



**hrc nz** Health Research Council  
of New Zealand  
Te Kaunihira Rangahau Hauora o Aotearoa

**hrc nz**  
Pathway to  
Impact

# 2020 Research Impact Assessment

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This slideshow has been created to assist applicants and reviewers in their interpretation of the HRC's Research Impact assessment, which has been further revised for the 2020 Annual Funding Round.

# Why must the HRC demonstrate research impact?

## The New Zealand public wants:

- Responsible use of taxpayer money
- Health and wellbeing concerns addressed

## The Government wants:

- Reduced health care costs
- Economic returns from innovation
- Increase in 'human capital'

We must continue to show benefit to Aotearoa/New Zealand to secure on-going support (or increase in support).

We have clear direction from the New Zealand Health Research Strategy (2017-2027)



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Why must the HRC demonstrate impact from the research that it funds?

The need to demonstrate return on investment has become a major policy issue for funders of research, both in New Zealand and internationally.<sup>1</sup>

As the primary agency for publicly funded health research in New Zealand, the HRC has a responsibility to use taxpayers' money effectively, and to demonstrate to the public that health research can save lives and improve quality of life for all New Zealanders. In addition, it's critical to demonstrate to government that our research can also reduce health care costs, generate revenue from innovation, and upskill our workforce.

In 2016, the HRC received a 56% budget increase, the largest forward movement in a decade, largely due to our ability to demonstrate a diversity of research impacts, extending well beyond health outcomes to include economic, environmental, and broader social benefits. We must continue to demonstrate the benefits of research to NZ to secure on-going support from the Government – and to make our case for increased investment.

Our work in this area is clearly aligned with **New Zealand's first ever national Health Research Strategy (2017-2027)**<sup>2</sup>, released in 2017, whose vision is to ensure that New Zealand has a world-leading health research and innovation system that, through excellent research, improves the health and wellbeing of all New Zealanders.

The HRC works in partnership with our researchers to capture the results of completed research and ensure that our best examples of research use and benefits along the pathway to impact are appropriately conveyed to government, and the general public.

We also incorporate prospective assessment of research impact at an individual grant level, to encourage applicants to consider and realise all potential ways in which their proposal can add value for New Zealand, and ultimately, to increase the collective benefits and impacts from the portfolio of research that we fund.

<sup>1</sup>MBIE (2017). The Impact of Science: discussion paper, available at: <http://www.mbie.govt.nz/info-services/science-innovation/funding-info-opportunities/nssi/impact-of-science>

<sup>2</sup>New Zealand Health Research Strategy, 2017-2027, available at: <https://www.health.govt.nz/publication/new-zealand-health-research-strategy-2017-2027>

## What is research impact?

*HRC Definition:* The direct and indirect influence of excellent research on individuals, communities or society as a whole, including improvements to health and equity, and other social, economic, cultural or environmental benefits for Aotearoa/New Zealand.

*Key message:* Research impact is generated or enhanced by communication, relationships and actions that connect academic research to fields, people or organisations beyond academia.



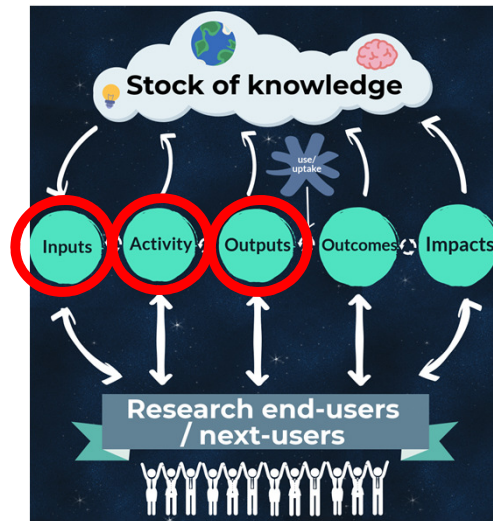
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The HRC's definition of research impact is focused on the creation of "real-world" benefits for non-academic end-users. The inclusion of excellence signals our ongoing commitment to fund high-quality research, which is a pre-requisite for research impact, but not sufficient to maximise the benefit derived from the research.

Our key message is that research impact is not created by researchers alone; but rather, requires communication, relationships and actions that connect academic research to people from organisations beyond academia.

