

SfTI: Ensuring Mission Success



SCIENCE FOR TECHNOLOGICAL INNOVATION (SfTI) Kia kotahi mai - Te Ao Pūtaiao me Te Ao Hangarau

Roadshow 8-15 October 2018

Vision



NZ is a vibrant and prosperous technology-driven economy with new businesses, offering high-value services and products that may not yet have been invented.

Mission

To enhance the capacity of New Zealand to use physical sciences and engineering for economic growth.



Values

SCIENCE FOR
TECHNOLOGICAL
INNOVATION

Kia kotahi mai –
Te Ao Pūtaiao me
Te Ao Hangarau

SFTI VALUES & PRINCIPLES

Ā Tātou Whanonga Pono

Collaboration and Openness Mahi Tahī

SCIENCE, MĀORI AND INDUSTRY WORKING SEAMLESSLY TOGETHER. We are team players. Team supporters. Have national and international partnerships. Always add new contacts and networks. Learn the working language of our partners. Listen respectfully to everyone. Give and receive constructive feedback. Are discreet and tactful with sensitive issues. Value and support diversity. Use processes that work for people. Recognise team members, no matter the size of their contribution. Celebrate colleagues' successes. Are great to work with.

Adventure Me Māui-tikitiki-a-Taranga

STRETCH SCIENCE. We set bold challenges. Take risks. Don't fear failure. Ask brave questions – of ourselves and others. Embrace new ideas and approaches. Are nimble and agile. Resourceful in challenges. Act on Māori and Industry expertise.

Responsibility Manaaki

ACT WITH INTEGRITY AND HONOUR. We feel responsible for the quality of our work. Look after fellow team members. Let evidence guide our decisions. Transparent. Lawful. Compliant with health & safety practices. Financially responsible. Legally protect our ideas and inventions.

Excellence Kairangi

THRIVE AT THE INTERNATIONAL FRONTIER OF INNOVATION. We form best teams comprised of Science, Māori and Industry. Use and develop leading-edge technology. Incorporate the best Māori and Industry knowledge. Holistic, systems thinkers. Actively expand our capabilities through capacity development. Help develop others. Transform 'failing' into learning. Always adopt the best information.

Impact Hua Rawa

SUPERCHARGE NEW ZEALAND'S FUTURE ECONOMY THROUGH TECHNOLOGICAL INNOVATION. We envision the commercial potential of our work. Prioritise 'NZ Inc.' Understand what stakeholders and future customers want and need. Skilfully communicate the value of our innovations. Maximise economic relevance through co-innovation with Māori and Industry. Create new value chains and value networks. Commercialise our creations. Internationalise innovations. Publish and publicise. Allow others to build on our ideas.

The 'Tech for' Challenge...

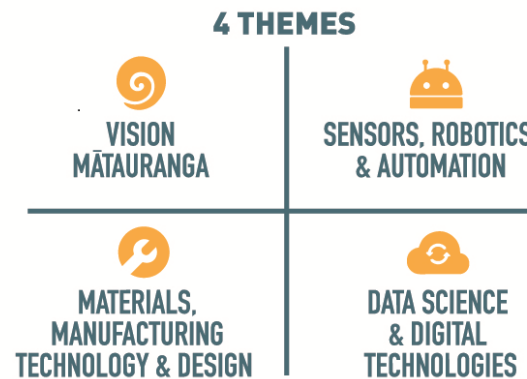
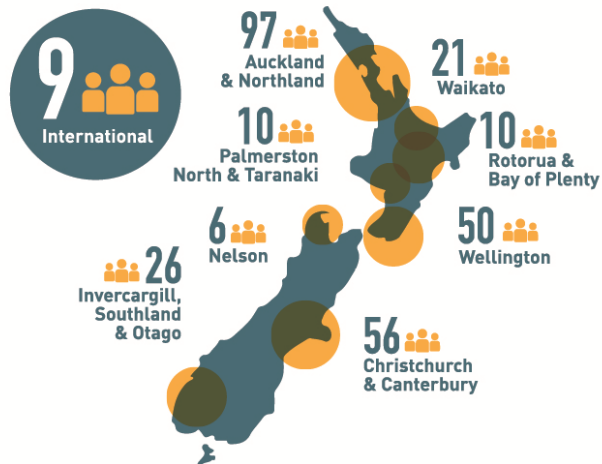


Where we are currently...

SCIENCE FOR TECHNOLOGICAL INNOVATION

Kia kotahi mai –
Te Ao Pūtaiao me
Te Ao Hangarau

AT A GLANCE



STRETCH SCIENCE

8 
SPEARHEAD PROJECTS
Large teams

32 
SEED PROJECTS
Small teams
including 1 completed

COMMERCIALISATION  **INNOVATION**
MEDIA TRAINING  **ENTREPRENEURSHIP**
MĀORI ECONOMY  **BUSINESS AWARDS**
 **TECHNOLOGY LEADERSHIP**
SPEAKING WITH PURPOSE  **PITCHING SKILLS**
 **MISSION LED SCIENCE** **COMPANY VISITS**
STAKEHOLDER ENGAGEMENT 

OUR ATTENDANCE RECORD

238 
at 3 All-of-SfTI
Workshops

307 
at 32 Courses and
Workshops

63 
at 11 Innovation
Showcases

51 
at 12 Conferences
to network

VISION MĀTAURANGA

336  at 17 Events featuring
Māori & the Māori Economy



OUR PEOPLE

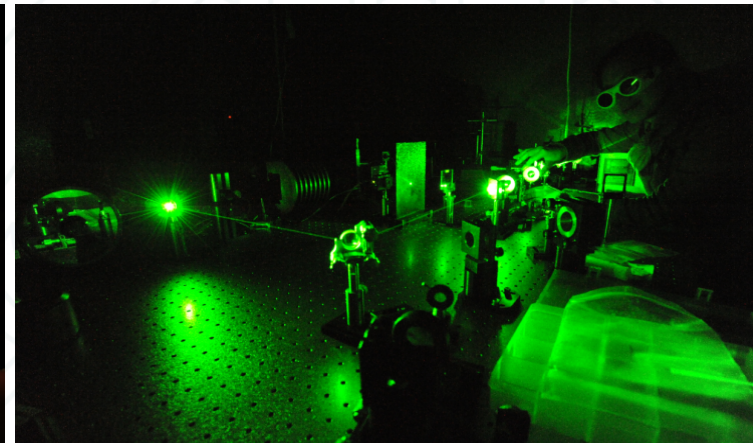
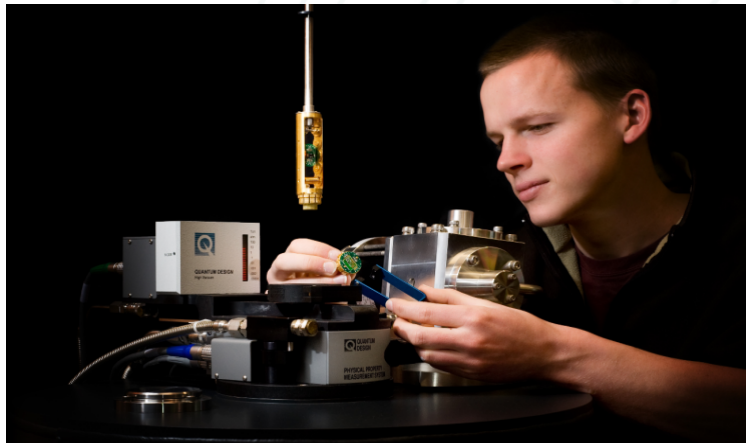


