

Digital Energy Hub

ERANZ Talking Heads
November 2017

James Muir

Electricity retailers

- » Innovative pricing plans and service offerings
- » Nimble, data rich, digital savvy
- » Technology companies

“One hundred inspired New Zealand entrepreneurs can turn this country around. That is the challenge for us all.”

Sir Paul Callaghan, 1947–2012

Rukuhia te wāhi ngaro, hei maunga tātai whetū
Explore the unknown, pursue excellence

Niche guys finish first

- » Technological innovation will lift NZ's productivity
- » Our future lies in the unexplored niches
- » Our tech sector is leading the way in R&D investment.



Business R&D is critical

R&D SPENDING BY NEW ZEALAND
BUSINESSES IN 2016

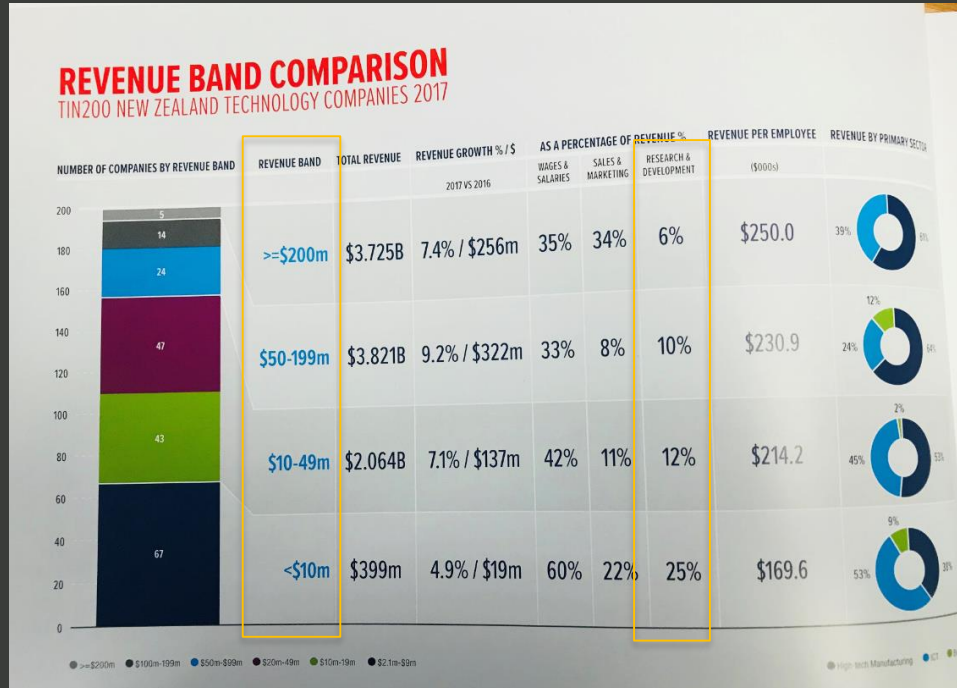


0.6%

OF GDP COMPARED WITH
OECD AVERAGE OF

1.6%

TIN200 companies invest 6-25% in R&D



Our Offer

What we do

Deliver innovation services to businesses:



R&D



**Innovation skills
programmes**



Grants



**Build New Zealand's
innovation capability**

Our expenditure

\$307.4m 2017/18
EXPECTED SPENDING

\$204.8m
GRANTS

\$45.7m
PERSONNEL

\$27.1m
SCIENCE PROJECTS
& SUBCONTRACTS

\$29.8m
OTHER

Our reach



2473

ORGANISATIONS
ENGAGED WITH
US IN 2016/17

Energy is one of our priority sectors



unison



We help businesses succeed through technology

“Callaghan Innovation’s support of Harmonic in the fields of innovation and R&D capability development have helped position us as the leading data science practitioner in specific industry sectors, such as energy, across Australasia.”

Phil Shepherd, CEO, [Harmonic](#)

“Funding and support from Callaghan Innovation has enabled GoodMeasure to go from strength to strength, investing in R&D to further the development of cutting-edge meter-data communications technology in New Zealand.”

