

Rutherford Discovery Fellowships

2021 Guidelines for PANELLISTS

Table of Contents

Changes for 2021.....	2
About the Rutherford Discovery Fellowships	2
Eligibility	2
Assessment Process (in brief).....	3
Discipline-based panels (Stage one)	4
Humanities and the Social Sciences (HSS).....	4
Life Sciences (LFS)	4
Physical Sciences, Engineering and Mathematics (PEM)	4
Assessment of proposals	4
Assessment in relation to years of research experience.....	5
Consideration of referee reports	5
Assessment Criteria	5
Considerations for assessing proposals to each criteria	5
1. Calibre of the applicant as a researcher	6
2. Assessment of the applicant's leadership quality	6
3. Assessment of the proposed research programme.....	6
Vision Mātauranga.....	6
Vision Mātauranga costs (relevant to Interview Panel members only)	7
Grades and distribution	7
Grading and recommendation to the interview panel	8
Interview panel (Stage two).....	8
Sensitive issues	8
Privacy	8
Conflicts of interest.....	9
Additional Information	9
Feedback to applicants	9
Disposal of applicant proposal matter	10
Royal Society Staff	10
Timetable.....	10
Enquiries.....	10
Appendix 1 - Vision Mātauranga information for applicants.....	11
Appendix II – Glossary of te reo Māori terms	15

CHANGES FOR 2021

The framework for engaging with Vision Mātauranga has been amended.

- Applicants are now asked to select Vision Mātauranga themes relevant to their proposal under Section 4. If one or more Vision Mātauranga themes have been selected, applicants are given up to one extra page under the research template of the application (Section 9-12) to explain any Vision Mātauranga component that applies to their proposed research. Applicants may choose to integrate Vision Mātauranga under Sections 9-10 and leave Section 11 empty, gather all relevant Vision Mātauranga information under Section 11, or a combination of both.
- Applicants have additionally been informed that the additional space of up to one page provided for proposals aligned with a Vision Mātauranga theme, is solely for providing additional information related to Vision Mātauranga. Applications that fill this space with information that is not relevant to Vision Mātauranga will be assessed less favourably than applications that fulfil the intent of the extra space. A 'Vision Mātauranga costs' section has been added for Interview panellists to consider when assessing the proposal
- A glossary of te reo words has been added in Appendix II

ABOUT THE RUTHERFORD DISCOVERY FELLOWSHIPS

The Rutherford Discovery Fellowships are administered by the Royal Society Te Apārangi (the Society) for the New Zealand Government.

The Fellowships will develop and foster the future leaders in the New Zealand science and innovation system¹. They will attract and retain New Zealand's most talented early- to mid-career researchers and encourage their career development by enabling them to establish a track record for future research leadership. It is expected that Fellows, throughout their careers, will contribute to positive outcomes for New Zealand.

Receipt of a Rutherford Discovery Fellowship is expected to have significant value in the future career development and leadership potential of a researcher.

Fellowships are awarded on a full-time basis of which at least 85% (or 0.85 FTE) of the Fellow's time must be dedicated to the research objectives identified in the proposal, unless an exemption to this requirement has been approved by the Society. The remainder of their time may be used for other research, teaching and non-research related development opportunities.

The scheme will award a minimum contribution of \$70,000 per year towards the researcher's salary, \$60,000 in research related expenses, and \$30,000 per year for the host organisations to support the Fellow's research programme.

ELIGIBILITY

For the purpose of this scheme, early-to mid-career researchers are researchers whose doctoral degrees were conferred between three and eight years prior to the year in which the Fellowship is awarded. For the 2021 funding round, applicants must have a PhD conferment date between 01 January 2013 and 31 December 2018. If applicants have more than one PhD, the first conferred date will be used unless otherwise approved by the Society. Eligibility can be extended where applicants have an allowable career interruption, including maternity/parental leave, medical leave, part-time employment because of ongoing childcare responsibilities, or as otherwise agreed to by the Society. Applicants that are the primary caregiver of dependent children born since their PhD was awarded, are also able to extend the period of eligibility by two years per child, to account for career

¹ This includes research in science, technologies, and humanities.

interruptions experienced due to being the primary caregiver for young children. The extension of two years per dependent child is inclusive of any periods of parental leave.

All applications forwarded for review fulfil the eligibility requirements.

ASSESSMENT PROCESS (IN BRIEF)

The Society will appoint a selection panel, chaired by the President of the Society, or their nominee, to oversee the selection process. The Chair of the panel will work with the Society's nominated manager to determine the best process to be used. The assessment of proposals is a two stage process.

Stage one is the assessment of all proposals by three discipline-based panels. Discipline-based panellists are asked to participate in a briefing video conference prior to beginning their assessment, but do not otherwise meet. Each discipline-based panellist grades the proposals within their panel and then submits their grades on an electronic form.

Once the overall scores from the panellists have been received, the Rutherford Discovery Fellowship Secretariat will produce an ordered list of applicants with the highest grades from each of the discipline-based panels. These top ranking applications will form the Long List for consideration by the interview panel. The number of applicants from each panel on the Long List will be determined by the number of proposals submitted (Table 1).

For information, discipline panellists will receive the overall panel scores and Long List following stage 2a of the process.

