

## Terms of Reference

# Stage 1 scoping and design of Strategic Outcomes (SOs) for the BioHeritage National Science Challenge

### Background

*Ngā kōiora tūku iho*, the *New Zealand's Biological Heritage National Science Challenge* ('the Challenge') has been established through an investment contract between the Ministry of Business, Innovation and Employment (MBIE) and Manaaki Whenua - Landcare Research Ltd (the Challenge Host).

MBIE recently completed a mid-way review, and investment in the Challenge has been confirmed for a second five-year term (Tranche 2 (T2): 2019-2024). A refreshed [Strategy](#) for T2 was developed as part of the mid-way review process.

The Challenge's Mission is to:

*Reverse the decline of New Zealand's biological heritage, through a national partnership to deliver a step change in research innovation, globally-leading technologies, and community and sector action.*

The Strategy establishes a framework to focus research and other investment to achieve seven Strategic Outcomes (SOs) under three Impact areas:



The Challenge is now entering the design and planning phase of the Strategy. This involves a two-stage process, with Stage 1 being scoping and design of each SO prior to commencement of T2 in July 2019.

It is expected that Stage 1 may take 3-4 months to complete. Individuals involved in Stage 1 scoping and design may have the opportunity to remain involved in Stage 2 (including in potential leadership roles in the Challenge). The emphasis in Stage 1 is in the design process, and in building networks of relevant expertise that could contribute to delivery of the SO. At Stage 2, it is envisaged that SO teams will lay out detailed plans for research investments by the Challenge (see p. 29 of the Strategy).

These Terms of Reference set out the purpose, intended outcomes, roles and responsibilities for the **Stage 1 design process**, expected interactions with the Challenge leadership, advisory and governance groups, and deliverables from Stage 1.

### Intent of the Stage 1 design process

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The intent of the Stage 1 design process is three-fold:

- To ensure that a wide range of solution-focused perspectives and novel research approaches are built into Tranche 2 of the Challenge, in order to drive transformational change.
- To be as inclusive of all relevant research expertise, aligned disciplines, and knowledge systems as practicable.
- To drive added value from all relevant capability, skills, and current investments, and to ensure that these are better connected, so as to present a more cohesive, 'joined up', and compelling narrative that will incentivise investment in environmental outcomes for the benefit of Aotearoa.

In Tranche 2, the Challenge **does not intend to invest in research projects *per se***. Contracts will be focused on overall delivery of each SO, with Challenge investments targeted to high-priority research, innovation, and translation gaps and potential barriers to delivering overall benefit for Aotearoa New Zealand.

The process will require design groups to construct a complete **innovation pathway** (see pages 5-6 of the Strategy), focusing contributions from a wide range of co-investors, to deliver step change towards the Mission by 2024.

The main **deliverable** from Stage 1 should take the form of an **Investment Prospectus**. Stage 1 groups have been established to scope and design an Investment Prospectus for each SO.

Each group will be expected to work closely with the Challenge in SO design. It is envisaged that a wide range of consultations and discussions, using the group members' and the Challenge's extended networks, will be required to develop each Investment Prospectus.

The Investment Prospectus is intended to incentivise significant cohesion and focus around priority areas – integrated across disciplines, knowledge systems, and organisations – to reverse the decline of biological heritage. Each Investment Prospectus should motivate a wide range of potential capacity and capability to **complement Challenge investment**, maximising overall benefit for Aotearoa New Zealand delivered in T2 of the Challenge. To be transformational, each Investment Prospectus should be designed to influence investment focus, decision-making, and science/research delivery across our Challenge Parties, stakeholder organisations, and other potential investors.

More detail on the role and activities of Stage 1 design groups can be found on page 28 of the Strategy.

### Deliverable: the Investment Prospectus

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Indicative areas of Challenge investment under each Impact and SO are provided on pages 8-13 of the Strategy, but **these should be viewed as a guide only**. In addition to identifying critical issues or gaps requiring Challenge investment, each Investment Prospectus should provide detail on end-user co-investment (for example: in technology development, knowledge application and translation), and contributions of Aligned Research from Challenge Parties, in order to attract complementary and downstream investment in research and innovation.

