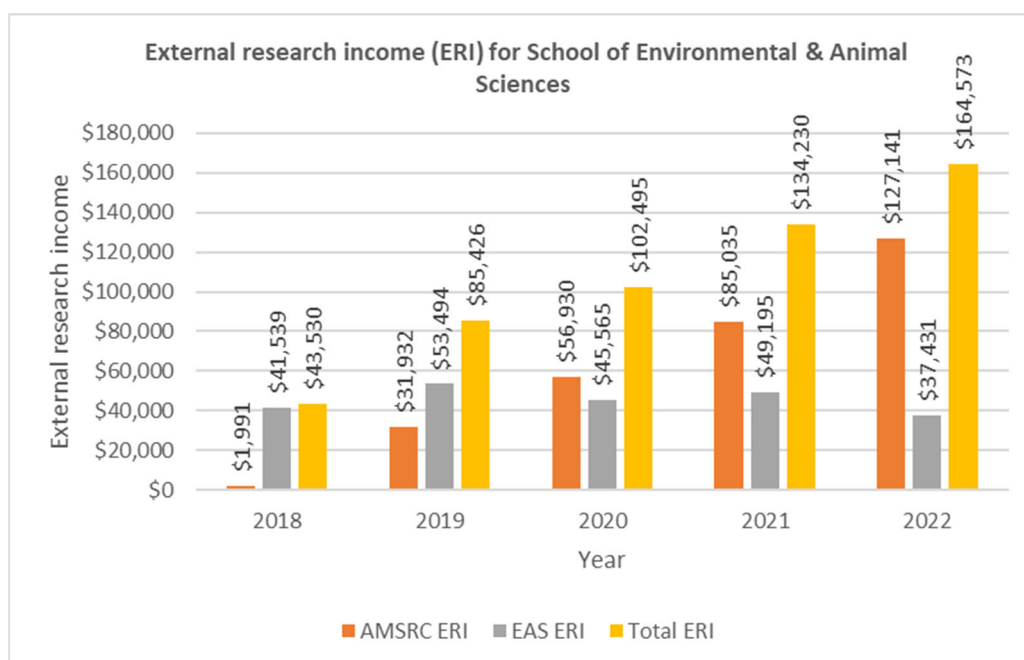


Figure 3: School of Environmental & Animal Sciences external research income

Note: The increase in funding 2019-2021 is due to staff in the School successfully winning external funding.

1.2 What the school is planning for increasing research diversity?

- Appointment of research active Mātauranga Māori expert to EAS staff, available to support/advise fellow EAS researchers
- Increase/ongoing support for students in research courses
- 3x ePress journals
- Support of ECR - mentoring / formal journal club for VN staff
- Scholarships available for postgraduate students
- Continued relationship and connection of work or research of VN in Tonga
- Increased engagement with industry stakeholders that require research partnerships (we have a number of zoos that we're starting to partner with to provide research outputs)

2 SWOT analysis for research in School of Environmental and Animal Sciences

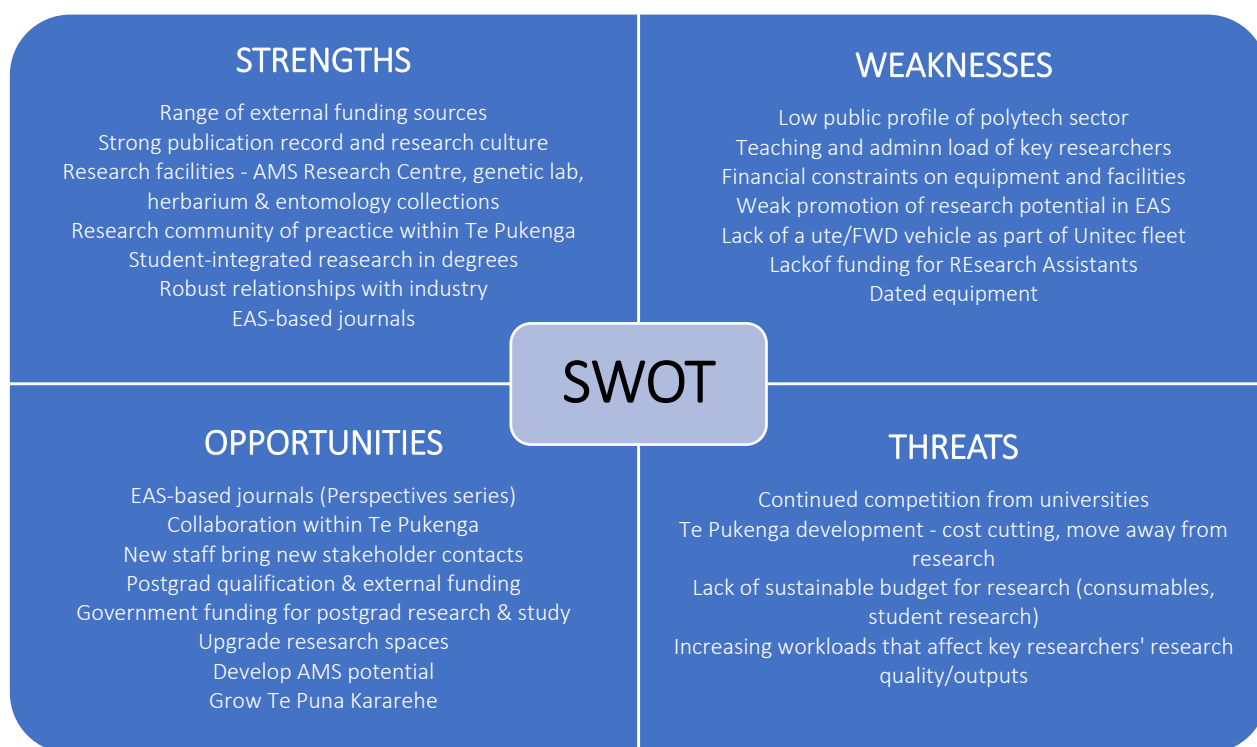


Figure 4: SWOT analysis for research in School of Environmental and Animal Sciences

3 Research Groups and projects

One of the key techniques for achieving goals and finding efficiencies while having fun along the way, is to work together. Unitec cannot afford to support discreet research trajectories for every individual teaching on degree programmes and this approach is equally unlikely to result in impactful research for our industries and communities.

The School of Environmental and Animal Sciences has four research groups (Animal Behaviour and Welfare; Biodiversity, Applied Ecology and Taxonomy; Veterinary Nursing; Figure 6) and hosts a research centre (Applied Molecular Solutions Research Centre). In addition, a number of EAS staff are members of the Environmental Solutions Research Centre (hosted by the School of Building Construction).

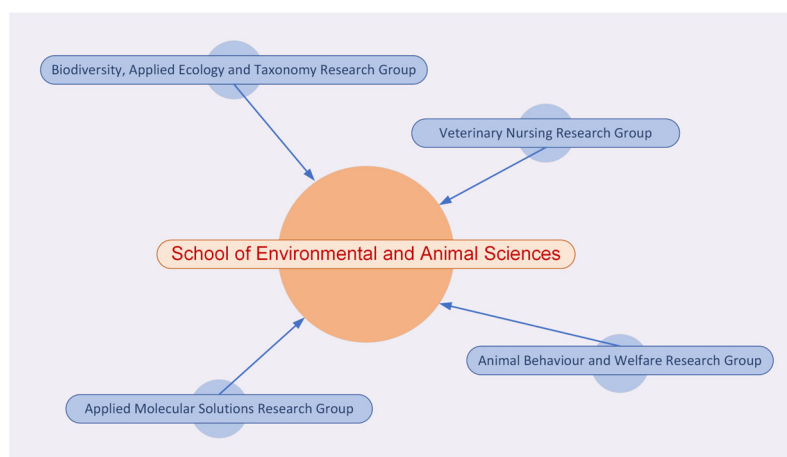


Figure 5: School of Environmental & Animal Sciences four research groups

The research groups/centre partner with external funders and win funding/grants (External Research Income, ERI) (Figures 7 & 8).

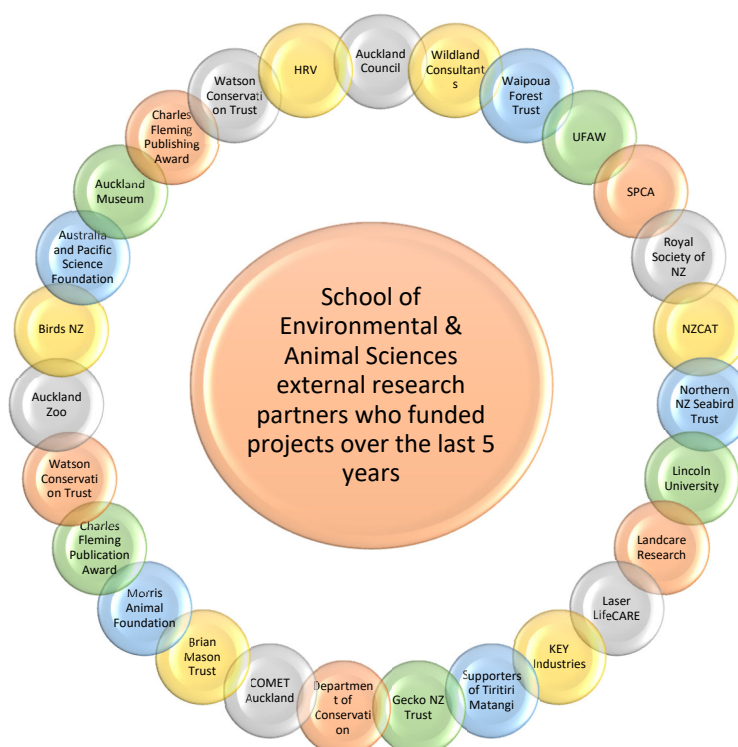


Figure 6: EAS external research partners who funded projects over the last 5 years

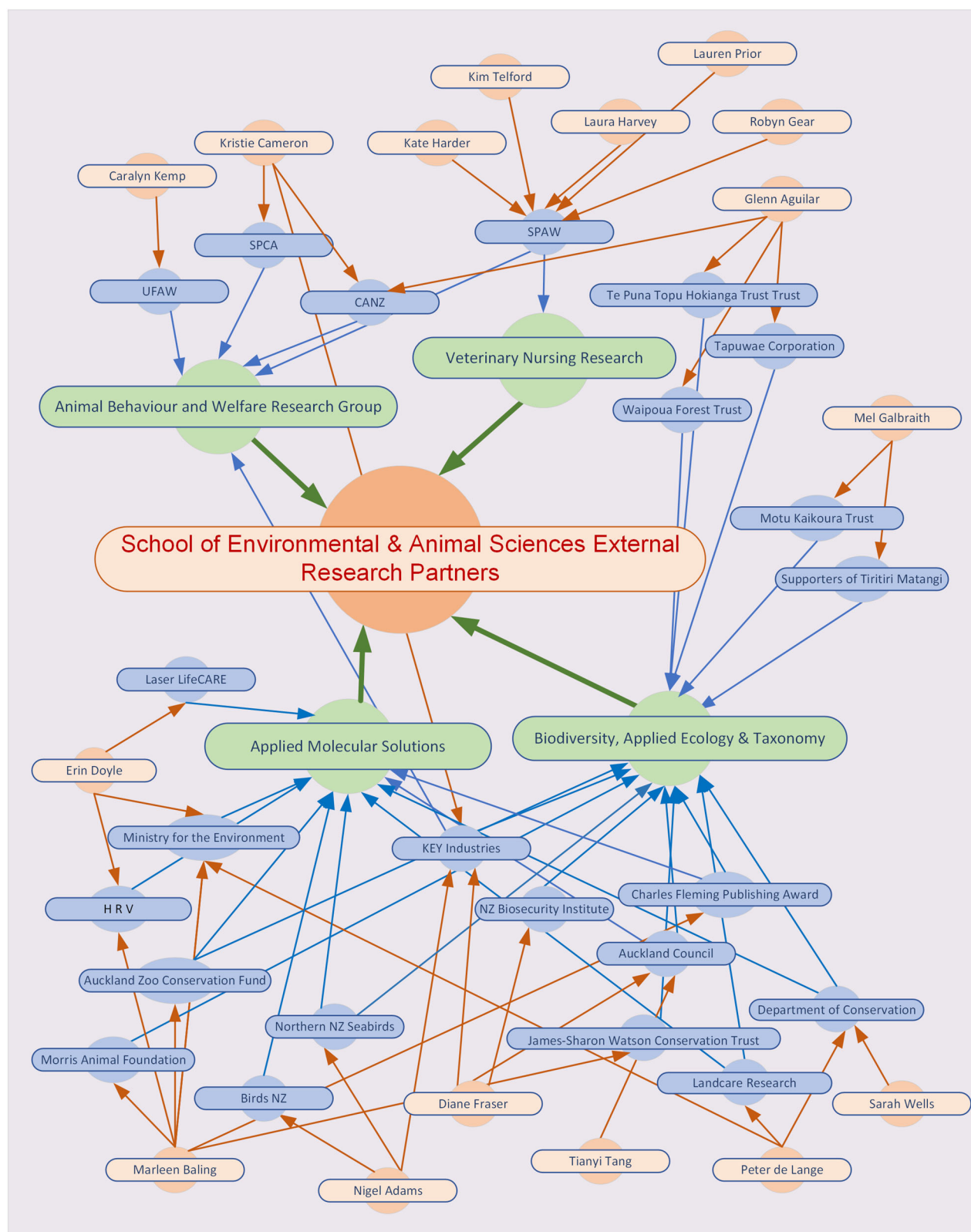


Figure 7: School of Environmental & Animal Sciences external research partners who funded projects over the last 3 years, along with the four research groups and lead researchers.

3.2 Research Group One - Animal Behaviour and Welfare

Statement of purpose

Animal Behaviour and Welfare research is directed towards:

- » understanding the interactions between humans and animals and their consequences;
- » developing physiological and behavioural measures of the welfare status of animals;
- » application of these measures to evaluate current and new husbandry and management systems;
- » developing an understanding of the natural ecological, welfare and behavioural requirements of captive wild and domestic animals to improve the management of captive animals in zoo and other animal care and holding facilities.

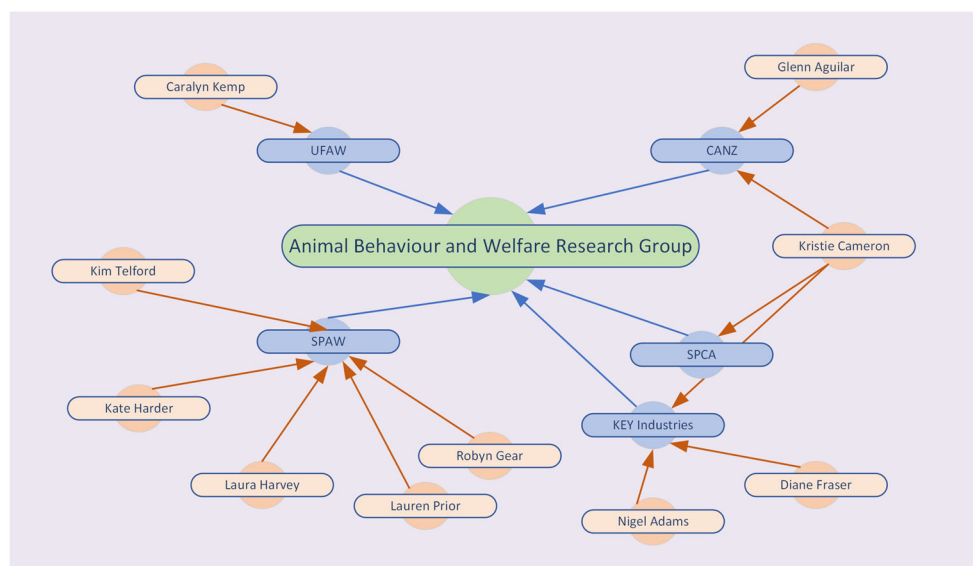


Figure 8: Animal Behaviour and Welfare research group externally funded research partners and lead researchers.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase staff confidence in Mātauranga Māori	All kaimahi	Ongoing	Specific PD	Increased confidence in staff with regard to Mātauranga Māori
Partner with community groups, iwi/hapu/imi groups or NGO's to develop list of research projects.	EASRC, Māori Champion, AB&W staff	Ongoing	EAS staff research time, to develop strategy and consultation on priority research. Student volunteers/ internships to conduct short-term research.	Long-term relationships are maintained between EAS and key iwi/hapū/imi/NGO groups (potential for MOUs?). Increased number of students working key research projects.

Goal 2: Develop research opportunity in Animal Behaviour and Welfare Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Seek Research Fellow in this area to mentor and partner	Research Leader, AB&W staff	Ongoing	Application to Tūāpapa Rangahau.	External researcher(s) to support AB&W staff.
Re-initiate staff research support group	Research Leader and EASRC	Ongoing	None	Meetings and mentoring arrangements as needed.
Support staff to attend writing retreats	Research Leader and EASRC	Ongoing	Tūāpapa Rangahau support	Participating staff to submit journal articles.
Publications in ePress journals from EAS staff and external authors. <i>Perspectives in Animal Health and Welfare</i>	<i>Perspectives in Animal Health and Welfare:</i> Laura Harvey	Ongoing	EAS staff time to work with manuscripts, and coordination of associate editors, website update. Time for ePress editor, copy editor and layout.	Yearly issue for journal. Publications from EAS staff and students, and staff from associated ITPs (e.g., Auckland Zoo, SPCA).