Stage two is in two parts: (a) the assessment of the Long List of applicants by the interview panel; and, (b) interviewing a shortlist of applicants and making recommendations for the successful Fellows. The Chair and four member interview panel will conduct the interviews.

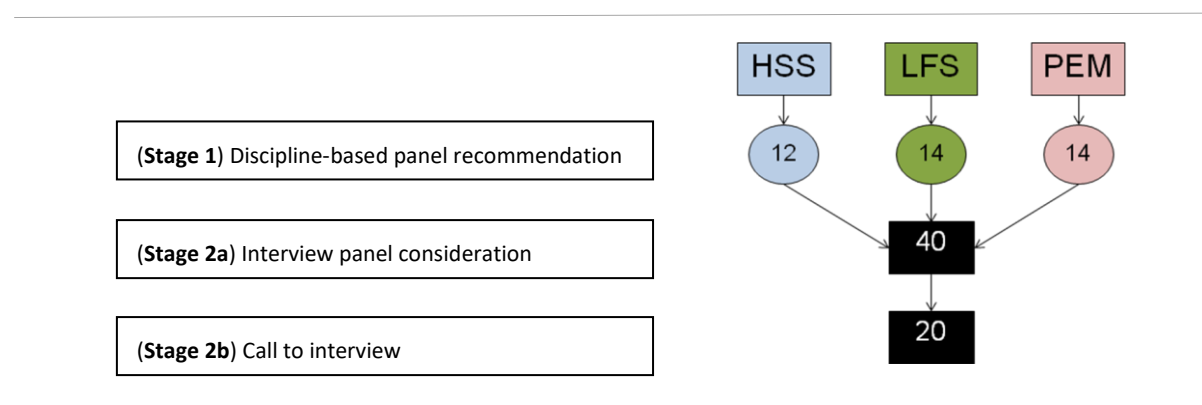


Figure 1. Process flow

Panel	Number of proposals submitted to each discipline-based panel	Number of proposals submitted (% of total)	Long List (number)
HSS	49	30%	12
LFS	56	35%	14
PEM	57	35%	14
Totals	162	100%	40

Table 1. Example distribution of proposals if 162 applications were to be received.

DISCIPLINE-BASED PANELS (STAGE ONE)

Each of the three research areas will have a discipline-based assessment panel. The panel comprises researchers who are experts in their field, have a broad knowledge of the research area and are experienced in assessment. Panel members are appointed by the Society under consent from the Chair of the selection panel. These panels are advisory only, providing recommendations on the relative merits of proposals to the interview panel. The three research areas are:

Humanities and the Social Sciences (HSS)

Research related to the human condition or aspects of human society.

This includes, but not limited to: English; languages; history; religion; philosophy; law; classics; linguistics; literature; cultural studies; media studies; art history; film; economics; education; psychology (cognitive, social, developmental, organisational, community and health); cognitive science; linguistics; archaeology; anthropology; sociology; social, cultural and human geography; social anthropology; architecture, urban design and environmental studies; public health; nursing; public policy; marketing; political science; and business studies.

Life Sciences (LFS)

Research related to understanding the activities that occur in cells and tissues and the interrelationships between organisms and their environment.

This includes, but not limited to: physiology (plant or animal), pathology (animal or plant), pharmacology, molecular biology, genetics, cell biology, microbiology; neurobiology and neuropsychology (including animals as a model species for humans); animal behaviour; population biology genetics; functional genomics and related bioinformatics; biostatistics and modelling; animal, plant and microbial ecology; biogeography; biodiversity; phylogenetics; systematics and evolution; biophysics, chemical biology; and biochemistry.

Physical Sciences, Engineering and Mathematics (PEM)

Research related to the physical world and mathematics.

This includes, but not limited to: physics; physical chemistry; organic chemistry; analytical chemistry; inorganic chemistry; pure and applied mathematics; statistics; logic, theoretical and engineering aspects of computer and information sciences; complexity theory; operations research; nanotechnology; software and hardware engineering; applications and robotics; materials science; engineering (including bioengineering and other cross-disciplinary research activities); geology; geophysics; physical geography; oceanography; hydrology; meteorology; atmospheric science; earth sciences; astronomy; and astrophysics.

ASSESSMENT OF PROPOSALS

Discipline-based panellists are asked to participate in a briefing video conference on one of the two dates indicated in the timetable. Each panel member will receive electronic copies of the applications for their panel. Panel members are asked to read, assess and grade each proposal based on the three selection criteria, taking into account the applicant-solicited referee reports.

When considering your grade, please take into account Vision Mātauranga across all assessment criteria where applicable. Proposals are to be assessed by panel members exclusively on the information provided in the proposal and referee reports.

Panel members also need to identify proposals for which they have a conflict of interest, explaining the nature of the conflict (please refer to Conflicts of interest).

Each panel member is asked to start reading applications at different points through the order of the proposals to avoid proposals from institutions or researchers first in the alphabet always being read first.

Each panel member will receive an electronic form on which to record their grades and comments. The spreadsheet should be completed and returned to the Rutherford Discovery Fellowship Secretariat by the due date.

The budget section is included for discipline panel members' perusal but is not to be graded by the discipline panels. This can form part of the assessment by the Interview Panel.

It should be noted that these discipline-based panellists return their grades to the Rutherford Discovery Fellowships Secretariat and do not convene for a meeting at the end of their assessment. The collated grades from the panellists will be used to create a ranked list of applications to be considered as the Long List. This Long List is reviewed by the interview panel.

