

Data, difference, and an indigenous development dividend to big data health analytics

CoMPASS Symposium.
Tāmaki Campus. June 2018.



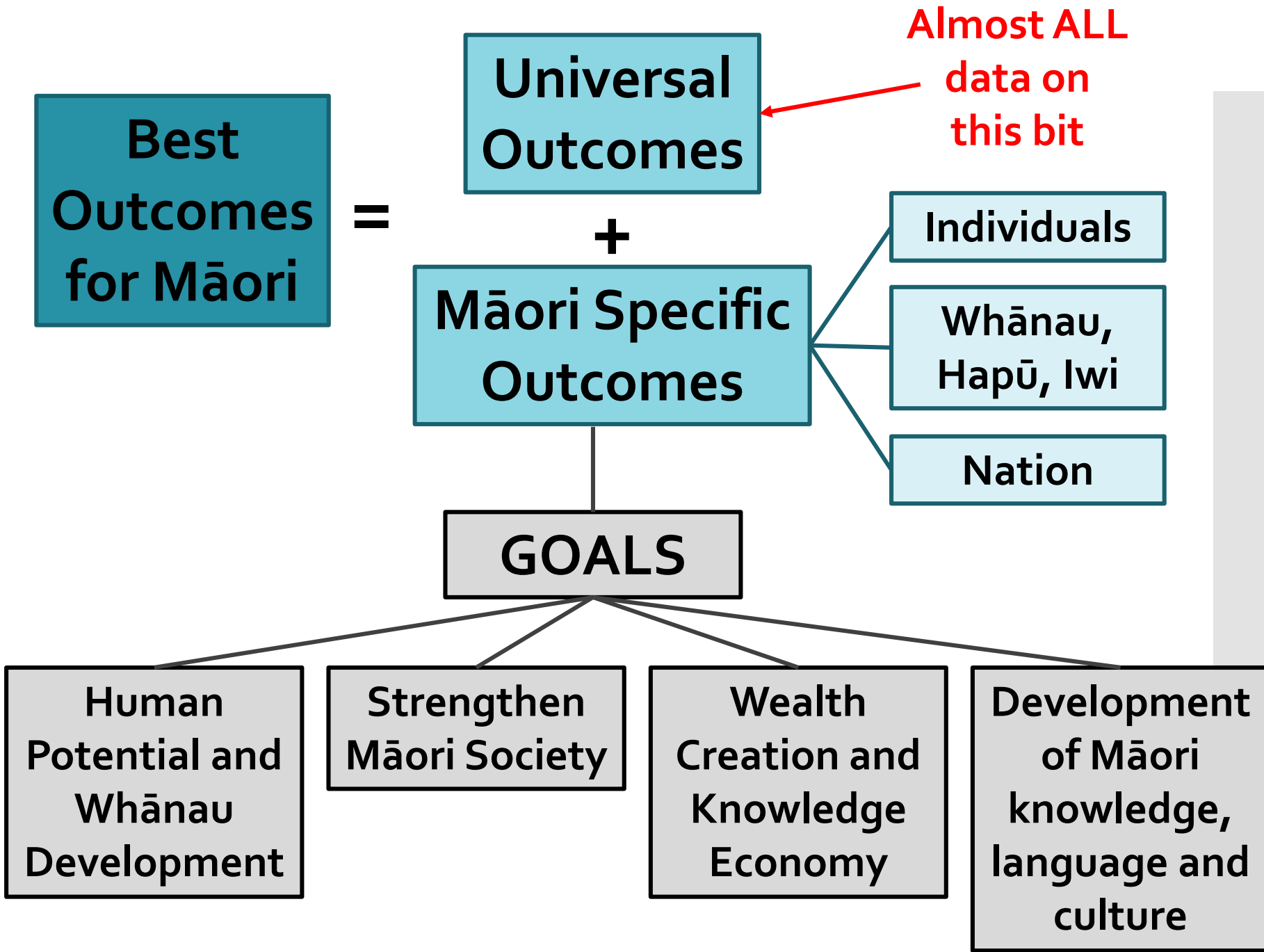
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Andrew Sporle

Māori Development Goals

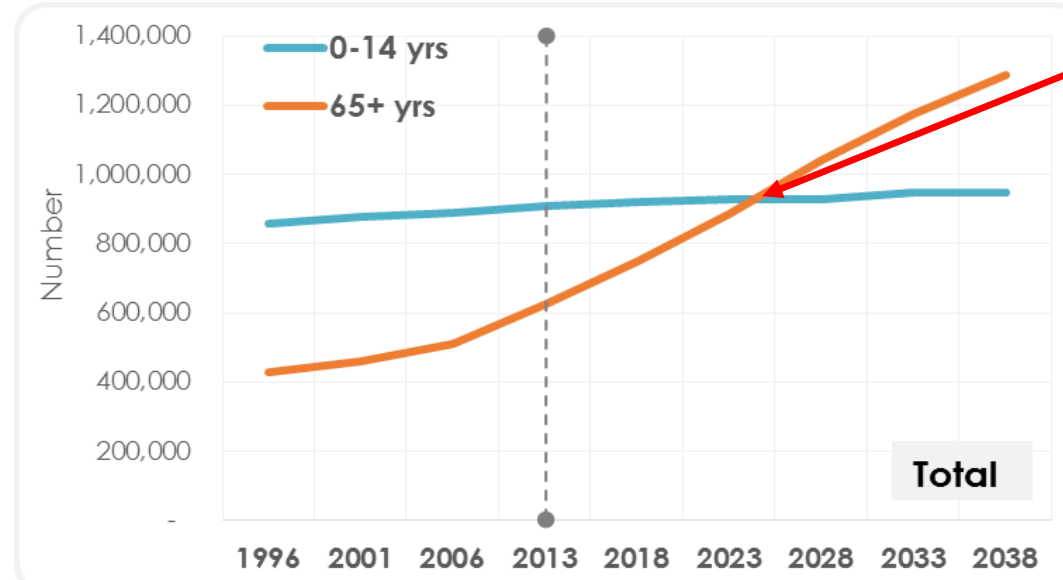
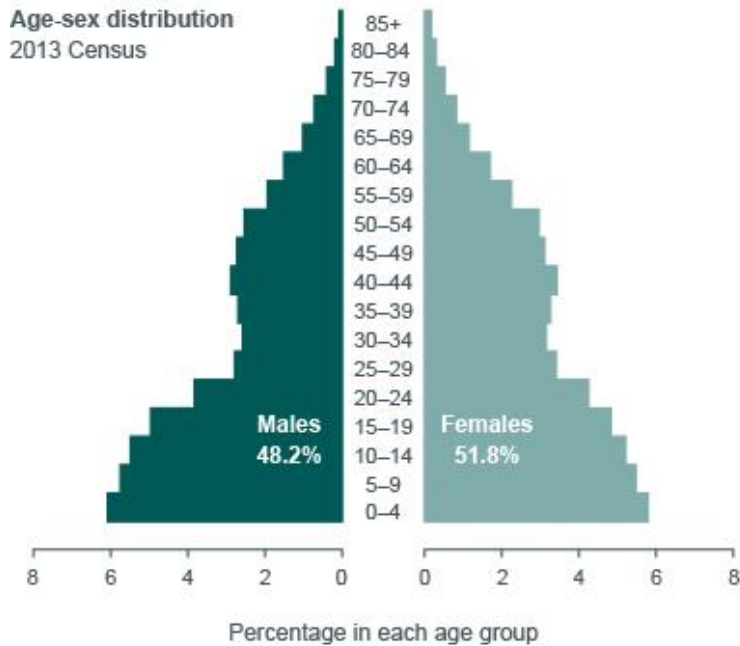
(Durie MH 2003)