## The HRC Pathway to Impact model



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Our definition of research impact is to be adopted alongside a **Pathway to Impact** model, which sets out a chain of linked steps to describe how impact can be generated from research inputs.

The pathway to impact recognises and acknowledges the creation of **interim benefits** for Aotearoa/New Zealand, including development of human capital, and allows producers of research for use *within academia* to plot their course to impact, describe how they add value along the chain and how they can realistically plan to maximise the benefits of their research.

The first three green circles describe how research is resourced, conducted, and the resulting knowledge codified into specific outputs. Further definitions are provided below.

Each of these steps has feedback loops to the future users of research, indicating the importance of their involvement at the planning/scoping stages. **Early engagement** or **collaboration from the outset** with end-users or the next users of the research ensures that users' needs are taken into account; that joint efforts are made for practical solutions; and shows **genuine consideration** for maximising the potential use and benefits of the research. Feedback loops also indicate how results can feed back into the wider research environment, building the existing knowledge and evidence base.

The pathway to impact is a conceptual model - a simplified representation of a complex and dynamic science system. We hope that this conceptualisation highlights the non-linear, cyclical nature of research, including constant feedback and reflection.

### Definitions:

### **Research users**

Research users or those who will benefit from the research are agents along the pathway to impact that utilise the research outputs (in conceptual or instrumental ways), including members of the community, the public sector, industry and other researchers. As such, this definition includes both interim and final users.

### **Inputs**

Not limited to only the money/resources put in from funder(s) or institution(s). Inputs includes the existing knowledge base that has led to the research question being asked. This might include discipline-specific knowledge, government policies/priorities, public/community/iwi knowledge, or clinical need. Research inputs includes this existing knowledge alongside the addition of:

- funding/financial resources
- infrastructure, facilities & materials
- people, skills, relationships & networks

### **Activity**

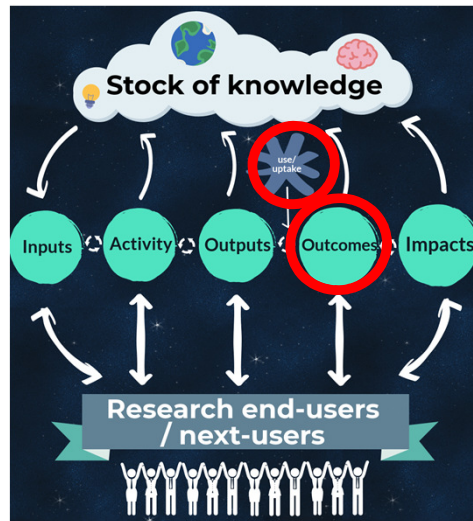
Generating new knowledge through conducting research usually involves collaboration between researchers and research end-users (or next-users) and training of post-graduate students, post-doctoral researchers and sometimes includes involvement and training of non-academics (e.g. clinical professionals or community co-producers of research).

### **Outputs**

Any form of demonstrable output embodying the findings generated by the research. For example, outputs can include direct products and/or services such as journal articles, conference presentations, hui, media engagements, reports, manuals, guidelines, prototypes, patents, software, or datasets.

The outputs of research can also include tacit knowledge exchanged between collaborators, and the training of students and postgraduate researchers, leading to increases in human capital (an intermediate mechanism for impact).

## The HRC Pathway to Impact model



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The HRC's Pathway to Impact Assessment is primarily focused on the next part of the chain – how outputs are transformed to outcomes, representing the utilisation / uptake / adoption / implementation of the research findings. This is a key interim step between the generation of knowledge deliverables (outputs) and the generation of tangible benefits to New Zealanders (impacts).

While knowledge is often used to advance future research within academia, it can also be taken up by research users to influence decisions outside of academia, such as changing clinical practice or policy decision-making. Over time, these outcomes can progressively transform to impacts – tangible health, social, economic and other gains for Aotearoa/New Zealand.

The uptake of negative results is an important component of the model – “honourable dead-ends” that lead to disinvestment in a field of research, or evidence to inform the discontinuation of a policy or practice.

However, research doesn't speak for itself. Utilisation requires action on behalf of researchers to engage the next-users of the research (if not already involved through co-design and co-production of the research) – fostering relationships/networks through continued communication, engagement and feedback. We encourage you to explore, from the outset, throughout the life of your project and beyond who could potentially use or benefit from your research and what you can do to facilitate this.