Assessment in relation to years of research experience

Panel members must consider applicants' track record in relation to their years of research experience, which may differ from the number of years since PhD conferment. The years of research experience (R) is noted in the application header and on the first page under research area, and excludes periods of maternity/parental leave, medical leave or other relevant career breaks outlined in section 1e of the CV.

Consideration of referee reports

Applicant-solicited referees are used for the assessment of proposals in conjunction with the selection criteria. Where referees disagree, the panel members must use their own judgement in determining which referee reports to emphasise and what score to assign. These deliberations should be guided by considerations such as: the panel member's own level of expertise on the subject; the comments made by referees to explain their grades; the relative competencies of the referees; and, possible conflicts of interest. Applicants have been informed that referees should not be directly involved in the proposed programme of research or in the chain of line management of their proposed host department.

Assessment Criteria

Proposals are assessed on the information provided in the application, the accompanying forms and the applicant's self-nominated referee reports.

For the current funding round the following weightings will be used:

- | | |
|--|-----|
| 1. Calibre of the applicant as a researcher | 60% |
| 2. Calibre of the applicant as a research leader | 20% |
| 3. Calibre of the proposed research programme | 20% |

Where relevant, panellists should consider applicants engagement with Vision Mātauranga across the assessment criteria.

In the case of applicants of the same calibre, preference will be given to applicants who:

- do not already have tenure or equivalent, or
- who are living overseas and will use the Fellowship to return to New Zealand to continue their research careers.

CONSIDERATIONS FOR ASSESSING PROPOSALS TO EACH CRITERIA

Panel members may wish to consider the following as a guide for assessing the three criteria.

1. Calibre of the applicant as a researcher

Consider if the applicant's career is exceptional for a candidate in this discipline, at their career stage.

Exceptional may be determined by consideration of the merit of the applicant's career to date and how the research compares with other New Zealand or international research in the same field. If the applicant is at the start of his or her career the calibre must be assessed in relation to the years of research experience. The curriculum vitae, supplied by the candidate in Section 5, should address the calibre of the applicant as a researcher. Some expected sources of evidence include: awards/prizes; invitations to editorial boards or keynote addresses at conferences; publication record; patents awarded; and, referee reports.

2. Assessment of the applicant's leadership quality

Consider the leadership qualities you believe the applicant possesses, or the potential they have.

Note that non-discipline-specific leadership (e.g. leadership in Mātauranga Māori, community leadership, board and council positions/memberships, etc.) should be assessed equally to discipline-specific leadership.

Expected sources of evidence may include but are not limited to: team leadership roles; student numbers and completions; leadership in Mātauranga Māori; community leadership; board memberships; project management responsibilities; quality of stakeholder relationships; external grant funding as a named investigator; presence in relevant research communities; invitations to present keynote or plenary presentations; collaborator networks; knowledge transfer activity; significant contribution to achievement of commercialisation milestones; entrepreneurial activity; indications of peer-esteem; thought leadership (e.g., conceptual development of a research field internationally); and, direct policy facing or public engagement work. If appropriate, applicants may also indicate the future direction they wish to develop their leadership skills.

3. Assessment of the proposed research programme

Consider the merit of the proposal and the potential of the research.

Merit may be determined by the applicant incorporating originality, insight and rigour. Please consider the ability of the researcher to carry out the research. Where relevant, applicants should consider the relation of the research to the themes of Vision Mātauranga and how the project will engage with Māori.

Potential of the research may be assessed from the work outlined in Sections 9-12 of the proposal. The research should significantly contribute to advances in theoretical understanding, develop new methodologies, contribute to new knowledge, or lead to advancement in a field by cross-fertilisation with ideas and results from another field. Often the design and planning of a programme of research determines its success. Good design and planning are determined by whether the overall proposal and its specific objectives have a clear focus, and the methods and experimental or sampling design are likely to produce high quality results. Expected sources of evidence include the proposed research in section 9-12 and referee reports.

Vision Mātauranga

[Vision Mātauranga](#) is a policy about innovation, opportunity and the creation of knowledge that highlights the potential contribution of Māori knowledge, resources and people. There are four themes:

- **Indigenous Innovation**, which involves contributing to *economic growth* through distinctive research and development;
- **Taiao**, which is concerned with achieving *environmental sustainability* through iwi and hapū relationships with land and sea;

- **Hauora/Oranga**, which centres around *improving health and social wellbeing*; and
- **Mātauranga**, which involves exploring *indigenous knowledge*.

Alignment with Vision Mātauranga must be considered by all applicants under section 4 of the application. If an application has been marked as 'Non Applicable' to Vision Mātauranga (i.e. the research does not have relevance for Māori), the applicant is required to provide a rationale for this decision.

Applications that align with one or more of the four themes, are given up to one additional page across sections 9-12. This gives applicants an opportunity to more easily integrate Vision Mātauranga into the conceptual framework and/or research design of the proposed programme, e.g. demonstration of consultation, linkages, outcomes or other relevant information. Alternatively, applicants may choose to gather all relevant Vision Mātauranga information under a separate heading (Section 11) under the Research Programme template, or use any combination of information across sections 9-12. Aspects of Vision Mātauranga relating to relevant experience can also be included in Section 6 – Research leadership.