Peter Sandston, Business & Channel Development Manager, [GoodMeasure](#)

Voice of the Energy Customer

"Our team arose from software industry.... Lightning Lab helped us find an energy industry partner." Polyanio

"We've never been more productive, nor have we iterated so quickly as we did through the Lightning Lab Electric." emhTrade

"We have no need to engage with Callaghan."

"We're not good at promoting our work...."

Voice of the Energy Customer

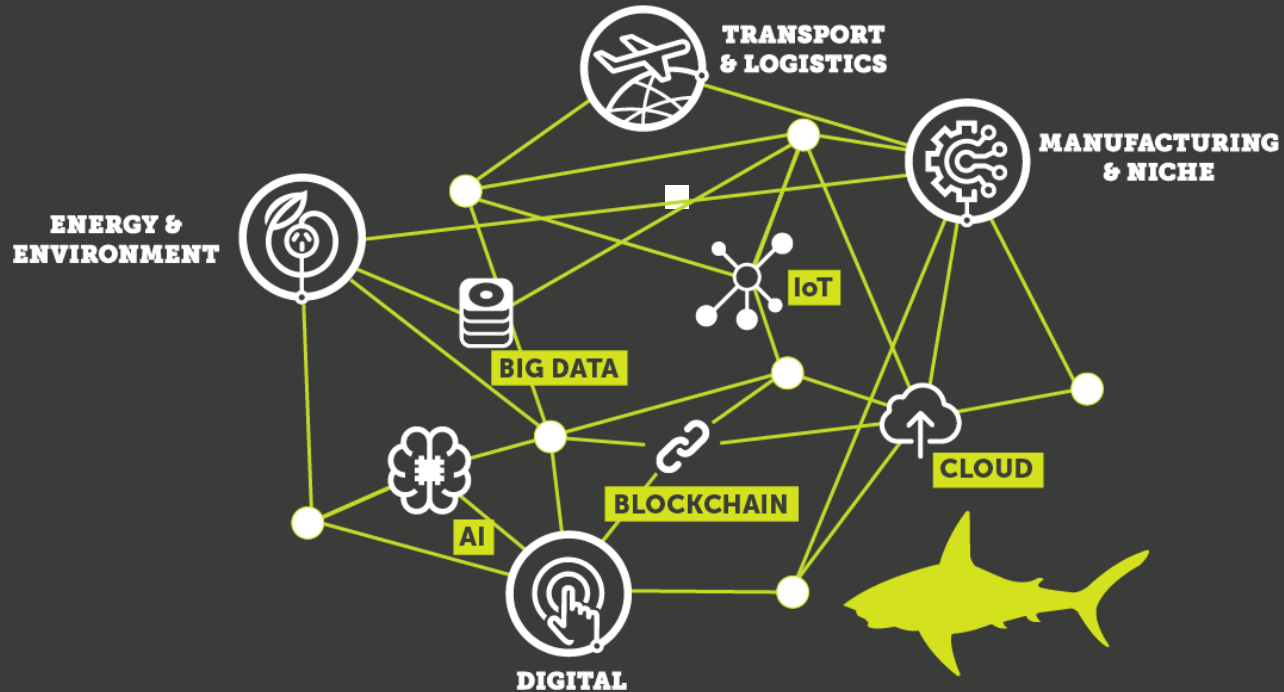
"We want to revitalize our innovation.... we're talking to big players about their assets...we need to understand machine learning."

"We felt isolated whilst validating our IoT technology"

"We've developed data analytics software but don't know how to commercialise."

"We're trying to innovate, have lots of ideas...want to find out who to team up with"

Digital Energy Hub



Callaghan Innovation

About us | News and events | Blog | Careers | Contact us

Access to experts | Technology and product development | Innovation skills | Business collaborations | R&D grants | Hub Test

Technology and product development

Digital Energy Hub

Connecting energy innovators to insights, ideas and each other



Lighting Lab Demo - M Laka Pitsa

Lighting Lab Demo - amrTzuka Pitsa

Lighting Lab Demo - Patsyris Pitsa

Lighting Lab Demo - Jurgel Pitsa


BRADLEY ANDREWS
What are your recommendations for creating business?