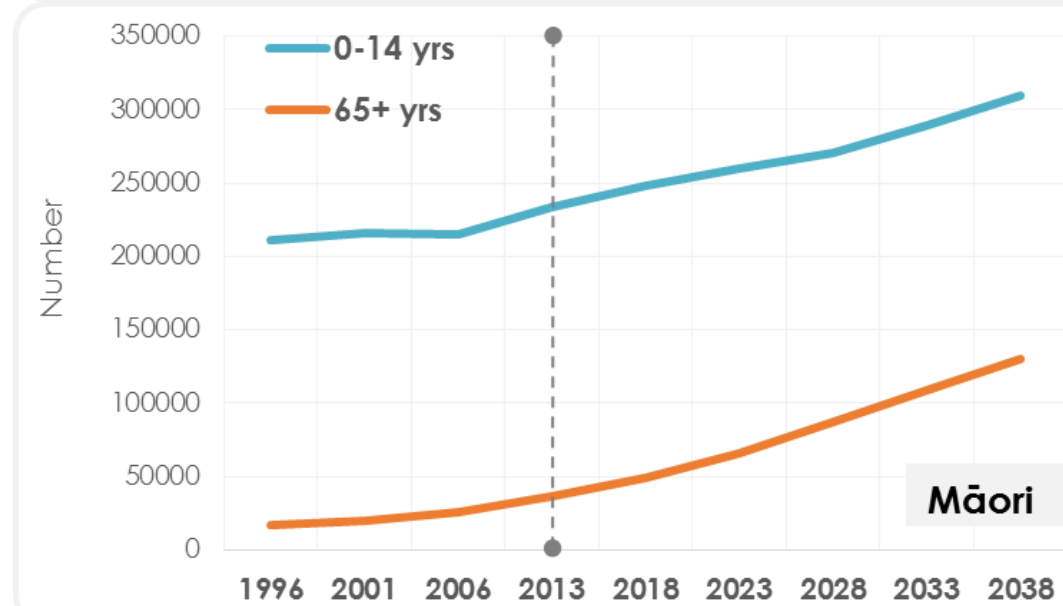
'Potential' demographic dividend in a Post-Settlement Context

Māori

Age-sex distribution
2013 Census



More older people than kids



Opportunity for major impact of lifecycle and inter-generational research

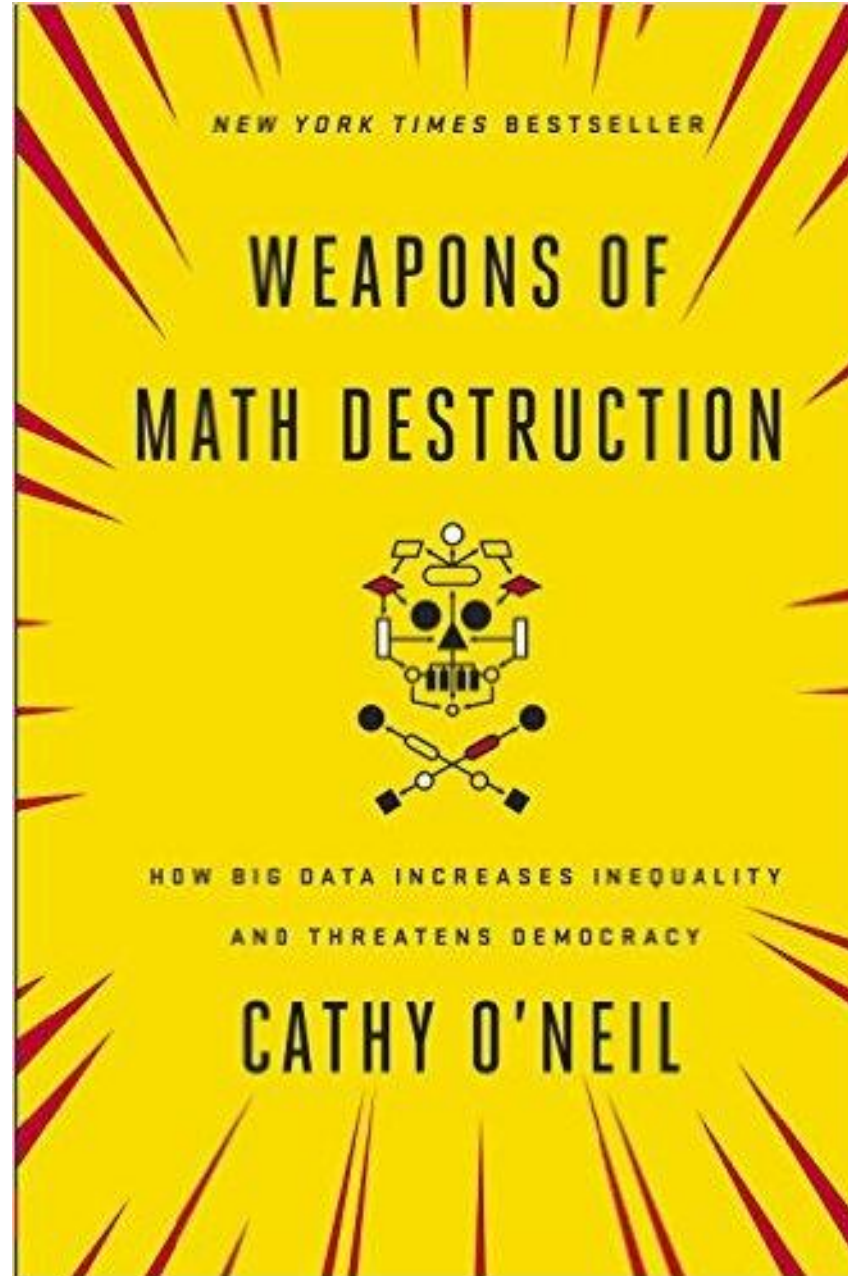
Data is a social product – and so is analysis

Imperfect data, imperfect models, embedded values can create self-fulfilling feedback loops.



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"big data increases inequality and threatens democracy."

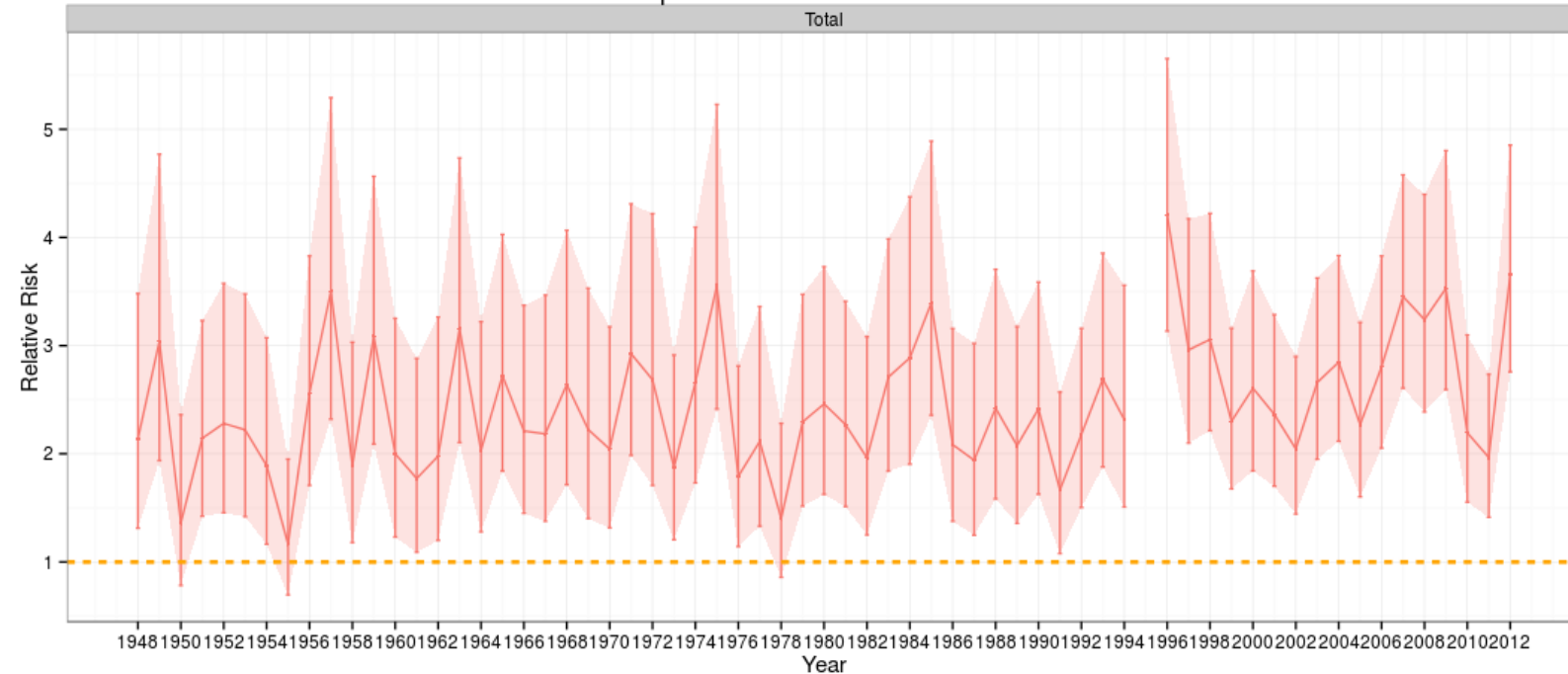
Can deficit data, accessible by a few, inform development?