Goal 3: Grow industry and community connectedness <i>This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.</i>				
Action	Responsible	Deadline	Resources needed	Desired result
Identify possible sources of external funding	Research Leader, APM, AB&W staff	Ongoing	Tūāpapa Rangahau support (Brenda Massey).	Maintenance of database of external funding options.
AB&W staff to identify projects which could apply for external funding	Research Leader, AB&W staff	Ongoing	Tūāpapa Rangahau support (Brenda Massey).	Funding for project start in 2024

3.3 Research Group Two – Biodiversity, Applied Ecology and Taxonomy

Statement of purpose

Biodiversity, Applied Ecology and Taxonomy research is directed towards:

- » contributing to the whakapapa and taxonomy of indigenous biota;
- » understanding the interaction between biota and the environment;
- » understanding the impact of anthropogenic change on indigenous biota, particularly with respect to habitat change, ecosystem degradation, and biosecurity;
- » application of research to inform current management approaches.

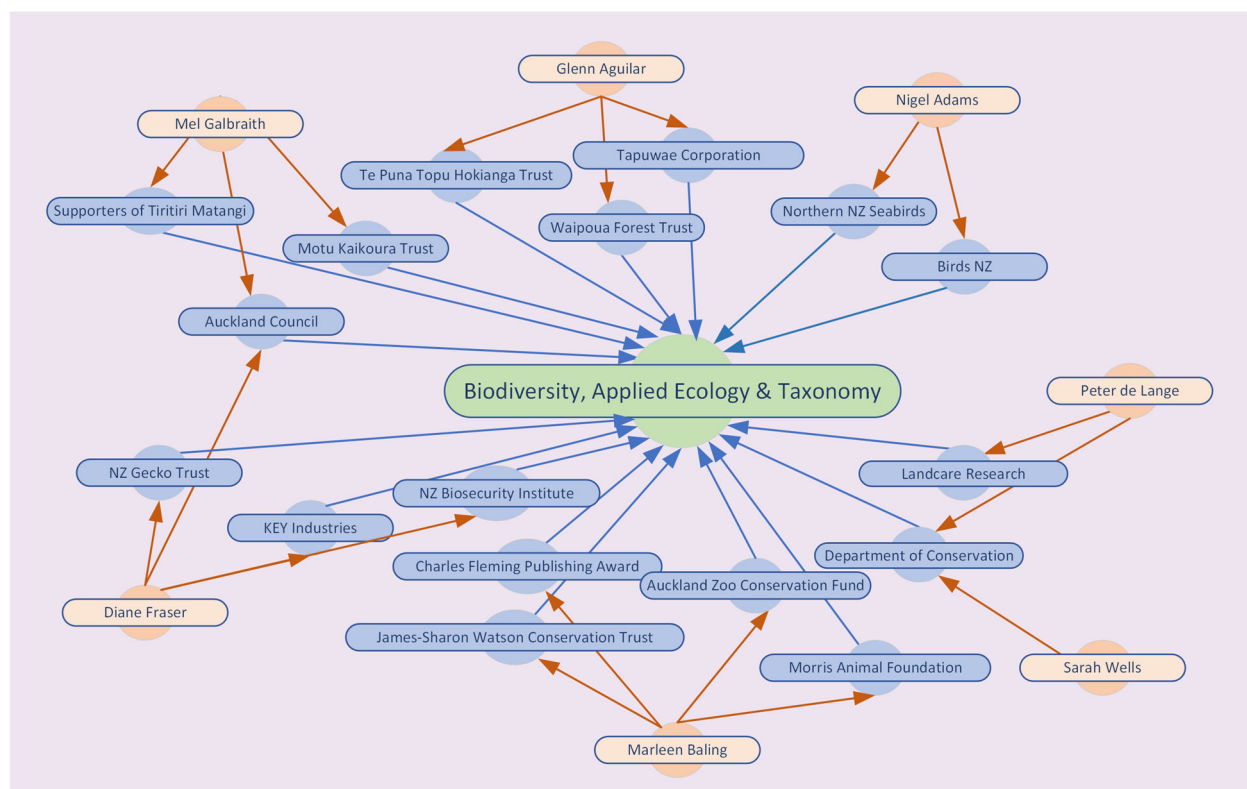


Figure 9: Biodiversity, Applied Ecology and Taxonomy research group externally funded research partners and lead researchers

Note: This group's externally funded partners and/or researcher overlap with the other research groups as seen in Figure 8.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Develop contestable fund for 1–2 undergrad studentships for third year Māori or Moriori students.	Research Leader, EASRC and Māori Champion?	Ongoing	Yearly research fund from Tūāpapa Rangahau as contestable fund for EAS staff to support third year studentships.	Increased interest from students from Māori background to continue to postgraduate level. Increase peer-review publication under student-associated projects.
Partner with community groups,	EASRC, Māori Champion and	Ongoing	EAS staff research time, to develop strategy and	Long-term relationships are maintained between EAS and

iwi/hapū/imi groups or NGO's to develop list of research projects.	Peter de Lange (e.g., Chatham Is?)		consultation on priority research. Student volunteers/ internships to conduct short-term research. Postgraduate students, to conduct research projects.	key iwi/hapū/imi groups (potential for MOUs?). Increased number of students working key research projects.

Goal 2: Develop research opportunity in Biodiversity, Applied Ecology and Taxonomy Research Group.

Action	Responsible	Deadline	Resources needed	Desired result
Provide resources for small studies associated with student research (NSCI7731 Negotiated Research) to publish.	Research Leader and NSCI7731 course coordinator	Ongoing	Yearly research fund from Tūāpapa Rangahau as contestable fund for small student-associated projects (via supervisors).	Increased peer-reviewed publication of student-associated projects. Small pilot studies that were funded will provide enough data for EAS staff to apply for external funding for a larger, related project.
Update and upgrade the EAS Research Room	Research leader and Research Group Leader	Ongoing	EAS staff time, to plan set up and use of the room (e.g., animal behaviour or ecology experiments, housing of animals for research) FM resources, to ensure that the facility is adequate for captive or indoor research purposes (e.g., automated lights, temperature-controlled room, sink and water source, no incoming pests).	Good quality research space for indoor or captive experiments. Publications of good quality indoor or captive research.
Develop contestable fund for 2–4 studentships for EAS staff.	Research Leader and EASRC?	Ongoing	Yearly research fund from Tūāpapa Rangahau as contestable fund for EAS staff to support third year studentships.	Increased peer-review publication for student-associated projects. Technical support for EAS staff to conduct their projects. Increased exposure for undergrad students to research to encourage studying at postgraduate level.
Encourage EAS staff to publish in a peer-reviewed journal or present their research in a scientific conference.	Research Leader and Research Group Leader	Ongoing	Research dissemination funding	Increased publications by EAS staff in good quality journals (e.g., high impact factor). Increased exposure of Te Pukenga and their staff in conference on national and international stage.
Support for postgraduate student	xx	Ongoing	Yearly funding for research projects for all postgraduate	Increased capacity for students to conduct their research.

research and dissemination.			students Contestable fund for conference travel for students.	Increased number of students studying at postgraduate level. Increased exposure of students to professional networks at conferences.
Publications in ePress journals from EAS staff and external authors. <i>Perspectives in Biosecurity</i> <i>Perspectives in Biodiversity</i>	<i>Perspectives in Biosecurity</i> : Mel Galbraith and Dan Blanchon <i>Perspectives in Biodiversity</i> : Peter de Lange and Marleen Baling	Ongoing	EAS staff time to work with manuscripts, and coordination of associate editors, website update. Time for ePress editor, copy editor and layout.	Yearly issues for each journal. Publications from EAS staff and students, and staff from associated ITPs (e.g., Auckland Zoo, Auckland Councils).

Goal 3: Grow industry and community connectedness

Action	Responsible	Deadline	Resources needed	Desired result
Upgrade and update the animal collections room.	Mel Galbraith and Tamara Takimoana Everiss	Ongoing	EAS staff time, to ensure collections room are good quality to hold the collections and bring in more collections. Student volunteer/ interns or summer studentships, to provide help in sorting and organising collections.	Good quality animal collections that can be used for research including partnerships with community (e.g., citizen science and bioblitz) or industry (e.g. Auckland Council, MPI).
Partner with DOC, Auckland Council, consulting companies and NGO's to develop list of research projects.	Research Leader, EASRC	Ongoing	EAS staff research time, to develop strategy and consultation with ITP on priority research. Student volunteers/ internships to conduct short-term research. Postgraduate students, to conduct research projects.	Long-term relationships are maintained between EAS and ITPs (potential for MOUs between EAS and some ITPs?). Increased number of students working with ITPs on research projects. Increased number of peer-reviewed publications with ITPs.
Yearly postgraduate seminar day	MASCI APM and MASCI project coordinator	Yearly	EAS staff time for planning, coordinating and running the seminar day. Postgrad student time to support planning and running the seminar day. Additional costs for food or additional resources as host.	Relationship maintenance with ITP. Increased exposure of ITP to research at EAS Te Pukenga. Networking between EAS staff & students and invited ITPs and other academic institutions. Grow potential for research collaborations between Te Pukenga staff

3.4 Research Group Three – Veterinary Nursing

Statement of purpose

Research in the Veterinary Nursing research group is mainly focused on exploring topics impacting on the veterinary nursing profession, such as compassion fatigue and barriers to accessing professional development, but also clinical topics, such as surveying for parasites in dogs in Tonga. The team is made up of early-career researchers, but they collaborate closely with members of the Animal Behaviour and Welfare Research Group and Applied Molecular Solutions Research Centre. Staff are currently gaining postgraduate qualifications, relying on internal funding, and moving from conference papers to journal articles.

A new ePress journal, *Perspectives in Animal Health and welfare*, has been established to provide a mechanism for staff and students to publish research. This journal fills a need to provide a quality-assured outlet for veterinary nursing research in Aotearoa.

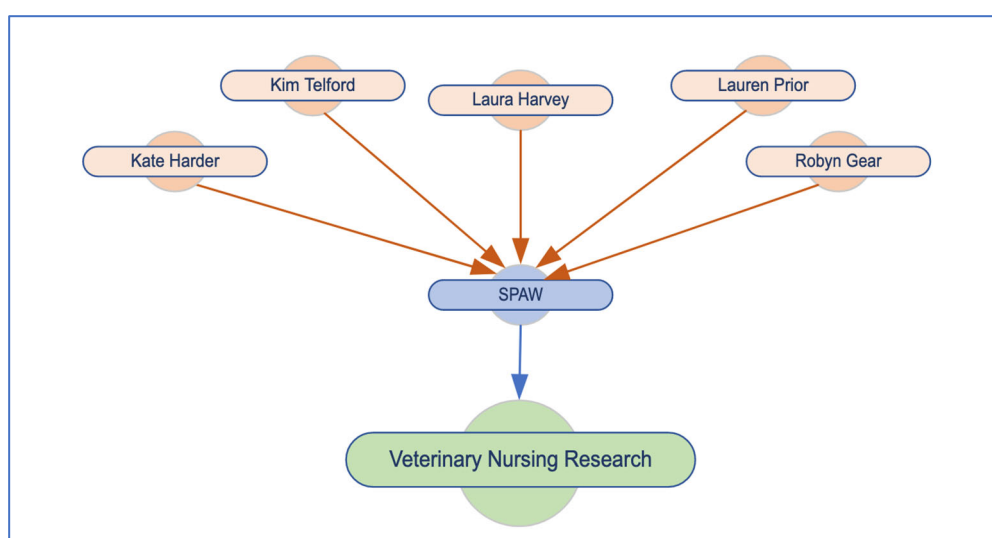


Figure 10: Veterinary Nursing research group externally funded research partner and lead researchers

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Increase staff confidence in Mātauranga Māori				Increased staff confidence in Mātauranga Māori
Partner with community groups, iwi/hapu/imi groups or NGO's to develop list of research projects.	EASRC, Māori Champion, VN staff	Ongoing	EAS staff research time, to develop strategy and consultation on priority research. Student volunteers/ internships to conduct short-term research.	Long-term relationships are maintained between EAS and key iwi/hapū/imi/NGO groups (potential for MOUs?). Increased number of students working key research projects.

Goal 2: Develop research opportunity in Veterinary Nursing Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>

Action	Responsible	Deadline	Resources needed	Desired result
Seek Research Fellow in this area to mentor and partner	Research Leader, VN staff	Ongoing	Application to Tūāpapa Rangahau.	External researcher(s) to support VN staff.
Support staff to gain postgraduate quals	HoS and APM	Ongoing	EAS PD budget	Three VN staff with Masters degrees by 2024
Establish mentoring for AB&W researchers and group into research teams	Research Leader, APM and AB&W staff	Ongoing	Time and potentially ECR funding	All staff in at least one research project team by Feb 2024
Publications in ePress journals from EAS staff and external authors. <i>Perspectives in Animal Health and Welfare</i>	<i>Perspectives in Animal Behaviour and Welfare</i> : Laura Harvey	Ongoing	EAS staff time to work with manuscripts, and coordination of associate editors, website update. Time for ePress editor, copy editor and layout.	Yearly issues for journal. Publications from EAS staff and students, and staff from associated ITPs (e.g., Auckland Zoo, SPCA).

Goal 3: Grow industry and community connectedness

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
Establish formal EAS veterinary journal club	Research Leader, VN staff	Ongoing	None	Opportunity for VN staff and veterinary specialists to meet industry PD obligations, and have research outcomes.
Identify possible sources of external funding	Research Leader, APM, VN staff	Ongoing	Tūāpapa Rangahau support (Brenda Massey).	Maintenance of database of external funding options.
VN staff to identify projects which could apply for external funding	Research Leader, VN staff	Ongoing	Tūāpapa Rangahau support (Brenda Massey).	Funding for project start in 2024.

3.5 Research Group Four – Applied Molecular Solutions Research Centre

Statement of purpose:

The Applied Molecular Solutions Research Centre aims to use our ability to identify organisms or parts of organisms rapidly and efficiently from small amounts of biological or environmental material. The explosive growth in the availability of genetic data is transforming our understanding of the world around us. Genomic data unlocks opportunities for decision-making that relates to the protection of natural resources and ecosystems, conservation of native flora and fauna, and assessment of animal and human health. These genetic resources can be used, for example, to create rapid diagnostic tests for diseases or pest species that affect native biodiversity, humans, crops, or livestock. They can also be used for more comprehensive studies that characterize whole communities of organisms, describe the physiology of an animal, or understand how genes function in a given ecological situation. We aim to apply existing technologies and develop and validate new approaches such that are suitable for addressing identified problems generated by the industries and communities we serve. We are currently involved in medium and small scale applied projects with stakeholder groups and industries such as councils, government departments, industry groups and private companies. Within Unitec there are opportunities for collaborative research with Computing (bioinformatics), Health (nursing), Landscape Architecture (landscape scale genetics, restoration genetics) and in the areas of environmental engineering and sustainability.

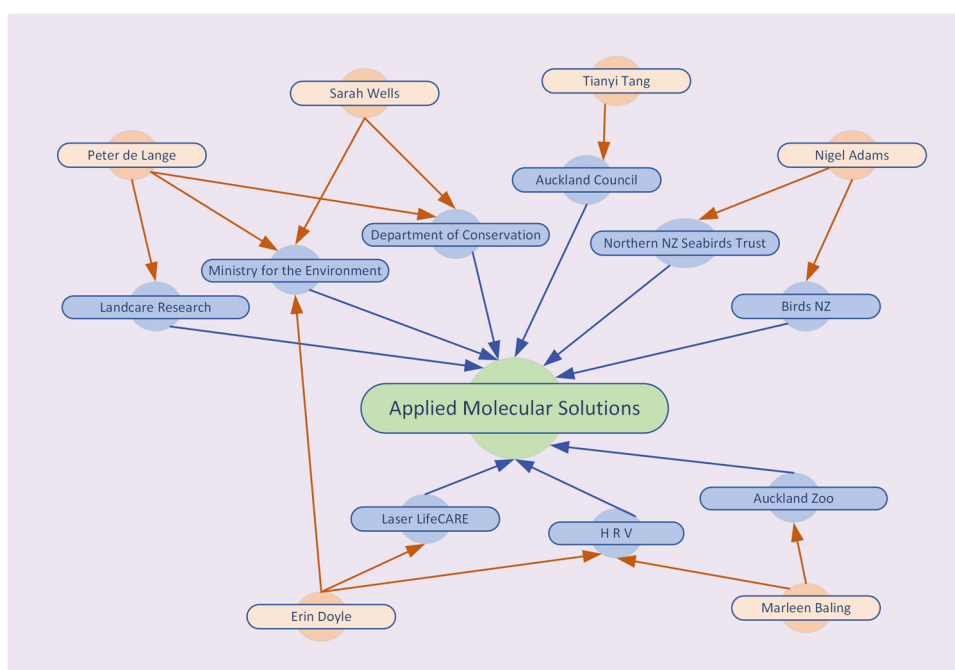


Figure 12: Applied molecular solutions research group externally funded research partners and lead researchers

Note: This group's externally funded partners and/or researcher overlap with the other research groups as seen in Figure 8.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Develop 1–2 undergraduate studentships role for Maori or Moriori students to work in laboratory or herbarium.	Research Group Leaders, EASRC and Maori Champion?	Ongoing	Yearly research fund from Tūāpapa Rangahau as contestable fund to support third year studentships.	Increased interest from students from Maori or Moriori background to continue to postgraduate level. Increase peer-review publication under student-associated projects.
Partner with community groups, iwi/hapu/imi groups or NGO's to develop list of research projects or molecular approaches/ techniques for applied research.	Research Group Leaders, principal investigators.	Ongoing	AMSRC staff research time, to develop strategy and consultation on priority research. Student volunteers/ internships to conduct short-term research. Postgraduate students, to conduct research projects. Co-funding opportunities from Tūāpapa Rangahau	Long-term relationships are maintained between AMSRC and key iwi/hapu/imi groups. MOU between AMSRC and some iwi/hapu/imi groups? Increased number of students working key research projects. New or novel molecular techniques that to provide solutions for real problems in the space indigenous innovation, environment, health or matauranga.