Bradley Andrews - WorleyParsons

BRADLEY ANDREWS
WorleyParsons

054 / 059

YouTube



Intro text here

Consumers

Distributed Generation

Distribution

Home

Driving Innovation




Innovate faster than your competition

Innovation skills

Build for Speed

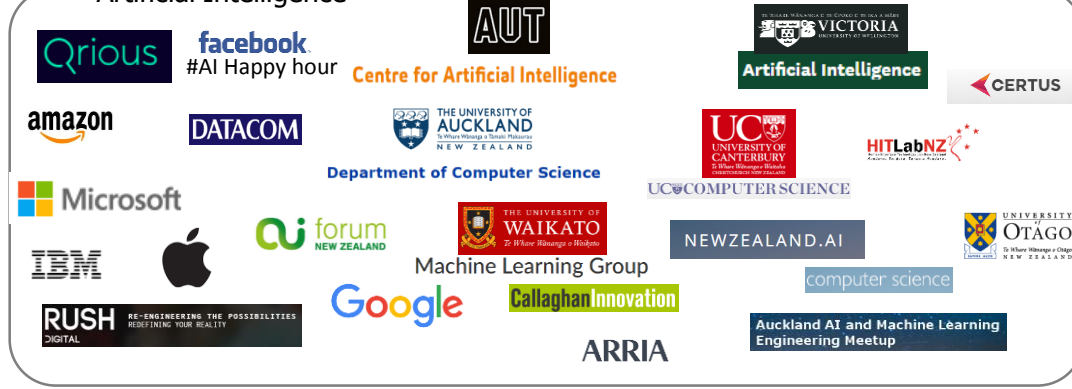


Data & Internet of Things



Digital Energy – Example technology providers

Artificial Intelligence



Big Data



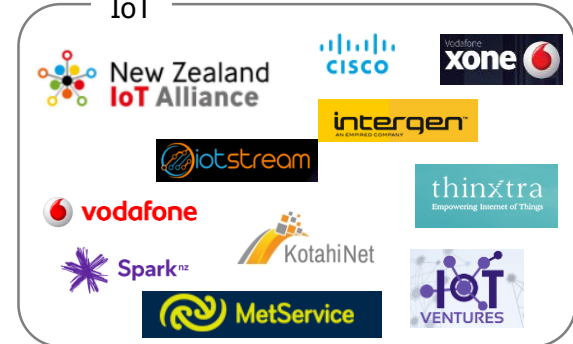
Blockchain



Cloud



IoT



Contact Callaghan Innovation for further information

Tech is exponential, culture is not.

- » How will Blockchain affect my business?
- » Over what timeframe?
- » What next?

“The hurdle - users must be willing and able to change business processes and collaborate with customers, suppliers, and competitors in ways they never have before”

Ron Beatty
Electricity Authority

How will Blockchain affect retailers?

- » Reduce transaction costs
- » Encourage service bundling
- » Increased focus on data availability, privacy, security & accuracy
- » Gradual erosion of volumes
- » Less engaged customers

NZ Electricity Sector and Blockchain

Co-ordination & Complexity

High

Substitution

Replaces how we do business

- Distributed energy P2P
- 2022/2023

Transformation

Completely novel applications

- Smart contracts, Transactive Grid
- 2027+

Low

Single Use

Less costly, focused solutions

- Bitcoin as payment option
 - Internal database
- 2018

Localization

Private network across organizations

- Bank, electricity retailer, telecom
 - Retailer + distribution company
- 2019/2020

Low

High

Novelty

What next?

- » Bring Blockchain into product roadmaps
- » Double down on technology & innovation
- » Connect with Callaghan Innovation

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