### **Definitions:**

#### **Outcomes**

Research outputs transform to research outcomes/interim benefits following utilisation by a

research user along the pathway to final impact.

**Impact**

The direct and indirect influence of excellent research on individuals, communities or society as a whole, including improvements to health and equity, and other social, economic, cultural or environmental benefits for New Zealand.



# What's new in 2020?

## Research Impact criteria applied to:

- **All Projects and Programmes**
- **All Research Investment Streams**
- EOI and Full Application stages



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The HRC has assessed research impact since 2010; however, improvements were needed to provide clear, consistent guidance on interpretation for applicants, assessors and external reviewers, and to better address recommendations from the 2015 Refresh of the HRC<sup>1</sup>. This Report recommended that we make changes to strengthen our prospective assessment of research impact, including greater emphasis on pathways to impact, benefit to Aotearoa/New Zealand, and engagement with end-users.

In 2019 we introduced new research impact assessment criteria for Programmes and Projects within two of our four investment streams. For 2020 we are extending this criteria across all research investment streams for Programmes and Projects.

<sup>1</sup>Strategic Refresh of the Health Research Council. (2015). Report to the Ministry of Health and the Minister of Science and Innovation. Available at: <http://www.mbie.govt.nz/about/whats-happening/news/document-image-library/hrc-strategic-refresh-final-report.pdf>

## 2020 forms and guidelines

**What types of benefits** are expected to arise from your research, and **who will benefit**?

**What specific activities will you undertake**, during the life of the project, to maximise the use and benefits of your research? Summarise the **team's track record of knowledge transfer** from similar research.



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The Forms and Guidelines for Programme and Project applications within a Research Investment Streams (RIS) centre around two components needed for the research impact section: 1) a **description** of the anticipated benefits for NZ, and 2) an **action plan** to maximise the use and benefits of research.

### 1. **What types of benefits** are expected to arise from your research, and **who will benefit**?

This section should provide a realistic description of how research findings could contribute to improved health or other societal benefits over time (a potential 'line of sight' or pathway to impact). Importantly, it should also identify the more immediate benefits, and users of the research who will form a focal point for your Action Plan.

Answer this question as appropriate to your research context. The balance between describing short-term benefits and potential longer-term impact will be dependent on the specific context of the research, with emphasis on considerations within your sphere of influence throughout the life of the research project.

The next slides will discuss elements that should be covered in this section, including types of impacts, types of outcomes and benefits, identifying who benefits, and the geographical distribution of benefits.

## Types of research impact

- Health outcomes
- Health system changes
- Equity
- Economic (generation of revenue or cost savings)
- Environmental
- Social
- Cultural
- International



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Applicants should give a broad social perspective of the potential value added for Aotearoa/New Zealand by the proposed research. Include possible spill over effects to other sectors where relevant. Examples below:

### Health, health system and equity impacts

- Improvements in accessibility, safety, effectiveness, efficiency, cost-effectiveness, cost-containment, and responsiveness of health and social services.
- Achievement of health & social equity for priority populations with respect to life expectancy, burden of disease and quality of life measures.

### Broader social, economic, cultural or environmental impacts

- Enhance New Zealand's reputation in global science leadership
- Improved wellbeing (interaction of natural, human, social, cultural and financial/physical capital) and quality of life, both in New Zealand and around the world, including action towards achieving the United Nations Sustainable Development Goals.
- Creation of a thriving commercialisation environment, growing economic gains by catalysing private sector investment, both national and international, in the med-tech and bio-tech innovation sector.

# Types of research outcomes

Interim uses for, and benefits from, research along the pathway to eventual impact

- Research-influenced changes in policy, decision-making, or agenda-setting
- Provision of improved public goods and services
  - For example: equitable, cost-effective health and disability services or public health interventions.
- Improved exercise of professional skill
  - For example: research-based improvements in medical practice
- Industrial innovation
  - Services, products, processes
- Growth and development of human capital



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While line of sight to eventual potential impact is important, in many cases applicants should maintain focus on the **outcomes** of their research – how their research findings can realistically make a difference in the short-to-medium-term. This could be by influencing decision-makers, and/or contributing through these intermediate mechanisms for impact, proposed by the OECD<sup>1</sup>. Examples below:

Influence on, or contribution to, decision-making

- Collaboration with DHB or PHO networks leads to development or updating of clinical/best practice guidelines
- New devices or techniques lead to changes in treatment or management protocols
- Extension of researcher expertise beyond academia with involvement, consultation or representation in government policy-setting forums
- Amplification of international perception of Aotearoa/New Zealand's research capability and expertise
- Development of partnerships and networks to offer co-ordinated approaches across multiple organisations or agencies (e.g. Councils, schools, marae, church) to introduce responsive and appropriate local policies to specific communities.
- Empowered communities who drive research focused specifically on actions for local or national change.

