



MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Data Science Research Programmes Workshop

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Why Invest in Data Science Research

- **Data science is changing how things are done at an extraordinary rate**
- **To harness the benefits, New Zealand needs to be at the forefront of the emerging technologies.**
- **While New Zealand has pockets of world class expertise in data science, current capability is dispersed and small scale.**

MBIE 's investment objectives in Data Science Research

Our primary investment objective is for data science to be deployed more widely across research disciplines and all sectors of the economy. To achieve this we need data science research to:

- **Grow in scale**
- **Grow depth**
- **Develop excellence and**
- **Have impact**

We want to bring together key New Zealand researchers to conduct multi-disciplinary data science research and leverage international connections and expertise

The Investment Structure

MBIE sought input from New Zealand and international researchers on the design

We heard that advances in data science methods and approaches are often inspired by real-life problems and critical that researchers have access to challenging use cases and real-world data.

We decided that the most effective investment would be to focus on a few technology areas and grow deep rather than broad capability

We decided to fund a portfolio of multi-disciplinary programmes addressing big challenges for the environment, society and economy

The Investment Mechanisms

We considered how best these goals could be achieved and settled on two funding mechanisms

Strategic Science Investment Fund (SSIF) - funding a portfolio of 4 domestic programmes

Focus of research: to address profound and complex data science challenges that will help solve key challenges for New Zealand.

Catalyst Fund - funding a portfolio of 4 domestic programmes in collaboration with Singapore

Focus of research: to support and encourage the development and exchange of scientific strengths and capabilities between both countries' research communities; and catalyse benefits from each other's global connections to cutting edge science.

What is MBIE's Strategic Science Investment Fund (SSIF)

SSIF invests in research programmes that have a

“long term beneficial impact on New Zealand's health, economy, environment and society”

SSIF total Investment is around \$330 million per annum

SSIF Programmes provide a particular, ongoing science and innovation capability for New Zealand.

SSIF investment goals

- Produce excellent cutting edge research
- Grow capability through the scale, depth, excellence and impact of data science research
- Deliver additionality, to provide fresh and ambitious thinking –new people, new collaborations, new and expanded research
- Foster new international and domestic collaborations
- Give effect to Vision Mātauranga Policy, practically and meaningfully for Māori

We want the portfolio of Data Science Research Programmes to have new impacts that would not have happened without this investment

Mid Term Review

Format not yet defined but we are likely to use a panel which may use a mix of independent experts and MBIE officials. Case studies should demonstrate:

- the need for research in the topic area (what is the problem/issue being addressed, who needs the research and why?)**
- what research you have done**
- how your domestic and international collaborations have contributed**
- showcase results (rather than simply outlining work in progress)**
- who is using/will use the results, and how that will deliver impact**
- how are the SSIF goals being met**

Case studies show achievement

- World leading data science research is translated into positive impact for New Zealand via new, more efficient and sustainable ways of working.
- Data science is widely used in New Zealand across the government, industry, environment and our society.
- New Zealand's excellent, data science research is internationally recognised, and people want to collaborate with New Zealand data scientists.
- A bigger and more productive data science industry in New Zealand, with more data science jobs and bigger earnings

A successful case study will demonstrate that you have delivered, or progressed towards delivering, impact or building capability, through science that is excellent, collaborative, and well linked with domestic or international initiatives

Possible Case Study

A single high level overarching case study could be presented by the SSIF Data Science portfolio demonstrating the overall benefit the SSIF investment has had for New Zealand

How will you demonstrate that you have achieved your goals?