Starting point:
transparency and
engagement

Data and Inequality of Outcomes

Population Data Visualiser - Beta

Total



**Stomach Cancer Death
Trend uncertain
Māori rates 3.7 times higher
than non-Māori**

Māori/ Non-Māori relative risk for stomach cancer incidence 1963-2012

Standardised to Māori population

Source: DoH and MoH Mortality collection data via Data Visualiser

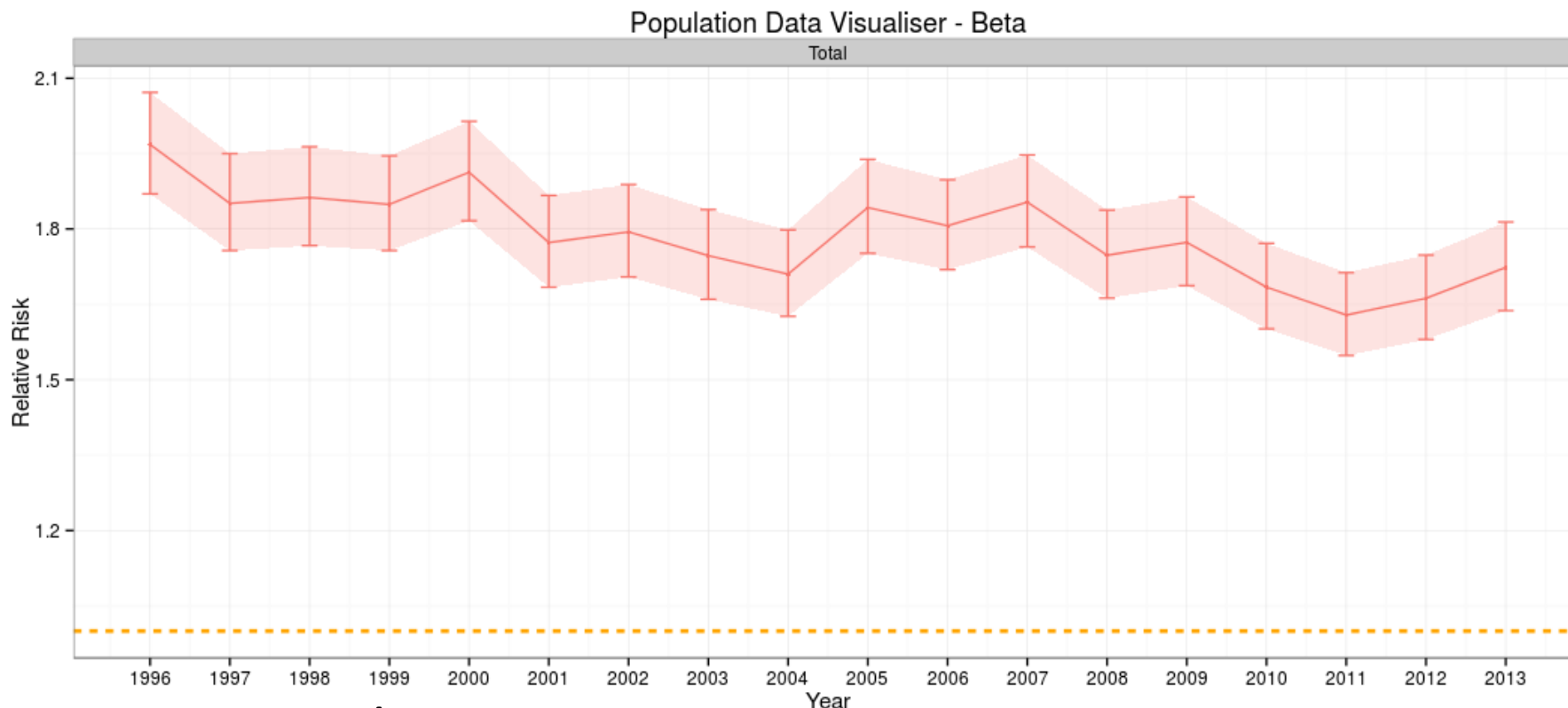


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Outcome monitoring necessary but not sufficient

Data and Inequitable Impact



Amenable Mortality (MoH)

Slow decrease.

