

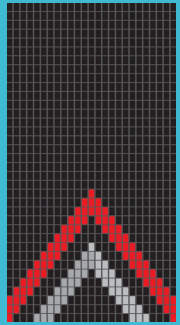


Indigenous Data Sovereignty: Challenges and Opportunities in Aotearoa NZ

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National Institute of Demographic and Economic Analysis

Whakataukī



Kei tua o te awe mapara he tangata
ke, he ma?

*Who makes the decisions after consent
has been given?*

They hang the man and flog the woman
That steal the goose from off the common,
But let the greater villain loose
That steals the common from the goose.



International Context

Indigenous Data Sovereignty

THE VALUE OF BIG & OPEN DATA

Unleashing the power of data to change lives

Statistics New Zealand's purpose is to empower decisions by adding value to New Zealand's most important data.

A world where knowledge creates power for the many, not the few.

Open Knowledge Australia

NEW ZEALAND DATA FUTURES FORUM

NZ IS A WORLD LEADER IN THE TRUSTED USE OF SHARED DATA TO DELIVER A PROSPEROUS, INCLUSIVE SOCIETY.

Open data can empower governments, citizens and private sector organizations to work towards better outcomes for public services ... (IOD Charter)

INTERNATIONAL DATA WEEK



Six Principles for Open Science

- a. Open Data
- b. Open Source
- c. Open Methodology
- d. Open Peer Review
- e. Open Access
- f. Open Educational Resources

Five Enormous Transformations

- a. The new knowledge revolution
- b. Big Data and the Internet Explosion
- c. Social connectivity
- d. Evolutionary programming
- e. Artificial intelligence

Keynote speech – Prof Ismail Serageldin, Biblioteca Alexandria

KEY CHALLENGE: TRUSTED USE OF DATA

The **secondary use of data** is the key issue in the data use context as individuals will have agreed to its collection for its primary purpose.

Subsequent uses, without explicit permission, through data linkage, data sharing, or data aggregation, create the potential for misuse and (mis)appropriation (**kaiātanga**).

Individuals should **consent** for their data to be included in aggregated data resources.

Collectives should **govern** how those data resources are then used. This can be thought of as supporting processes of collective consent.

Collective concerns about privacy, benefits and harms can't be addressed through individually focused consent mechanisms.



The background of the image features a hand reaching out from the left side, with the index finger pointing towards a digital globe. The globe is composed of a wireframe mesh and is surrounded by a network of white dots connected by thin lines, suggesting a global data network or internet connectivity. The overall color palette is a mix of light blues, greys, and the natural skin tones of the hand.

WHOSE DATA ?

**Whose control
?**

**Whose ethics
?**

Whose benefit ?

THE CHALLENGE OF COMPETING INDIGENOUS INTERESTS

1. 'Indigenous' support for open data and open science
2. Increasing 'Indigenous' participation in cutting edge science and technology
3. 'Indigenous' aspirations for Indigenous Data Sovereignty

Goal: for Indigenous communities to benefit from innovation and development via greater control of Indigenous knowledge and Indigenous data

INDIGENOUS DATA SOVEREIGNTY

TOWARD AN AGENDA

Edited by TAHU KUKUTAI
and JOHN TAYLOR



'A debate-shaping book ... it speaks to a fast-emerging field; it has a lot of important things to say; and the timing is right.'

— Stephen Cornell, Professor of Sociology
and Faculty Chair of the Native Nations Institute,
University of Arizona

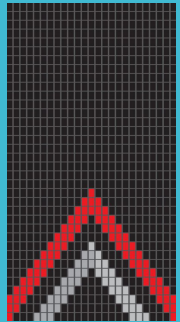


PRESS

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This book is available to download for free or hard copies are available to purchase from:
press.anu.edu.au/publications/series/centre-aboriginal-economic-policy-research-caepr/indigenous-data-sovereignty