Panellists are asked to consider the quality of the Vision Mātauranga engagement (including reasoning for why engagement is not applicable under section 4) in their assessment, in particular across the leadership and/or research programme criteria. Comments relating to Vision Mātauranga can also be included in the comments field on the scoring template.

Vision Mātauranga costs (relevant to Interview Panel members only)

If a proposal is aligned to Vision Mātauranga, the Interview Panel assessment may additionally consider costs associated with Vision Mātauranga capability development and engagement in the budget.

Examples include (but are not limited to):

- Research assistant time
- Student stipend support
- Costs of engagement or consultation (direct expenses). Examples could include: donation to the organisation or marae committee as a way of recognising expertise and contribution; koha; vouchers; providing resources such as books or research findings to the communities involved.
- Costs of dissemination (e.g. hui) – direct expenses

For more information on Vision Mātauranga (i.e. including guidance for applicants, please see [Appendix I](#). For a glossary of commonly used Māori concepts, words and phrases commonly seen in Rutherford Discovery Fellowship proposals, please see [Appendix II](#).

GRADES AND DISTRIBUTION

There are six scores available; 1 (**excellent**) to 6 (**room for improvement**). Each criterion should be assigned one of the six scores. Each panel member should use the following target distribution for the proposals that they assess.

Score	1 (excellent)	2	3	4	5	6 (room for improvement)
% of proposals	10-20	15-25	20-30	15-25	10-20	0-10
Example (60 proposals)	6-12	9-15	12-18	9-15	6-12	0-6

Table 2. Target distribution.

In the example above where 60 proposals are assessed, between 6 and 12 proposals should be assigned a score of 1, between 9 and 15 proposals should be assigned a score of 2, between 12 and 18 proposals should be assigned a score of 3, and so on. **Additional help to achieve the target distribution is provided in the score sheet.**

Grading and recommendation to the interview panel

Once the overall scores from the panellists have been received, the Rutherford Discovery Fellowship Secretariat will produce an ordered list of applicants with the highest grades from each of the discipline-based panels. These top ranking applications will form the Long List for consideration by the interview panel. The number of applicants from each panel on the Long List will be determined by the number of proposals submitted.

INTERVIEW PANEL (STAGE TWO)

The Chair and members of the interview panel will conduct the interviews. This is a two-part process:

- The interview panel assesses the Long List of applicants with the highest ranking grades from the discipline-based panels and will create a shortlist of applicants to be invited for interview. The applicants called to interview will be the highest ranked by the panel and does not need to reflect the number of proposals in a particular discipline.
- The interview panel will conduct interviews and recommend the successful applicants for the Fellowships.

The Chair of the interview panel is responsible for the effective conduct of the assessment process. This post will be filled by the President of the Society or their nominee. Each panel member needs to ensure that the funding recommendations made are defensible by ensuring the framework for assessment, including Vision Mātauranga, is followed and identifying, and taking appropriate action, over conflicts of interest.

Each applicant will be asked a series of questions in an allocated 20-minute interview. Overseas applicants will be interviewed using either teleconferencing or video-conferencing facilities.

The recommendations of the interview panel for successful applicants are ratified by the President of the Society.

SENSITIVE ISSUES

Privacy

The Society has obligations under the Privacy Act to keep confidential certain information provided by individuals. Moreover, the records of deliberations by panels are regarded as strictly confidential; as are the contents of applications.

- Panel members should ensure the safe keeping of all applications and related confidential documents (e.g. applications, referee reports, scoring spreadsheets or summaries).
- At the conclusion of the grading, panel meetings and the interviews, members should leave documentation with the Society staff and destroy any documentation remaining elsewhere.
- Panel members should not enter into correspondence or discussion of the contents of the applications with referees, third parties, or the applicants. Any necessary correspondence shall be addressed by the Secretariat of the Rutherford Discovery Fellowships.
- The intellectual property of the ideas and hypotheses put forward in the applications should be treated in strict confidence.

Conflicts of interest

The Society takes the issue of conflicts of interest very seriously. A rigorous position is taken in order to maintain the credibility of the allocation process and to ensure that applications are subjected to fair and reasonable appraisal.

The Society wants to ensure that the panel members are active researchers with an excellent background in research. As these researchers will invariably have connections with some applicants, conflicts of interest will arise. Where these occur for panel members, the following rules will apply.

- All conflicts of interest must be declared in writing to the Society. Society staff will minute all conflicts of interest and actions taken.
- Where a panel member is a family member or close friend of any applicant(s), that person will not assess the proposal or interview the candidate and take no part in the consideration of that proposal. They will hear about the outcome of that proposal when official letters are sent to all applicants.
- If a panel member has an interest in an application, such as collaborating with an applicant or an applicant's group, or is conflicted with the applicant* then that member shall not assess the proposal or interview the candidate.
- A panel member cannot be a referee for any applicant in the current funding round.
- If the interview panel Chair has a conflict of interest then the duties of chairing the interview shall be passed to another panel member.