Māori rates 1.7 times higher than non-Māori

**Ambulatory sensitive hospitalisation rate
M/nM RR = 1.6**

Māori/ Non-Māori relative risk for amenable mortality 1996 -2013

Standardised to Māori population

Source: DoH and MoH Mortality collection data via Data Visualiser



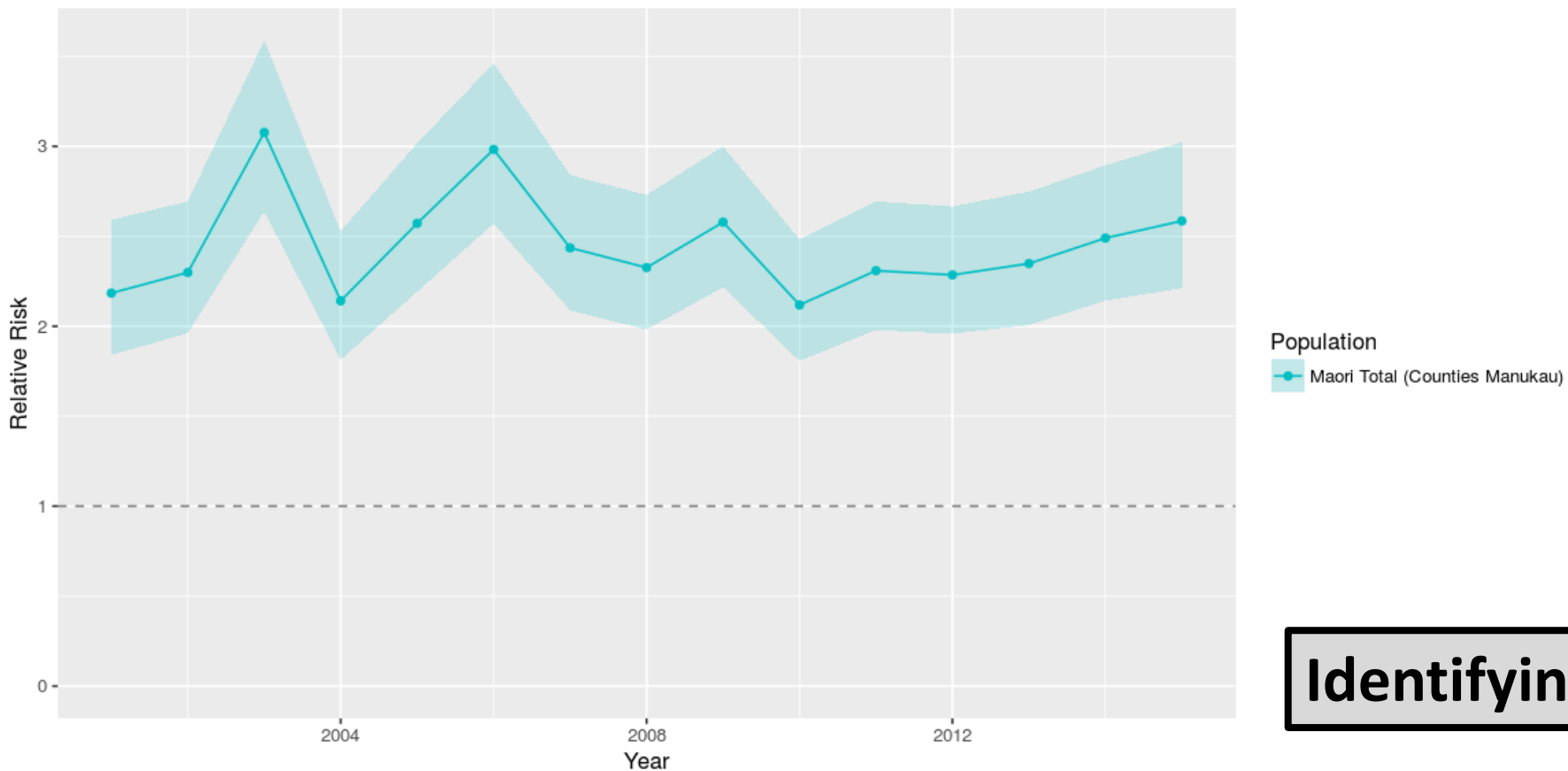
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Identifying intervention points

Data and Inequitable Impact

Ministry of Health Amenable Mortality Relative Risk



Amenable Mortality (MoH)

Regional variation in service impact for Māori

Identifying intervention location

Māori/ Non-Māori relative risk for amenable mortality 1996 -2015

Standardised to WHO population

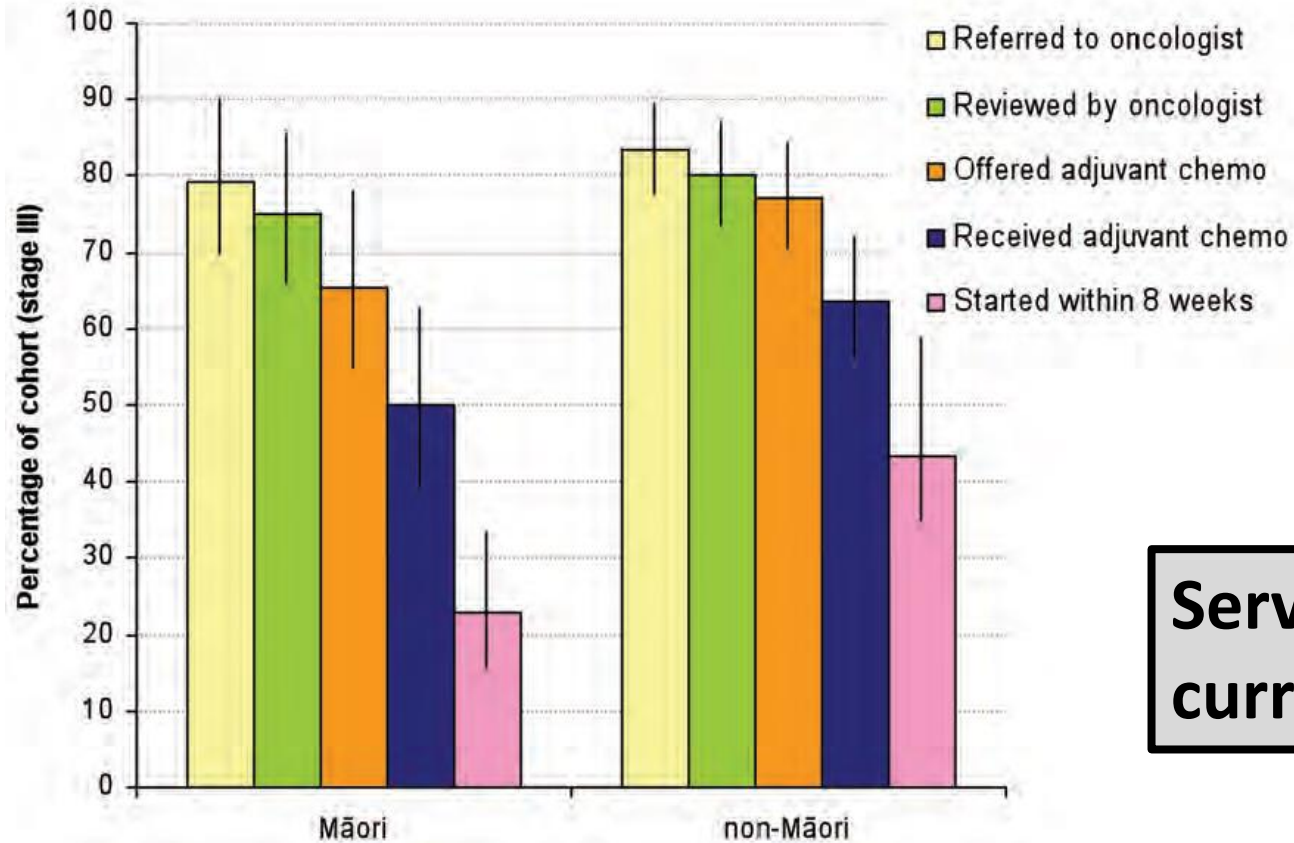
Source: DoH and MoH Mortality collection data via Data Visualiser



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Data and Identifying Inequitable Processes?



Inequalities in colon cancer survival between Māori and non-Māori arise due to lots of small differences cumulating

Service delivery process review is currently ad-hoc and research funded



Issues with current Data resources for Māori Development

Require descent and tribal information

Availability of Māori - defined measures

Deficit or development measures

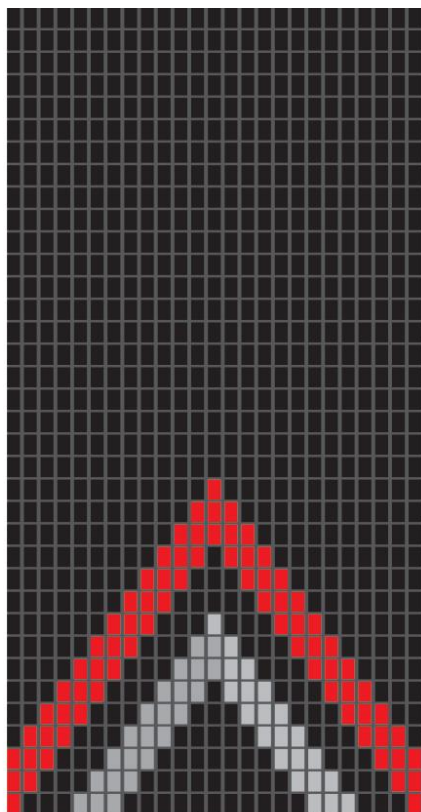
Census link can provide these
BUT:

- Census participation varies by ethnicity, gender and age
- Matching not complete ?similar variation
- Iwi list not comprehensive
- Iwi data quality ?