Indigenous Data Sovereignty

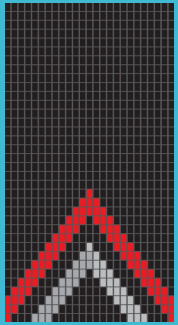


Data Sovereignty states that data is subject to the laws of the nation **within which it is stored**

Indigenous Data Sovereignty states that data is subject to the laws of the nation **from which it is collected** (including Tribal nations)

Indigenous Data Sovereignty is about putting **indigenous data in indigenous hands**

IDSov: Growing global recognition



UN Special Rapporteur on the right to privacy. Big Data Open Data Taskforce Report (A/73/45712)

“Data are a **cultural, strategic, and economic resource** for indigenous peoples”

“Existing data and data infrastructure **fail to recognise or privilege indigenous knowledge and worldviews** and do not meet indigenous peoples’ current and future data needs’.

“The Special Rapporteur encourages Governments and corporations to **recognise the inherent sovereignty of indigenous peoples over data** about them or collected from them, and which pertain to indigenous peoples’ knowledge systems, customs or territories”

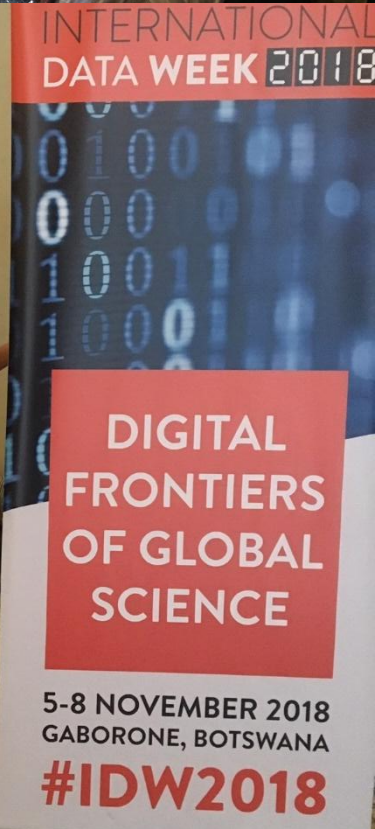
A COMMITMENT TO INDIGENOUS DATA SOVEREIGNTY (IDS) SPANS THE GLOBE

NATION-STATE BASED, INDIGENOUS LED COMMUNITIES OF PRACTICE

- TE MANA RARAUNGA MAORI DATA SOVEREIGNTY NETWORK in Aotearoa/New Zealand
- UNITED STATES INDIGENOUS DATA SOVEREIGNTY NETWORK
- MAIAM NAYRI WINGARA ABORIGINAL AND TORRES STRAIT ISLANDER DATA SOVEREIGNTY COLLECTIVE in Australia
- FIRST NATIONS INDIGENOUS GOVERNANCE CENTRE in Canada
- NASCENT: SAMI/SÁPMI in Sweden, Mexico, FIRST NATIONS, INUIT & METIS in Canada

RDA INTERNATIONAL INDIGENOUS DATA SOVEREIGNTY INTEREST GROUP





Be
FAIR & CARE

C.A.R.E Principles for Indigenous Data Governance

- **Collective Benefit.** Data ecosystems shall be designed and function in ways that enable Indigenous Peoples to derive benefit from the data.
- **Authority to Control.** Indigenous Peoples rights and interests in Indigenous data must be recognised and their authority to control such data respected. Indigenous data governance enables Indigenous Peoples and governing bodies to accurately determine how Indigenous Peoples are represented within data.
- **Responsibility.** Those working with Indigenous data have a responsibility to share how that data are used to support Indigenous Peoples' self-determination and community benefit. Accountability requires meaningful and openly available evidence of these efforts and the benefits accruing to Indigenous Peoples.
- **Ethics.** Indigenous Peoples' rights and wellbeing should be the primary concern at all stages of the data life cycle and data ecosystem.

