

# Using technology for good - together

How can we use technology in more innovative and collaborative ways to enable transition to a low emissions economy?

Russell Craig  
National Technology Officer, Microsoft New Zealand





Humans face unprecedented challenges, from mitigating climate change and ensuring resilient water supplies, to feeding a growing population and stemming a catastrophic loss of biodiversity.

New Zealand needs to transition to a low carbon economy **while also** developing new economic opportunities, enhancing wellbeing and protecting the environment.

Digital technologies – including Artificial Intelligence (AI) and the Internet of Things (IoT) - can help us chart a better future.



Good news!

We've been here before.

The challenges are not new.

# Digitalisation has sparked a 4<sup>th</sup> Industrial Revolution



Steam, water,  
mechanical equipment



1780s

Electricity, division of  
labor, mass production



1870s

Electronics, IT,  
automation



1970s

Blurring the physical  
and digital divide



2015+



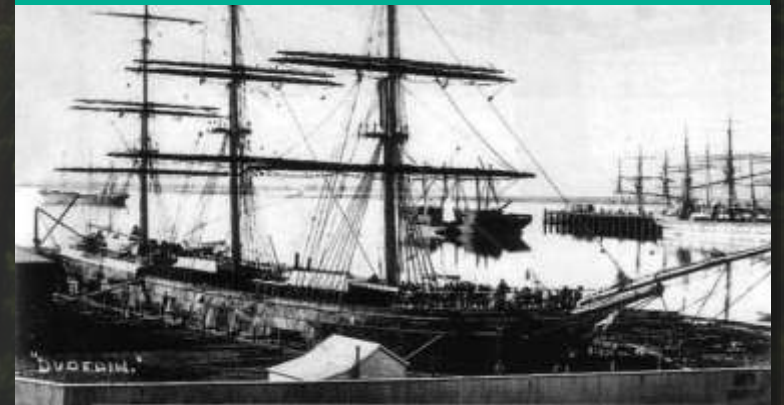
We've known digital has profound effects for quite a while