PRECISION – more important for smaller populations

“Tribes must grapple with the task of building strong nations while utilising data that have been collected to advance the aims of other governments.”

- Desi Rodriguez-Lonebear



TE MANA RARAUNGA

Māori Data Sovereignty Network

**“He whenua hou,
Te Ao Raraunga
Te Ao Raraunga,
He whenua hou”**

Kirikowhai Mikaere

(Data is the new land)

Data is a valuable strategic resource

<https://www.temanararaunga.maori.nz/>

Māori Development Parameters (some)

Māori as data providers

Engagement with Māori

Statutory protections and independence

Consultation with Māori

Protecting Māori interests

Transparent methods

Individual and Collective measures

Co-design

Maintaining Social and Cultural licence

Māori determined content

Ownership and use resolved

Co-collection

Māori capacity building

Māori methodology

Data Initiatives and Māori Development

Māori Development parameters (some)	Provider Data	IDI
Māori as data providers	✓	✓
Engagement with Māori		✓
Consultation with Māori		✓
Ownership and use resolved		
Co-design		
Co-collection		
Statutory protections and independence		
Transparent methods		
Māori methodology		
Protecting Māori interests		
Maintaining Social and Cultural licence		
Māori capacity building		

Risks

- Māori development dividend
- Data system backlash

“It’s not for us, it’s about us”



**RUAPEHU
WHĀNAU**
TRANSFORMATION
PLAN

THE SOLUTIONS

Māori driven community development

RARANGAHI TE TAURAWHIRI TĀNGATA KIA HUA AI TE MĀRAMA BRINGING PEOPLE TOGETHER TO MAKE A DIFFERENCE



Focus areas >

EDUCATION

- Increase Numeracy & Literacy attainment
- Increase school leavers attaining NCEA Level 2 or above

EMPLOYMENT

- Connect local jobs & local workers
- Local workforce has the right capacity

HOUSING

- Increase available houses to rent
- Increase % of healthy homes

HEALTH

- Increase availability & access to local services
- Collaborate across service providers

SOCIAL

- Stronger whānau
- Connected, Cohesive, Collaborating Communities

Opportunities >

Solutions >

1. Ruapehu Learning Journal
2. Whānau Reading, Literacy & Numeracy Programme
3. Community Tagging
4. NCEA & Whānau events

5. Community Work Broker
6. Community Careers Expo
7. Trades Training
8. Local Skill Needs Analysts
9. Community Learning Centre

10. Housing Needs survey and Action Plan
11. Sponsored Home Ownership programme
12. Healthy Homes Initiative
13. Property WOF
14. Research alternative housing developments

15. Hauora Navigator
16. Wellbeing Expo
17. Hauora Yellow Pages
18. Integrated Service Centre – a one stop shop

19. Ruapehu TopTown
20. Extend Kaitoko Whānau programme
21. Community Values (Maunga, Tangata, Tukotahi)
22. Community technology hub
23. Street by street initiative

Our Purpose >

To enable whānau transformation in the Ruapehu rohe

More progress for Te Hiku Social Accord for iwi in Far North

26 Jun, 2018 10:00am
3 minutes to read



Nanaia Mahuta greeting Te Hiku iwi leader Haami Piripi to Wellington. Photo / Supplied

Northland Age

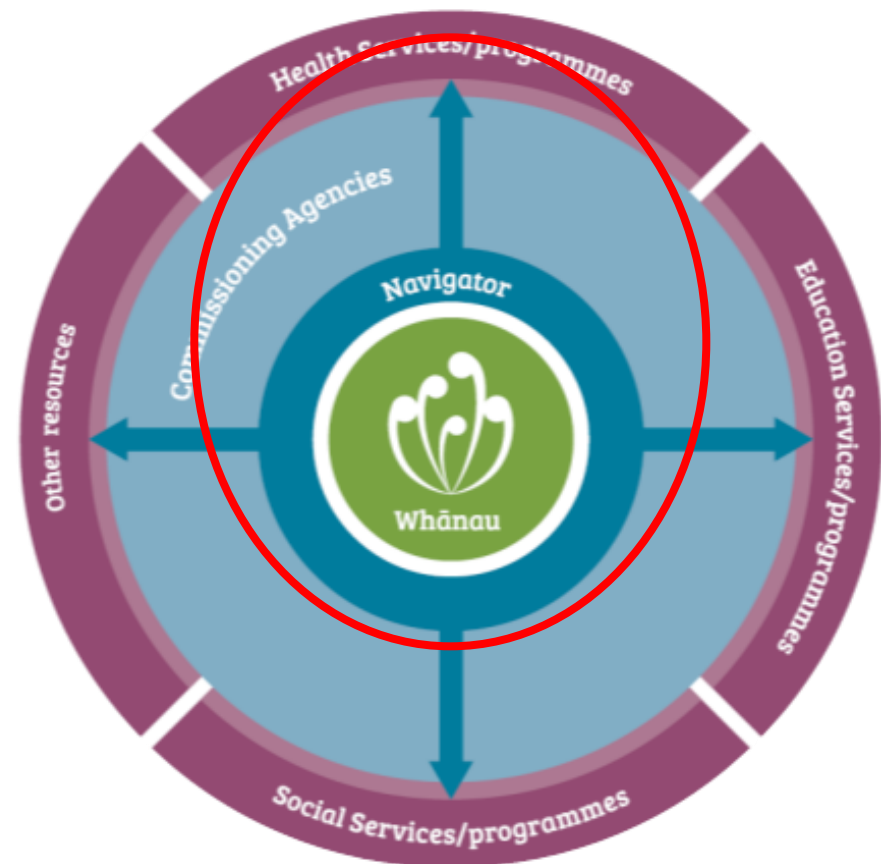
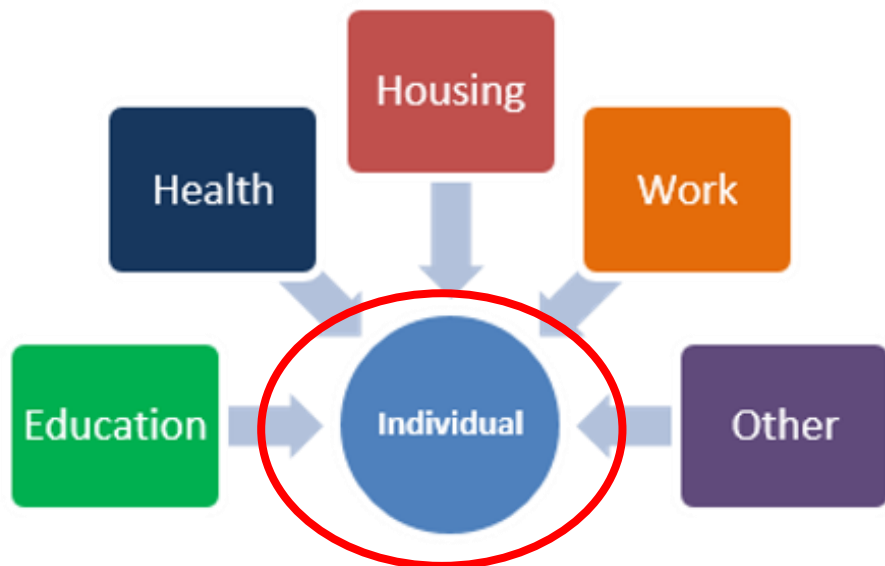
Far North Iwi leaders met with key Cabinet Ministers in Wellington on Thursday, to outline their priorities and aspirations and to advance partnership initiatives under the Te Hiku Social Accord.