OUR PROJECTS

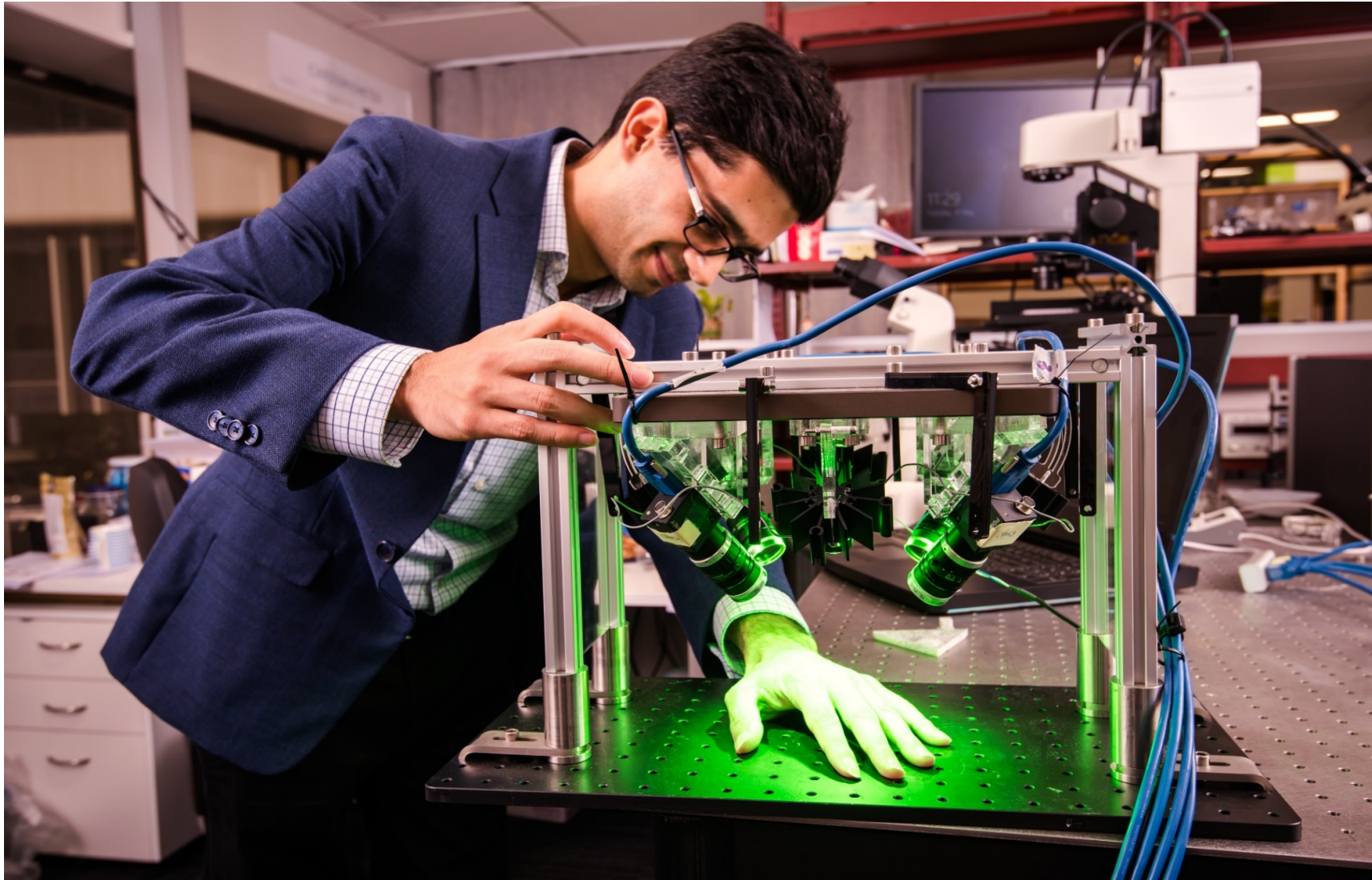


OUR DEVELOPMENT

Three Approaches to Project Formation - 1



Three Approaches to Project Formation – 2 Seeds



Ballots for Seed Projects...



Ballot

☐ Yes

☐ No

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Three Approaches to Project Formation - 3



“They are learning fast. First spearheads were very much what the researchers wanted to do, and what they would consider “fun”. Now there is real focus on collaboration with Industry, and Iwi, to address technological challenges that will lead to real benefit: exports, jobs, better well-being, or a better community.”