**A panel member is generally deemed to be conflicted if:*

- *They work in the same department as the applicant(s). Where the department is large and contact between the panel member and applicant(s) is minimal, the Chair may deem there to be no conflict.*
- *They work at the same CRI AND are in the same team as the applicant(s) (the level of conflict will depend on the size of the organisation).*
- *They work at the same company as the applicant(s). The level of conflict will depend on the size of the company.*
- *They have co-authored publications with the applicant(s) in the last 5 years*
- *They have a low level of comfort assessing the application due to their relationship with the applicant(s).*

When all conflicts of interest are taken into account, the interview panel Chair may decide that the remaining panellists' expertise is not sufficient for assessment of a particular proposal. In this case, an additional opinion from an external independent person may be sought. Alternatively, a panellist who has previously left the room may be asked to return to answer technical questions only.

ADDITIONAL INFORMATION

Feedback to applicants

In the Proposals On-Line web-based system, applicants are offered the option of receiving feedback in the form of quartiles for the three graded criteria at the conclusion of the funding round. A general statement about the funding round will also be prepared and given to all applicants.

Applicants will also be notified:

- if the applicant was successful in making the Long List.
- if the applicant is considered ineligible to apply for a Rutherford Discovery Fellowship.

Disposal of applicant proposal matter

Referees are asked to return only the completed Referee report form. Please destroy all proposal material once your report is completed.

Royal Society Staff

It is not the role of Society staff to make funding decisions. Rather, their role is one of facilitation of and "guardianship" over the assessment process, ensuring that the process is credible and defensible. To achieve this, staff will:

- organise all logistical aspects of the process;
- assist the discipline-based and interview panellists in determining realistic timetables for meetings;
- provide a framework for assessment;
- record funding decisions and collate generic feedback for applicants;
- record any conflicts of interest and identify problem areas;
- convey funding decisions to applicants and their host organisations - all discussions related to a decision should occur through Society staff; and,
- negotiate contract details with host institutions.

Timetable

Date	Activity
Mon 08 Mar 2021	Proposals On-Line web-based application system opens.
Thu 29 Apr 2021	On-Line web portal closes at 5 pm (New Zealand Standard Time).
Thu 03 Jun 2021	Deadline for receipt of applicant-solicited referee reports by the Secretariat of the Rutherford Discovery Fellowships at 5 pm (New Zealand Standard Time).
Thu 10 Jun 2021	Applications are available to discipline based panels.
Tues 08 Jun 2021 or Fri 11 Jun 2021	Discipline panellists briefing video conference from 10am-11am. Panellist to choose one of the two dates offered.
Thu 15 Jul 2021	Last day for discipline-based panellists to submit their recommendations to the Secretariat.
Mid Jul 2021	The long-listed proposals are sent to the interview panel.
Fri 27 Aug 2021	Last day for interview panellists to submit their recommendations to the Secretariat.
Early Sep 2021	Interview panel selects a short list of candidates to interview.
Mid to late Sep 2021	Interviews conducted by the interview panel. Dates to be confirmed.
Oct 2021 (TBC)	Results announced.

Table 3. Timetable for 2021

Enquiries

If you require further information about the Rutherford Discovery Fellowships, please email us at rutherford.discovery@royalsociety.org.nz or phone 04 470 5764.

Additional information on the Rutherford Discovery Fellowships is available on the following website: <https://royalsociety.org.nz/what-we-do/funds-and-opportunities/rutherford-discovery-fellowships/>

APPENDIX 1 - VISION MĀTAURANGA INFORMATION FOR APPLICANTS

Vision Mātauranga is a policy about innovation, opportunity and the creation of knowledge that highlights the potential contribution of Māori knowledge, resources and people.

Applicants should identify which, if any, of the four Vision Mātauranga themes below are associated with the proposed research. If this is not applicable to your proposed research, you must tick N/A AND provide a brief rationale for this decision.

The four themes are:

- **Indigenous Innovation**, which involves contributing to *economic growth* through distinctive research and development;
- **Taiao**, which is concerned with achieving *environmental sustainability* through iwi and hapū relationships with land and sea;
- **Hauora/Oranga**, which centres around improving *health and social wellbeing*; and
- **Mātauranga**, which involves exploring *indigenous knowledge*.

NEW: Collection of the % contribution of each Vision Mātauranga theme to the proposed research will form part of our reporting obligations for NZRIS (see “Changes” earlier). If you have ticked one or more Vision Mātauranga themes, please consider each theme one at a time. Indicate the proportion of the proposed research that aligns with that theme. It is possible for the combined total to be over 100% (for example, if the proposed research is entirely Mātauranga and also has a Hauora/Oranga theme, the contributions could be 100% and 10% respectively).

If one or more themes apply to your proposed research programme, **up to one additional page will be available for the research section (Section 9-12) of the application**. This gives applicants an opportunity to more easily integrate Vision Mātauranga into the conceptual framework and/or research design of the proposed programme, e.g. demonstration of consultation, linkages, outcomes or other relevant information. Alternatively, applicants may choose to gather all relevant Vision Mātauranga information under a separate heading (Section 11) under the Research Programme template, or use any combination of information across sections 9-12. Aspects of Vision Mātauranga relating to relevant experience can be included in Section 6 – Research leadership. Where Vision Mātauranga is appropriate to a proposal, it can contribute to the assessment of its overall excellence.

How do I decide whether my proposal aligns with Vision Mātauranga?