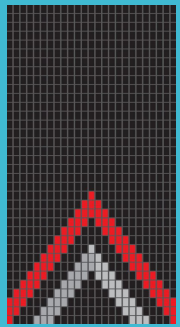


National Context

Maori Data Sovereignty

Maori Data Sovereignty:

Key Players

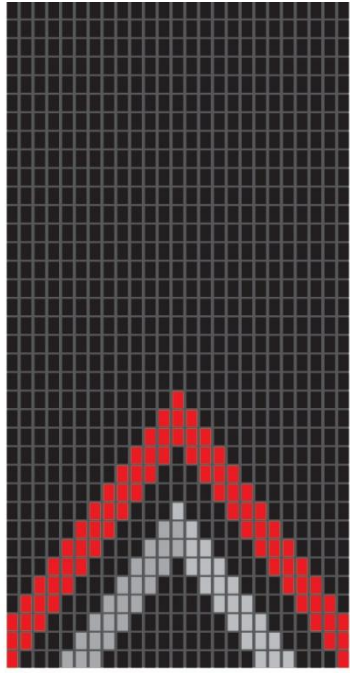


Mana (Governance)

- **Data Iwi Leaders Group**
- Leading co-design of Māori data governance approach across the official data system

Mahi (governance)

- **Te Mana Raraunga**
- Developing principles
- Developing frameworks for data access and control



TE MANA
RARAUNGA

Māori Data Sovereignty Network

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

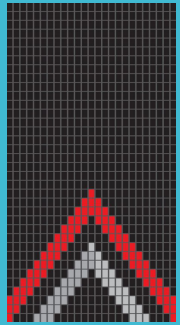
- Data rights and interests
- Data governance
- Data storage and security
- Data access and control



@MaoriDSov

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

What are Māori Data?



Māori data refers to information or knowledge in a digital or digitisable form that is about or from Māori peoples and our environments, regardless of who controls it.

Data from Māori (self-generated)

- Eg. Māori/iwi organisations and businesses

Data about Māori (generated by others)

- Eg. Integrated Data Infrastructure; Research

Data about Māori resources (self and/or others)

- Eg. Māori land

The ethical use of
data to enhance
collective, holistic
wellbeing

Principles of Māori Data Sovereignty



Brief #1 | October 2018

This Te Mana Raraunga (TMR) Brief provides a general overview of key Māori Data Sovereignty terms and principles.

TMR advocates for the realisation of Māori rights and interests in data¹, and for the ethical use of data to enhance the wellbeing of our people, language and culture.

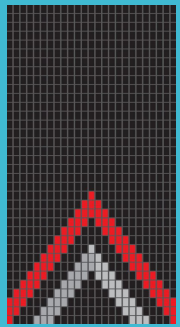
“He rei ngā niho, he paraoa ngā kauae”

“One must have the right principles for important endeavours.”

Download from: <http://www.temanararaunga.maori.nz/panui>

MDSov Principles:

Rangatiratanga



01 Rangatiratanga | Authority

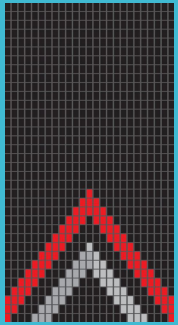
1.1 Control. Māori have an inherent right to exercise control over Māori data and Māori data ecosystems. This right includes, but is not limited to, the creation, collection, access, analysis, interpretation, management, security, dissemination, use and reuse of Māori data.

1.2 Jurisdiction. Decisions about the physical and virtual storage of Māori data shall enhance control for current and future generations. Whenever possible, Māori data shall be stored in Aotearoa New Zealand.

1.3 Self-determination. Māori have the right to data that is relevant and empowers sustainable self-determination and effective self-governance.

MDSov Principles:

Whanaungatanga



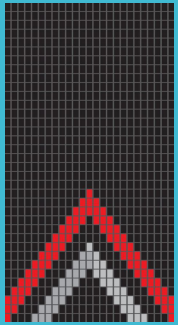
03 Whanaungatanga | Obligations

3.1 Balancing rights. Individuals' rights (including privacy rights), risks and benefits in relation to data need to be balanced with those of the groups of which they are a part. In some contexts, collective Māori rights will prevail over those of individuals.