Eol: Capabilities not Projects

CAPABILITY

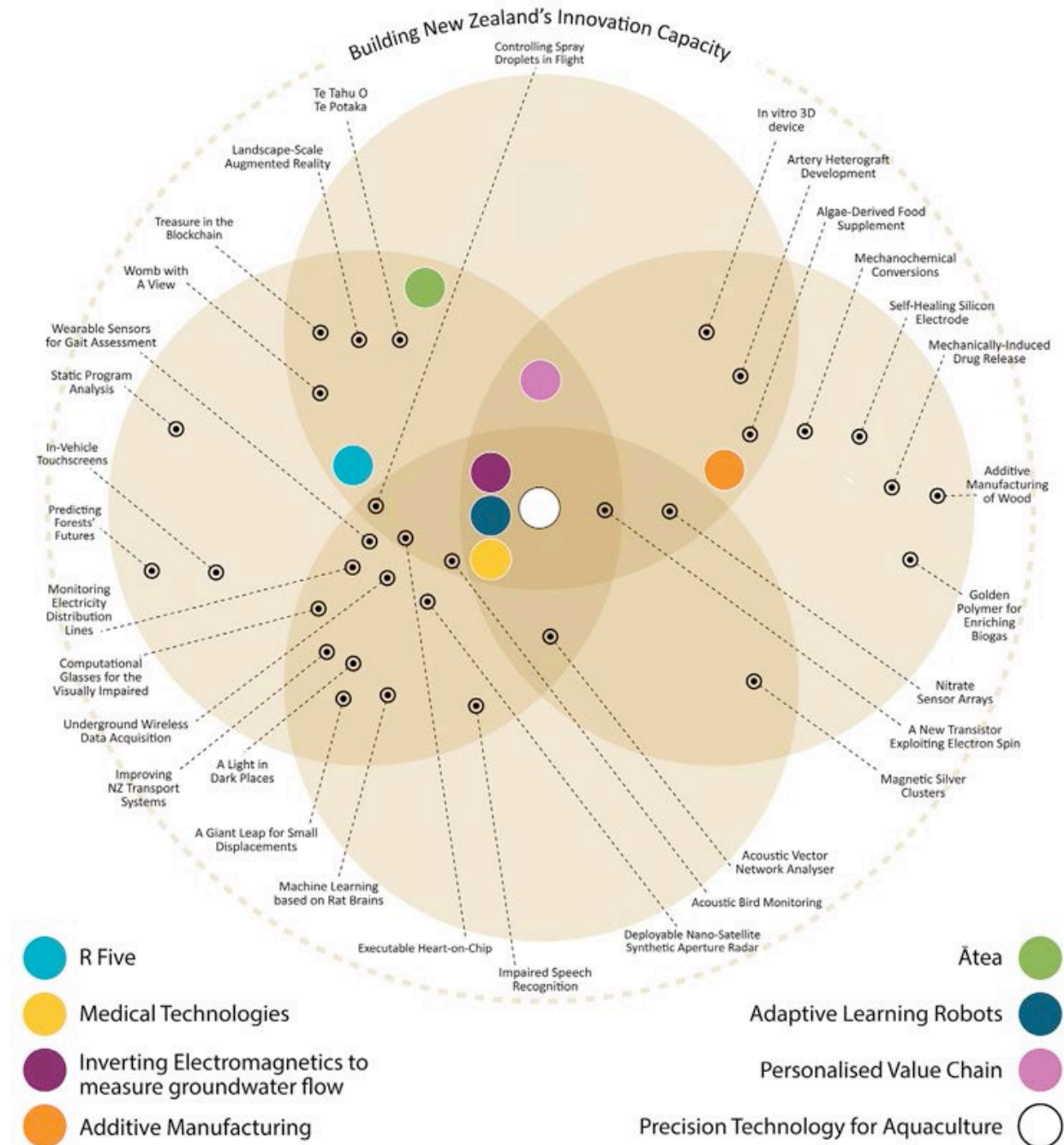


Call for Expressions of Interest (EOI) for new SfTI Personalised Value Chain (PVC) spearhead research project

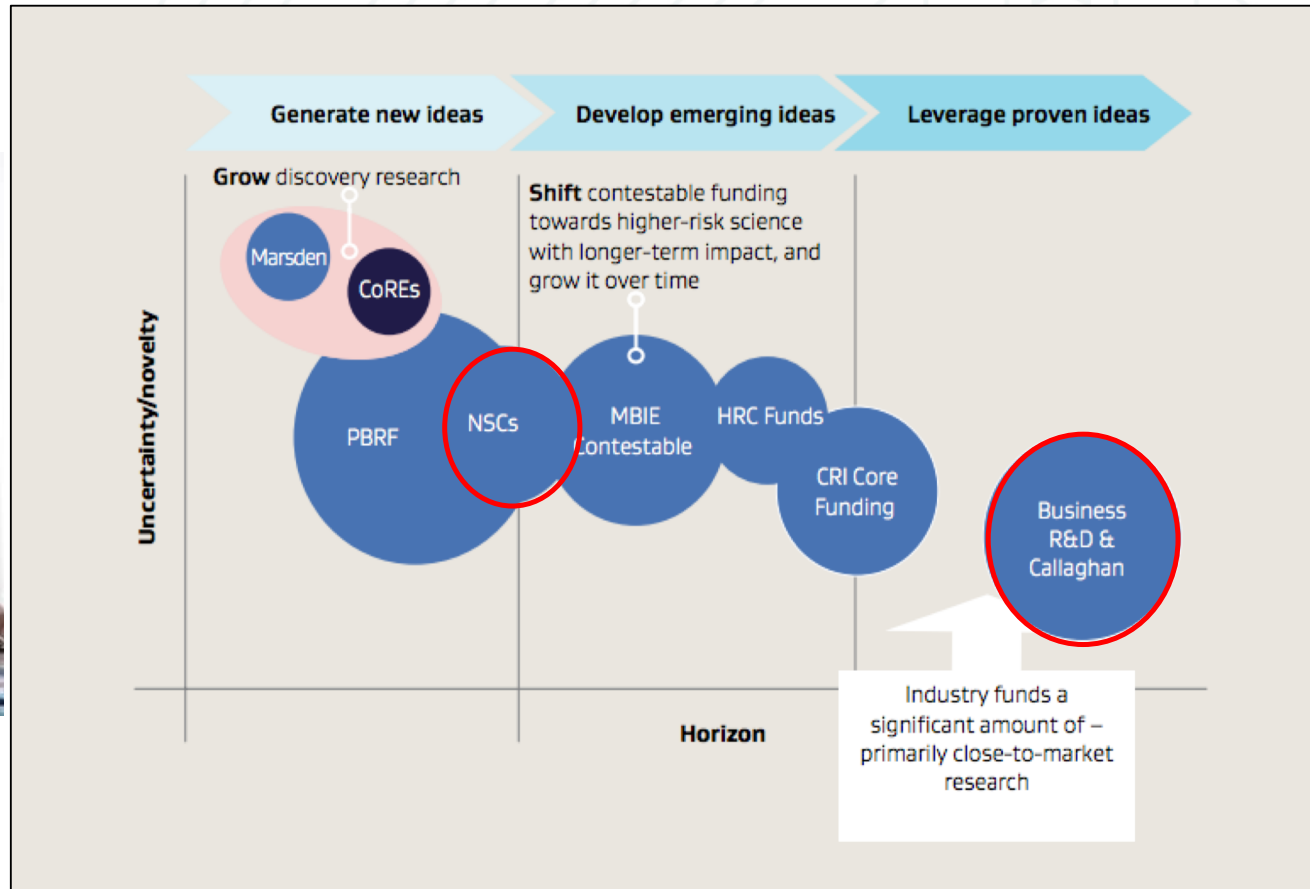
[View All News](#)

SfTI welcomes applications from researchers interested in the PVC spearhead project: to enable the use of technology to better link NZ's exporters with global consumers.

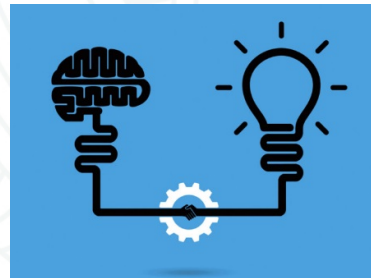
Interested researchers are invited to apply to be part of a process to establish research teams and develop a proposal. If successful, the proposal would be funded from July 2019.



SfTI and the NZ Research Horizon...