The five ways of conceptualising Vision Mātauranga in your research may help you decide if this applies to your project. The categories have been adapted from those on the National Science Challenge, Biological Heritage website <https://bioheritage.nz/about-us/vision-matauranga/> hosted by Manaaki Whenua Landcare Research. Please note, however, that these categories are fluid. There may well be overlap between them as in categories b and c in terms of the nature and degree of relevance to Māori, and not every point in each category need apply. The original categories were set out by MBIE in information for the Endeavour Fund c. 2015.

a. Research with no specific Māori component

- No mātauranga Māori (Māori knowledge) is used.
- Māori are not associated with the research process (e.g. not on any research management / advisory / governance panels, it is not inclusive of Māori land or institutions, nor the subject of any component of the research).
- Work is not likely to be of greater direct relevance to Māori than members of any other group.

b. Research specifically relevant to Māori

- There is specific relevance to Māori.

- Mātauranga Māori may be used in a minor way to guide the work and its relevance to Māori.
- It includes work that contributes to Māori aspirations and outcomes.

c. Research involving Māori

- Mātauranga Māori may be incorporated in the project, but is not central to the project.
- Research is specifically and directly relevant to Māori and Māori are involved in the design and/or undertaking of the research.
- The work typically contributes to Māori (e.g., iwi / hapū, organisations) aspirations and outcomes.

d. Māori-centred research

- The project is Māori led, and where Mātauranga Māori is used alongside other knowledges (e.g. through frameworks, models, methods, tools, etc.).
- Kaupapa Māori research is a key focus of the project.
- Research is typically collaborative or consultative, with direct input from Māori stakeholders.
- There is alignment with and contribution to Māori (e.g., iwi / hapū, organisations) aspirations.

e. Kaupapa Māori research

- Mātauranga Māori is incorporated, used and understood, as a central focus of project and its findings.
- Research is grounded in te ao Māori and connected to Māori philosophies and principles.
- Research typically uses kaupapa Māori research methodologies.
- Te reo Māori may be a central feature to this kaupapa or research activity, and the applicant has medium to high cultural fluency or knowledge of tikanga and reo.
- The research is generally led by a Māori researcher; non-Indigenous researchers may carry out research under the guidance/mentoring of a Māori researcher.
- Māori participation (iwi/hapū/marae/individual) is high.
- The work contributes strongly to Māori (e.g., iwi/hapū, organisations) aspirations and outcomes and is mana enhancing.

Developing a Vision Mātauranga statement

It is important to keep in mind that there is no single approach or prescription for Vision Mātauranga: one size does not fit all and there are many possible ways of addressing Vision Mātauranga. Vision Mātauranga should not, however, be seen as an add-on, nor should it be treated as separate from the research, methods or people involved in the project. A holistic approach that considers reciprocity and relationships is therefore desirable. It is also essential that any costs associated with Vision Mātauranga capability development and engagement are accounted for in the budget (section 14).

Vision Mātauranga does not begin and end with your Vision Mātauranga statement. You should document how you have considered Vision Mātauranga and demonstrate applicable actions and relationships throughout the research. The following questions may be useful to consider when conceptualising and writing your project:

- Have you co-created the research topic/issue with an iwi or Māori organisation?
- What does working in partnership with iwi mean to you as a researcher?
- To what extent have you discussed the research with Māori stakeholders and agreed on the methodology you will use?
- Was there full disclosure and informed consent to the proposed research with Māori stakeholders? How has that agreement/informed consent been agreed to?

- Has the budget been disclosed and agreed to with Māori partners? Is there provision in that budget for Māori involvement, capability development and consultation?
- What provisions have you made to ensure there is appropriate technology transfer to Māori stakeholders as the research proceeds and as findings become available towards the end of the project?
- Are there benefits to Māori? What are they? And how have these been agreed with Māori partners?
- How is the project an opportunity to build the capacity of Māori researchers or students in your discipline?
- How will you share the research outcomes with Māori?
- Has there been agreement about the intellectual property ownership of research findings with Māori partners? What is the nature of that agreement?
- Is there a need for members of the research team to be proficient in te reo? How has this aspect been addressed?
- Is there a Tiriti o Waitangi component or requirement in your research?
- Is the research mana enhancing?

Vision Mātauranga Resources

Below you will find a non-exhaustive list of published resources that describe, discuss, and talk about how researchers have engaged with Vision Mātauranga and kaupapa Māori research. These range from early conceptions of Vision Mātauranga to more recent frameworks. The resources underscore the diverse ways Vision Mātauranga may be approached across disciplines and methodologies.

For a glossary provided to panellists and referees of commonly used Māori concepts, words and phrases commonly seen in Rutherford Discovery Fellowship proposals, please see Appendix II.