3.2 Accountabilities. Individuals and organisations responsible for the creation, collection, analysis, management, access, security or dissemination of Māori data are accountable to the communities, groups and individuals from whom the data derive.

MDSov Principles:

Manaakitanga



05 Manaakitanga | Reciprocity

5.1 Respect. The collection, use and interpretation of data shall uphold the dignity of Māori communities, groups and individuals. Data analysis that stigmatises or blames Māori can result in collective and individual harm and should be actively avoided.

5.2 Consent. Free, prior and informed consent (FPIC)² shall underpin the collection and use of all data from or about Māori. Less defined types of consent shall be balanced by stronger governance arrangements.

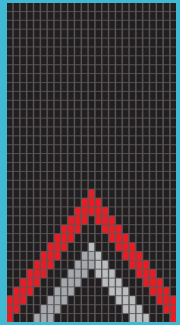


Challenges & Opportunities

Maori Data Sovereignty / Indigenous Data Sovereignty

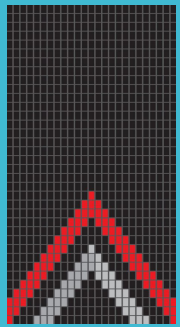


Control serves Rights



- **Maori/Indigenous Data Sovereignty is a discourse about rights and interests**
- Indigenous / Treaty rights
- Cultural Intellectual Property rights
- Ownership – Exclusive or Shared
- **Control serves Rights**
- Infrastructure influences ownership and possession
- Data Governance controls access and use
- Information influences relevance and usefulness

Challenges & Opportunities



- The priorities and values shaping the evolution of data ecosystems rarely reflect MDSov principles although there are some positive developments
- Still a fixation on personal data protection, privacy and consent – only partial solutions to the challenges raised by big data, surveillance technologies and AI
- Weak regulatory mechanisms and private corporate players more powerful than governments
- **Data Governance:** via participation in the governance of Indigenous data in data repositories
- **Data Access:** via integration of Indigenous values into data access processes
- **Data Analysis:** via analysis of data through an Indigenous lens.