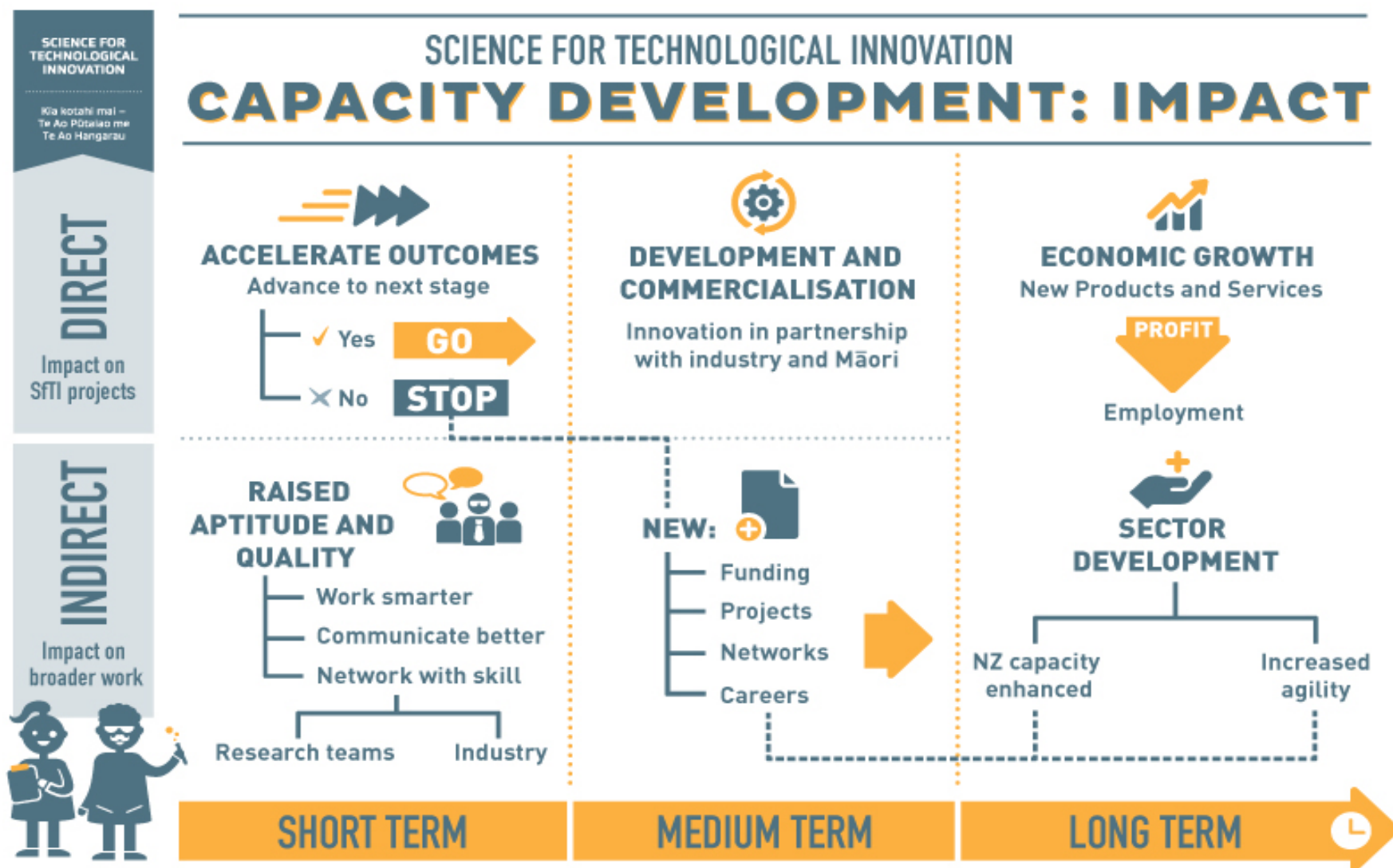


*SfTI: Researcher Facing,
Industry Relevant*



*CI: Industry Facing,
Researcher Relevant*

Enhancing Human & Relational Capacity...



Capacity Development...

Connecting - Whakawhanaungatanga

Our scientists train to be super connectors.

Communicating - Whakawhitiwhiti kōrero

Our scientists train to be super communicators.

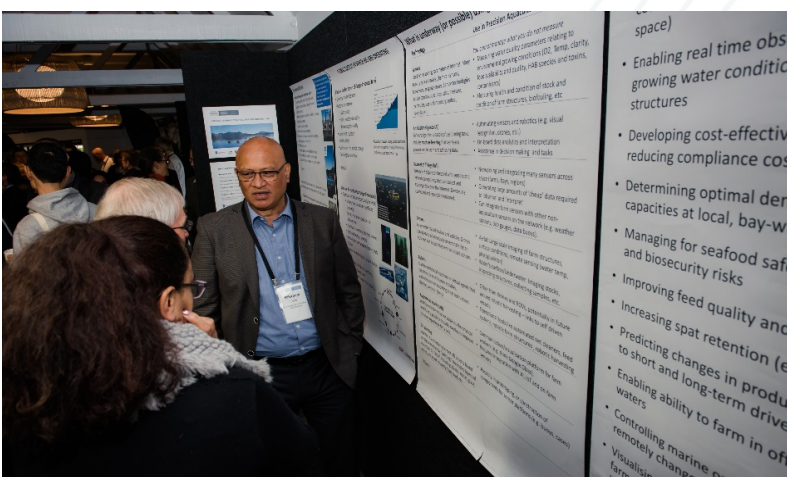
Co-innovating - Auaha-ā-rōpū

Our scientists train to be active co-innovators.

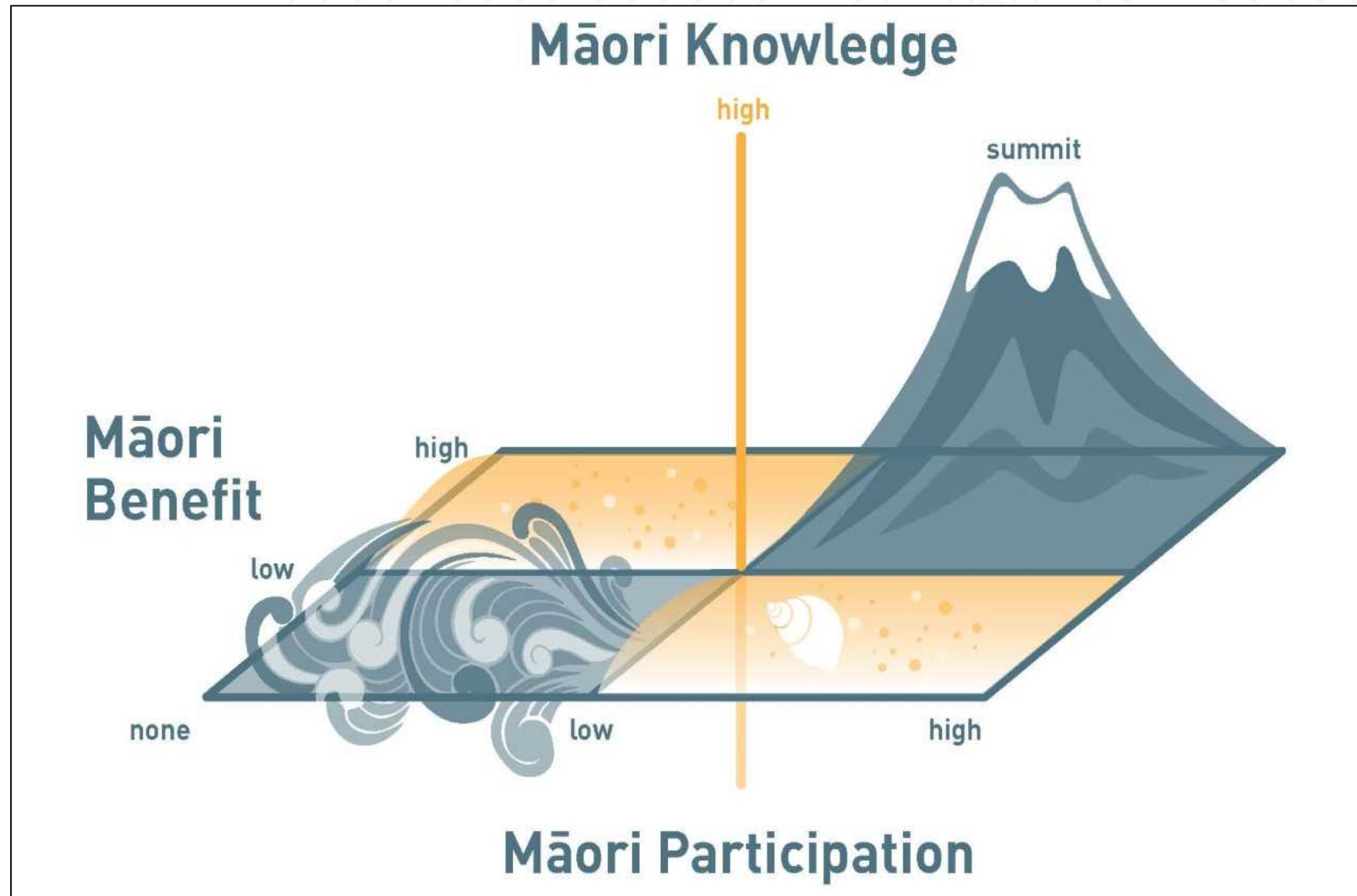
Commercialising - Aronga Pakihi

Our scientists train to understand the process, priorities and timelines of commercialisation.