- Allen, W., Jamie M. Ataria, J. M., Apgar, J. M., Harmsworth, G., and Tremblay, L. A. (2009). Kia pono te mahi putaiao—doing science in the right spirit. *Journal of the Royal Society of New Zealand*, 39:4, 239-242. DOI: 10.1080/03014220909510588
- Crawford, S. (2009). Mātauranga Māori and western science: The importance of hypotheses, predictions and protocols, *Journal of the Royal Society of New Zealand*, 39:4, 163-166. DOI: 10.1080/03014220909510571
- Broughton, D. (Te Aitanga-a-Hauiti, Taranaki, Ngāti Porou, Ngāpuhi), and McBreen, K. (Waitaha, Kāti Māmoe, Ngāi Tahu). (2015). Mātauranga Māori, tino rangatiratanga and the future of New Zealand science. *Journal of the Royal Society of New Zealand*, 45:2, 83-88. DOI: 10.1080/03036758.2015.1011171
- Kana, F. and Tamatea, K. (2006). Sharing, listening, learning and developing understandings of Kaupapa Māori research by engaging with two Māori communities involved in education. *Waikato Journal of Education*, 12, 9-20.
<https://researchcommons.waikato.ac.nz/bitstream/handle/10289/6198/Kana%20Sharing.pdf?sequence=3&isAllowed=y>
- Macfarlane, S., Macfarlane, A. and Gillon, G. (2015) Sharing the food baskets of knowledge: Creating space for a blending of streams. In A. Macfarlane, S. Macfarlane, M. Webber, (eds.), *Sociocultural realities: Exploring new horizons*. Christchurch: Canterbury University Press, 52-67.
- Moewaka Barnes, H. (2006). Transforming Science: How our Structures Limit Innovation. *Social Policy Journal of New Zealand Te Puna Whakaaro*, 29, 1-16.
<https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/journals-and-magazines/social-policy-journal/spj29/29-pages-1-16.pdf>
- Pihama, L., Tiakiwai, S.-J., and Southey, K. (eds.). (2015). *Kaupapa rangahau: A reader. A collection of readings from the Kaupapa Rangahau workshops series*. (2nd ed.). Hamilton, New Zealand: Te

Kotahi Research Institute.

https://researchcommons.waikato.ac.nz/bitstream/handle/10289/11738/Kaupapa%20Rangahau%20-%20A%20Reader_2nd%20Edition.pdf?sequence=7&isAllowed=y

- Smith, L. T., Maxwell, T. K., Puke, H., and Temara, P. (2016). Indigenous knowledge, methodology and mayhem: What is the role of methodology in producing indigenous insights? A discussion from Mātauranga Māori. *Knowledge Cultures*, 4(3), 131–156.
<https://addletonacademicpublishers.com/component/content/article?id=2834:feature-article-indigenous-knowledge-methodology-and-mayhem-what-is-the-role-of-methodology-in-producing-indigenous-insights-a-discussion-from-matauranga-maori>

APPENDIX II – GLOSSARY OF TE REO MĀORI TERMS

Definitions taken from maoridictionary.co.nz

With thanks to Professor Angus Macfarlane, University of Canterbury, for his input.

Aotearoa	the Māori name for New Zealand
Aroha	affection, sympathy, charity, compassion, love, empathy
Atua	ancestor with continuing influence, god, demon, supernatural being, deity, ghost, object of superstitious regard, strange being - although often translated as 'god' and now also used for the Christian God
Hapū	kinship group, clan, tribe, subtribe - section of a large kinship group and the primary political unit in traditional Māori society. It consisted of a number of whānau sharing descent from a common ancestor, usually being named after the ancestor, but sometimes from an important event in the group's history. A number of related hapū usually shared adjacent territories forming a looser tribal federation (iwi)
Hau kāinga	home, true home, local people of a marae, home people
Hauora	Health, wellbeing
Hui	gathering, meeting, assembly
Iwi	extended kinship group, tribe, nation, people, nationality, race - often refers to a large group of people descended from a common ancestor and associated with a distinct territory
Kāinga	home, address, residence, village, settlement, habitation, habitat, dwelling
Kaitiaki	trustee, minder, guard, custodian, guardian, caregiver, keeper, steward
Kaitiakitanga	guardianship, stewardship, trusteeship
Kaumātua	adult, elder, elderly man, elderly woman, senior person - a person of status within the whānau or iwi
Kaupapa	Philosophy, topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative
Kaupapa Māori	Māori approach, Māori topic, Māori customary practice, Māori institution, Māori agenda, Māori principles, Māori ideology - a philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society
Koha	gift, present, offering, donation, contribution - especially one maintaining social relationships and has connotations of reciprocity
Kōiwi tangata	Human bones or remains
Kōrero	to tell, say, speak, read, talk, address; speech, narrative, story, news, account, discussion, conversation, discourse, statement, information

Mamae	be painful, sore, hurt
Mana	prestige, authority, control, power, influence, status, spiritual power, charisma - mana is a supernatural force in a person, place or object. Mana goes hand in hand with tapu, one affecting the other. The more prestigious the event, person or object, the more it is surrounded by tapu and mana. Mana is the enduring, indestructible power of the atua and is inherited at birth, the more senior the descent, the greater the mana. The authority of mana and tapu is inherited and delegated through the senior line from the atua as their human agent to act on revealed will. Since authority is a spiritual gift delegated by the atua, man remains the agent, never the source of mana. This divine choice is confirmed by the elders, initiated by the tohunga under traditional consecratory rites (tohi). Mana gives a person the authority to lead, organise and regulate communal expeditions and activities, to make decisions regarding social and political matters. A person or tribe's mana can increase from successful ventures or decrease through the lack of success.
Manaakitanga	hospitality, kindness, generosity, support - the process of showing respect, generosity and care for others
Māori	Māori, Indigenous New Zealander, Indigenous person of Aotearoa/New Zealand - a new use of the word resulting from Pākehā contact in order to distinguish between people of Māori descent and the colonisers
Marae	courtyard - the open area in front of the wharehau (meeting house), where formal greetings and discussions take place. Often also used to include the complex of buildings around the marae
Mātauranga	knowledge, wisdom, understanding, skill - sometimes used in the plural; education - an extension of the original meaning and commonly used in modern Māori with this meaning
Mauri	life principle, life force, vital essence, special nature, a material symbol of a life principle, source of emotions - the essential quality and vitality of a being or entity. Also used for a physical object, individual, ecosystem or social group in which this essence is located
Moana	sea, ocean, large lake
Te Moana-nui-a-Kiwa	the Pacific Ocean
Pākehā	English, foreign, European, exotic - introduced from or originating in a foreign country; New Zealander of European descent - probably originally applied to English-speaking Europeans living in Aotearoa/New Zealand
Pepeha	tribal saying, tribal motto, proverb (especially about a tribe), set form of words, formulaic expression, saying of the ancestors, figure of speech, motto, slogan - set sayings known for their economy of words and metaphor and encapsulating many Māori values and human characteristics