Goal 2: Develop research opportunity in Applied Molecular Solutions Research Group				
Action	Responsible	Deadline	Resources needed	Desired result
Connecting all relevant research spaces as AMSRC: molecular lab, herbarium, plant growth room and culture/microbiology lab.	Research Group Leaders.	2024	EAS staff time for planning, budgeting and coordinating the research spaces. Funding support from Tūāpapa Rangahau for base operational costs.	All research spaces are streamlined to ensure accurate usage and outputs recorded. To enable to plan for better research collaboration between users of all these research spaces.
Develop 1–2 undergraduate studentships role for support staff in laboratory, herbarium, growth room or culture/microbiology room.	Research Group Leaders.	Yearly	Yearly research fund from Tūāpapa Rangahau as contestable fund for to support third year studentships.	Increased peer-review publication for student-associated projects. Technical support for AMSRC staff to conduct their projects. Increased exposure for undergrad students to research to encourage studying at postgraduate level.

Develop a permanent casual research assistant positions in the laboratory and herbarium.	Research Group Leaders.	Yearly	Funding support to hire the casual assistants.	Increased efficiency of general lab and herbarium operations. Reduced workload for AMRSC staff with lab technical support. If assistants are student, increased experience for students working in the laboratories, herbarium or biological collections.
Students working in AMSRC participate in the postgraduate seminar day.	AMSRC supervisors	Yearly	EAS staff time for planning of seminar day. Student time to support the postgraduate seminar day.	Experience for students to publicly present their research. Networking opportunity for students with EAS staff, other students and also ITPs.
Contestable fund for staff to attend workshops of conference that will increase capability or skill in molecular laboratory.	Research Group Leaders.	Yearly	Funding support from Tūāpapa Rangahau.	Increased capacity and AMSRC staff are updated in the latest molecular techniques.
Identification of research space upgrade or acquisition of equipment.	Research Leaders, AMSRC staff, lab manager.	2024	AMSRC staff time to identify priority upgrade and equipment to purchase. Funding to cover the cpst of upgrade or equipment purchase (e.g. CAPEX).	Increase quality of the research space and newer technology equipment. Increase in efficiency of research operations. Increase attractiveness to more collaborations.
AMSRC staff and associated external staff publishing in ePress journals: <i>Perspectives in Biosecurity</i> <i>Perspectives in Biodiversity</i>	Principal researchers <i>Perspectives in Biosecurity</i> : Mel Galbraith and Dan Blanchon <i>Perspectives in Biosecurity</i> : Peter de Lange and Marleen Baling	Ongoing	AMRSC staff and student time to work on manuscripts.	Publications from AMSRC staff and students and co-authors from associated ITPs (e.g. Auckland Zoo, Auckland Councils, DOC).

Goal 3: Grow industry and community connectedness

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
Partner with ITPs (DOC, Landcare Research, Auckland Zoo, Auckland Council) to develop list of research projects or molecular approaches/ techniques for applied research.	Research Group Leaders, principal investigators.	Ongoing	AMSRC staff research time, to develop strategy and consultation on priority research. Student volunteers/ internships to conduct short-term research. Postgraduate students, to conduct research projects.	New molecular techniques that to provide solutions for real problems in biodiversity, biosecurity, agriculture, animal welfare and health generated by industry and/or the community. Long-term relationships are maintained between AMSRC and ITPs. MOU between AMSRC and some ITPs(?). Increase in students working with ITPs on research projects. Increased peer-reviewed publications with ITPs.
Encourage AMSRC staff to publish in a per-reviewed international journal or present their research in a scientific conference.	Research Leaders, principal investigators	Ongoing	Dissemination funding	Increased publications in AMSRC staff good quality journals (e.g. high impact factor). Increased exposure of Te Pukenga and their staff in conference in national and international stage.
Public outreach activities, e.g. such as Bioblitz, courses/workshops for schools.	Research leaders, AMSRC staff	Once a year	AMSRC staff time to plan, coordinate and run the public outreach. Student volunteer time to support the public outreach. Laboratory equipment and consumables, transport costs.	Increased exposure of the community/ public to molecular approaches, and taxonomy. Increased exposure of Te Pukenga and staff to a wider community.

4 Current staff expertise

Below are the data of the current staff members in terms of their RPTL status, Principal Investigator (PI) for external grants, PI for Industry funded projects and research outputs over the last five years.

Full Name	Research outputs (2017-2023)	Research Interests
Caralyn Kemp	1-Book Chapter, 5-Conference Contribution-Oral Presentation, 1-Conference Contribution-Poster Presentation, 3-Journal Article, 1-Report	Animal behaviour and welfare; statistics
Chloe McMenamin		Veterinary nursing
Diane Fraser	9-Conference Contribution- Oral Presentation, 14-Conference Contribution- Poster Presentation, 4-Journal Article, 2-Other, 3-Presentation (non-conference), 2-Report	Biosecurity, animal nutrition, advocacy and public policy
Glenn Aguilar	8-Conference Contribution- Oral Presentation, 6-Conference Contribution- Poster Presentation, 7-Journal Article, 1-Report	Geographic information systems (GIS), marine fisheries, modelling
Jo Thorne		Canine behaviour & training, improvement of behaviour and welfare of companion animals
Kate Harder	1-Conference Contribution- Oral Presentation	Bird and marine mammal surveys, mist netting and biological data collection
Kim Telford		Veterinary practice
Kristie Cameron	1-Conference Contribution- Oral Presentation, 4-Conference Contribution- Poster Presentation, 10-Journal Article	Animal behaviour, nutrition and welfare; statistics
Laura Harvey	1-Awarded Masters Thesis, 3-Conference Contribution- Oral Presentation, 12-Conference Contribution- Poster Presentation, 7-Journal Article, 1-Presentation (non-conference)	Veterinary nursing professional topics
Lauren Prior	5-Conference Contribution- Poster Presentation	Veterinary anaesthesia and analgesia, best practice veterinary nursing, social issues in veterinary clinics
Lorne Roberts	3-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Other, 2-Presentation (non-conference)	Captive animal biology, human-animal interactions, kea conservation
Mark Large	1-Book Chapter, 2-Edited Book/Volume, 5-Journal Article, 2-Other	Botany, palynology, plant anatomy and histology; statistics
Marleen Baling	1-Awarded Doctoral Thesis, 1-Book Authored, 3-Book Chapter Authored, 6-Conference Contribution- Oral Presentation, 9-Conference Contribution- Poster Presentation, 13-Journal Article	Wildlife ecology; reptile ecology, conservation translocation; animal colouration; behavioural ecology
Mel Galbraith	8-Conference Contribution- Oral Presentation, 4-Conference Contribution- Poster	Ecology, ornithology, biosecurity and socio-ecology.

	Presentation, 3-Journal Article, 12-Presentation (non-conference)	
Nigel Adams	1-Book Chapter, 4-Conference Contribution-Oral Presentation, 5-Conference Contribution-Poster Presentation, 8-Journal Article, 1-Other, 1-Presentation (non-conference), 5-Report	Ornithology (particularly seabirds), diet, vertebrate anatomy and physiology; statistics
Peter De Lange	5-Book Authored, 6-Book Chapter, 3-Conference Contribution- Oral Presentation, 1-Educational Material, 48-Journal Article, 1-Monograph, 1-Other, 1-Presentation (non-conference), 2-Report	Botany, biosecurity, geology, lichenology
Robyn Gear	1-Book Chapter, 3-Conference Contribution-Poster Presentation, 1-Journal Article	Small animal internal medicine
Sarah Wells	3-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 4-Journal Article	Molecular ecology
Sofia Chambers		Molecular biology

School Research Plan – School of Healthcare & Social Practice

1 Introduction and current state

The School of Healthcare & Social Practice was formed in 2019 from the Health Care and Social Practice Pathways, which evolved from the Faculty of Social and Health Sciences in 2016. The School offers degrees in Social Practice, Medical Imaging and Nursing, and researchers are grouped in six research groups: 'Indigenous Studies', 'Social Practice and Social Justice', 'Social Work, Community Development and Narrative Practice', 'Nurse Education and Future Workforce Development', 'Anatomy' and 'Medical Imaging Practice'.

	Social Practice Cohort	Health Care Cohort	Overall for the School
Number of degree teaching staff	13	21	34
Total research FTE allocated	2.88	2.3	5.18
Current Research Traffic Light rating (Percentage of green lit staff)	92%	81%	85%
PBRF history (Number of PBRF rated staff in 2018)	9	5	14

1.1 Health Care

The Unitec Research Strategy 2020 – 2024 states: Priority 1 is that Research that is aligned with Te Tiriti o Waitangi and Goal One is: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes and governance.

1.1.1 Describe how School Research is aligned with Te Tiriti o Waitangi?

Our grant applications this year have all reflected the relationships we have developed with Māori. We have developed our proposals *with* our Māori partner to reflect the need for a Te Ao Māori perspective on developing undergraduate curricula to meet the needs of older people. Our RTPL research dissemination budget has prioritised Māori staff. The department is actively recruiting Māori staff for student facing roles and we anticipate that this will bring further opportunity for development.

1.1.2 What the school is planning in the area of research to achieve the goal and key project (leadership roles, recruitment, prioritisation, opportunity and partnership development)

The Department of Healthcare incorporates the distinct health specialties of Medical Imaging and Nursing. Both specialties offer undergraduate degrees (Bachelor of Science (Medical Imaging) and Bachelor of Nursing). Neither department offers any graduate programmes. Across the department, the proportion of novice researchers is high. It means that researchers are completing post graduate qualifications and are learning by assisting on projects that are led by more senior members of the department. Critical mass has not yet been achieved. However, the department is aspirational in that the appointment of Māori and Pacific research active staff will assist the whole team in developing culturally appropriate research skills.

Overall, academic staff in Healthcare continue to develop as researchers. Five staff achieved ratings in the 2018 PBRF round with 3 achieving C grades and 2 achieving R grades. Preparation has begun to identify and support those staff members who are likely to contribute the next round through the submission of draft portfolios and feedback and the development of tailored support. Medical Imaging maintains a Research Productivity Traffic Light with 100% of staff being green lit. Nursing academic staff are also engaging and developing their research capability. In the last year the department has shown significant development in the Research Productivity Traffic Light 93% now being green lit. Within the

healthcare department, six staff have a doctoral qualification and there are three who are nearing completion.

Research consumerism and the critique of available evidence for practice is embedded within teaching and learning on the Bachelor of Nursing and Bachelor of Science (Medical Imaging) curricula. Examples include investigating the relationship between exercise and alteration in vital signs; enquiry-based learning projects investigating health topics; analysis of research methodologies and data collection methods, journal article critique and research proposal development. Medical imaging students are required to develop a research proposal in level 7 studies.

Nursing and medical imaging students are not required to carry out research as part of their level 7 courses. However, healthcare staff do role model as active researchers for example,

- » Dr. Joseph Aziz (HEAL 5251) Morphological anatomy and rat studies
- » Madhusudan Vyas (HEAL 7175) Lu177- PSMA treatment in the advanced stage of prostate cancer
- » Dr Joanna Thorogood Medical Imaging APM
- » Dr. Dianne Roy (HCBN7101; HCBN 7103) Stroke family study – phenomenology;
- » Dr. Samantha Heath (HCBN7101) Ongoing education for nurses –Mixed methods research
- » Dr Shadi Safavi (HCBN 7102) Emotional response to the diagnosis of Cancer
- » Leslie Kistan (HCBN 6107) Understanding success factors to promote ED Nurse retention in a New Zealand District Health Board
- » Vimlesh Shukhla (HCBN 7103) Exploring Perspectives affecting Access to Healthcare Amongst Older Fijian Indian Immigrants in New Zealand

The award of \$320,000 Whitinga Fellowship from MBIE/Te Apārangi, continues to provide huge opportunities to further develop the research culture and capability within the department. There are 5 internal staff members who are actively contributing to the two national studies in which all Te Pūkenga subsidiaries are a part. The project sits within the healthcare education research cluster previously identified in the first edition of the research strategy. Clinical continues to be represented through collaboration with a local hospice on developing their understanding of potential service development and has resulted in successful completion for one master's student. The establishment of the Centre for Research in education for Healthcare Professionals has provided opportunities to collaborate with international colleagues for projects grant applications, and with ESRC on sustainability in healthcare with a major aged care provider. Nursing staff are investigating the impact of zoom supervision on students and clinical supervisors to determine if there are any lessons to be taken for current or future practice. Medical Imaging staff are well engaged with the private sector in researching novel treatments for prostate cancer and further, the ongoing development of research to examine the quality of images produced using specialist technology. Other staff are invested in working clinical colleagues on working patterns and wellbeing. Dissemination activity internal to the department has been exemplary with contributions to both, Unitec and externally mediated opportunities with other ITPs.

1.2 Social Practice

The Unitec Research Strategy 2020 – 2024 states: Priority 1 is that Research that is aligned with Te Tiriti o Waitangi and Goal One is: Unitec has strong Māori research leadership, capability, excellence, partnerships, processes and governance.

1.2.1 Describe how School Research is aligned with Te Tiriti o Waitangi

A significant number of staff research projects in Social Practice reflect Treaty principles, and several aspects of our Research Group foci align explicitly with this priority. See the appendix for research projects engaging Māori individuals and groups.

It is a key priority for Social Practice, in both its teaching and research activities, to be aligned with Te Tiriti principles and practices. A large percentage of our student body is Māori and/or Pacific, and Social Practice has been engaged for many years (even prior to Unitec's broader 'I See Me' initiatives) in embedding Mātauranga Māori throughout our curricula. As detailed below, large number of Master of Applied Practice -- Social Practice theses and dissertations are Kaupapa Māori and/or Treaty -based, and in 2023 the Applied Practice (AP) (postgraduate) Suite has refreshed its graduate profiles and learning outcomes explicitly to include Te Tiriti principles.

1.2.2 What the school is planning in the area of research to achieve the goal and key project (leadership roles, recruitment, prioritisation, opportunity and partnership development)

In terms of alignment with Te Tiriti o Waitangi, our developing Research Group 'Indigenous Studies' in particular (but not exclusively) will grow and enhance associated research activity. Partnering with Māori (and/or Pacific) individuals and groups and with Nga Wai a te Tūi will be sought as appropriate. In addition, in 2021 we recruited a highly research-active Māori Senior Lecturer to support Treaty-based research. We also anticipate increased levels of publishing alongside students on topics supporting this priority.

More generally, Social Practice staff members' research activity sits alongside, informs and enhances three Social Practice degrees: The Bachelor of Social Practice (BSP), which has been taught since 2014; the Master of Applied Practice (Social Practice), which has been taught within Social Practice since 2019 (it was previously housed in Te Miro); and the Postgraduate Certificate in Applied Practice (Social Practice), which has been offered since 2022.

Researchers in Social Practice are grouped in three major categories: 'Indigenous Studies', 'Social Practice and Social Justice', and 'Social Work, Community Development and Narrative Practice.'

Social Practice staff are highly research-active. All tenured teaching staff members hold a minimum of a Master's qualification, and six staff members hold PhDs (and two are currently pursuing PhDs). Nine staff achieved ratings in the 2018 PBRF round; three of these rated in the New and Emerging category, evidencing the Department's support for developing researchers. One staff member rated B. The BSP has been consistently and very highly green-lit in the Research Productivity Traffic Light, and for the past seven years 100% of staff teaching at Master's level have been green-lit. In addition, in recent years several Early Career Researchers (ECRs) in Social Practice have received internal Unitec funding to support their projects.

Research culture in the Department emphasizes the value of community and industry -engaged research. As a result, staff disseminate research outputs not only in high-impact international journals and conferences, but also via local hui and within organizations where research can impact professional practice immediately and directly. A number of research-engaged community and industry partnerships in Social Practice have involved externally-funded research projects, which are detailed towards the end of this document (see appendix).

Research is embedded within teaching and learning approaches and the curriculum, particularly at postgraduate level. The Master of Applied Practice – Social Practice (MAP-SP) is exemplary in terms of its emphasis on innovative research that has significant potential to impact positively on a range of

communities, particularly Māori communities and also Pasifika communities. A key strength of the MAP-SP is its exceptionally strong integration of Mātauranga Māori, building on Social Practice staff engagement with external Māori stakeholders, Māori organisations, and Iwi. Staff are also strongly engaged with external Pasifika stakeholders.

As noted above, the majority of MAP-SP students are Māori and/or Pasifika, representing a significant Unitec investment in educational achievement for these key priority groups. Two student projects are or have recently been supported by external funding (noted just below).

Recent MAP-SP research topics with strong Māori themes include (but are not limited to):

- » The effectiveness of Te Whāriki Manawāhine o Hauraki Māori Women's Refuge in Hauraki (*Note: this student, Denise Messiter – who established this service and is currently its General Manager – received Queen's Birthday Honours for this work and related services in 2022: New Zealand Order of Merit*).
- » Kohikohia ngā taikākā o tea o pāpāho Māori: How to sustain kaupapa Māori in Māori language media.
- » The effectiveness of the Incredible Years parenting programme for Tongan parents.
- » Purakau: Kaupapa Māori approaches to counselling practice in tertiary education.
- » Challenges and barriers that Māori and Pasifika woman are facing studying an automotive course at Unitec Institute of Technology. (Note relevance to Pasifika also).
- » The experiences of Māori Deaf who have had an episode of mental distress that resulted in the use of a mental health service (*Note: supported by funding from the Deaf Foundation via supervisor Geoff Bridgman*).
- » Exploration of the application of treaty-based practice in government workplaces.