Vision Mātauranga



Vision Mātauranga

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TE AROMATAWAI

Assessing the Quality of Vision Mātauranga

SfTI uses three pou or pillars to assess how well projects meaningfully incorporate VM

POU TAHI: MĀORI KNOWLEDGE

- The incorporation of Māori principles or practices
- Applying Māori knowledge of Māori history or resources
- Tino Mātauranga – an extension in the understanding or application of Māori Knowledge

1 POINT

1 POINT

1 POINT

POU RUA: MĀORI PARTICIPATION

- In the conception or development of the project
- In the execution of the project

1 POINT

1 POINT

POU TORU: MĀORI BENEFIT

- A gain for Māori or Māori capability
- A topic of high impact or priority for Māori

1 POINT

1 POINT

OUT OF A POSSIBLE SCORE OF SEVEN,
VM QUALITY OF A SfTI PROJECT IS
DESCRIBED AS:

| | |
|-----------|-----|
| EXCELLENT | 7 |
| HIGH | 5-6 |
| MEDIUM | 3-4 |
| LOW | 1-2 |

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OUR PEOPLE



OUR PROJECTS



OUR DEVELOPMENT

Strategy Essence...

Resources: We will

- expand our science and technology reach whilst maintaining flexibility;
- evolve our new and current missions to expand the scope of teams;
- simplify our structure to enhance accessibility.

Stakeholder Goals: We will

- strengthen our stakeholder partnerships;
- further integrate VM into all that we do;
- keep enhancing our research community's technical, human and relational capacity;
- work more closely and jointly with our host CI;
- explore international connections aligned with our missions.

Environment: We will

- embed the SfTI Cycle into the ecosystem commercialisation pipeline;
- take a collective innovation system approach to impact.



SPEARHEAD PROJECTS



SEED PROJECTS

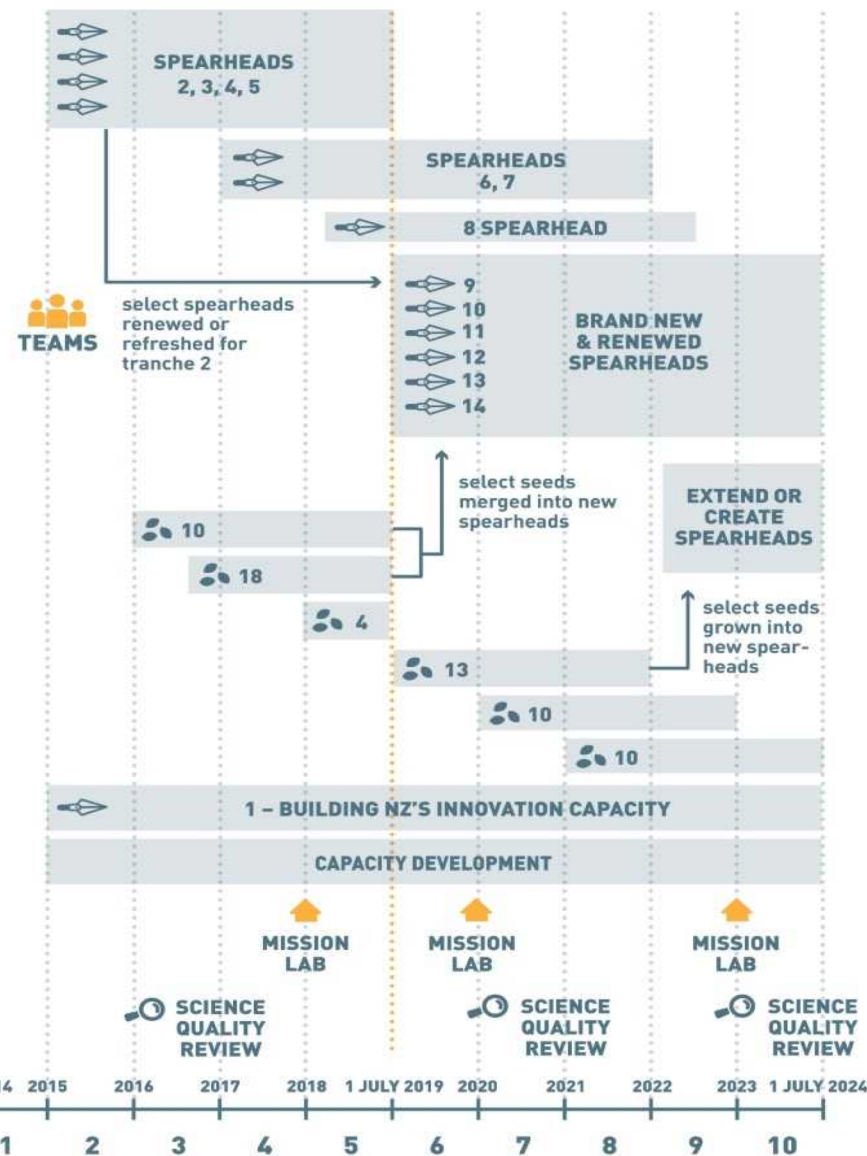


INNOVATION
ACTIVITIES

SFTI FUNDING TIMELINE

TRANCHE ONE

TRANCHE TWO



SPEARHEAD DEVELOPMENT



1 IDENTIFY NZ CHALLENGES

Industry
mission lab



2 EXPLORE PROJECTS

Pinpoint stretch science
Determine scope and
capabilities



3 ASSEMBLE BEST TEAMS

Identify potential leaders
Seek expressions
of capability



4 DEVELOP PROJECT SPECIFICS

With industry, Māori
and management team
Set activities and milestones



5 LAUNCH PROJECT



6 MANAGE AND PERIODICALLY REVIEW

Reports
Science Quality Review
Persist, pivot or perish



PROJECT
REACHES GOALS
More market validation



“FINISHED”

Stay with SfTI
Commercialisation Ready



New Missions 1: Place-based Awareness

idealog

VENTURE

TECH

DESIGN

WORKPLACE

URBAN

ETC.

