

## Call for Expressions of Interest: PVC spearhead research team and project development

12 March 2018

### Science for Technological Innovation (SfTI) NSC

Spearhead projects are intended to deliver specific innovative technologies to help achieve the SfTI mission of enhancing New Zealand's capacity to use physical and engineering sciences for economic growth. They should be mission-led and bring nationwide teams together to have a broad impact on this country's technology ecosystem, including capacity development activities.

During a round of industry consultation in 2017, we asked business leaders to put forward, discuss and agree on some key directions for New Zealand's high-tech future. One of the potential Spearhead projects identified was The Personalised Value Chain; *to enable the use of technology to better link New Zealand's exporters with global consumers.*

A PVC Project Team has subsequently focused this broad research area into three distinct research questions:

1. How can we empower consumers to protect their privacy while they are online, thereby creating better ecommerce options and experiences?
  - As a trading nation, New Zealand is well placed to use online tools for communicating with and selling to end users (both B2B and B2C). It is not possible for us to compete against global aggregation ecommerce sites such as Amazon using the same business model. Instead, we could work towards developing another option for consumers where they can retain digital custody of their personal information. Consumers would be able to make their own decisions about when and with whom to share their data, and they would have the ability to change or withdraw permissions at any time from a central point.
2. What are the defining characteristics of establishing trust using a Mātauranga Māori approach and how might we apply these principles to establishing online trust to strengthen relationships between (NZ) sellers and global buyers?
  - In New Zealand, we are uniquely placed to explore how Māori values and practices are enacted in the creation and maintenance of trust. Through understanding and mapping this Māori-based Science of Trust, we might then develop technology tools that enhance business relationships and export success without devaluing or compromising Mātauranga Māori and in a way that can be embraced by a range of Māori enterprises. This might lead to a Science of Digital Trust that works well for New Zealand, as well as other countries with an indigenous population.

3. How can we make accurate predictions about consumer behaviour and demand when we have limited and/or poor quality data?
  - There are many possible ways to approach the problem of New Zealand's lack of comprehensive big data on global consumers, and further, explore how we might turn it into an advantage. This proposed research direction is open to suggestions on how our small trading nation can apply some creativity to developing a technology-enabled understanding of overseas markets and consumers using small and/or unstructured data. This research question is the least defined of the three, and provides wide scope for researchers to identify an innovative approach.

**At this time, we are calling for researchers to identify which of these research questions they are interested in exploring further – we are not currently accepting research proposals.**

Interested researchers will be part of a process to establish teams before putting together research proposals at a later date. This will involve coming together in workshops to explore the project and potential approaches, and organise into multidisciplinary teams from across research organisations. It is important that participants attend these workshops with a willingness to consider a range of different ideas about the core research question and work towards achieving group consensus on how to move forward.

Initially, SfTI will fund team development, including travel and workshop costs to consider this Spearhead direction and how each of the three research questions fits within the overarching aim. This process will finish with the development of a formal research proposal which may cover one, two or three strands of work. Any eventual projects should make every endeavour to address Vision Mātauranga and to engage the SfTI Kāhui Māori advisors for assistance. The project funding level will be in the order of \$1m per annum for up to five years, with a three year initial contract, from July 2019, and this is to cover all strands of work under the Spearhead.

The accompanying Market Insights Report focuses on key issues related to how New Zealand exporters connect with global buyers, some of their key challenges, and reference to relevant ecommerce and tech trends. Additionally, it provides the vision for, and reasoning behind each of the three research questions identified.

The attached Application Form is designed to elicit a brief summary of where your research interest lies and what you are able to contribute in terms of expertise and experience. Please do not exceed the word limit as long applications will not be considered.

### Indicative Timeline

12 March 2018	PVC EoI released
1 June 2018	Applications close
August 2018	Workshop invitations sent to researchers
November 2018	MBIE announces Science Board funding decision for SfTI second tranche
January 2019	Research proposal due
1 July 2019	Research commences