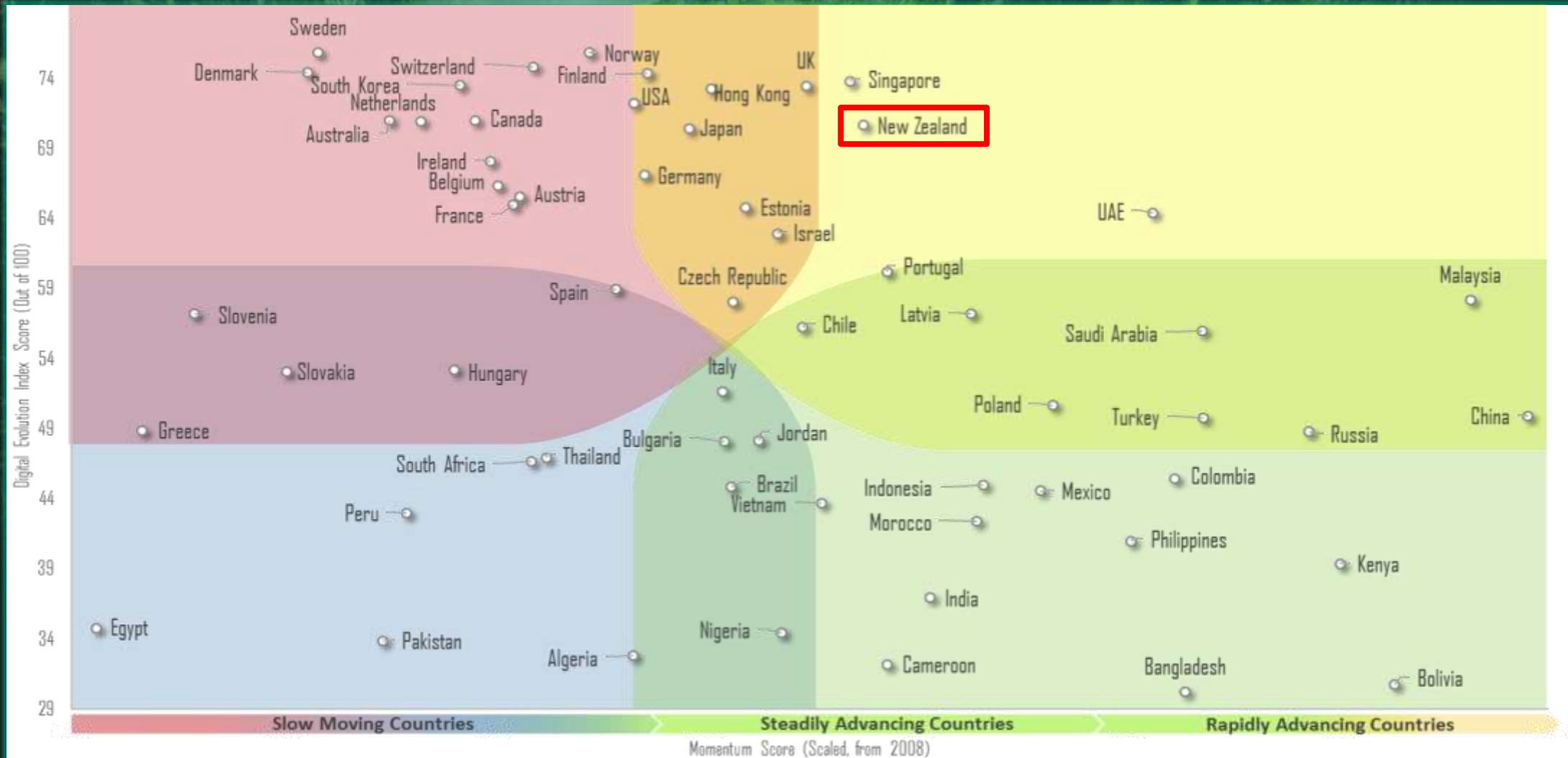
Catching the Knowledge Wave Conference  
2001

“The five theme groups have produced a host of recommendations in the areas of **people and capability, innovation and creativity, entrepreneurship, sustainable economic strategies, and social cohesion** and the knowledge divide.”

The Internet -  
Freezer Ship of  
the 21<sup>st</sup> Century  
Economy



# In less than 20 years we've become a leading digital nation





# How can digital help NZ transition?



Too many ways to share today!

Start with the fundamentals.

A 2018 study finds that the Microsoft cloud is as much as **93% more energy efficient** and as much as **98% more carbon efficient** than on-premises solutions.

## The carbon benefits of cloud computing

A study on the Microsoft Cloud

in partnership with **wsp**

For localized deployments, Microsoft Cloud is between **79 to 93% more energy efficient** than a traditional on-premise datacenter.

When renewable energy is taken into account, carbon emissions (kg/CO<sub>2</sub>/user-year) from Azure Compute are **92-98% lower** than a traditional on-premise datacenter.

*The four key investments that reduce environmental impact:*

- Renewable electricity
- Operational efficiency
- Equipment efficiency
- Infrastructure efficiency