TOPIC: A Day in the Life

A Day In The Life: Wrestler's Kat Lintott and Ben Forman

By IDEALOG, 05 Jun 2018

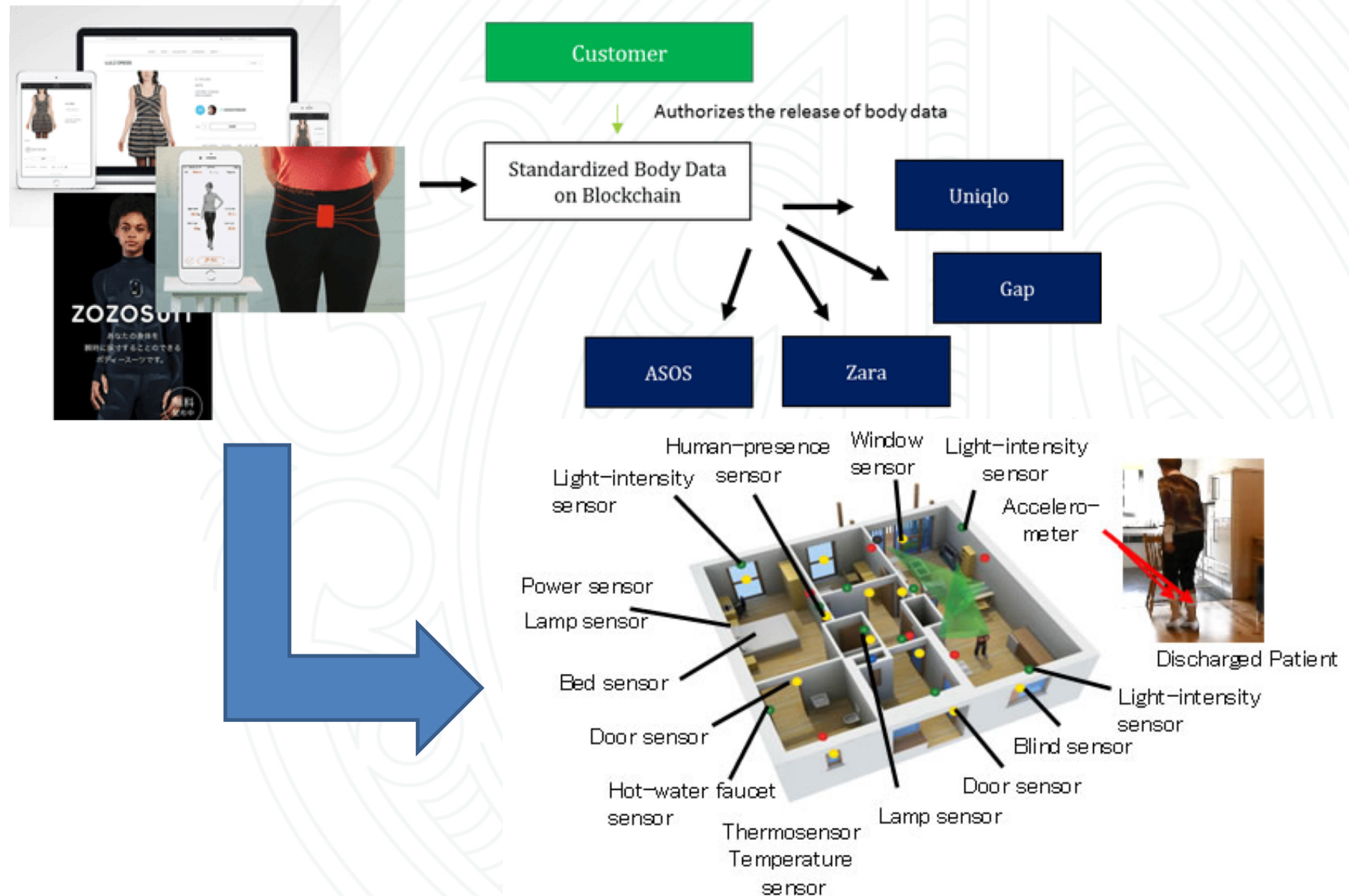
<https://www.wrestler.nz/virtual-reality/>



New Missions 2: Space and Spatial



New Missions 3: NZ Version of SmartHouses



New Missions 4: Veracity

HIGH-VALUE
NUTRITION

Ko Nga Kai
Whai Painga

National
Science
Challenges



New Missions 5: Biosecurity

SNIFF SNIFF



KAPOW!



AUTO-RESET



SNIFF SNIFF...



SCAVENGED



DR ANDREA BYROM | DIRECTOR

New Zealand's Biological Heritage National Science Challenge
c/- Manaaki Whenua Landcare Research

DDI: +64 3 321 9629 | E: director@biologicalheritage.nz | SKYPE: andrea_byrom

W: www.biologicalheritage.nz

NEW ZEALAND'S
BIOLOGICAL
HERITAGE

Ngā Kōhira
Tuku Iho

National
SCIENCE
Challenges



Prof. Dan Tompkins

PROJECT MANAGER: SCIENCE STRATEGY

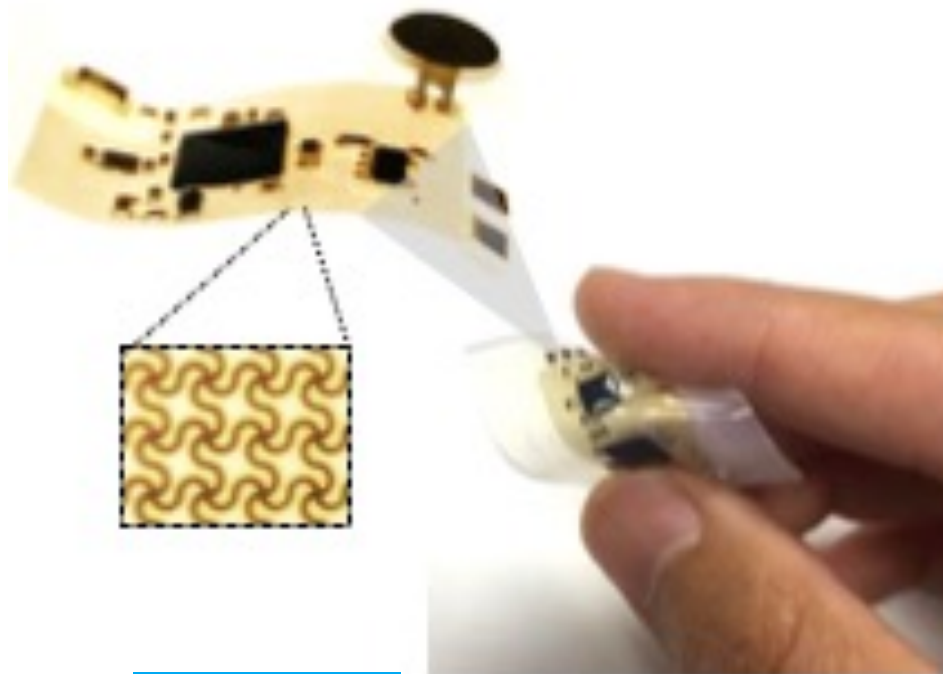
Dunedin +64 (0) 27 347 3129 | DanT@pf2050.co.nz
www.pf2050.co.nz

Predator Free 2050 Limited

Level 4, HSBC Building, 1 Queen St, Britomart, Auckland 1010
PO Box 106040, Auckland City 1143, New Zealand