<sup>1</sup>OECD (2015), *What is Impact Assessment? Mechanisms*, available at: <http://www.oecd.org/sti/inno/Mechanisms-OECDImpact.pdf>

## Types of research-related benefits

- Building capacity and capability for a stronger research sector
- Improve research capacity of health sector
- Enduring benefits from international engagement
- Enduring benefits from collaboration (national or international)
- Generate resource of value for research community
- Potential for research findings to influence the research field



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More basic research proposals, where the pathway to health and societal impact is typically longer and less certain, should also include consideration of *research-related benefits* that can be realistically achieved in the shorter term. This includes benefits related to the conduct of the research, as well as the knowledge deliverables.

- Will your research generate capacity and capability gains for a stronger research sector to address current and future health research challenges in Aotearoa/New Zealand? (e.g. provide opportunity for academic career advancement and build the health research workforce)
- Will it improve the capacity of our health sector to generate and implement research findings, or contribute to the training or professional development of health professionals or social services staff?
- Will opportunities be created through international or national collaborations, such as access to overseas funding streams or markets, or research resources unavailable in Aotearoa/New Zealand?
- Will it create enduring connectivity, develop partnerships or strengthen networks between academia and industry, policy or community organisations?
- Will your research generate tools, platforms, or other knowledge resources (e.g. datasets) that can be used by a wider group beyond your immediate field of research?
- How could research findings influence future research agendas or decision-making, and to what extent?
- Will there be opportunity for broader societal impacts (e.g. through public engagement)?

## Who benefits from your research?

Identify the research next users or end users. They may be in:

- Government policy or civil service
- Clinical practice or health service provision
- Industry or business
- Community, iwi, NGO, or charity organisations
- Patient/consumer representation or advocacy groups
- Research or academia



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Applicants should identify those who will use or benefit from their research in the immediate, interim or longer-term, as appropriate to the context. These could include decision-makers in policy, healthcare, industry, or communities; patients or the general public/consumer organisations; or for more basic research, other researchers who can benefit from removal of knowledge barriers or from improved capacity for research in Aotearoa/New Zealand.

## Where will the benefits be seen?

- What is the geographical distribution of the potential benefits?
- Local / regional / national / international?



How will benefits be distributed in Aotearoa/New Zealand? For example, will they be applicable locally, or can they be scaled up to have regional or national impact? If research findings will contribute to the international health research effort, describe how Aotearoa/New Zealand will benefit from this in the short- and longer-term.

What existing networks will assist the potential reach of research findings?

## 2020 forms and guidelines

**What types of benefits** are expected to arise from your research, and **who will benefit**?

**What specific activities will you undertake**, during the life of the project, to maximise the use and benefits of your research? Summarise the **team's track record of knowledge transfer** from similar research.



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**2. What specific activities will you undertake**, during the life of the project, to maximise the use and benefits of your research? Summarise the **team's track record of knowledge transfer** from similar research.

Describe what targeted actions have been or will be taken<sup>1</sup> to improve the likelihood of research uptake and impact, and to ensure that the next users or end users (identified in the previous section) can meaningfully contribute to, and/or benefit from, the research. This could include meaningful, context-appropriate engagement with potential research-users at the beginning of the grant (co-design), throughout the grant (co-production) and at the end of the grant. Some activities and stakeholders need to be engaged from the start (e.g. if they have a stake in the research design or if they hold critical data), others will only be engaged later when you have something to show them. Describe other planned dissemination activities that are designed to reach broader audiences.

The HRC acknowledges that impact isn't generated by researchers alone. Who can **enable the uptake** of your research, and how have they been involved in your research? **Identify uncertainties to uptake or systematic/institutional barriers**, and your mitigation strategies (where relevant).