Recent MAP-SP research topics with strong Pasifika themes include (but are not limited to):

- » Exploring the views and possible impacts of assisted dying on elderly members of a Catholic church community in Papakura, and on their Catholic faith.
- » Assessing communication gaps between the Papua New Guinea National Volunteer Service, its network of skilled volunteers, and hosting rural communities in Kerea and Kintunu villages in Papua New Guinea.
- » How NZ Police policies on diversity are experienced by Pacific Island communications staff (*Note: funded by a Pacific Health Scholarship from the Ministry of Health*).

Engagements with Māori individuals and groups as well as Pacific individuals and groups are also reflected in a range of staff-led research projects, some of which involve bachelor students (see the appendix for details).

Beyond supervisory relationships in the MAP-SP, Social Practice staff have developed staff/student research collaborations, some involving co-authorship. Co-authored projects completed to date are listed in the appendix. One notable collaboration led to Social Practice's first Bold Innovator's Scholarship award in 2022 (\$15,000), granted annually at Unitec to a recent Master's or Doctoral graduate to develop innovative and enterprising projects based on their research. Kristi Shaw's *Extraordinary Parents Project*, developed with the support of her Principal Supervisor (Social Practice staff member Geoff Bridgman), is designed to help parents with a child challenged by anxiety to help themselves, their children, and each other collaboratively.

Finally, staff members are recognized for their research expertise in relation to roles as policy advisors, academic journal reviewers, and committee members. Several hold leadership positions linked to research activity within local, national and international industry and professional bodies. A number of these activities involve PBRF-recognised Student Factors. Please see detailed examples in the appendix.

2 School of Healthcare & Social Practice Goals and KPIs

There are six KPIs for research:

1. **Quality Assured (QA) Research Outputs** - recognised research outputs that have been through a peer review process or have been specifically commissioned. This is presented as a ratio of counts of the number of QA outputs to FTE of degree teaching staff.
2. **Research Productivity** - measure of staff teaching on degree programmes who meet the agreed levels of research in the research traffic light. This is measured as the ratio research active staff to the total number of staff on a degree programme.
3. **External Research Income (ERI)** - income received from external sources for research purposes calculated on the project milestones achieved and spending to date, in a particular year. This is measured in dollars.
4. **Industry Funded Projects** - research and enterprise projects Unitec is receiving funding for, where the services Unitec is providing is applied contract research or consultancy from all funders excluding any governmental contestable funding sources. This is measured as a count of the number of projects.
5. **Student Integrated Research** - a measure of student input into staff-engaged research including authorship, contributions to wānanga, creative outputs, studentships, or research assistant positions, awards or other contributions (as defined by the PBRF). This is measured as a count of the number of research outputs.
6. **Rangahau Māori Productivity** - productivity in this context would be aggregated as - QA outputs by Māori staff, funded projects with named Māori staff, Māori supervisors, Level 9 and 10 Māori postgraduate scholarships, QA outputs that demonstrate excellence in Vision Mātauranga, accredited Vision Mātauranga and Kaupapa Māori rangahau professional development achievements and rangahau Māori research stories in the media.

The School of Healthcare & Social Practice has the current goals.

- **Quality Assured Research Outputs:** Maintaining the quality assured research outputs to at least 1.5 outputs per research active FTE¹.
- **Research Productivity:** Work towards maintaining green traffic light status with 75% or more staff who meet the agreed levels of research in the research traffic light.
- **External Research Income:** The school will strive to lead or partner in the development of external funding applications and to lead or partner in successful externally funded projects.

¹ Research active FTE – staff FTE involved in teaching and/or supervising degree programmes.

- **Industry Funded Projects:** Maintain industry-funded projects at 1-3 projects per year
- **Student Integrated Research:** The school will strive to develop research Student Integrated Research projects in line with the definition of this KPI.
- **Rangahau Māori Productivity:** The school will strive to increase Māori Rangahau Productivity in line with the definition of this KPI.

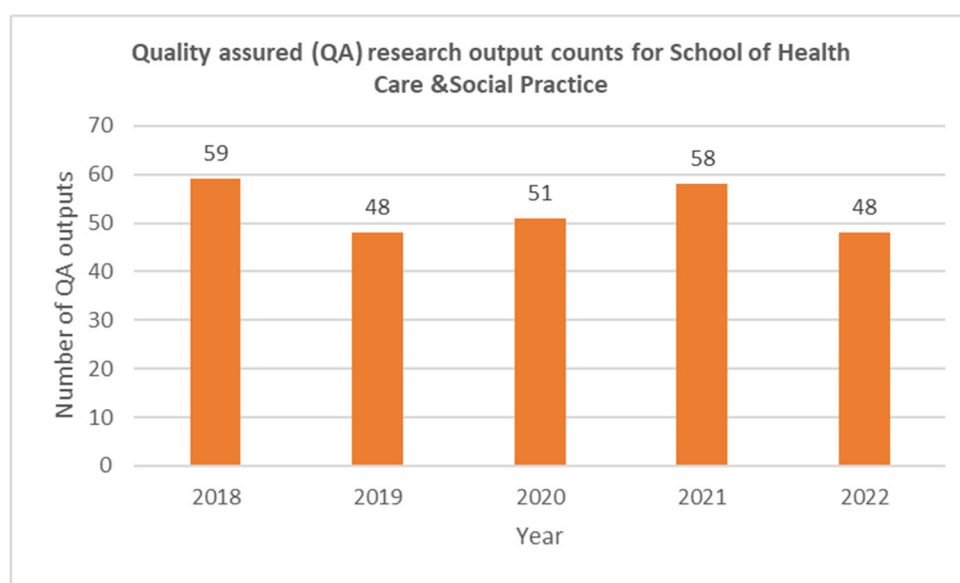


Figure 1: School of Healthcare & Social Practice Quality Assured Research Outputs

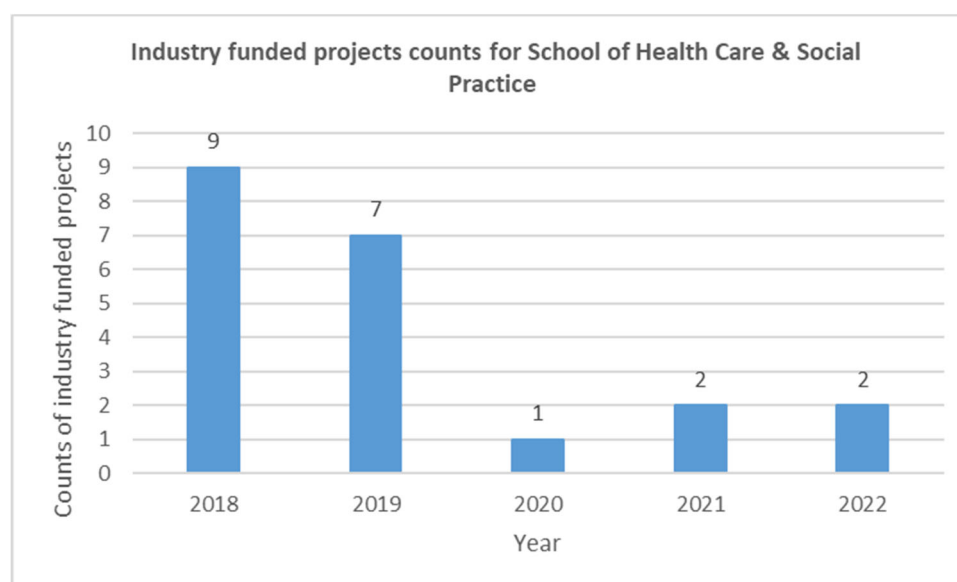


Figure 2: School of Computing & Information Technology Industry Funded Projects

Note: There was a slight change in the definition of industry funded projects in 2018 to include public sector and where the services Unitec is providing is applied contract research or consultancy. Prior to this only funding from private sector was included. Thus, the 2018 figures reported are comparatively higher than that of 2016 and 2017.

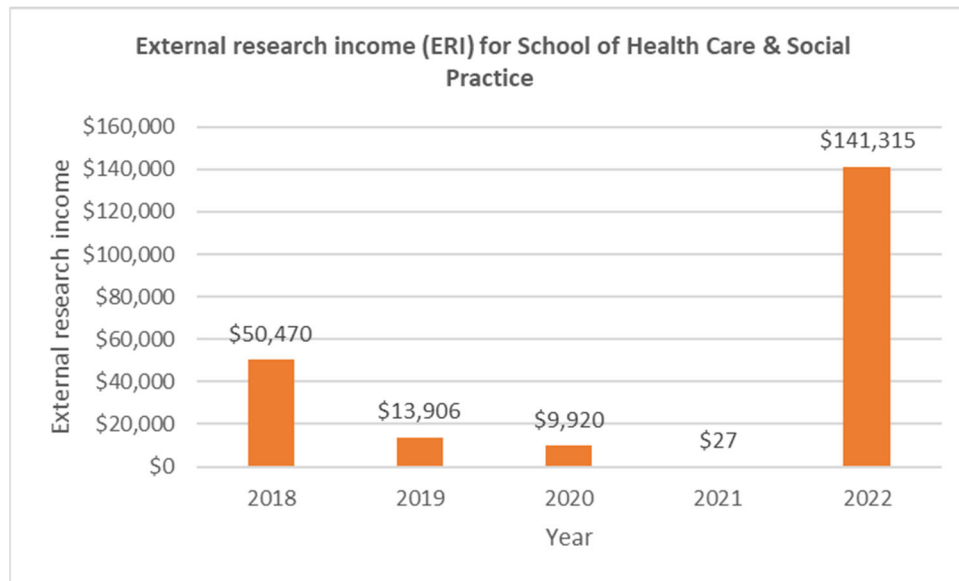


Figure 3: School of Healthcare & Social Practice External Research Income

2.1 What the school is planning for increasing research diversity – Social Practice

Beyond already-existing opportunities to increase research diversity, in 2023 Social Practice does not have additional plans to implement. Our research diversity is strong. It is noted however that maintaining sustainable supervisory and research culture support for Pacific MAP-SP students is an ongoing challenge. The programme currently contracts much of its Pacific supervisory support externally.

2.2 What the school is planning for increasing research diversity – Healthcare and Medical Imaging

Nursing and Medical imaging remain challenged in respect to diversity. The planned employment of Māori staff may assist with the development of resource within the department. Our current PhD students are almost at completion and for nursing, this will provide strength from a qualified researcher from a Pacific perspective. It is also noted that researchers within the department are developing relationships and connections that will support the position of the department in the year to come.

3 SWOT analysis for research in School of Healthcare & Social Practice

The SWOT analysis for Healthcare & Social Practice has been split into two disciplines: HealthCare and Social Practice.

3.1 Health Care



Figure 4: SWOT analysis for Health Care in School of Healthcare & Social Practice

3.2 Social Practice

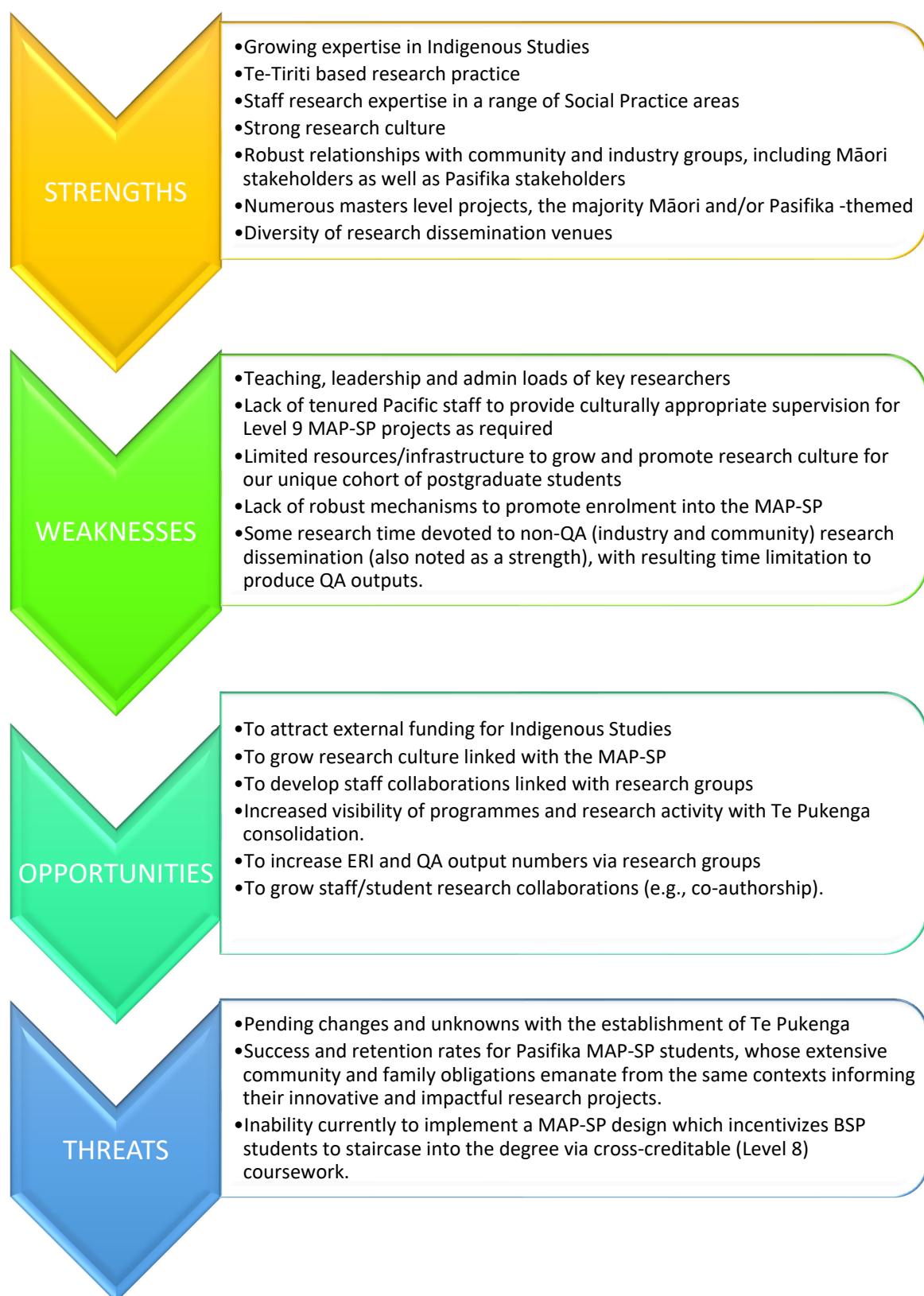


Figure 5: SWOT analysis for Social Practice in School of Healthcare & Social Practice

4 Research Groups and projects (consider the Te Tiriti Priority One goal in the Research Strategy)

One of the key techniques for achieving goals and finding efficiencies while having fun along the way, is to work together. Unitec cannot afford to support discreet research trajectories for every individual teaching on degree programmes, and this approach is equally unlikely to result in impactful research for our industries and communities.

The School of Healthcare & Social Practice has six research groups ('Indigenous Studies', 'Social Practice and Social Justice', 'Social Work, Community Development and Narrative Practice', 'Nurse Education and Future Workforce Development', 'Anatomy' and 'Medical Imaging Practice').

In future, Healthcare could potentially work towards the development of a centre for healthcare professional education. This centre would see projects like drawing for anatomy, literacy and workforce education research all come together under one heading Healthcare Education and Workforce Development.

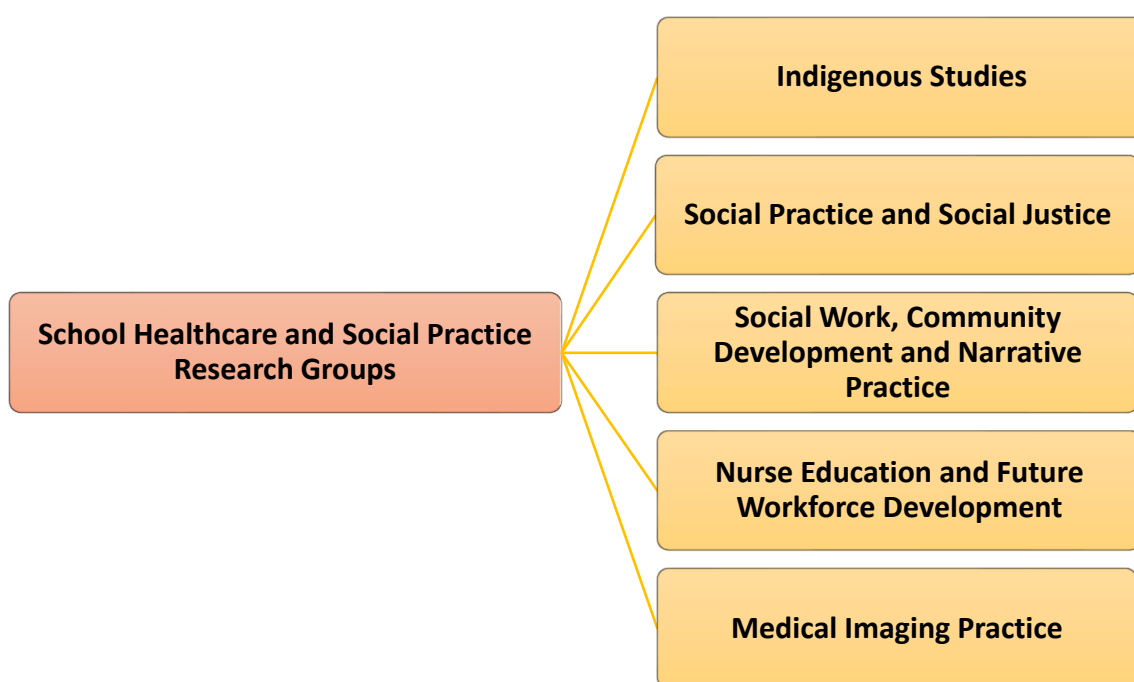


Figure 6: School of Healthcare & Social Practice research groups

The above research groups partner (or plan to partner) with external funders and win funding/grants, which Unitec calls External Research Income (ERI). Below are the external research partners who funded projects over the last 5 years.