Pūrākau	myth, ancient legend, story
Rangatahi	younger generation, youth
Rangatira	chief (male or female), chieftain, chieftainess, master, mistress, boss, supervisor, employer, landlord, owner, proprietor - qualities of a leader is a concern for the integrity and prosperity of the people, the land, the language and other cultural treasures (e.g. oratory and song poetry), and an aggressive and sustained response to outside forces that may threaten these
Rangatiratanga	chieftainship, right to exercise authority, chiefly autonomy, chiefly authority, ownership, leadership of a social group, domain of the rangatira, noble birth, attributes of a chief
Rohe	boundary, district, region, territory, area, border (of land)
Rūnanga	council, tribal council, assembly, board, boardroom, iwi authority - assemblies called to discuss issues of concern to iwi or the community
Tamariki	children - normally used only in the plural
Tāne	husband, male, man
Tangata whenua	local people, hosts, indigenous people - people born of the whenua, i.e. of the placenta and of the land where the people's ancestors have lived and where their placenta are buried
Taonga	treasure, anything prized - applied to anything considered to be of value including socially or culturally valuable objects, resources, phenomenon, ideas and techniques
Tapu	be sacred, prohibited, restricted, set apart, forbidden, under atua protection; restriction, prohibition - a supernatural condition. A person, place or thing is dedicated to an atua and is thus removed from the sphere of the profane and put into the sphere of the sacred. It is untouchable, no longer to be put to common use
Te reo Māori	Māori language
Te Tiriti o Waitangi	The Treaty of Waitangi
Tikanga	correct procedure, custom, habit, lore, method, manner, rule, way, code, meaning, plan, practice, convention, protocol - the customary system of values and practices that have developed over time and are deeply embedded in the social context
Tino rangatiratanga	self-determination, sovereignty, autonomy, self-government, domination, rule, control, power
Tipuna	ancestor, grandparent, grandfather, grandmother - singular form of tīpuna and the eastern dialect variation of tupuna
Tohunga	skilled person, chosen expert, priest, healer - a person chosen by the agent of an atua and the tribe as a leader in a particular field because of

	signs indicating talent for a particular vocation
Tupuna	ancestor, grandparent – singular form of tūpuna and the western dialect variation of tipuna
Tūrangawaewae	domicile, standing, place where one has the right to stand - place where one has rights of residence and belonging through kinship and whakapapa
Wairua	spirit, soul - spirit of a person which exists beyond death. It is the non-physical spirit, distinct from the body and the mauri
Wahine/wāhine	wahine - woman, female, lady, wife; wāhine - women, females, ladies, wives – plural form of wahine; female, women, feminine
Wairuatanga	spirituality
Wānanga	seminar, conference, forum, educational seminar; tribal knowledge, lore, learning - important traditional cultural, religious, historical, genealogical and philosophical knowledge; tertiary institution that caters for Māori learning needs - established under the Education Act 1990
Whaikōrero	oratory, oration, formal speech-making, address, speech - formal speeches usually made by men during a pohiri and other gatherings
Whakapapa	genealogy, genealogical table, lineage, descent - reciting whakapapa was, and is, an important skill and reflected the importance of genealogies in Māori society in terms of leadership, land and fishing rights, kinship and status. It is central to all Māori institutions. There are different terms for the types of whakapapa and the different ways of reciting them including: tāhū (recite a direct line of ancestry through only the senior line); whakamoe (recite a genealogy including males and their spouses); taotahi (recite genealogy in a single line of descent); hikohiko (recite genealogy in a selective way by not following a single line of descent); ure tārewa (male line of descent through the first-born male in each generation)
Whakataukī	proverb, significant saying, formulaic saying, cryptic saying, aphorism. Like whakataukī and pepeha they are essential ingredients in whaikōrero
Whānau	extended family, family group, a familiar term of address to a number of people - the primary economic unit of traditional Māori society. In the modern context the term is sometimes used to include friends who may not have any kinship ties to other members
Whānaungatanga	relationship, kinship, sense of family connection - a relationship through shared experiences and working together which provides people with a sense of belonging. It develops as a result of kinship rights and obligations, which also serve to strengthen each member of the kin group. It also extends to others to whom one develops a close familial, friendship or reciprocal relationship
Whenua	land - often used in the plural; territory, domain; country, land, nation, state