The Accord, negotiated as part of the Te Hiku iwi Treaty settlement legislation, is founded on the vision of cultural, social and economic prosperity for the communities, whānau, hapū and iwi of Te Hiku, last week being the first opportunity for iwi to meet with the new set of government ministers to review the progress that has been made so far, and to build on the strategic approach provided by the Accord.

"Many of our Māori whānau are still in a crisis situation in terms of safety, housing, education and employment," Te Hiku iwi leader Haami Piripi said.

"Our iwi have been working hard with agencies to fully understand the current state of wellbeing of our whānau of Te Hiku, and it's not a pretty picture.

Whanau Ora embeds Māori values



Improved health care access

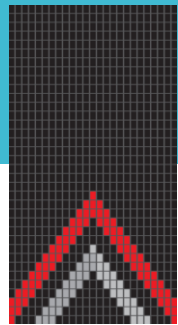
BUT

in the context of Māori definition of individual and whanau wellbeing

Needs:

- Different data
- Different concepts (SES, Lifecourse)

Building Māori data capability and capacity



Official Statistics System

Māori GIS project

Iwi Statistical
Standard Review

Local Māori Data
Needs

Māori longitudinal
capability within
the OSS

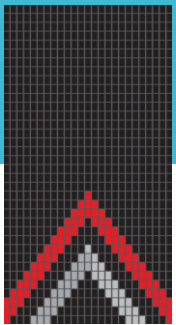
Data Visualisation

Workforce
development

**Data system
responsiveness**

**Māori data
capability**

Creating tribally-defined geographic boundaries for Official Data



Official data sources are organized around central and local government boundaries.

Can official data be organised around Māori governance areas?

Official statistics existing structure:

- **Meshblocks**
 - Smallest area data building block
 - ~ 40 households (~ 100 people)
- **Census area units (made up of meshblocks)**
 - Smallest area routinely accessible



Local Authorities

Hamilton

Tauranga

Whakatane

Rotorua

Te Kuiti

Tokoroa

Lake Rotorua

Lake Okataina

Lake Tarawera

BAY OF PLENTY

GISBORNE

Gisborne

Taupo

Lake Taupo (Taupomoana)

Lake Waikaremoana



Census Area Unit

So maybe Census Area Unit?

- Really don't match tribal boundary descriptions
- Too large
- Some rural tribal areas invisible

Meshblocks

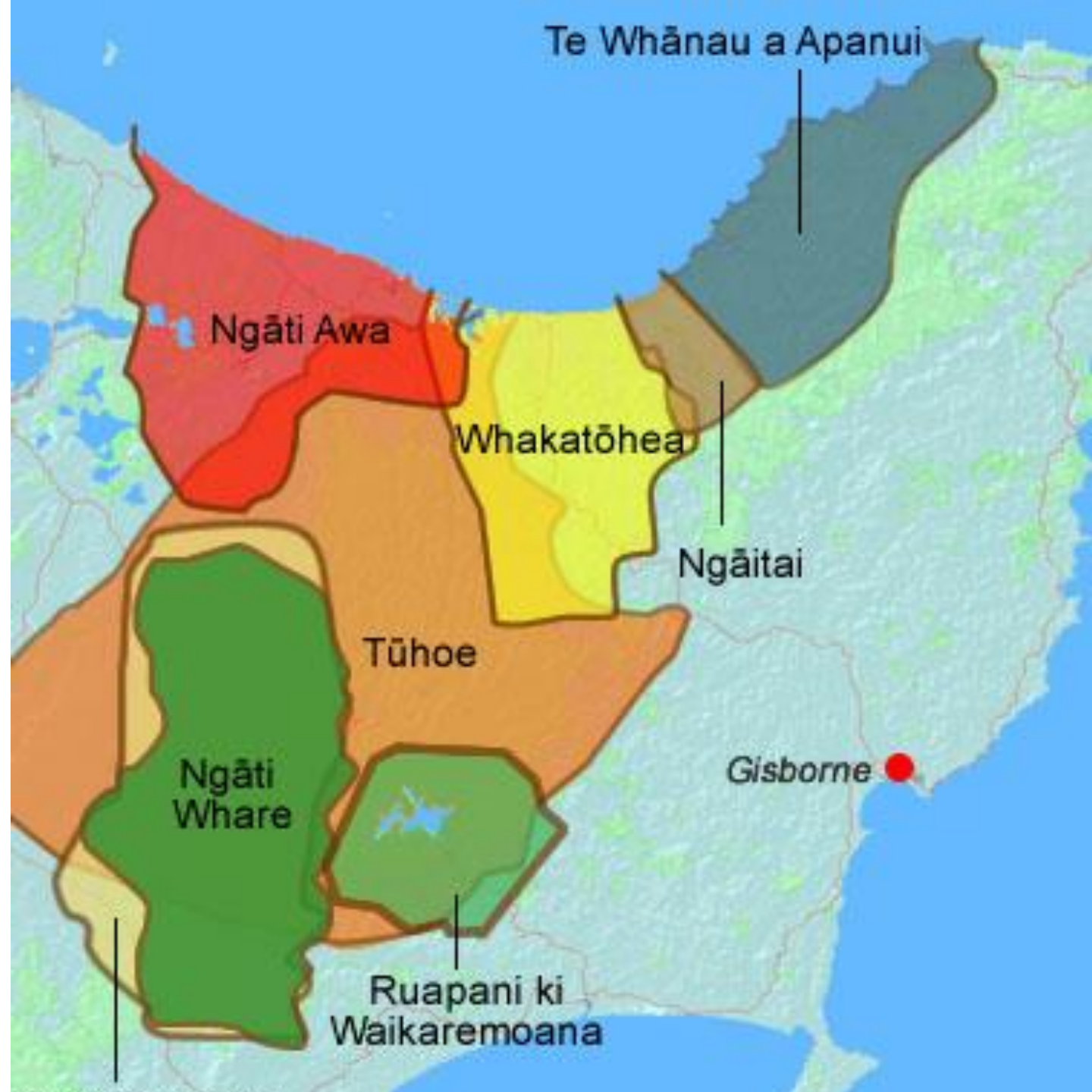
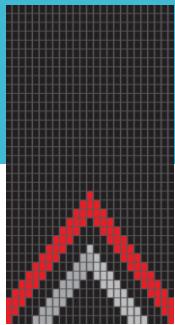
Possibly re-sort existing meshblocks?

But meshblocks:

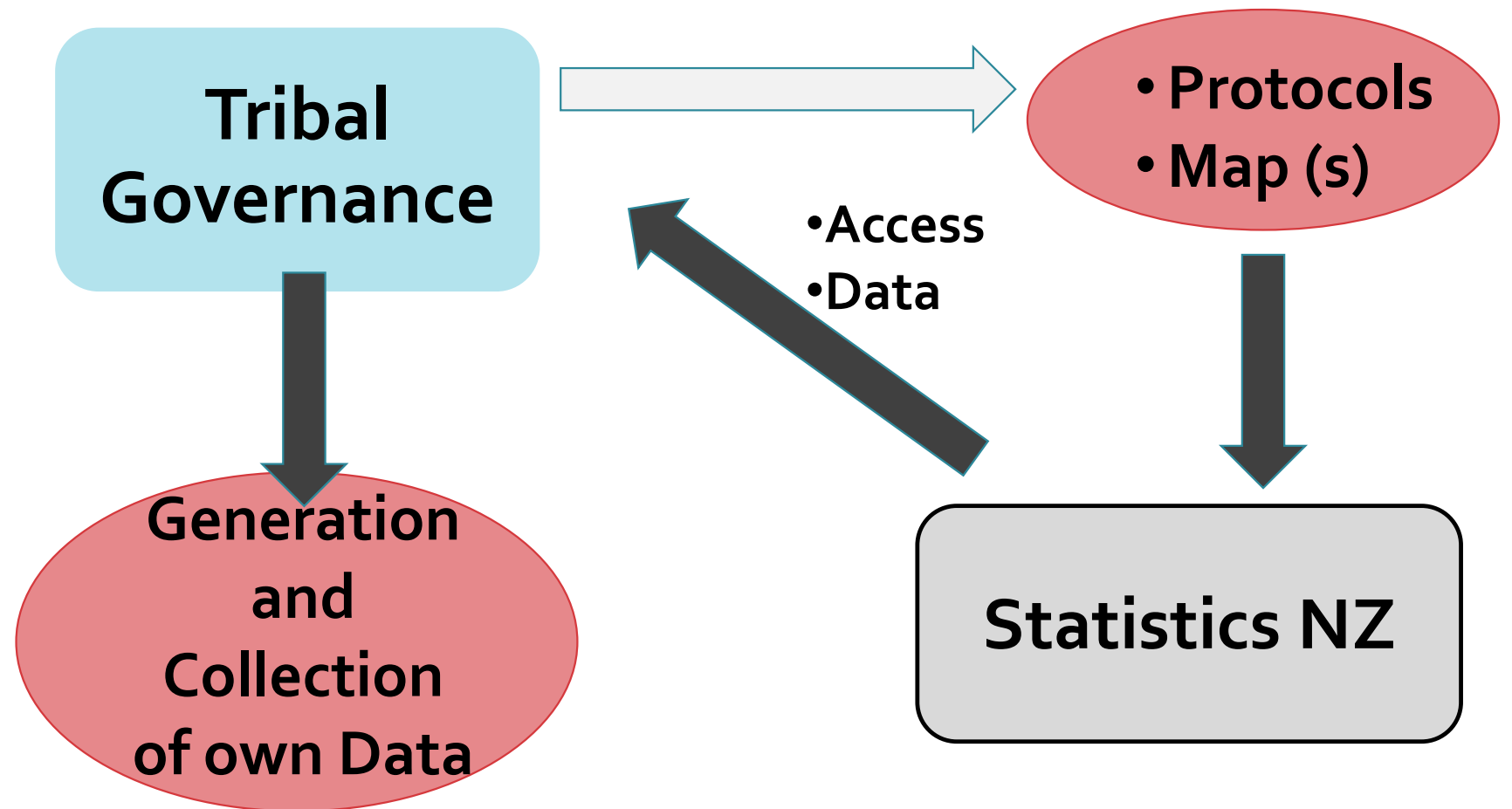
- don't match tribal boundary descriptions
- lack detail
- change over time
- small size = large error from confidentialisation process

A Māori GIS capability to the Official Statistics System

A permanent structural change



Changing the Map: Making data local



A Locally Based Initiative to Support People and Communities by Transformative Use of Data

□ SHARE

| JULIA LANE, DAVID C. KENDRICK, DAVID T. ELLWOOD

The data revolution is transforming how executives manage operations and businesses deliver goods and services. Yet when it comes to helping people escape poverty, the revolution has barely begun.

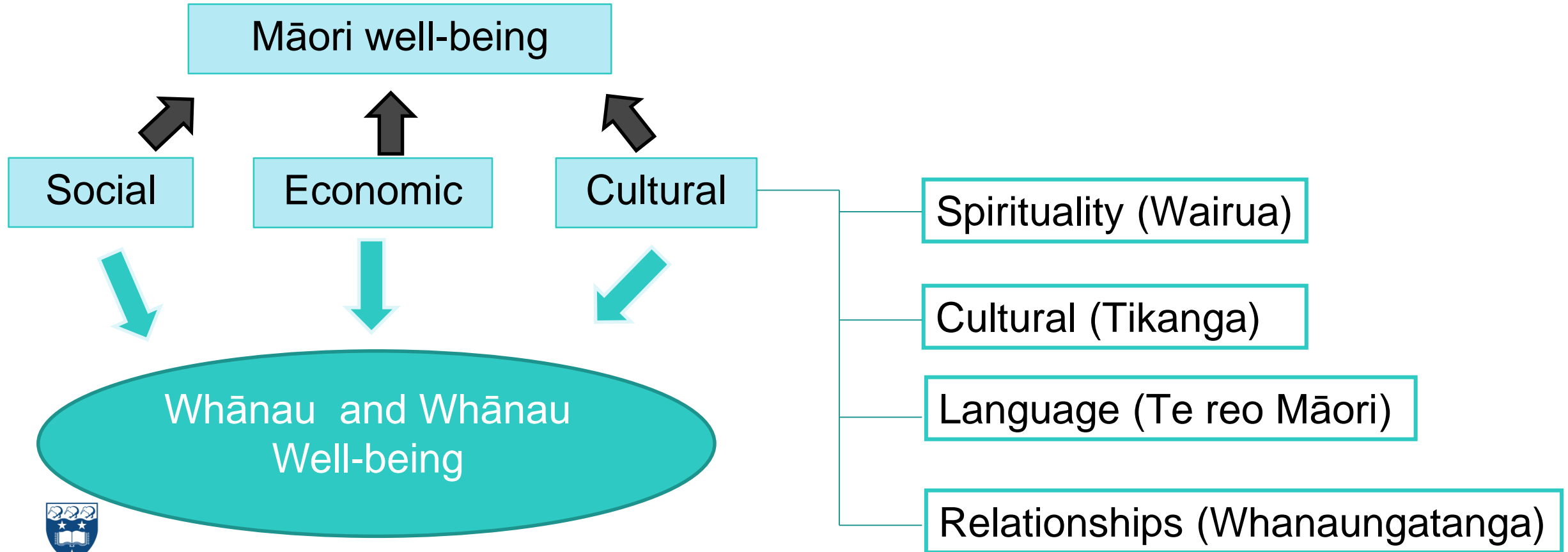
DOWNLOAD THIS PAPER

Full Idea Paper

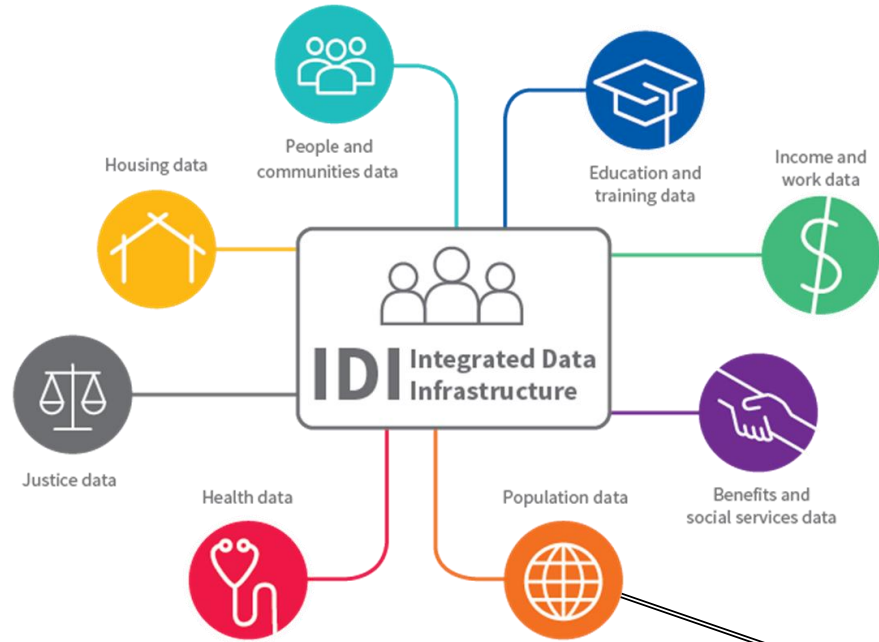
[Summary >](#)

Te Kupenga 2013 survey – what's new about it?