Figure 7: School of Healthcare & Social Practice external research partners who funded projects from 2016-2022

4.1 Research Group One – Indigenous Studies

Statement of purpose

Research in the area of indigenous studies is directed towards:

- » Māori community development
- » Pasifika community development
- » Indigenous models of practice
- » Indigenous methodologies

This research group will be developed and grown across 2022-2023, establishing specific goals and targets over time. This group builds upon existing staff expertise and articulates with fast-growing foci within the MAP-Social Practice. See the appendix for descriptions of recent Social Practice staff research projects partnering or engaging with Māori and/or Pacific groups and individuals.

The potential for collaborative projects with postgraduate students, and recruitment of students on that basis, will support the development of this group. Staff working in this group will partner as appropriate with Ngā Wai a Te Tūi to develop its strategic direction. Partnership with Unitec's Pacific Centre will also be sought.

Potential external funding sources include:

- » Health Research Council
- » Ministry for Pacific Peoples
- » AKO Aotearoa
- » Pasifika Futures
- » Te Puna Kokiri

2023 Goals

This research group is still under development/aspirational and is still developing its goals.

4.2 Research Group Two – Social Practice and Social Justice

Statement of purpose

Research in the area of Social Practice and Social Justice is directed towards:

- » Transforming social policy and institutions towards equitable outcomes for a range of cultural groups.
- » Decolonising and democratizing educational and professional practices.
- » Critiques of discourse and practice leading to inclusive, sustainable and thriving communities.

2023-2024 Goals:

Goal 1: Increase staff/staff and staff/student collaborations				
Action	Responsible	Deadline	Resources needed	Desired result
Partner less experienced team members with more senior researchers	Research Leader with staff support	Semester 1 2024	Dissemination funding	Co-authored research output for at least one partnership
Support at least two staff members to attend writing retreat	Research Leader	Semester 1 2024	Tūāpapa Rangahau support	Attending staff member/s submit journal article/s for

				publication
Create or support attendance in fora for MAP-SP students to network	MAP-SP Discipline Leader, core MAP-SP teaching team, APM	Semester 2 2023	Variable/TBC	At least one hui where research ideas are shared and/or developed
Support staff members to co-author with students	MAP-SP Discipline Leader, core MAP-SP teaching team	Semester 2 2024	Potentially Tūāpapa Rangahau support (Marie Shannon)	At least one co-authored article published

Goal 2: Earn External Research Income				
Action	Responsible	Deadline	Resources needed	Desired result
Identify applicable research projects, associated partners and external funding opportunities	Research Partners	Semester 2 2024	Research Partner and/or Senior Research Advisor support (Tūāpapa Rangahau)	Funding for at least one project starts in 2024
Investigate contract research opportunities	Tūāpapa Rangahau	Semester 1 2024	Tūāpapa Rangahau staff (time)	At least one new contract active by 2024

4.3 Research Group Three – Social Work, Community Development and Narrative Practice

Statement of purpose

Research in the area of Social Work, Community Development and Narrative Practice is directed towards:

- » Te Tiriti –based Social Practice and training
- » Best practices in social work and in narrative/community work
- » Evaluation of professional and educational practices and programmes
- » Needs and risk assessment, and associated interventions

2023-2024 Goals:

Goal 1: Increase staff/staff and staff/student collaborations				
Action	Responsible	Deadline	Resources needed	Desired result
Partner less experienced team members with more senior researchers	Research Leader with staff support	Semester 1 2024	Dissemination funding	Co-authored research output for at least one partnership
Support at least two staff members to attend writing retreat	Research Leader	Semester 1 2024	Tūāpapa Rangahau support	Attending staff member/s submit journal article/s for publication

Create or support attendance in fora for MAP-SP students to network	MAP-SP Discipline Leader, core MAP-SP teaching team, APM	Semester 2 2023	Variable/TBC	At least one hui where research ideas are shared and/or developed
Support staff members to co-author with students	MAP-SP Discipline Leader, core MAP-SP teaching team	Semester 1 2024	Potentially Tūāpapa Rangahau support (Marie Shannon)	At least one co-authored article published

Goal 2: Earn External Research Income				
Action	Responsible	Deadline	Resources needed	Desired result
Identify applicable research projects, associated partners and external funding opportunities	Research Partners	Semester 2 2024	Research Partner and/or Senior Research Advisor support (Tūāpapa Rangahau)	Funding for at least one project starts in 2024
Investigate contract research opportunities	Tūāpapa Rangahau	Semester 1 2024	Tūāpapa Rangahau staff (time)	At least one new contract active by 2024

4.4 Research Group Four – Nurse Education and Future Workforce Development

Research in Nurse Education and Future Workforce Development is focused on exploring topics that impact on the success of nursing students and their ability to take their place as part of a modern workforce. This group is made up of novice and emerging researchers who are mentored by an experienced researcher. External funding has provided the opportunity to collaborate nationally on the development of Future Nursing workforce with respect to aged care. Funding is also internal and will see outputs that are conference papers with opportunity to develop journal articles. The key areas of output will be:

- » Best practice in nurse education (aged care)
- » Evaluation of professional and educational practices and programmes
- » Needs and risk assessment, and associated interventions in the current healthcare context
- » Development of Māori and Pacific nurses for the future workforce

2023-2024 Goals

Goal 1: Demonstrate <u>Vision Mātauranga</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Continue to partner with Māori on grant applications	RL, Director CREHP	Ongoing	Support from senior grant advisor	Achievement of another successful grant submission

Goal 2: Develop research opportunity in [Name of Research Group] Research Group <i>This could be to develop a project, a funding application or a studentship programme.</i>				
Action	Responsible	Deadline	Resources needed	Desired result

Submit grant applications to further the study on aged care	RL, Director CREHP	Ongoing	Support from senior grant s advisor	Achievement of another successful grant submission

Goal 3: Grow industry and community connectedness

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
Continue to work with external industry partner and to further connections nationally and internationally	RL, Director CREHP	Ongoing	Research partners	Further collaboration

4.5 Research Group Five – Medical Imaging Practice

Statement of purpose

Research in medical imaging is focused on exploring topics related to the practice of medical imaging and includes activities like the use of radioactive isotopes as a treatment for prostate cancer in men, staff upskilling in relation to emerging digital technologies and the use of quantitative CT and artificial intelligence in assessment of chronic obstructive pulmonary disease (COPD). Researchers are mainly novices with one significantly experienced researcher within the group. Some external funding has been awarded, and there are applications in preparation for submission to contest for funding in other areas.

2023-2024 Goals

Goal 1: Demonstrate <u>Vison Mātauranga (Medical Imaging Practice)</u>				
Action	Responsible	Deadline	Resources needed	Desired result
Development of relationships with internal/external communities of practice	Medical imaging staff	Ongoing	Introductions; Kaumatua support; employment Māori medical imaging staff	Development of key relationships for the development of Vision Maturanga in teaching human biology

Goal 2: Grow industry and community connectedness (Medical Imaging Practice)

This is at the heart of research in the ITP sector and the Unitec Research Strategy. How will this group develop and achieve this.

Action	Responsible	Deadline	Resources needed	Desired result
Development of Professional connectedness among Te Pūkenga medical imaging teaching staff	ALL	Ongoing	Time	Researchers remain connected with clinical areas

5 Appendix

5.1 Appendix – Staff Interests

Staff Name	Research outputs (2018-2022)	Research Interests
Dianne Roy	1-Book Chapter, 3-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Discussion/Working Paper (Published), 2-Journal Article, 1-Presentation (non-conference)	Phenomenology and lived experience of chronic and long-term illness
Georgia Cray	1-Awarded Masters Thesis, 1-Presentation (non-conference)	Palliative care. Community nursing and aged care
Gilian Graham	2-Conference Contribution- Abstract, 1-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 3-Presentation (non-conference)	Nurse education; infection control; therapeutic communication
Irene Doyle	1-Journal Article, 1-Presentation (non-conference)	Managing rheumatic fever and early detection for protecting communities.
Jillian Phillips	1-Conference Contribution- Abstract, 9-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Presentation (non-conference)	Nurse education; literacy among student nurses
Joanna Thorogood	1-Awarded Doctoral Thesis, 1-Conference Contribution- Abstract, 5-Conference Contribution- Oral Presentation, 5-Conference Contribution- Poster Presentation, 1-Journal Article, 2-Presentation (non-conference)	PhD student
Joseph Aziz	5-Conference Contribution- Oral Presentation, 3-Conference	Anatomy

	Contribution- Poster Presentation, 1-Journal Article, 2-Other, 1-Presentation (non-conference), 1-Report	
Kirstin Botha	1-Presentation (non-conference)	Human biology; Aged care nursing; Nurse education
Lee Yang	1-Conference Contribution- Oral Presentation, 3-Presentation (non-conference)	Clinical radiology
Leslie Kistan	5-Presentation (non-conference)	PhD student
Lian Wu	2-Conference Contribution- Oral Presentation, 2-Conference Contribution- Paper in published Proceedings, 4-Conference Contribution- Poster Presentation, 3-Journal Article, 1-Report	Traditional Maori house building and its impact on respiratory disease.
Madhusudan Vyas	1-Book Authored, 2-Conference Contribution- Abstract, 9-Conference Contribution- Oral Presentation, 7-Conference Contribution- Paper in published Proceedings, 7-Conference Contribution- Poster Presentation, 2-Edited Book/Volume, 1-Educational Material, 2-Journal Article, 1-Presentation (non-conference)	PhD student
Michele Rogalin-Henderson	1-Presentation (non-conference)	Aged care in the curriculum
Robina Mall	8-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Presentation (non-conference)	Aged care in the curriculum
Samantha Heath	1-Awarded Doctoral Thesis, 1-Conference Contribution- Abstract, 18-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 2-Conference Contribution- Poster Presentation, 1-Journal Article, 1-Other, 3-Presentation (non-conference)	Mixed methods research; Nurse education; Professional development; literacy of student nurses; future nursing workforce
Shadi Sadat Safavi	1-Conference Contribution- Oral Presentation, 2-Journal Article, 2-Presentation (non-conference)	GP Practice nurses in a pandemic: how the lock-down impacts on primary healthcare services
Sharon Sitters	1-Conference Contribution- Abstract, 9-Conference Contribution- Oral Presentation, 1-Conference Contribution- Poster Presentation, 1-Presentation (non-conference)	Modern day slavery
Shobha Johnson	1-Conference Contribution- Abstract, 9-Conference Contribution- Oral Presentation, 1-Conference	Nurse education; paediatric nursing

	Contribution- Poster Presentation, 1-Presentation (non-conference)	
Vimlesh Shukla	1-Performance, 4-Presentation (non-conference)	PhD student
Ali Rasheed	1-Awarded Doctoral Thesis, 3-Conference Contribution- Oral Presentation	Mental health issues amongst minority community groups in Aotearoa New Zealand, particularly South Asian migrants and refugees.
Allan McEvoy	4-Conference Contribution- Oral Presentation, 1-Presentation (non-conference)	Critical incident stress debriefing for frontline mental health social workers
Byron Rangiwai	1-Awarded Doctoral Thesis, 9-Conference Contribution- Oral Presentation, 61-Journal Article, 3-Other, 1-Presentation (non-conference)	Māori studies, indigenous studies, indigenous theology
Craig Tunnicliffe	4-Conference Contribution- Oral Presentation	Education for social change. Social work education including field education pedagogy, supportive learning strategies, diversity and inclusion, gender and sexuality, technology and society, sociology and critical theory
David Kenkel	4-Conference Contribution- Oral Presentation, 6-Discussion/Working Paper (Published), 2-Journal Article2-Other, 3-Presentation (non-conference), 1-Report	Community development; re-imagining social work in light of climate change; social justice and social work professional bodies; undocumented Tuvaluan immigrants in West Auckland
Flora Apulu	1-Conference Contribution- Oral Presentation, 1-Report	Youth Development: authentic youth participation and governance; youth offending: prevention, risk assessment and interventions; co-design strategies and programme development. Pacific Peoples: Samoan women's wellbeing and development, health and wellbeing advancement, intercountry adoptions, youth development, business and prosperity, co-design strategy and programme development
Geoff Bridgman	5-Conference Contribution- Oral Presentation, 3-Film/video, 1-Monograph, 2-Other, 1-Presentation (non-conference), 8-Report	Violence prevention; community safety and resilience; Māori mental health; Deaf mental health; white fragility; mixed-methods research
Helen Gremillion	8-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 1-Conference	Gender studies; feminist theories; narrative therapy and community work; research ethics; constructionist theories of the body and of

	Contribution- Poster Presentation, 3-Journal Article	sexualities; gender and science; consumer culture; medical anthropology; qualitative research methodologies
Irene Ayallo	3-Conference Contribution- Oral Presentation, 1-Journal Article, 1-Presentation (non-conference), 1-Report	Refugee and migrant communities, public theology, family violence, action research
Jason Hallie	7-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings	The effectiveness of alcohol (and other substance) education in the workplace
Nigel Pizzini	4-Conference Contribution- Oral Presentation, 1-Conference Contribution- Paper in published Proceedings, 3-Journal Article, 1-Other	School counselling (effectiveness, barriers, constraints); counsellor education (foci: collaborative approaches, centring Mātauranga Māori, clinical supervision); narrative therapy and community work; gender and sexualities; masculinity and male discourses; addiction; violence and relationships
Peter Matthewson	6-Conference Contribution- Oral Presentation, 1-Journal Article	Action research to develop anti-poverty practice framework for social work in Aotearoa; impact of student placement in radical organisation

5.2 Externally funded research projects within Social Practice (2015-present):

- » A project examining barriers and facilitative factors regarding male high school students engaging with school counsellors (Nigel Pizzini). \$1.5K Contributed by the New Zealand Association of Counsellors.
- » Evaluation research on a project to reduce violence in schools (the Violence Free Communities' [VFC] 'Jade Speaks Up' project: Geoff Bridgman is Research Director; Elaine Dyer at VFC is Project Leader). National rollout planned. ACC has contributed approximately \$33K per year for three years to this project (2018-2020). Note: not recorded as ERI; work conducted on staff member's non-Unitec time.
- » A project exploring community resilience in Waitakere (joint venture with industry partner and fund holder, Community Waitakere). \$60,000 awarded by the Lotteries Community Research Fund (John Stansfield [former staff member], Geoff Bridgman).
- » A study of growth and gentrification in Glen Eden (David Kenkel and former staff members David Haigh and Kate Doswell). The Waitakere Ranges Local Board has contributed \$20,000; Unitec has contributed \$5,000.
- » A project exploring the lived experiences of undocumented Tuvaluan immigrants in New Zealand (Hoa Nguyen and David Kenkel, in partnership with the Te Atatu Electoral Office). The intention is to influence change in immigration policy. Extensive media coverage achieved (including on New Zealand's One News programme in 2021). The Te Atatu Electoral Office has contributed \$9,370; Unitec has contributed \$5,000. (2020-2021). As at July 2022 findings have been under view in Parliament's Education Workforce Committee.
- » A project exploring the lived experiences of young people after they leave care homes to live independently in Vietnam (Hoa Nguyen and external researchers), funded from Trinity College of Dublin (EUR \$2,000) and from the International Association of Schools of Social Work (US \$4,000).
- » Research evaluating the South Kaipara Community Economic Development Scheme (John Stansfield and Susan Elliott, both former staff members – in partnership with external researchers). The Department of Internal Affairs and Helensville district Health trust have contributed \$10,000 to this project, and Unitec has contributed \$5,000.
- » Evaluation of Henderson's Budgeting Services (HBSI) Financial Literacy Programme for youth and validation of a financial self-efficacy scale (Hoa Nguyen). Unitec has contributed \$5,000 (in addition to \$13,000 from its Early Career Researcher Fund); HBSI has contributed \$5000 plus staff time.
- » Research on the effectiveness of interventions offered via the Problem Gambling Foundation, whose \$5,000 was matched by \$5,000 from Unitec (Geoff Bridgman).
- » Two research projects on Deaf Mental Health (Geoff Bridgman, for one of these studies as project supervisor). For one project the Deaf Development Fund has contributed \$5,000, and the New Zealand Sign Language Fund an additional \$5,000. For the second project, the Oakley Mental Health Research Foundation has contributed \$5,000, which was matched by \$5,000 from Unitec.
- » Translation research to apply the findings of a national study on Tongan youth suicide prevention to an ethnic-specific resource (Aulola Lino). A Health Research Council Translation Grant of \$5,000 funded this work. Note: not recorded as ERI; managed via another institution prior to this staff member's arrival at Unitec.

- » Research on strategies for developing social policy units within community-based organizations (Hoa Nguyen). Unitec contributed \$5,000, and the partner organization Community Waitakere contributed \$1,000 plus \$4,000 in-kind.
- » A study investigating community development principles involved in roadside fruit tree planting over 30 years on Waiheke Island (John Stansfield, former staff member). The Waiheke Resources Trust contributed \$3,000, and Unitec \$5,000.

5.3 Key examples of PBRF-recognized research contributions within Social Practice:

- » Aulola Lino's service on the Advisory Committee for Taulanga U Social Services, contributing to evaluative processes and research projects on a parenting programme (funded by Pasifika Futures).
- » David McNabb's role as the Council for Social Work Education Aotearoa NZ representative to the Board of the International Association of Schools of Social Work, which oversees global social work research. David also chairs the CSWEANZ International Projects Committee which awards US \$15,000 in research grants annually. Also, social practice staff liaise regularly with international academic visitors whom David hosts via his role within the Council for International Fellowship Aotearoa (an exchange programme for social workers and related professionals).
- » Helen Gremillion's roles as Research Professional Development Liaison across Unitec and as an invited member of the New Zealand Ethics Committee.
- » Four Master's students receiving Dean's Awards for research excellence (topics: An exploration of Ngāi Tūhoe aspirations for self-determination in relation to statutory child welfare; An exploration of the contribution and limits of non-Māori leadership within Māori communities; Discrimination against persons diagnosed with borderline personality disorder; De-gendering the French language through narrative conversations).
- » Geoff Bridgman's membership on the Health Research Council's College of Experts. Also Geoff was the only non-University member over a five-year period on HRC's Feasibility Study Application Assessment Committee. Geoff received a Unitec-wide award for Research Excellence in 2018.