What elements of the **team's track record of knowledge transfer** provide confidence in the likelihood of research uptake? For example: existing links, relationships, or networks with relevant research next-users or end-users; demonstrable examples of knowledge mobilisation or changes in health outcomes or societal impact generated from similar research. This component is considered relative to opportunity.



Researchers undertaking basic research are encouraged to conduct meaningful stakeholder engagement, and emphasise their track record for knowledge mobilisation.

<sup>1</sup> Consult HRC Guidelines and funding rules for information on support of knowledge transfer activities and include these activities in objectives/milestones where appropriate. Progress against implementing the action plan will form part of the milestones HRC monitors with respect to contractual compliance and delivery.

## Pathway to Impact principles

- All applications must articulate a line-of-sight to eventual impact
- There are many potential pathways to impact
- The timeframe and pathway to impact are usually uncertain
- Focus on benefits and use within your direct influence
- Early and genuine engagement and collaboration with research users is encouraged
- All applications should add value for Aotearoa/New Zealand
- Descriptions should be realistic and credible



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The following principles underpin our assessment Research Impact using the Pathway to Impact model:

All applications to the HRC must provide a clear, credible description of a 'line of sight' from the current research to potential eventual impact. Why is what you're doing important? And what might change as a result? Once you've established your line-of-sight, emphasise the pathway to impact – what are you going to do to maximise the chance that your research will get there?

There are many different potential interim uses and benefits that can be generated from health research, and literally thousands of unique pathways to achieve impact.<sup>1</sup>

Future impact is inherently uncertain; the full extent of impact is often unknowable at the time the research is conducted and may take decades to be fully realised.

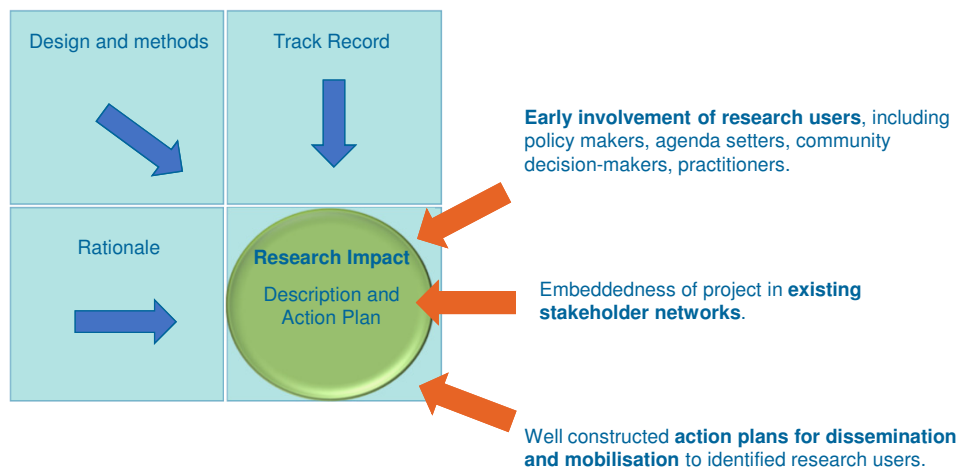
Generally speaking, impact that takes more time to be realised becomes increasingly moderated by external factors, beyond the research team's direct influence. It's important that we don't incentivise over-promising and under-delivery with regard to impact, but focus on short-to-medium-term use and benefits that are more within the research team's direct influence. We understand that there are many external factors that are outside of your control and that delivery of wider, long-term impacts is not down to your actions alone. This is about recognising the potential impact of your research and planning for how you might maximise that. While it may not end up going to plan, if you've considered the potential use and benefits of the research at this prospective planning stage, then you'll be better placed to create and respond to opportunities to generate impact during the research process.

Clearly identify the target audience for your research (e.g. not the general public), why is it relevant to them and how have you involved them in the research? All health researchers in Aotearoa/New Zealand should be encouraged (and supported) to consult with non-academic end-users (including Māori), at regular intervals during the course of developing their research programme, and throughout the research process (e.g. genuine inclusion of appropriate collaborators on the research team and the establishment of meaningful relationships for enduring connectivity). This is to help identify what research is needed and increase the likelihood of its use and influence.