kgCO<sub>2</sub>/user

<https://tinyurl.com/yazqluus>



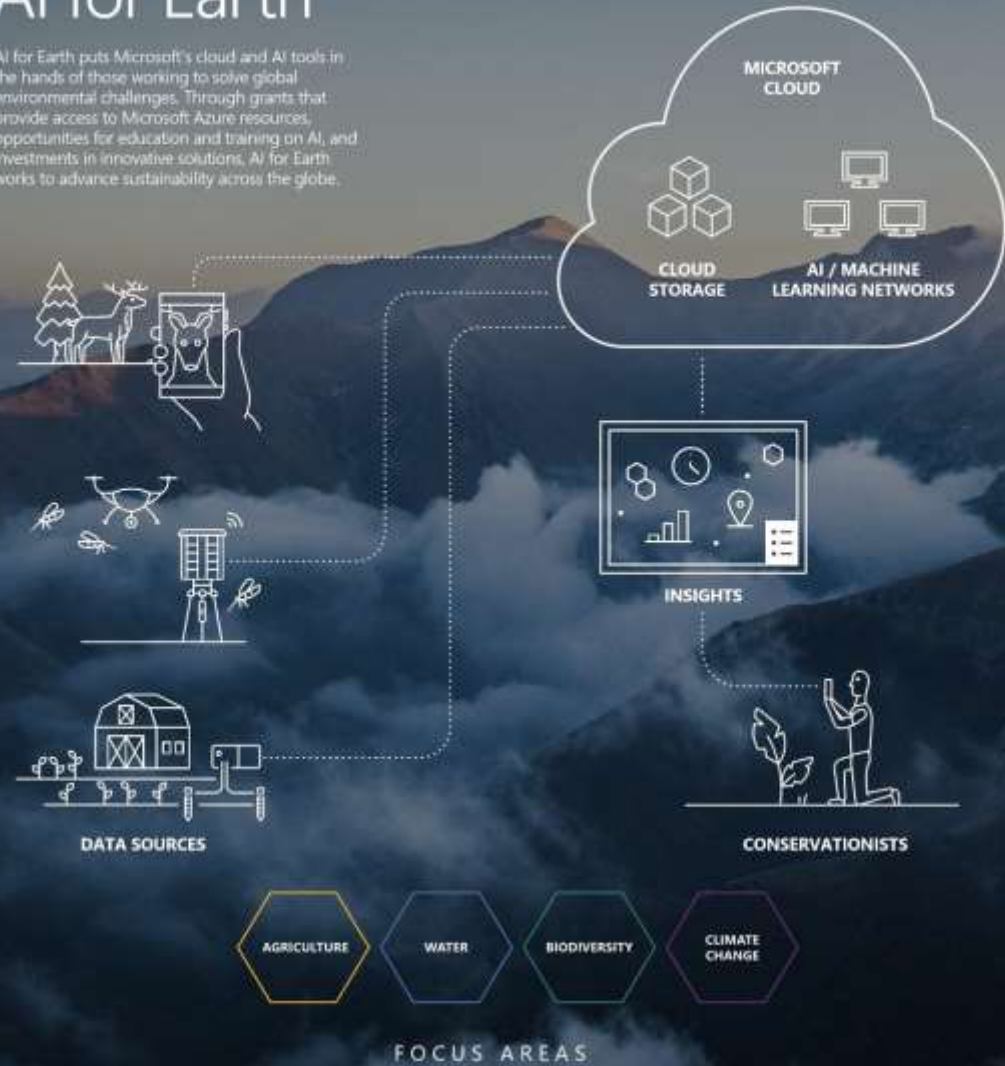


# AI for Earth

empowering people and organizations to solve global environmental challenges through technological innovation

## AI for Earth

AI for Earth puts Microsoft's cloud and AI tools in the hands of those working to solve global environmental challenges. Through grants that provide access to Microsoft Azure resources, opportunities for education and training on AI, and investments in innovative solutions, AI for Earth works to advance sustainability across the globe.



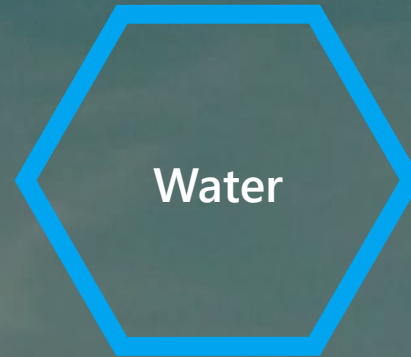
# Focus areas



AI for Earth is focused on four areas that are vital in building a sustainable future:



Feed the growing world population



Conserve and protect water sources



Monitor and protect species from extinction



Reduce climate change impact on communities

<https://www.microsoft.com/en-us/ai/ai-for-earth>



**On its own, technology is not the answer**

**Working alone doesn't work!**

**Using technology for good – together**

## Using Technology for Good - Together

THE PRIMARY INDUSTRIES AND REGIONAL INNOVATION COLLABORATIVE

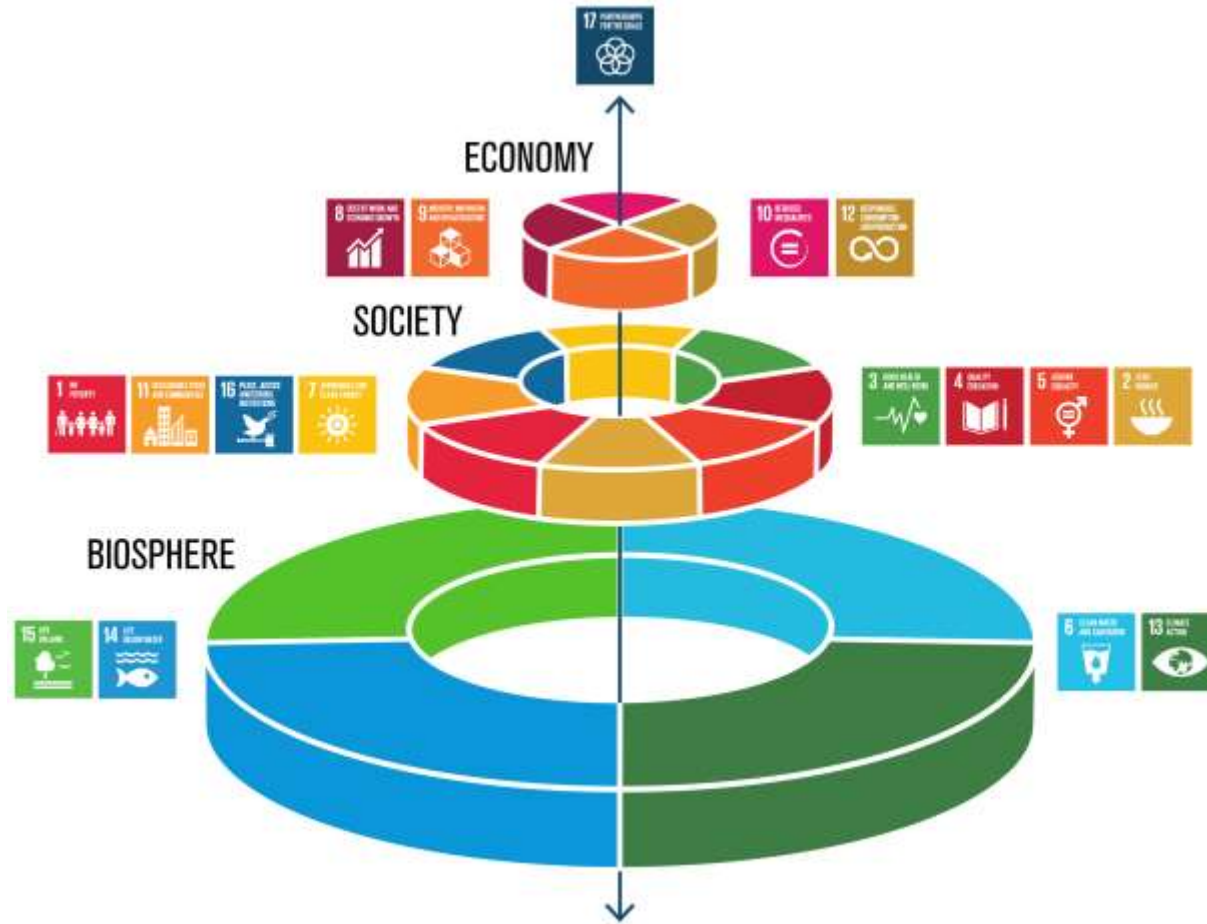


We believe...

In the potential for science and technologies to contribute to the well-being of humanity.