5.4 Social Practice research projects engaging Māori and/or Pacific individuals and groups:

- » The ACC-funded 'Jade Speaks Up' Project (Geoff Bridgman) – involving 17 mainly low decile schools from Auckland through to Dunedin – includes at least 500 Māori and 583 Pacific Island participants (2017 to May 2018).
- » Former staff members Paula Bold-Wilson Eliza Wallace submitted Kaupapa Māori Master's theses informed by Māori communities. Both received first-class honours for their work, which was supported by Unitec Postgraduate Research Scholarships. Social Practice staff member Geoff Bridgman and former staff member Catherine Hughes, respectively, were the thesis supervisors.
- » Fifteen Māori and Pacific research partners are affiliated with Violence Free Communities and have been engaged in a major research project with Geoff Bridgman, on the topic of 'Banishing Bullying Together' in McLaren Park/Henderson South. Approximately 50 Bachelor of Social Practice students who were research assistants on this project were Māori or Pacific.

- » Aulola Lino is collaborating with Dr Jemaima Tiatia-Seath on Health Research Council funded projects designed to help prevent suicide amongst Tongan youth. Lino is also part of a National Pasifika Reference Group for ASIST and SafeTALK (Lifeline Aotearoa).
- » A range of Māori and Pacific collaborators were involved in Geoff Bridgman's and former staff member John Stansfield's project, in partnership with Community Waitakere, on perceptions of community safety in West Auckland.
- » The wananga sector and Pasifika staff at Whitireia were engaged in a CSWEANZ project assessing fit and proper criteria during admission processes for social work education programmes (former staff member Catherine Hughes, and current staff member David McNabb).
- » Ten undergraduate students, six of whom are Māori or Pacific, have been involved in research practicum projects since 2017 (supervised by Geoff Bridgman), the majority of which involve mainly Māori and Pacific Island participants.
- » A Pasifika staff member of Henderson's Budgeting Services Inc. (HBSI) is serving as a co-author on Hoa Nguyen's study involving HBSI's Financial Literacy Programme. In addition, two Māori advisors are involved in this study.

5.5 Research publications to date involving Social Practice staff co-authorship with students/graduates:

- »
- » Shaw, K.L., & Bridgman, G.D. (2022). Creating appreciation and community support for mothers caring for a child with an anxiety disorder. E-press, Unitec. Te Pūkenga. DOI: <https://doi.org/10.34074/mono.097>.
- » Gremillion, H., & Powell, C. (2019). Evaluating Unitec's ALLY workshop on diverse sexuality and gender inclusivity. *Evaluation Journal of Australasia*, 19(3), 134-146. doi:10.1177/1035719X19875595
- » Pizzini, N. & McCormick, M. (2020) Stopping the Bus while touring through client landscapes. *International Social Work*, 1-6. Doi:10.1177/0020872820940031
- » Powell, C., & Gremillion, H. (2018). The experiences of diverse-gender tertiary students: Structural discrimination and microaggressions. Whanake: *The Pacific Journal of Community Development*, 4(2), 10-30.
- » Connor, H., Bruning, J. & Napan, K. (2016). Positive women: A community development response to supporting women and families living with HIV/AIDS in Aotearoa New Zealand. *Whanake: the Pacific Journal of Community Development*, 2(2), 14–23.
- » Woolson-Neville, D., & Gremillion, H. (2015). Experiencing women's advocacy: Connections with and departures from a feminist socio-political movement to end violence against women. *Unitec ePress Research Report Series*, 2, pp.1-15.
- » Bruning, J., Connor, D. H., & Napan, K. (2015). HIV and AIDS policies globally: A New Zealand perspective. In J. Allen & A. Parrot (Eds.) *HIV/AIDS policies and their impact on women*. New York, USA: Routledge.
- » Rangiwhai, B., Aliioaiga, E., Cook, M., Latu, F., & Tukutau, M. (2022). The effects of the 2021 Delta lockdown in Aotearoa New Zealand: A thematic analysis of some preliminary material to inform a future research question. *Te Kaharoa: The eJournal on Indigenous Pacific Issues*, 15(1), 1-29.
- » Rangiwhai, B., Enari, D., Masae, C., Paea, D., Tahilanu-Mapili, L., & Vailahi, V. (2021). Lost in translation: Reflexive thematic analysis in research with Pacific peoples. *Te Kaharoa: The*

eJournal on Indigenous Pacific Issues, 17(1).
<https://doi.org/10.24135/tekaharoa.v17i1.354>

Unitec New Zealand Limited

Meeting of Te Komiti Rangahau o Unitec | Unitec Research Committee

Date of Meeting: 14 September 2023

Title	2023 Early Career Researcher (ECR) Funding Progress Reports
Provided by:	Brenda Massey, Senior Grants Advisor
For:	REVIEW

Recommendation

That the committee receives progress reports from the recipients of 2023 Early Career Researcher (ECR) Funding.

Purpose

The purpose of this paper is to report to the committee concerning the progress towards outcomes and expenditure of the 2023 ECR funded projects.

Information/Background

The ECR Fund provides annual, contestable funding to emerging and established ECRs at Unitec in order to develop their capability, capacity and career progression as a Principal Investigator on a high quality, externally partnered, applied research project that meets the evaluation criteria. Provision of one progress report and one final report is required as part of the accountability requirements of the fund.

Attachments

- 2023 ECR Progress Report – Dr Irene Ayallo
- 2023 ECR Progress Report – Madhusudan Vyas
- 2023 ECR Progress Report – Dr Mary Yan
- 2023 ECR Progress Report – Dr Sarah Wells
- 2023 ECR Progress Report – Dr Caralyn Kemp
- 2023 ECR Progress Report – Tanya White

Early Career Researcher Fund 2023

Progress Report

Email your completed Progress Report to bmassey@unitec.ac.nz before **5pm on Thursday, 31 August 2023**. Instructions in red italics may be removed before submission.

Researcher:	Dr Irene Ayallo
Project Title:	A participatory action study investigating the views of 'youth of African background' on cultural identity construction and the significance of creating cultural spaces.
Amount of Grant:	\$13,200

Provide an update on the project's overall progress

The study investigated how the youth of African background living in Aotearoa (mainly Auckland and Wellington) navigate multiple cultures (their African-ness and Aotearoa cultures) to form their own cultural identities. The aim was to understand their experiences of cultural identity, highlight the opportunities and challenges faced, and explore creating a safe space where these young people can safely explore their multiple identities. The data collection stage is complete, and the preliminary data analysis shows this aim has been achieved. The research is progressing well and is still within the original proposed timeline. As expected in a research process, the project has managed opportunities and challenges.

A few elements in the original proposal have been revised based on community feedback and guided by preliminary research findings. For instance, adjusting the age range from 18-24 years to 18-35 (the African Charter definition of youth). The budget reflects less spending because of savings from the proposed participants' workshops. Most youth participants gave feedback that they preferred to participate via questionnaires. The recruitment process was challenging, mainly linked to ethnic communities facing 'research fatigue' - participating in research without seeing tangible outcomes. Despite the challenges, we still met the minimum number of participants. We have gathered rich data, which the research team discussed in the July research workshop. The focus in September is further analysis and dissemination of the research findings.

A significant outcome to date is a collaboration that has emerged from community interest and the initial findings - to create a safe space where African background youth and young adults in NZ will begin connecting. This space will initially be online, with several opportunities to translate into physical spaces. This would be a 'tangible' research outcome, which the community mentioned was often lacking in most research. The savings from the workshops will go towards setting up this hub - with multiple spaces.

Section 2d: Timetable

Achievement	Date
Complete UREC Application/Approval	January 2023
Recruitment and training of trainers (workshop facilitators)	February - March 2023
Conducting research workshops	April – June 2023
Receiving and collating data from workshops	July 2023
Analysis of data	August – September 2023
Write up of findings	October 2023
Dissemination of findings to the community	November 2023
Estimated completion date	December 2023 – January 2024

So far, there has been interest from other community-based practitioners in the findings and possibilities of future collaborations in implementing some of the recommendations. The team has had several meetings with these groups in the interest of disseminating the research findings and committing to tangible outcomes. For instance:

Hi Irene

My name is **Byron** Williams, I am a PhD student at Waikato University researching the experiences of racism amongst African renters based in Wellington. I am supervised by Jess Terruhn.

My email is not actually about my own research but about a youth project a colleague and I are hoping to get started. Our aim is to provide an Afro-centred youth project based in Wellington to provide a space for young Africans to congregate, hangout, and feel safe. We also want to create a space where they can speak about the issues they are facing and provide assistance if we have the capacity.

At the moment, my colleague and I have identified some issues on the ground experienced by African youth but still need to get a better idea of what young people are facing.

I'm emailing because I know you have done and are currently doing work amongst African youth so you may have an understanding of what issues are currently on the ground.

If possible, I would like to connect with you and discuss what you are seeing on the ground to better inform the approach we will take. We plan to conduct community events to have open dialogue with members of the community but are trying to gain as much access to information as possible.

Please let me know. Kind regards,

One proposed practical outcome is creating a safe space for youth to connect. Initially, the team proposes an online community hub – hosted on Mighty Networks. The practicalities of this hub are still being discussed and considered.

Outline progress with respect to the relevant milestones identified in your application for funding

Milestone Date	Anticipated Achievement	Activities and Progress
Jan 2023	Complete UREC Application/Approval	An ethics application for the project was completed and sent to the UREC in March 2023 – for the April meeting. This was approved in April – with a start date of April 28, 2023, until April 28, 2024. Based on community feedback, the Team revised the ethics application slightly – adjusting the age group according to the African Charter definition of youth (18-35 years old). The revisions were sent and approved by UREC.

Feb - Mar 2023	Recruitment and training of trainers (workshop facilitators)	Although the formal training of the Training of Trainers (ToTs) was delayed until the end of April 2023 because of the ethics process, informal conversations occurred between February and March (while discussing elements of this research with community people). Several young people showed interest in facilitating the research in their regions. This enabled the training to begin soon after we received the ethics approval. The team sent out invites to young people who indicated interest and selected (as per the ethics application) the ToTs for the project. The initial workshop was conducted in early June 2023.
Apr – Jun 2023	Conducting research workshops	Per the ethics application, participants were recruited within this time frame through the research team's extensive community and professional networks. Invitations were sent to organizations working with youth and to some youth directly. It was a challenging and slow process, with most communities expressing and experiencing 'research fatigue'. In most cases, the team discussed the project at length with individuals and groups, committing to tangible outcomes. In the end, we met the minimum number of participants, 35. Participants either participated through workshops or questionnaire surveys. Most of them preferred a questionnaire survey. This is a significant finding in this research.
Jul 2023	Receiving and collating data from workshops	The team gathered for a data analysis workshop in late July. At this gathering, we discussed the research process so far – the benefits and challenges so far. We also read and discussed each of the 35 responses received and started identifying patterns and themes and discussing the implications of some of the findings.

Aug – Sept 2023	Analysis of data	The team is undertaking further data analysis. We are also discussing preliminary findings with relevant individuals and community members. The aim is to implement some immediate (achievable) recommendations, such as establishing an online community hub. This is part of the Team's commitment to tangible research outcomes.
Oct 2023	Write up of findings.	The first write-up is underway – in the form of a report (proposed) to be published in Kōtuitui: New Zealand Journal of Social Sciences Online.
Nov 2023	Dissemination of findings to the community	This will begin with the creation of the online community hub. Details being discussed and TBC.
Dec 2023 – Jan 2024	Estimated completion date	In progress – and on track to complete within the timeframe.

Outline any variations to your project [if applicable]

Some of the budget areas have been shifted – as revisions were made to meet the actual availability and needs of the community. For instance:

- Upon discussion with the ToTs, they preferred to have the first workshop online – due to their availability. This cut costs on accommodation and food. The ToTs were still compensated for their time (full-day workshop).
- With many participants choosing to participate through surveys instead of workshops, the workshop costs decreased, and the budget shifted to personnel.
- One of the critical findings of the research was the need for a space for African youth in Aotearoa to connect. The savings from the workshop will go towards setting up the hub – online initially. Personnel is required for this.

Outline any new opportunities to come from this project so far.

So far, there has been interest from other community-based practitioners in the findings and possibilities of future collaborations in implementing some of the recommendations. The team has had several meetings with these groups in the interest of disseminating the research findings and committing to tangible outcomes. For instance:

Hi Irene

My name is **Byron** Williams, I am a PhD student at Waikato University researching the experiences of racism amongst African renters based in Wellington. I am supervised by Jess Terruhn.

My email is not actually about my own research but about a youth project a colleague and I are hoping to get started. Our aim is to provide an Afro-centred youth project based in Wellington to provide a space for young Africans to congregate, hangout, and feel safe. We also want to create a space where they can speak about the issues they are facing and provide assistance if we have the capacity.

At the moment, my colleague and I have identified some issues on the ground experienced by African youth but still need to get a better idea of what young people are facing.

I'm emailing because I know you have done and are currently doing work amongst African youth so you may have an understanding of what issues are currently on the ground.

If possible, I would like to connect with you and discuss what you are seeing on the ground to better inform the approach we will take.

We plan to conduct community events to have open dialogue with members of the community but are trying to gain as much access to information as possible.

Please let me know. Kind regards,

One proposed practical outcome is creating a safe space for youth to connect. Initially, the team proposes an online community hub – hosted on Mighty Networks. The practicalities of this hub are still being discussed and considered. This will be a significant outcome and opportunity based on this research's findings. The hope is that this online hub can translate into physical connections/meetings as needed.

Financial Update (provided by Asma Munir (Research Administrator, Tuapapa Rangahau):

Project Code	Name	Committed Budget	Actual Expenditure	Committed Expenditure	Actuals + Commitments Expenditure	Unallocated Committed Budget	% Complete
	Personnel (8 hours of workshop facilitation x \$25 p/hr x 6 facilitators)	\$ 1,200.00	\$ 550.00	\$ -	\$ 550.00	\$ 650.00	
	29-30 July Training of trainers' workshop (2 days x 6 people @\$250 pp): travel, accommodation, food, workshop materials	\$ 3,000.00	\$ 737.00	\$ -	\$ 737.00	\$ 2,263.00	
	HOTEL Quality Hotel Lincoln Green AKL Conference/Meeting		\$ 360.00	\$ -	\$ 360.00		
	HOTEL Quality Hotel Lincoln Green AKL Morning Tea		\$ 160.00	\$ -	\$ 160.00		
	HOTEL Quality Hotel Lincoln Green AKL Lunch		\$ 51.50	\$ -	\$ 51.50		
	HOTEL Quality Hotel Lincoln Green AKL Dinner		\$ 165.50	\$ -	\$ 165.50		
	MTA vouches		\$ 205.65	\$ -	\$ 205.65		
	PaknSave vouchers		\$ 600.00	\$ -	\$ 600.00		
	eGift vouchers		\$ -	\$ 500.00	\$ 500.00		
	Research workshops (2 days x 8 participants + 2 RAs @\$2,000 per region – Auckland, Hamilton, and Wellington): workshop materials, food, koha (petrol vouchers)	\$ 6,000.00	\$ -	\$ -	\$ -	\$ 6,000.00	
	PaknSave vouchers for Hamilton		\$ 100.00	\$ -	\$ 100.00		
	Data collection and discussion workshop (2 days x 6 people @\$250 p/day): travel, accommodation, food, workshop materials	\$ 3,000.00	\$ -	\$ -	\$ -	\$ 3,000.00	0%
Total		\$ 13,200.00	\$ 2,929.65	\$ 500.00	\$ 3,429.65	\$ 10,270.35	22%

The less-than-estimated spending is due to costs cut in the workshops. As mentioned before, some revisions were made to meet the actual availability and needs of the community. For instance:

- Upon discussion with the ToTs, they preferred to have the first workshop online – due to their availability. Most were in between jobs at the time of the proposed workshop and could not afford to be present in Auckland for the suggested days. Instead, they preferred an online workshop. This cut costs on accommodation, transport, and food. The ToTs were still compensated for their time (full-day workshop).
- With many participants choosing to participate through surveys instead of workshops, the workshop costs decreased, and the budget shifted to personnel.

Proposed Spending of the remaining funds: implementing outcomes

- One of the key findings of the research was the need for a space for African youth in Aotearoa to connect. A significant amount of the savings from the workshop will go towards setting up the hub – online initially. Personnel is required for this.
- The process of setting up the hub will involve a follow-up workshop with some of the youth who participated in the project – to help design the hub. Funding will go towards the workshop.
- This outcome and dissemination will be reported in the final report due before 31 March 2024.

Self-assessment: The Early Career Researcher Fund aims to develop early career researchers' capability, capacity and career progression as a Principal Investigator on a high-quality applied research project. How well do you believe you have managed your project to date?

I believe the project has been managed to a very good standard – adjusting elements to reflect community needs while staying within the time frame. Setting up the online community hub will be a significant outcome – implementing a recommendation while the research is ongoing. This aligns with the project's original commitment to tangible and impact-based research.

Have you completed the "Managing a research contract" course on Moodle?

Yes ☒

No ☐

Do you wish to highlight any other matters relevant to this project?