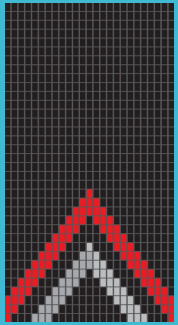
Example: Data Governance



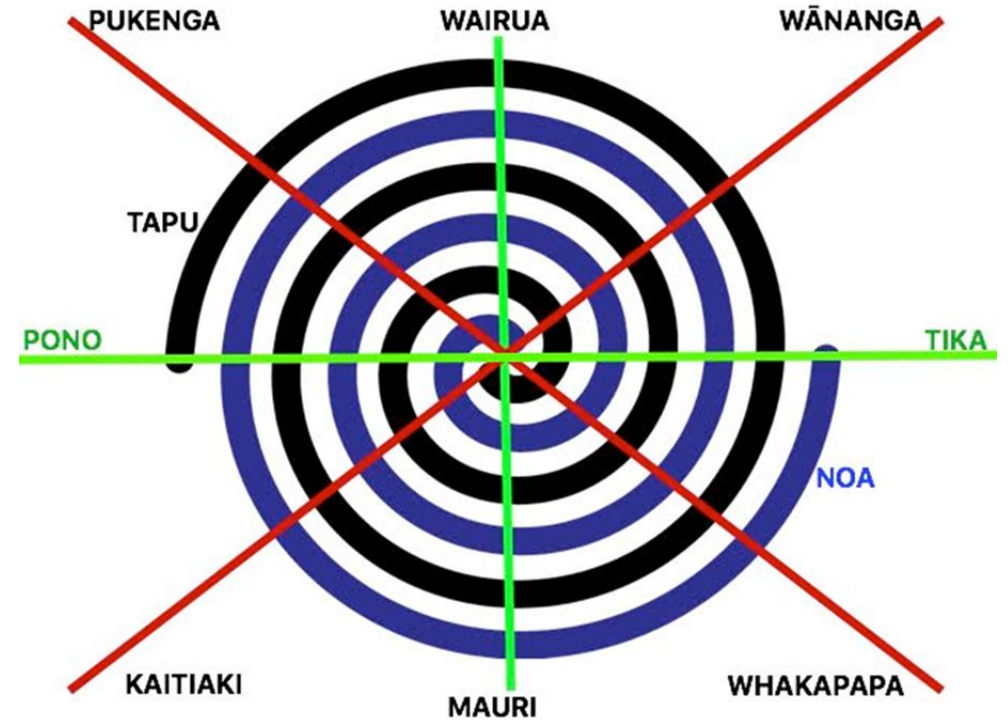
**genomics
aotearoa**

- Challenge – how to recognise indigenous data sovereignty when publishers (and funders) expect genome sequence data to be made publically available
- Aspiration / solution - Create an indigenous genomics platform
 - Develop a Maori Data Repository
 - Develop Indigenous Origin Label
 - Articulate the “Maori/Indigenous” perspective on open data
 - Engage with publishers

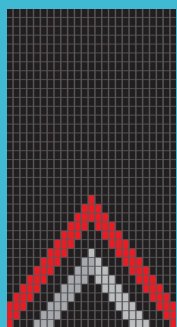
Example: Data Access



- Uses the Takarangi to reflect the duality that informs Te Ao Māori
- Assessment of the Data
 - Sensitivity - Tapu / Noa
- Assessment of the Data Use
 - Integrity - Tika / Pono
 - Authenticity - Mauri / Wairua
- Assessment of the Data Users
 - Mandate - Whakapapa / Pukenga
 - Stewardship - Kaitiaki / Wānanga



Adapted to the context of data



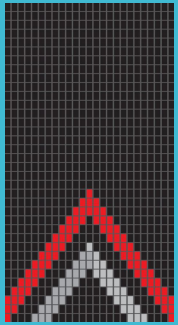
Concept	Characteristic	Assessment Question
Tapu	Level of sensitivity	"How sensitive is the data?"
Noa	Level of accessibility	"How accessible should this data be?"
Tika	Level of value	"How does the use of this data add value to the community?"
Pono	Level of trust	"Will the community support this use of the data?"
Mauri	Level of originality	"How unique is the data?"
Wairua	Nature of the application	"Is the data being used in the same spirit as its original purpose?"
Whakapapa	Level of relationship	"Does the user have an existing relationship with the data?"
Pukenga	Level of expertise	"Does the user have the expertise and experience to use data in a culturally appropriate manner?"
Kaitiaki	Level of authority	"Will the data be protected from inappropriate use?"
Wananga	Level of responsibility	"Does the institution have the necessary infrastructure to ensure the use of the data in a culturally appropriate and ethical manner?"

ALIGNED TO THE 5SAFES FRAMEW ORK



5Safes	Māori Concept	Characteristic
Safe People	Whakapapa Pukenga	Relationship Expertise / Experience
Safe Projects	Pono Tika	Accountability Value for Community
Safe Settings	Wananga Kaitiaki	Cultural infrastructure Cultural authority
Safe Data	Wairua Mauri	Application Originality
Safe Output	Tapu Noa	Sensitivity Accessibility

Example: Data Science Platform



- Raraunga Maori – Maori theme in Aotearoa Data Science Platform Proposal
 - undertaking Māori-led data research, upskilling both the research community and the Māori community to make optimal use of Māori data for Māori advancement.
- Research
 - Machine learning for Maori language revitalisation
 - Tikanga in Technology – issues of ethics and collective privacy
 - Maori and Artificial Intelligence – applications with environmental data and social data
- Capacity Building
 - Maori Data Science Internship programme
 - VM workshops for Data Scientists
 - Workshops on Indigenous Data Governance

HOME ABOUT US



ACTIVITIES JOIN US

MĀORI DATA SOVEREIGNTY NETWORK

HOME

Our Data, Our Sovereignty, Our Future

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