To that end, each Investment Prospectus should include:

- A set of 3-5 Intermediate Outcomes (IOs) to be delivered by 2024 for each SO;
- Narrative (no more than 10 pages) on how the IOs will be achieved, who (individuals and organisations) will be contributing along the innovation pathway, and detail on what each will be contributing;
- Indicative level of investments required from the Challenge, and where on the innovation pathway these investments will be required to deliver the IOs;
- Quantification of contributions of aligned research investments by Challenge Parties and (where appropriate) other research organisations, and how these will be shaped year-by-year to focus on delivery of the IOs;
- Indicative cash co-investment, either in-principle or committed, from private sector or other sources;
- Indicative in-kind contributions from relevant expertise in communities, Mātauranga knowledge holders, Challenge Parties, and government agencies;
- A plan to address each of the criteria for scoping SOs, on page 25 of the Challenge [Strategy](#);
- A preliminary budget for overall delivery of the Intermediate Outcomes by 2024. Indicative Challenge investments in each SO can be found on page 34 of the Strategy.

Research detail is not expected in the Investment Prospectus.

### Membership and operating principles for Stage 1 design groups

Stage 1 design groups must have a strategic, impact-oriented focus on activities that will deliver long-term outcomes for the benefit of Aotearoa New Zealand. The purpose of the Stage 1 design group is to co-design an Investment Prospectus for each SO, focusing aligned research investment and collaboration across a broad range of organisations including research, Māori, industry, government agencies, and communities.

It is expected that Stage 1 design groups will uphold the Challenge's [values](#) at all times (see page 22 of the [Strategy](#)). The Challenge has made a purposeful commitment to embracing and embedding these values.

Membership is based on individuals' key skills and networks. Each SO group will comprise 5-10 members, chaired and facilitated by one of the group members.

It is expected that scoping and design of Strategic Outcome teams will take 3-4 months (if group members are working on design part-time). Where practicable, attendance in person at design workshops will be expected. Some travel will also be required of group members, to secure contributions from aligned research, industry, and end-user agencies.

Group members must be thoroughly familiar with the [Strategy](#), and will be expected to work closely with the Challenge leadership, advisory and Governance Groups (see below).

Stage 1 group members should not assume that they will have ongoing leadership roles in (or research investment from) the Challenge after Stage 1.

## Guidance and support from the Challenge

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In developing the Investment Prospectus, design groups can expect strong guidance and support from the Challenge's Science Leadership Group, Governance Group, and Kāhui Māori. The Challenge will endeavour to help each group identify critical skill sets, facilitate contacts with relevant research teams across the Challenge Parties, provide contacts and networks with end users and private investors, and ensure that the Investment Prospectus gives appropriate effect to Vision Mātauranga. However, design groups will also be expected to follow up contacts, utilise their own contacts and networks, and/or facilitate new contacts and networks as part of the design process.

The [International Science Advisory Panel](#) (ISAP), or other relevant international reviewers, will peer review each Investment Prospectus. The ISAP may also be able to help identify international connections and expertise relevant to delivery of each SO. The Challenge is happy to provide introductions to ISAP members if needed.

The Challenge Support Team will provide administrative support (page 26 of the Strategy).

## How the Investment Prospectus will be evaluated

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Each Investment Prospectus will be evaluated according to the assessment criteria on page 25 of the Strategy. Agreement by the Challenge to proceed to Stage 2 will be based on the likelihood that a Prospectus will deliver the agreed Intermediate Outcome(s) within each SO. It is expected that evaluation of each Investment Prospectus will be an iterative process, and that some will require further refinement, identification of the right skills and roles, and/or investment commitments, before proceeding.

The Governance Group will give final approval for an Investment Prospectus for an SO to proceed to Stage 2.

## Remuneration

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Participants' usual hourly rates will be covered, plus travel and associated workshop costs (where practicable within the terms of the Collaboration Agreement for the BioHeritage NSC).