New Missions 6: Soft Electronics

Soft Material-Enabled, Flexible Hybrid Electronics



Medicine

Healthcare

Human-Machine
Interfaces



StretchSense™

Technology Overview



scion™

FORESTS | PRODUCTS | INNOVATION

New Missions 7: Māori Data Sovereignty



Te Pūnaha Matatini
Data ■ Knowledge ■ Insight



Māori Data Futures Hui – more being planned



Focused Mission Labs 1: Rangatahi-led



Focused Mission Labs 2: Water-tech



OUR LAND
AND WATER

Toitū te Whenua,
Toiora te Wai

National
Science
Challenges



Focused Mission Labs 3: Low Carbon-tech

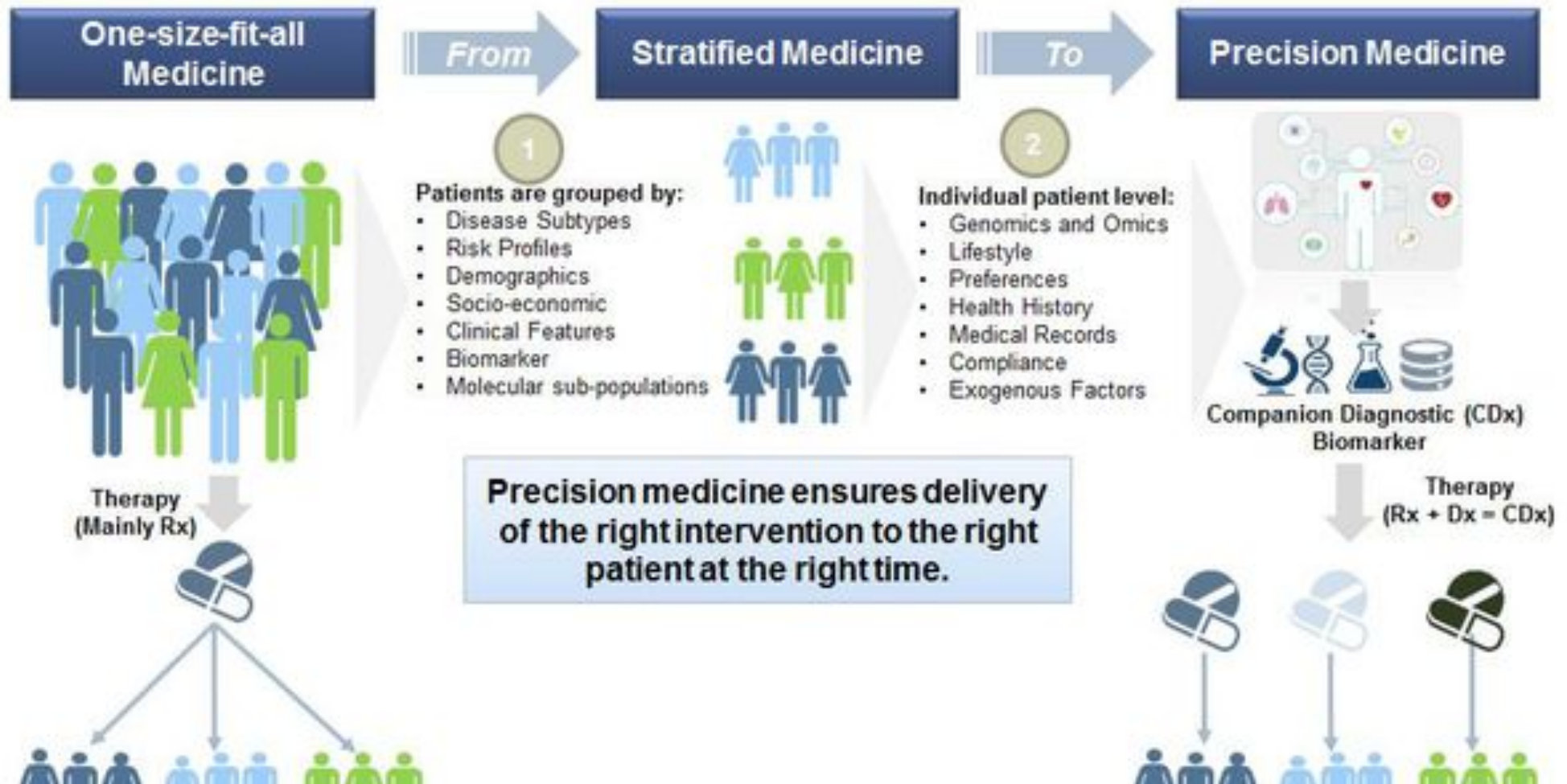


Low-emissions
economy

August 2018

www.sftichallenge.govt.nz

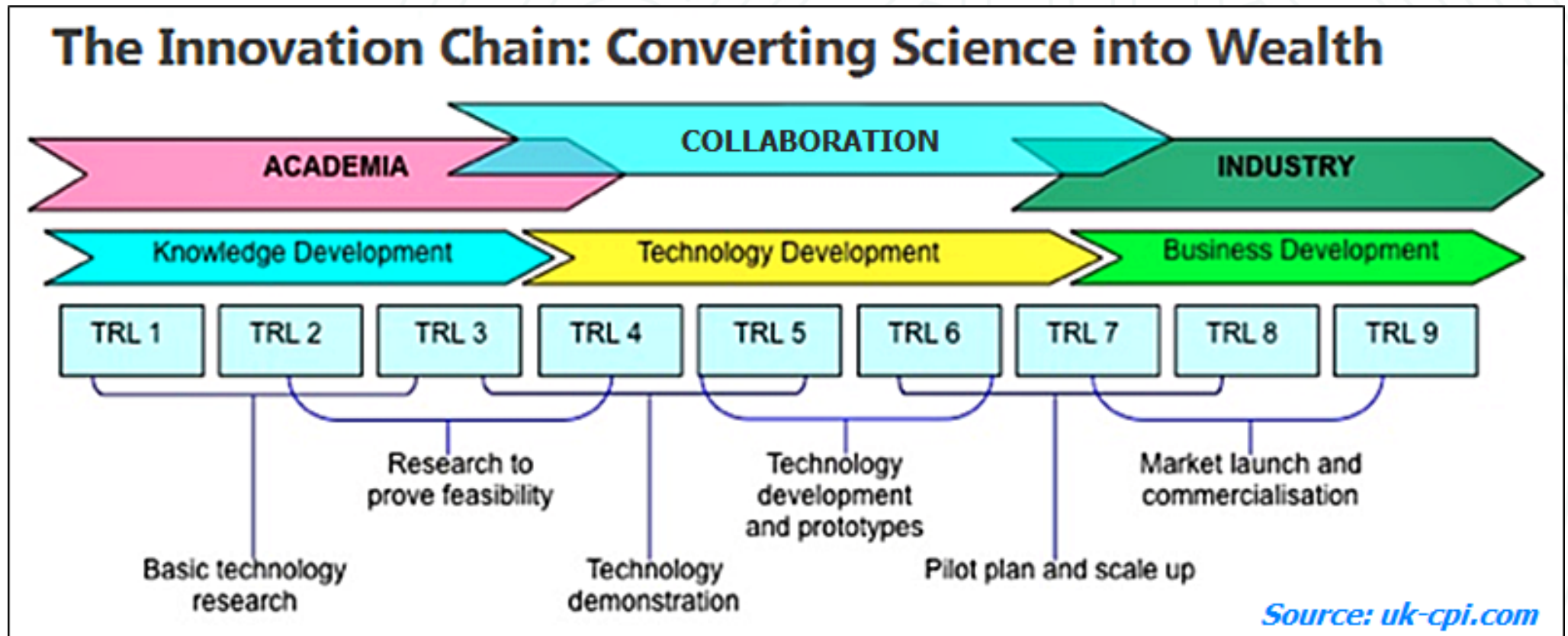
Future Missions 4: Med Tech?