Yes ☐

No ☒

Reminders:

- There will be no rollover of funds into 2024.
- All purchase orders, invoices, expense claims and applications to travel connected with your project must be signed off by the Director Research and Enterprise.
- You must notify Tūāpapa Rangahau of publications as and when they occur (via email to research@unitec.ac.nz).
- You must notify Tūāpapa Rangahau of any significant changes to your planned research.
- A final report on your project is due before 31 March 2024.

NB: Any problems or issues that you would prefer not to highlight in this report can be discussed, in confidence if requested, with the Director of Research and Enterprise, your Research Partner and/or with Brenda Massey, Senior Grants Advisor.

Early Career Researcher Fund 2023

Progress Report

Email your completed Progress Report to bmassey@unitec.ac.nz before **5pm on Thursday, 31 August 2023**. Instructions in red italics may be removed before submission.

Researcher:	Madhusudan Vyas
Project Title:	Artificial intelligence based software solution to predict individual outcomes of targeted radiotherapy
Amount of Grant:	\$8,000

Provide an update on the project's overall progress

UPSMA project aim since the beginning was to create an AI based solution which can help to detect PSMA avid lesion and help to predict possibility the outcomes of the Lu177-PSMA treatment. It was not an easy task to work on the limited resources although received money from ECR and support from stack holders helped us to make some progress as we planned. We have now successfully created software which can load the images and analyse the quantifications. Now next stage is to evaluate it with clinical database and comparing with the exiting software for interpretation. Overall we have a made slow but steady progress in positive directions.

(Please also find attached a two page summary by developer team)

Outline progress with respect to the relevant milestones identified in your application for funding

Milestone Date	Anticipated Achievement	Activities and Progress
Oct 2022 to Jan 2023	Phase one- Writing of software	Achieved this stage for detection although still need the modelling part of the software
Feb 2023 to April 2023	Phase two- Prospective analysis of software	Lesion detection is achieved although quantification and validation of the number is still required to be completed.
July 2023 to Dec 2023	Phase three- Deploying software with prospective analysis	Delayed and will be doing in November as need to get confidence on the quantitative part
Dec 2023	Estimated completion date	75% will be completed although multiple iteration required.

Outline any variations to your project [if applicable]

No applicable as mentioned earlier we are making progress as planned and some evaluation with the comparable software needs to be done before deploying it in clinical settings.

Outline any new opportunities to come from this project so far

We are currently working with multiple stakeholders including UMI®, AUT, Shanghai University of technology and Mercy radiology to get more funds from NZ-China grant round for this year. Our aim is to make this product global and even for this making and evaluating some more funding opportunities and capacity of the current project making it more attractive to get more global and local interest.

Financial Update

Item	Amount approved	Amount spent to date ¹	Remaining funds (i.e. amount approved less amount spent to date)	Anticipated amount to be spent by the end of the funding term*
Personnel for data analysis	\$1,000			1000
Professional services (software developer; 150 hours)	\$5,000	400		4600
Equipment	\$2,000			2000
Total	\$8,000			7500

* If the anticipated amount to be spent by the end of the funding term is more or less than the amount approved, please explain why: I haven't sent anymore invoice yet and more to be send by the end of next month as currently evaluating overall expenses.

Self-assessment: The Early Career Researcher Fund aims to develop early career researchers' capability, capacity and career progression as a Principal Investigator on a high-quality applied research project. How well do you believe you have managed your project to date?

Current project I have successfully managed with arranging continuous meeting and communication with my stack holders and active contributors to keep current project more viable. Continuous engagement of the Co-PI and their productive feedback helped to make this project a huge success so far. Although we still need more money to keep going in future as there will be more to do but happy with my progress till date.

Have you completed the "Managing a research contract" course on Moodle?

Yes ☐

No ☒

Do you wish to highlight any other matters relevant to this project?

Yes ☐

No ☒

¹ If you are unsure, you can check these figures with Asma Muir amuir@unitec.ac.nz

Summary

This progress report aims to provide an overview of the work accomplished on the DICOM Image Processing and SUV Counter project. Progress has been made in the area of image processing, image manipulation, ROI identification, and SUV counting. The outcome is a GUI application designed to work with DICOM medical imaging files. It offers functionalities to select DICOM files, navigate through them, draw automatic regions of interest (ROIs), display metadata, select custom ROIs, and compute a standardized uptake value (SUV) based on various factors like the patient's weight and the injected dose. It also has a colour-based object detection to find regions of interest.

Objectives

- To develop a tool that can navigate through, display, and process DICOM images.
- To implement an algorithm for counting the Standard Uptake Value (SUV) based on user-defined parameters and ROI.

Tool's Breakdown:

1. Selection and Navigation of DICOM Files

- Implemented a file selection dialog for users.
- Added prev/next buttons for navigating between images in a DICOM series.

2. Display of DICOM Images

- DICOM images are now displayed on a Tkinter canvas.
- Images are resized and converted to RGB format for better visualization.

3. Automatic Region of Interests (ROI) Identification

- Developed an algorithm that automatically draws bounding boxes around potential areas of interest.

4. Metadata Information

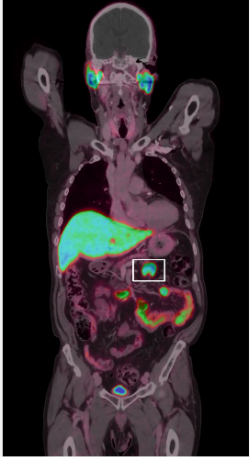
- An "Info" button has been implemented that allows users to view DICOM metadata in a separate text widget.

5. SUV Counting Algorithm

- Successfully implemented an algorithm to calculate the SUV ratio based on specific color codes and user inputs.

SUV Counter App

Select DICOM File



Previous

Next Previous

Automatic Region of Interests

Info	
(0008, 0005) Specific Character Set	CS: 'ISO_IR 192'
(0008, 0008) Image Type	CS: ['DERIVED', 'SECONDARY', 'Fusion-PETCT', 'FUSED', 'MPR']
(0008, 0012) Instance Creation Date	DA: '20220907'
(0008, 0013) Instance Creation Time	TM: '161333.048943'
(0008, 0016) SOP Class UID	UI: Secondary Capture Image Storage
(0008, 0018) SOP Instance UID	UI:
1.2.156.112605.189250949387599.230131043912.4.6912.66193	
(0008, 0020) Study Date	DA: '20220907'
(0008, 0021) Series Date	DA: '20220907'

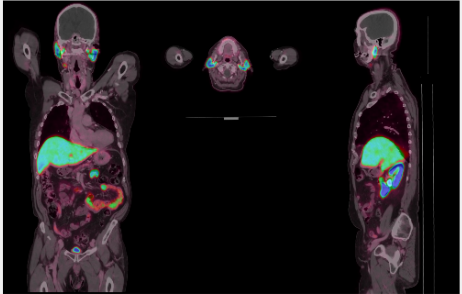
Injected Dose:
1200

Select ROI
Count SUV

Total Pixels: 292, ----- SUV (bw): 18.98

SUV Counter App

Select DICOM File



Next

Automatic Region of Interests

Info	
(0008, 0005) Specific Character Set	CS: 'ISO_IR 192'
(0008, 0008) Image Type	CS: ['DERIVED', 'SECONDARY', 'Fusion-PETCT', 'FUSED', 'MPR']
(0008, 0012) Instance Creation Date	DA: '20220907'
(0008, 0013) Instance Creation Time	TM: '161333.048943'
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(0008, 0021) Series Date	DA: '20220907'

Injected Dose:
1200

Select ROI
Count SUV

Total Pixels: 257, ----- SUV (bw): 16.705

Early Career Researcher Fund 2023

Progress Report

Email your completed Progress Report to bmassey@unitec.ac.nz before **5pm on Thursday, 31 August 2023**. Instructions in red italics may be removed before submission.

Researcher:	Dr Mary Yan
Project Title:	Probiotic effects of yacon extract residual saccharides on gut microbiota: a preliminary study
Amount of Grant:	\$3,000

Provide an update on the project's overall progress

The major activities in the past five months:

1. Microbiota in cow gut is very abundant in species. The current project is a preliminary study to evaluate the prebiotic effects of yacon extract residual saccharides on cow gut microbiota. We applied a seed funding and targeted bifidobacterial and lactobacilli (beneficial bacteria), and enterococcus. Due to the limitations of fund and facilities, we cannot measure the total population of the three bacteria. Therefore, we will measure the populations of their main species in cow gut.

Literature research has been undertaken to define the main species of the targeted bacteria in cow gut, they are:

Bifidobacterium pseudologum

Bifidobacterium ruminantium

Lactobacillus acidophilus

Lactobacillus ruminus

Enterococcus faecium

2. To get advice from the expert in AgResearch, Mary contacted Dr Arjan Jonker in the Animal Nutrition and Physiology team of AgResearch. Dr Jonker's main research focus is on enteric methane emissions and nitrogen excretion by ruminants and utilisation of food industry by-product for livestock feeding. Hopefully we can have some advice in the future for in vivo study.
3. We have Dr Jemila Kester (a microbiologist at AUT) joined the team to help advise and supervise the microbiology part of the project. She modified the methods and suggested replacing cow faecal samples with cultural media.
4. Due to the climate impact, the main manufacture is postponing the production of yacon concentrate. Therefore, we decided to process yacon fruits in a AUT food laboratory. We collected about 5 kg yacon fruits from the yacon farm in Kerikeri, then processed yacon through washing, cutting, processing, and produced 1 kg yacon pomace.



5. All the consumables have been ordered.

Outline progress with respect to the relevant milestones identified in your application for funding

Milestone Date	Anticipated Achievement	Activities and Progress
Apr-May 2023	Reference cultures and facilities preparation	Completed Five reference cultures have been defined and purchased. • <i>Bifidobacterium pseudologum</i> • <i>Bifidobacterium ruminantium</i> • <i>Lactobacillus acidophilus</i> • <i>Lactobacillus ruminus</i> • <i>Enterococcus faecium</i>
May-Jul 2023	Yacon extract residues collection (yacon is harvested in early winter)	Completed Yacon fruits collected from the yacon farm in Kerikeri have been processed and produced about 1 kg yacon pomace
Jun-Jul 2023	Faecal samples preparation	Completed (Methods been modified to use cultural media)
Jul-Aug 2023	Fermentation and testing	On track
Jul-Sep 2023	Data compilation	On track
Dec 2023	Estimated completion date	

Outline any variations to your project [if applicable]

No changes to date following approval of ECR fund.

Outline any new opportunities to come from this project so far

While collecting yacon fruits from the yacon farm in Kerikeri, the owner of the farm had an instruction from the funder to help with the project. Yacon New Zealand Ltd has a long-term plan for the development of value-added food products that could benefit local and international populations. We will work together to develop more healthier food products e.g. herbal tea from yacon leaves.

Financial Update

Item	Amount approved	Amount spent to date ¹	Remaining funds (i.e. amount approved less amount spent to date)	Anticipated amount to be spent by the end of the funding term*
Materials Reference bacterial cultures, and lab consumables (e.g., 50 ml culture tubes, GasPak, chemicals)	\$3,000	\$2,700	\$300	\$3000
AUT Co-funding – Equipment (Anaerobic containers, incubator, spectrometer, Biosafety cabinet)	Cash \$1,000 (agreed fund from Dr Rothman Kam)	Cash \$1,400	nil	nil
	\$5,000 (external funding from AUT)	\$5,000 (in-kind)		
Total	\$4,000 (ECR fund & AUT cash)	\$4,100	\$300 (ECR fund)	\$4,400

* If the anticipated amount to be spent by the end of the funding term is more or less than the amount approved, please explain why: Dr Jemila Kester asked for new anaerobic jars, Dr Rothman Kam ordered using his budget.

Self-assessment: The Early Career Researcher Fund aims to develop early career researchers' capability, capacity and career progression as a Principal Investigator on a high-quality applied research project. How well do you believe you have managed your project to date?

All on track

Have you completed the "Managing a research contract" course on Moodle?

Yes ☒

No ☐

Do you wish to highlight any other matters relevant to this project?

Yes ☒ I had a chat with the owner of GMP Dairy Ltd about using cattle in his dairy farm for in vivo study in the future, he is happy to support.

No ☐

¹ If you are unsure, you can check these figures with Asma Muir amuir@unitec.ac.nz

Early Career Researcher Fund 2023

Progress Report

Email your completed Progress Report to bmasey@unitec.ac.nz before **5pm on Thursday, 31 August 2023**. Instructions in red italics may be removed before submission.

Researcher:	Dr Sarah Wells
Project Title:	A genomic investigation of hybridisation in <i>Naultinus</i> geckos
Amount of Grant:	\$9,290

Provide an update on the project's overall progress

I have been busy developing iwi collaborations and applying for permits. This has been successful and I am just waiting for DOC permit approval which should come through soon. Fieldwork has not yet started and is due to start in November 2023, as specified in my original timeline. This is because of the awkward timing of our field seasons over the summer, compared to the timing and expiry of Unitec grants.

Outline progress with respect to the relevant milestones identified in your application for funding

Milestone Date	Anticipated Achievement	Activities and Progress
Apr 2023	Permits granted and iwi approval given	Some iwi approval granted, others in discussion. Trip to meet with iwi on Waitangi marae very successful. Animal Ethics approved. DOC permit applied for in June 2022 but still waiting on approval. Have been regularly chasing them up.
Jan 2024	Fieldwork completed (conducted over the 2023 summer season from Oct 2023 to Jan 2024)	Not yet started due to the stated timeline.
Apr 2024	DNA extractions completed and samples sent for sequencing	Not yet started due to the stated timeline.
Sept 2024	Morphological analysis completed	Not yet started due to the stated timeline.
Jan 2025	Population genomic analysis completed	Not yet started due to the stated timeline.
Mar 2025	Manuscript drafted and submitted for publication	Not yet started due to the stated timeline.
Mar 2025	Estimated completion date	

Outline any variations to your project [if applicable]

Yes, I have changed the budget as it was going to be too difficult to source an experienced research assistant. Instead, the money for this will be diverted into paying for extra travel expenses for myself and my collaborator to conduct the fieldwork over multiple smaller fieldtrips over weekends. In addition, funding will be used to pay for the genomic analysis part of the project that was previously I had not yet secured funding for (see tasks for 2024 in table above). This money can be pre-invoiced to the sequencing company to be used in 2024 when needed.

Outline any new opportunities to come from this project so far

I have formed some great on-going collaborations with iwi in the Bay of Islands, in particular with Ngati Rahiri and Ngati Kuta. I look forward to strengthening these when field work begins.

Financial Update

I have not filled in the table below because 1) none of the funding has been used yet because fieldwork has not started yet. I am currently chasing up my DOC permit and then will be booking and paying for travel and accommodation costs. These, as well as sequencing costs, will be invoiced before the end of November. And 2) because the budget has been changed, as described above.

Item	Amount approved	Amount spent to date ¹	Remaining funds (i.e. amount approved less amount spent to date)	Anticipated amount to be spent by the end of the funding term*
Personnel (RA: 158 hours @ \$25 p/hr)	\$3,950			
Travel (mileage 100km)	\$340			
Travel (accommodation: 3 weeks @ \$200 p/n)	\$4,200			
Materials (QIAGEN DNA extraction kit x2)	\$800			
Total	\$9,290			

* If the anticipated amount to be spent by the end of the funding term is more or less than the amount approved, please explain why:

Self-assessment: The Early Career Researcher Fund aims to develop early career researchers' capability, capacity and career progression as a Principal Investigator on a high-quality applied research project. How well do you believe you have managed your project to date?

Good, considering the difficulty in the timing of this grant being incompatible with the timing of field seasons in my research field. This was always going to be a tricky timing. However, I anticipate no issues in allocating the funding of this project by the end of November. I have a plan for this to be invoiced within the next few months in anticipation of this being used over the summer and early next year.

Have you completed the "Managing a research contract" course on Moodle?

Yes ☐

No ☒

Do you wish to highlight any other matters relevant to this project?

Yes ☐

No ☒

¹ If you are unsure, you can check these figures with Asma Muir amuir@unitec.ac.nz

Early Career Researcher Fund 2023

Progress Report

Email your completed Progress Report to bmassey@unitec.ac.nz before **5pm on Thursday, 31 August 2023**. Instructions in red italics may be removed before submission.

Researcher:	Dr Caralyn Kemp
Project Title:	Social benefits of dog parks for dogs
Amount of Grant:	\$11,000

Provide an update on the project's overall progress

The aims of this project are to:

- Investigate the prevalence of positive and negative interactive behaviour occurring between dogs with other dogs, their owners, and human strangers across four dog parks.
- Compare observational data with the owners' perception of the benefits of the dog park for their dogs and themselves
- Compare the social behaviours occurring between different dog parks to determine whether the design of the dog park influences the behaviour of owners and the socialisation of the dogs within these spaces.

Human ethics for Phase 1 (surveys) and 2 (dog handler observations) was applied for in December 2022 and approval was granted on the 31st of January 2023. Three EAS undergraduate students started collecting data across 3 of the dog parks in February 2023. Each student is responsible for one park. Brooklyn Nielson came on board towards the end of February 2023 as the Research Assistant (Key Researcher) for this project.

Since February, the weather has worked against us as this project is field-based. The sustained wet weather has resulted in limited numbers of dog walkers going to parks. The parks are very mud-bound and sodden, making it unpleasant for dog handlers. It is also difficult to handout paper-based surveys and score dog handler behaviour on worksheets which are also paper-based. It is not appropriate to use iPads in the rain either. This has limited the progression planned for this project. Phase 1 has been completed at one park and is still in progress at the other 3. Phase 2 has progressed further and has been completed at two parks and is nearly completed at the other two. The three undergraduate students will discontinue their involvement in data collection at the end of August. Brooklyn will continue Phase 1 and 2 at any parks which have not had their full data sets collected.