To build a sustainable future for New Zealand we need to accelerate the adoption of digital technologies into our Primary Industries and Regional Economies, and can no longer act as individuals or organizations working alone.

# Grounded in the UN Sustainable Development Goals



# Our focus

As the Primary Industries and Regional Innovation Collaborative (PIRIC) we focus on strengthening New Zealand's regional economies by:



## INNOVATIVE INDUSTRIES

Accelerating the Digital Transformation of New Zealand's agriculture, food processing, forestry, horticulture and seafood sectors.



## SUSTAINABLE COMMUNITIES

Helping build sustainable and connected communities that have the confidence, skills and ability to participate in the digital world.

## WORKING ALONE...DOESN'T WORK!

WE BELIEVE IN THE POWER OF "COLLABORATIVE INNOVATION"

"There is a need for alignment of vision and intent, and cultivation of complex interaction and cooperation, between many parties.

Enabling deliberate, collaborative action – particularly '*collaborative innovation*' – is essential to successfully joining up these parties in the co-creation and execution of new ideas and initiatives."



## Our principles

mutuality  
openness  
trust  
collaboration  
transparency  
dialogue  
accountability.



# What is PIRIC?

- PIRIC is an open club – a “voluntary, unincorporated association”, governed by a charter.
- A “do tank”, not a think tank.
- A facilitator and contributor, not a controller.
- A community builder.
- Not important in its own right – only through what it enables.
- Not an accumulator of resources – not allowed a bank account.
- A grand experiment – nothing ventured, nothing gained!

Learn more: [www.piric.org](http://www.piric.org) | Contact us: [info@piric.org](mailto:info@piric.org)

## Primary Industries and Regional Innovation Collaborative Charter

### Preamble

#### A. Collaborative Innovation and Sustainable Development

- I The 17 global Sustainable Development Goals (SDGs) set by the United Nations in 2015 cover social and economic development issues including poverty, hunger, health, education, climate change, gender equality, water, sanitation, energy, urbanization, environment and social justice.  
See <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>
- II In addressing these issues, the UN formally recognized the growing importance of focusing on diversity and inclusion, entrepreneurship and innovation as critical components in addressing the world's social and economic needs.
- III Realising the SDGs is not possible through institutions, organisations and people acting alone. There is a need for alignment of vision and intent, and cultivation of complex interaction and cooperation, between many parties. Enabling deliberate, collaborative action – particularly ‘collaborative innovation’ – is essential to successfully joining up these parties in the co-creation and execution of new ideas and initiatives.
- IV Collaborative innovation efforts are best supported by universal principles of openness, fairness, transparency, trust, mutuality and accountability, and benefit significantly from diversity in thought, experience and cultural contexts. In the New Zealand context successful collaborative innovation depends, in particular, on recognizing the value of Māori views, knowledge and innovation practices. Where appropriate, it is acknowledged that these should be incorporated into any cooperative venture that seeks to develop the new knowledge and the new ways of working essential to fostering sustainable economic and social development.

#### B. Purpose of the Primary Industries and Regional Innovation Collaborative Charter

- I With these things in mind, and with an explicit focus on achieving goals associated with the role New Zealand's primary industries play in regional economic and social development and in the environment, the Primary Industries and Regional Innovation Collaborative (“PIRIC”) was established, in accordance with the terms of a Memorandum of Understanding between The Collaborative Limited and Microsoft New Zealand Limited dated 22 August 2018 (“MoU”).
- II The Charter (“the Charter”) was established pursuant to the terms of the MoU and will govern the PIRIC and any of its members that wish to engage in activities aligned to the UN SDG's and the Vision, Mission and Goals stated under sections E-G below.
- III The Charter establishes PIRIC governance arrangements, sets out the terms and conditions of PIRIC membership, and articulates principles to guide PIRIC activities. These are set out in the annex to the Charter. The PIRIC is a voluntary and unincorporated association, the Charter and MoU does not establish any kind of separate legal entity and, other than where stated to the contrary, is not intended to be legally binding.