The most important considerations for the HRC's assessment is that value is added for each proposal, appropriate to the specific context of the research.

<sup>1</sup> The nature, scale and beneficiaries of research impact: An initial analysis of Research Excellence Framework (REF) 2014 impact case studies Research Report 2015/01 King's College London and Digital Science March 2015. Available from: <https://www.kcl.ac.uk/sspp/policy-institute/publications/Analysis-of-REF-impact.pdf>

## Factors that influence research impact



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The HRC has prepared guidelines to improve the consistency of research impact assessment; however, these are generic around consideration of factors that influence research impact, rather than prescriptive around the weighting of different types and timescales to impact. Science Assessing Committee membership draws on a range of expertise and a fair and balanced in-committee discussion on the types and timescales to impact, and the appropriateness of the action plan, is essential to a robust assessment.

Research Impact is one of four assessment criteria used by HRC to assess research proposals, alongside Rationale, Design and Methods, and Track Record.

The likelihood of impact is influenced by multiple factors. Some factors are assessed within the other three criteria (blue arrows), while other factors are distinct to consideration of impact (orange arrows).

Our assumption is that for research to have potential to generate high societal impact specific to Aotearoa/New Zealand settings, scientific quality is paramount but not sufficient.

The research impact criterion should be considered distinct from science quality, and potential impact should firstly be discussed on the assumption that the aims of the research will be met (scientific uncertainty is reflected in the scores against other criteria). However, if the science quality is fundamentally flawed to the extent that impact will be unlikely, the research impact score should reflect this.

Design and methods may not necessarily have the qualities of being novel or original to meet the aims of the research project and achieve potential impact.

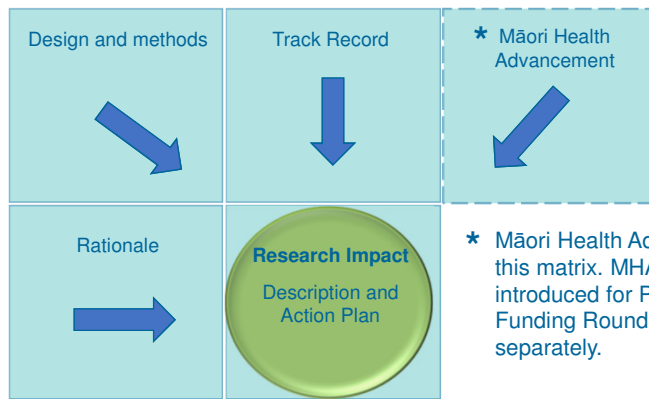
The importance of research gaps/significance of knowledge barriers set out in the rationale, provides a good starting point for description of potential research impact, but must be expanded upon to provide a broader societal perspective of value. Description of potential research impact may focus not just on the value of the research findings, but also from the conduct of research itself in terms of capacity and capability building and networking for enduring connectivity.

Engagement activities should be realistic, meaningful, and appropriate to the context of the research; yet all researchers are challenged to look for research users outside their immediate academic circle.

Assessment of the Action Plan should also consider the research team's track record and existing networks for mobilising the knowledge generated and increasing the likelihood and rate of potential impact. Reviewers who represent next-users or future-users of research are encouraged to share their perspective on the potential value added by the research.

Overall assessment of research impact should focus on quality, credibility, value added and appropriateness of the action plan within the specific context of use.

# Factors that influence research impact



\* Māori Health Advancement is an integral part of this matrix. MHA considerations will be introduced for Programmes in the 2020 Annual Funding Round; further guidance will be provided separately.



# Final message

- **Impact types and timescales**

- Reference your line of sight to eventual impact, but focus the discussion on what is **realistically achievable within your sphere of influence**.
- Keep it relevant, keep it credible.

- **Role of your Host Institution**

- Discuss potential enablers or barriers in your action plan.



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The Host institution is targeted in the research contract to provide an appropriate research environment within which research material is assessed for any potential value beyond peer review publication. Specifically, the Fifth Schedule states in section 2.2.3 in relation to the Research Material, the Research Provider acknowledges that it is expected to generally, **maximise the impact of any new IP on health and economic outcomes, for the benefit of New Zealand.**

If you believe that specific research outcomes may be significantly enhanced or constrained by your Host organisation that should be discussed as part of your action plan.

# Thank you



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