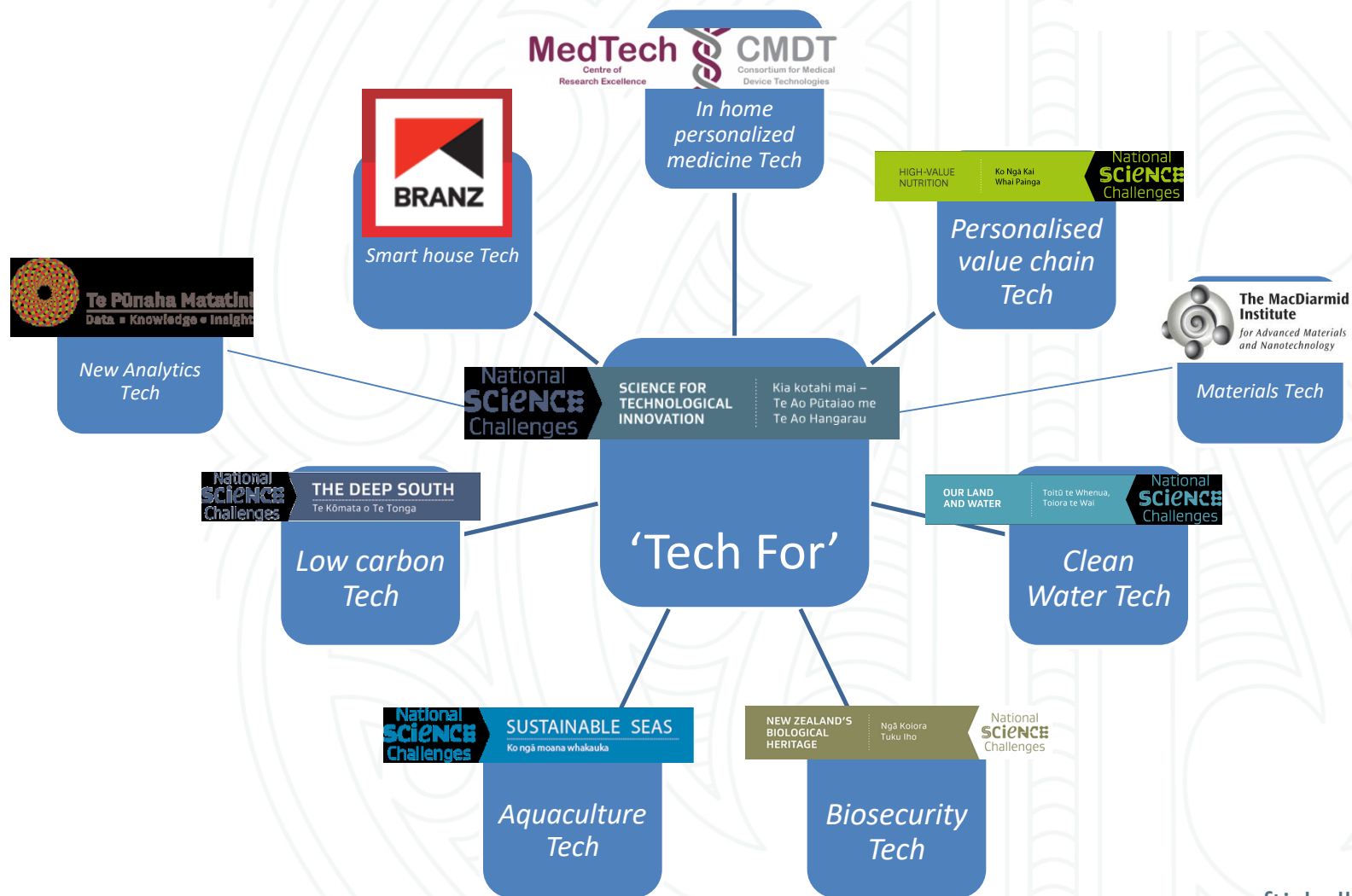
Future Missions 5+: New Mission Labs



Technology Readiness Levels...



National Collaboration ... Other NSCs and CoREs





SPEARHEAD PROJECTS



SEED PROJECTS

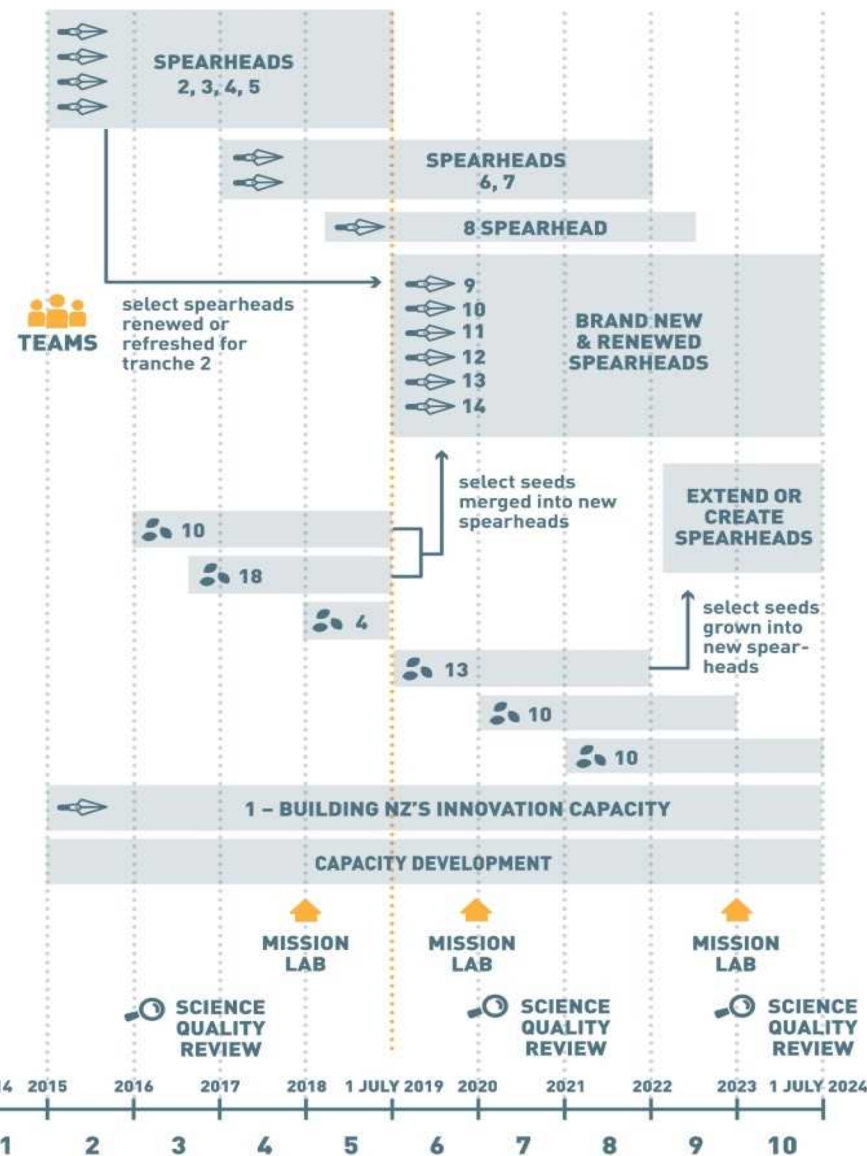


INNOVATION
ACTIVITIES

SFTI FUNDING TIMELINE

TRANCHE ONE

TRANCHE TWO



Science Quality Reviews



Prof Paulo de Souza, Prof Anthony Guiseppi-Elie, Prof Jennifer Loy , Dr Colin Knox (Chair) , Prof Shaun Hendy , Jo-Anne Hazel (Writer).

Reframing 'Failure': Pursue, Pivot or Perish...



After Morning Tea: Building NZ's Innovation Capacity...



Questions?