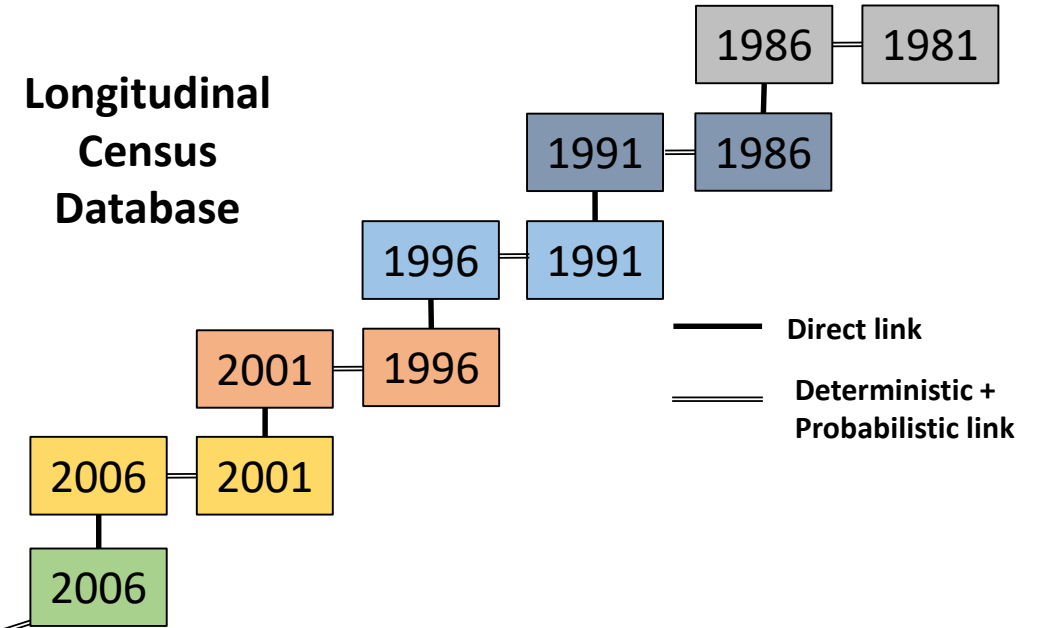
Statistics NZ's first survey of Māori well-being.



Te Hao Nui - Māori longitudinal capacity in the OSS

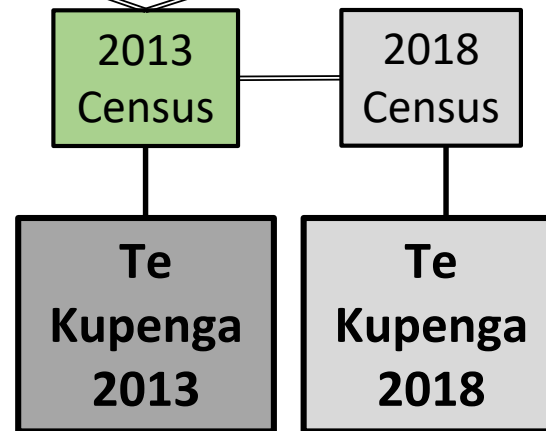


Longitudinal Census Database



Source of wellbeing info:

- subjective wellbeing
 - whanau
 - self-reported health status
- social
- cultural
- economic wellbeing



Permanent longitudinal study + Tribal

- Geographies
- Identifications
- ? Data repositories

Identifying GAPS and Informing new data collection



Re-orientating the Data System to inform Development

Combined commitment to change

Māori Specific Outcomes:

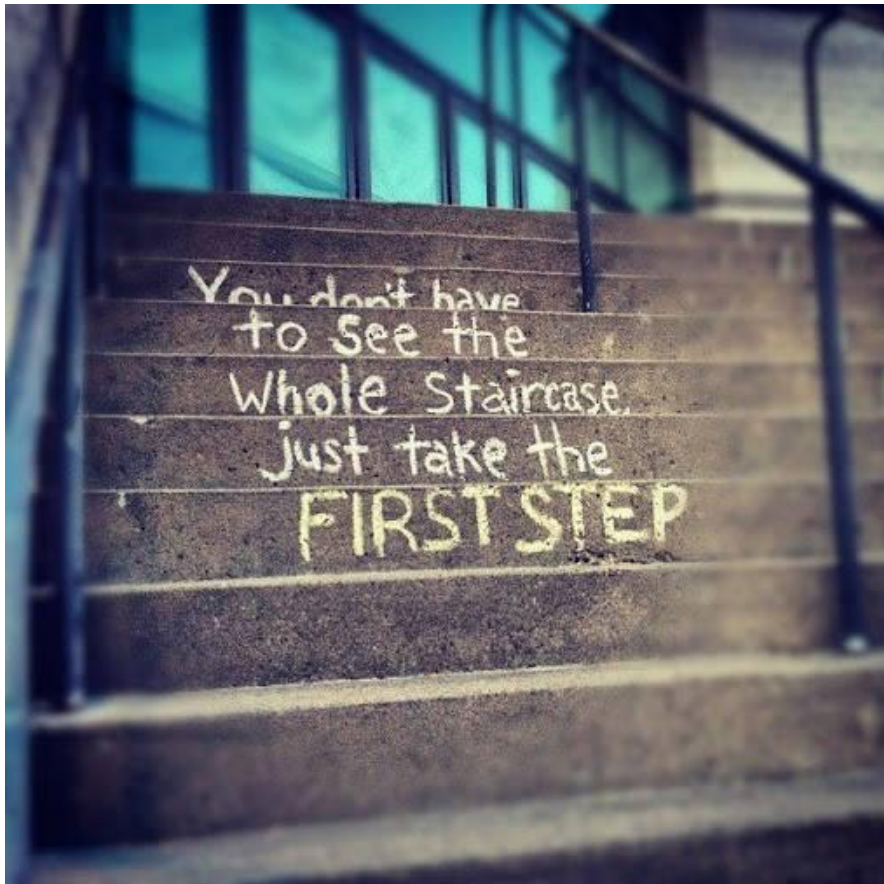
Supporting locally driven innovation to match need

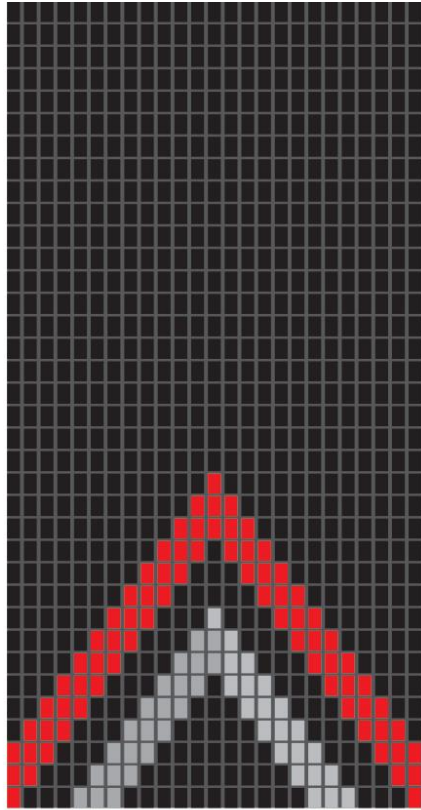
Universal Outcomes:
Data system monitoring of local and national inequity

Changing

What is measured
Who can access it
How it is accessed
How it is analysed

Māori data capability
- Workforce
- Technology





TE MANA RARAUNGA

Māori Data Sovereignty Network

**Advocating for the development
of capacity and capability across
the Māori data ecosystem
including:**

- Data rights and interests
- Data governance
- Data storage and security
- Data access and control

<https://www.temanararaunga.maori.nz/>