

NATIONAL SCIENCE CHALLENGES
KEY MESSAGES REGARDING CHALLENGE PRINCIPLES
NOVEMBER 2013

The background to these key messages

- Potential Challenge participants are involved in developing proposals for the National Science Challenges, so it is timely to reiterate the thinking underpinning the Challenges.
- MBIE wishes to remind potential Challenge participants that the Challenges represent a new way of funding research, and that their proposals need to meet Challenge outcomes if they are to be approved by the Science Board.
- These messages have been developed to reiterate the concept of the Challenges and emphasise the main Challenge principles.

The Challenges are not ‘business as usual’

- The Challenges fundamentally change the way New Zealand’s research agenda is determined and delivered. They are a collaborative way to ‘step up’ the delivery of New Zealand science.
- They are a longer-term than other research investments.
- The Challenges involve different funding mechanisms than those used in the current contestable model.
- The Challenges are underpinned by a number of key approaches. For example, all Challenge proposals are to give effect to the Vision Mātauranga policy.

Science-led and science-focused

- The Challenges are science-led so the research focus is developed by scientists familiar with existing research, gaps and opportunities.
- This means each Challenge will involve the strategic high quality research required to address the Challenge.

Mission-led

- As outlined in the Gazette Notice, the Challenges are a new strategic approach to mission-led science investment.
- The Challenges’ mission-led research will respond to the most important, national-scale issues facing New Zealand.
- The research in each Challenge will be directed at achieving the objective and outcomes specified for the Challenge.
- The Challenges will complement other science priorities in mission-led investments, along with business-led and discovery-led components of the science ecosystem.

Additionality

- A key consideration in the identification of the Challenges was the additional progress or impact that collaborative research could bring.
- The Challenge approach seeks to bring together research and research providers who will share information and knowledge, and work together to achieve common outcomes to provide mutual benefits that would not have occurred otherwise.

Collaboration and multi-disciplinarity

- The nature of the problems the Challenges are seeking to address will require collaboration and multidisciplinary research, including social science, in each research plan.
- Researchers and end-users will need to have a shared understanding of the themes, objectives and outcomes and how the Challenge will contribute to these.
- The private sector, which will benefit from many Challenges, is encouraged to co-fund research in the Challenges.

Best science

- Each research plan will involve identifying the best research to address the Challenge.
- The research will be detailed in a 10-year research plan to achieve the Challenge objective and outcomes.

Best team

- Each Challenge collaboration will bring together New Zealand's best research team to address the Challenge.
- Those interested in participating in the Challenges are encouraged to work together to form the best team and proposal.
- International collaboration may also be required to provide skills, critical mass and access to resources.

Dynamism

- Each Challenge will include mechanisms, including contestability within the Challenge, to bring in new ideas, researchers, and research providers.
- There must be an opportunity to allow new research to be integrated into each Challenge, and the Challenge to be refreshed and renewed.

Approach to the 'new money'

- The outcome for each Challenge is identified in the Request for Proposals; however, research topics are not fixed.
- The new money is intended to cover transformational research where the greatest impact can be made. It should not simply be spread thinly across a number of Challenge activities nor used to connect existing business as usual activities.
- Proposals must address all outcomes and themes of a Challenge. However if potential participants consider they can better meet the Challenge objective with different theme(s) and/or outcome(s), they are able to present a case in their proposal.

Independent Assessment Panel

- The Challenges are an important, long-term addition to science investment in New Zealand. It is therefore important Challenge proposals are assessed by an independent assessment panel (IAP) of recognised experts.
- The need for expert input into the Challenges and the need to avoid conflicts of interest, mean overseas experts are likely to be required on each IAP.
- The IAP will assess proposals against the criteria set out in the Gazette Notice; and provide assessment information on proposals to the Science Board. The Science Board will make funding decisions.
- The IAP will assess each proposal that will outline research and business plans.
- The IAP will comprise the chair; a Vision Mātauranga expert; an expert in delivery of research outcomes and assessment of benefits; an expert in governance, management and financial arrangements; and approximately 2-5 science experts.
- The science experts are likely to vary across each panel depending on the area of science covered by each Challenge. For related Challenges, science experts may potentially be able to sit on more than one panel.
- End users are expected to work closely with Challenge teams as they shape their proposals. Benefits to end users will be assessed by an IAP member who will appraise the ability of proposals to deliver research outcomes and benefits to end users.