Due to the poor weather, it is likely that dog handler behaviour, when they do go to the park, is altered, with visits being shorter than normal due to the unpleasantness of being outdoors. As there also seem to be fewer dogs around, dogs have fewer opportunities to play and be social, resulting in dog handlers not staying as long because they see fewer benefits for their dog. We are therefore considering requesting a modification to the human ethics approval for Phase 2 to collect more data over the summer 2023/2024 months. This would also allow us to determine how weather factors in to the benefits of dog parks.

It was intended to apply for animal ethics at AgResearch earlier this year, but due to the difficulties and delays with Phases 1 and 2, it was put off so that all efforts could be focussed. Approval was sought and granted in July 2023. This ethics approval covers Phase

3. A fourth undergraduate student has, as of the 1st of August, come on board the project to help with conducting Phase 3 dog behaviour observations at two of the parks. Data collection will occur across the 2023/2024 summer period. A second student is being sought for this project. We also hope to gain funding to keep Brooklyn on in 2024 to help with Phase 3 and the extension of Phase 2 if this goes ahead.

Outline progress with respect to the relevant milestones identified in your application for funding

Milestone Date	Anticipated Achievement	Activities and Progress
End 2023	Unitec symposium student output	It seems that this event has been cancelled this year. Alternative opportunities for student dissemination of research will be sought.
End 2023 and mid 2024	Undergraduate student reports	2023 students (3) begin data analysis of their results next month with plans for report submission in November/December
2024	Phase 1 and 2 written up and submitted to a peer-reviewed journal, potentially Landscape and Urban Planning	This is still planned, with a manuscript in preparation but not completed until after all the data has been collected. Data collection has been limited due to the consistent poor weather.
2025	Phase 3 written up and submitted to a peer-reviewed journal, potentially Applied Animal Behaviour Science	Phase 3 has received animal ethics approval, beginning 24 th July, and training on recording dog social behaviours has begun. A student has come onboard to assist with data collection.
Early-mid 2023	Presentation and/or discussion with Auckland Local Board	Discussions with our link to Auckland Council have paused temporarily while they finish their own project on an assessment of dog by-laws. We are looking for further contacts but there is difficulty in determining who is responsible for dog parks in Auckland, even within Local Boards.
End 2025	Potential report written for Auckland Council	Still planned but will depend on continued development of interested parties.

Outline any variations to your project [if applicable]

The main change to planned outputs is in regards to the MIT/Unitec symposium. This has been cancelled for 2023 and therefore we have lost the opportunity for the undergraduate students to present their work. An appropriate alternative is being sought.

Weather has delayed and limited much of the fieldwork, with few people going to the dog park in the hours the students can attend. We had hoped to collect more data during the summer months, but this was not possible. As a result, students cannot collect data past 5pm due to it getting dark. It is usually after work that dog parks are busiest.

Outline any new opportunities to come from this project so far

We aim to apply for additional funding in 2024 from Companion Animals NZ, Healthy Pets NZ.

Financial Update

The spending of funds has gone according to plan. The fuel vouchers have been slow in arrival, due to external events.

Item	Amount approved	Amount spent to date ¹	Remaining funds (i.e. amount approved less amount spent to date)	Anticipated amount to be spent by the end of the funding term*
Personnel (Key Researcher)	\$8,000			8,000
Travel to dog parks	\$1,000	600	400	1,000
Animal ethics application	\$2,000	0		2,000
Printing of surveys	\$50 (external/in-kind)	32	10	42
Total	\$11,050			11,042

* If the anticipated amount to be spent by the end of the funding term is more or less than the amount approved, please explain why: We have found that printing has been cheaper than anticipated.

Self-assessment: The Early Career Researcher Fund aims to develop early career researchers' capability, capacity and career progression as a Principal Investigator on a high-quality applied research project. How well do you believe you have managed your project to date?

Have you completed the "Managing a research contract" course on Moodle?

Yes ☐ No ☒

Do you wish to highlight any other matters relevant to this project?

Yes ☐

No ☒

¹ If you are unsure, you can check these figures with Asma Muir amuir@unitec.ac.nz

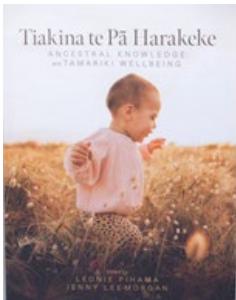
Early Career Researcher Fund 2023

Progress Report

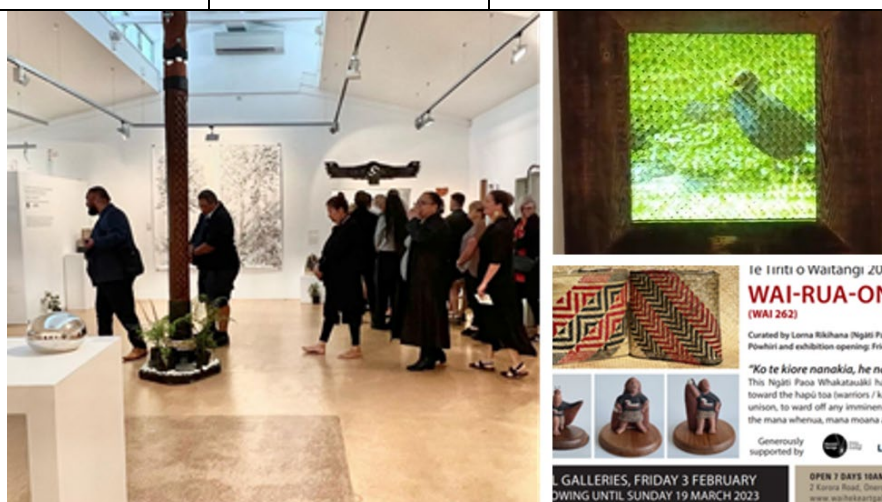
Researcher:	Tanya White
Project Title:	Toitū te Whenua
Amount of Grant:	Costs up to the value of 0.2 FTE for Tanya White

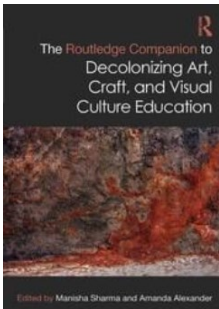
PROJECT'S OVERALL PROGRESS

The outputs listed below cover the past year and include part of 2022. They are different to the milestones identified in the original funding application. This variance can be attributed to budget constraints, resource limitations, personnel changes, and logistical issues due to the taiao being impacted by weather events.

Date	Achievement	Activities and Progress
1. 2022	ONLINE JOURNAL ARTICLE	White, T. (2022). Wānangatia te Wahakura - Weaving Wellbeing for Mokopuna and Whānau. <i>The Vessel : Embodied Knowledge</i>, 3rd, chapter 4. 
2. Oct 2022	CONFERENCE CONTRIBUTION	White, T., & Tan, L. (2022, October). <i>Te Whānau Pā Harakeke: An indigenous artform of community intervention</i>. Paper presented at the Alliances and Commonalities Conference, Stockholm.
3. 2022	BOOK CHAPTER	White, T. (2022). Raranga Waha Kura : Weaving Wellbeing for Mokopuna and Whānau. In Pihema, L. & Lee-Morgan, J. (Eds.), <i>Tiakina Te Pā Harakeke : Ancestral Knowledge and Tamariki Wellbeing</i> (pp. 159-176). Wellington: Huia. 

4. 2022	PUBLIC ART EVENT	• Te Pataka Art Trail • Group curatorship • Hung, B. (curator), Renata, H. (curator), Tan, L. (curator), White, T. (curator), Wood, B. (curator), & Woodruffe, P. (curator). (2022). <i>Te Pataka Art Trail</i>. [Curatorial Exercise]. Te Puukenga Unitec Campus: Auckland, New Zealand 27 October - 16 December.
		
5. Feb 2023	GALLERY EXHIBITION	• WAI-RUA-ONO-RUA (WAI262) Waitangi Exhibition, Community Art Gallery, Waiheke. • Collaborative project with Peeti Lamwilai. • Visual and sound projection onto harakeke woven screen. Framed with recycled cladding from Puukenga building.



6. 2023	BOOK CHAPTER	• Tan, L., & White, T. (2023). Raranga and Tikanga Pā Harakeke - An Indigenous Model of Socially Engaged Art and Education. In M. Sharma & A. Alexander (Eds.), <i>The Routledge Companion to Decolonizing Art, Craft, and Visual Culture Education</i> (pp. TBA). New York, USA: Routledge.
		

7. April 2023	CONFERENCE PRESENTATION	• Toitū te whenua: working together for the wellbeing and resilience of te taiao. • Group presentation at 5th International Conference on Resilient and Responsible Architecture & Urbanism (RRAU). • Paper submission for publication. Authors: T White, L Tan, L Toki, H Renata, D Blanchon.
8. June 2023	RRAU 2023 PAPER SUBMISSION FOR PUBLICATION	



9. June 2023	BOOK CHAPTER	• White T (2023) Rarangahia Mai Rā. In L. Toki, J. Diamond & D. Menzies (Eds), Takina te Hau e te Reo Karanga (pages 151-155), ePress, https://doi.org/10.34074/book.104



10. July – Sept 2023	GALLERY GROUP EXHIBITION	• White, Tanya. (artist)/kairaranga. (2023). Pohewa Pahewa: a Māori design kaupapa. [Raranga Taura Kutai. An installation of harakeke mussel ropes.]. Group exhibition. Curated by Zoe Black, Johnson Witehira, Graham Tipene, Tyrone Ohia, Desna Whaanga-Schollum, Objectspace, Auckland, New Zealand, 1 July - 3 Sep 2023.



11. 28 th July 2023	MATARIKI MANAAKI WHENUA EVENT	• manaaki whenua working bee • 57 volunteers • Working on the restoration of Rangimārie pā harakeke and regeneration of Te Waiunuroa o Wairaka.



Matariki Manaaki Whenua working bee, Te Noho Kotahitanga Marae, 2023

12. July 2023	COMMUNITY PROJECT INATURALIST	• Created Toitū te whenua – Ngā Kaitiaki Taiao, Unitec Te Puukenga Inaturalist Community project https://www.inaturalist.org/projects/toitu-te-whenua-nga-kaitiaki-taiao-unitec-te-puukenga?tab=species • Collecting and tracking biodiversity observations within the Wairaka Campus, Unitec area – Te Noho Kotahitanga marae. • Currently 736 observations of 434 species

About Members 9

Protect and care for the mauri of Te Waiunuroa o Wairaka and all her biodiversity, including Rangimārie pā harakeke and taonga whenua of Te Noho Kotahitanga marae, Te Whare Wānanga o Wairaka, Unitec, Te Puukenga.

[Read More >](#) [Your Membership](#)

[Edit Project](#) [Project Journal](#)

Overview **736** OBSERVATIONS **434** SPECIES **231** IDENTIFIERS **61** OBSERVERS [Stats](#)

12 observations

Australasian Swamphen
Porphyrio melanotus

8 observations

Red Damselfly
Xanthocnemis zealandica

6 observations

Black Nightshade
Solanum nigrum

6 observations

White Basket Fungus
Heodictyon cibarum

6 observations

Myrtle Rust
Austropuccinia psidii

13. Aug 2023	FUNDING APPLICATION	• Foundation North • Preparing application to submit end of August. • To support Toitū te Taiao project : focus on regenerative environment – whakahou taiao; and Ngā Kaitiaki initiatives including ○ Water sensor monitors ○ Planting days ○ Restoration of Te Waiunuroa o Wairaka ○ Restoration of Rangimārie pā harakeke ○ Development and maintenance of website ○ Dissemination of knowledge through wānanga, conferences and publications ○ Development of series of pou whenua to connect community to narratives, using augmented reality.
14. Oct 2023	CONFERENCE GROUP SUBMISSION	• The International Association of Societies of Design Research (IASDR) Milan 2023. Presenter: Leon Tan From Urban Development to the Pluriverse – Ontological Design for Natural and Cultural Heritage Contribution Details ===== Contribution ID : 599 Track / Type : Pictorials Acceptance Status: This contribution has been accepted. Title : From Urban Development to the Pluriverse – Ontological Design for Natural and Cultural Heritage Author(s) : Tan, Leon; Ferguson, Gina; Hung, Bobby; Lamwilai, Peeti; Ngaropo, Pouroto; Renata, Hohepa; White, Tanya; Wood, Rebecca; Woodruffe, Paul Presenting Author : Tan, Leon Presenter's E-Mail: ltan@unitec.ac.nz
15. Nov 2023	GROUP ABSTRACT SUBMISSION	• International Indigenous Climate Change Research Summit (IICCR) 2023 • Group submission • Toitū te Whenua: Working for the Wellbeing and Resilience of Te Taiao
16. Nov 2023	ABSTRACT SUBMISSION	• International Indigenous Climate Change Research Summit (IICCR) 2023 • Raranga Taura Kūtai: Indigenous solutions to coastal mussel habitat degradation.
17. 2022/2023	TOITŪ TE WHENUA WEBSITE	• Created initial content for Toitū te Whenua website using Squarespace. • Included sections on: ○ Kaitiakitanga ○ Narrative and video images of Rangimārie pā harakeke and Te Waiunuroa o Wairaka ○ Bioblitz results from 2022 ○ Restoration of the ngāhere beside Penman house ○ Conference posters, including NZES 2022 Conference in Otago (see below).

		Currently in the process of seeking funding for website publication.
18. Dec 2023	WĀNANGA	- Hui with Ngāti Whātua ki Orakei and Tāmaki Makaurau Weavers to review kaitiakitanga of Rangimārie pā harakeke. - Discuss creation of booklet for varieties of harakeke in Rangimārie pā harakeke.

Outline any variations to your project [if applicable]

As outlined above.

Outline any new opportunities to come from this project so far

Yes, these have been included above.

Self-assessment: The Early Career Researcher Fund aims to develop early career researchers' capability, capacity and career progression as a Principal Investigator on a high-quality applied research project. How well do you believe you have managed your project to date?

Have you completed the "Managing a research contract" course on Moodle?

Yes ☐

No ☒

Do you wish to highlight any other matters relevant to this project?

Yes ☐

No ☒

Reminders:

- There will be no rollover of funds into 2024.
- All purchase orders, invoices, expense claims and applications to travel connected with your project must be signed off by the Director Research and Enterprise.
- You must notify Tūāpapa Rangahau of publications as and when they occur (via email to research@unitec.ac.nz).
- You must notify Tūāpapa Rangahau of any significant changes to your planned research.
- A final report on your project is due before 31 March 2024.

NB: Any problems or issues that you would prefer not to highlight in this report can be discussed, in confidence if requested, with the Director of Research and Enterprise, your Research Partner and/or with Brenda Massey, Senior Grants Advisor.

Unitec New Zealand Limited

Meeting of Te Komiti Rangahau o Unitec | Unitec Research Committee

Date of Meeting: 14 September 2023

Title	Research Related Documents on Te Aka The Nest
Provided by:	A/P Marcus Williams, Director Research and Enterprise
For:	Information

Recommendation

That the committee notes that all research related forms, guidelines, policies, and procedures are available on Te Aka | The Nest and understands how to locate them.

Key Points

All Unitec's policies and procedures, forms, guidelines, and manuals are available on Te Aka | The Nest by clicking on the 'Policies and Forms' tab on the homepage. They can also be located by using the search box at the top of the page.

The key documents that relate to research are as follows¹:

Policies and Procedures

- [AC 4.0 Conduct of Research Policy](#)
- [AC 4.1 Research Centre Procedure](#)
- [AC 4.2 Conduct of Student Research Policy](#)
- [AC 4.2.1 Supervision and Advisement of Student Research Guidelines](#)
- [AC 4.3 Research Ethics Policy](#)
- [Early Career Researcher Forum Terms of Reference](#)
- [Utilising external research and enterprise funding](#)
- [Copyright Procedures for Staff](#)

Guidelines

- [Application for Ethical Approval Guidelines](#)
- [Guidelines for Applying for and Managing External Research Funding](#)
- [Guidelines for Documenting Research Outputs](#)
- [Guidelines for Non-Degree Teaching Research Track](#)
- [Guidelines for Research Dissemination Funding](#)

¹ Please note that this is not a comprehensive list of all research related policies, procedures, and guidelines.

- [Guidelines on Research Output Type Evidence](#)
- [Guidelines on Research Outputs Management System \(ROMS\)](#)
- [Guidelines on Scholarly Communication](#)

Information on Tūāpapa Rangahau's support mechanisms (e.g. professional development opportunities, internal funding schemes etc) is also available on Te Aka by clicking on the 'Teaching & Research' tab on the homepage, selecting 'Tūāpapa Rangahau; partnering research and enterprise' from the dropdown list and then clicking '[Tūāpapa Rangahau Research Documents – page](#)'. There is a hyperlink from this page that will take you to a [OneDrive folder](#) which contains funding application forms, key research dates, the latest IRP template, a copy of the Unitec Research Strategy etc.

Contributors

- Brenda Massey, Senior Grants Advisor
- Penny Thomson, Research Partner

Te Komiti Rangahau o Unitec | Unitec Research Committee Self-Assessment

Purpose: NZQA requires the Committees of Unitec's Academic Board to provide evidence of self-assessment.

Te Komiti Rangahau o Unitec Self-Assessment Provocations

- Can we improve the way the committee is run?
- Is time well managed?
- Are issues under discussion well-handled and resolved?
- Are the agenda and minutes well handled?
- Are the perspectives of committee members respected and heard?
- Are actions completed and accounted for?
- Were there matters raised and dealt with in the meeting that were particularly helpful or unhelpful?
- Does the committee oversee and ensure compliance within its mandate?
- Does the committee show foresight and proactively engage in continuous improvement?
- Does the committee review and improve the relevant policies, guidelines and regulations?