US INDIGENOUS DATA SOVEREIGNTY NETWORK

GIDA
Global Indigenous
Data Alliance

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Overview of Indigenous Peoples' Data Sovereignty

Randall Akee, UCLA

Brief Definition of Indigenous Peoples

A brief definition of "Indigenous”:

“Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them.”

Examples of Indigenous Peoples

American Indians, Alaska Natives, Native Hawaiians, American Samoans, Taino (Puerto Rico) and Chamorro (Guam).

Generally called "Native American" in the U.S. or Indigenous Peoples internationally.

Other Indigenous Peoples may reside in U.S. (or anywhere else) e.g. Nahuatl, Maya, Zapotec, Australian Aboriginal, First Nations, Maori.

What are Indigenous Data?

Data, information and knowledge, in any format, that impacts Indigenous Peoples, nations, and communities at the collective and individual levels:

Data about our Resources and Environments

Land, water, geology, titles, air, soil, sacred sites, territories, plants, animals, etc.

Data about Us as Individuals

Administrative, legal, health, social, commercial, corporate, services, etc.

Data about Us as Collectives – Nations and Peoples

Traditional and cultural information, archives, oral histories, literature, ancestral and clan knowledge, stories, belongings, etc.

Informed by British Columbia First Nations Data Governance Institute - BCFNDGI.COM and Stephanie Carroll

Indigenous Data Sovereignty

The *right* of Indigenous Peoples and nations to govern the collection, ownership, and application of their own data.

1. Derives from inherent rights to govern their peoples, lands, and resources.

2. Genesis in traditions, roles, and responsibilities for the use of community held information.

3. Positioned within a human rights framework and court cases, treaties, and/or recognition.

4. Knowledge belongs to the collective and is fundamental to who we are as peoples.

For more information see the US Indigenous Data Sovereignty web site usindigenousdata.org.
See also, Kukutai T & Taylor J. (Eds). (2016). Indigenous Data Sovereignty. Canberra: Australian National University Press.

Indigenous Collections and Indigenous Data | Issues of Provenance, Integrity and Transparency

Jane Anderson, New York University and ENRICH

Identifying Indigenous Collections

- Indigenous collections and data can be hard to find
- Can be buried in a larger collection
- Can be mislabeled, not properly attributed, not searchable, not findable
- Can range from ethnographic material to biological materials, buried in science papers and databases
- Includes data produced from studies on belongings and ancestors
- Indigenous collections are not FAIR

Problems in data & information infrastructures

Every Indigenous community has enormous collections of tangible and intangible cultural material, held in archives, museums, libraries and online databases.

Significant information about these collections, including individual and community names and proper provenance information, is missing.

Indigenous peoples and communities are largely not the legal rights holders.

Issues of responsibility, ownership, as well as the incomplete and significant mistakes in the metadata, continue into the digital lives of this material.

There are more researchers working and collecting data and samples from Indigenous communities and on Indigenous lands than ever before.

Full Record | MARC Tags

Main title

Passamaquoddy War song ; Trading song [sound recording] / sung by Peter Selmore.

Published/Created

1890-03.

Request this Item

Where to Request

MUSIC RECORDING

PRINT RECORD

SAVE RECORD

EMAIL RECORD

CITE RECORD

LCCN Permalink	https://lccn.loc.gov/2015655578
Description	1 sound cylinder (2:45 min.) ; 3.75 in.
Rights advisory	Rights are held by the Peabody Museum of Archaeology and Ethnology, Harvard University.
Access advisory	Access to recordings may be restricted. To request materials, please contact the Folklife Reading Room at http://hdl.loc.gov/loc.afc/folklife.contact
Local shelving no.	Cylinder 4260 AFS 14739: A1 RKF 0006 AFC 1972/003: SR29

MARCXML Record
MODS Record

Report Record Errors

AUDIO RECORDING

Passamaquoddy War song ; Trading song

Mihqelsuwakonutomon (Song of Remembrance in the Passamaquoddy War Song Series) ; Esunomawotultine (Trading dance/song) / Jesse Walter Fewkes collection of Passamaquoddy cylinder recordings SR29

About this Item

Title
Passamaquoddy War song ; Trading song

Other Title
Mihqelsuwakonutomon (Song of Remembrance in the Passamaquoddy War Song Series) ; Esunomawotultine (Trading dance/song)

Jesse Walter Fewkes collection of Passamaquoddy cylinder recordings SR29

Summary
The first song, Mihqelsuwakonutomon, means 'He/She tells memories of it'. This is a lament or mourning song. It is a fragment of one song in a series of songs and dances. Esunomawotultine, the trading dance, is the second song on Fewkes' wax cylinder 17 (Cylinder 4260; AFC 1972/003: SR29) recorded by Jesse Walter Fewkes in Calais, Maine, March 16, 1890.

Contributor Names
Fewkes, Jesse Walter, 1850-1930, recordist, speaker.

Selmore, Peter, performer.

Created / Published
1890-03-16.

Traditional Knowledge Labels

Attribution - Elihtasik (How it is done).

Outreach - Ekehkimkewey (Educational).

Non-Commercial - Ma yut monuwasiw (This is not sold).

Learn more about the traditional knowledge labels

Part of...
American Folklife Center (32,872)

Library of Congress Online Catalog (919,432)

Transforming records (MARC)

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Transforming digital infrastructures


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  all:                          null
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Indigenous Data Futures

PROVENANCE

TRANSPARENCY

INTEGRITY

Data Breach for American Indian Tribes

Randall Akee, UCLA

US Treasury Data Breach for American Indian Tribes

- In order to receive funding from the CARES Act funds, tribal governments were required to submit to the US Treasury information on:
  - Annual tribal expenses
  - Labor force numbers
  - Bank account numbers
- These data were downloaded by unknown government officials and emailed to a wide array of non-federal government employees. (Agoyo and York, 2020).
- These data provided confidential information for all American Indian and Alaska Native villages.
- It is now publicly available.

US Treasury Data Breach for American Indian Tribes

- The data provides proprietary information on tribal governmental operations and facilities
- Most importantly, the data contains information that may provide insight into the size and extent of tribal gaming operations.
- Tribal gaming operations often keep that information private as it provides useful data for potential competitors looking to enter the industry.
- The data breach illustrates the importance of data access and safeguarding.

US Treasury Data Breach for American Indian Tribes

- As much of tribal government revenue is derived from existing business ventures, anything that affects the viability of that industry will have dire consequences on tribal populations, services and wellbeing.
- Tribal nations do not have standard tax bases as municipalities or states would; as a result, tribal revenue sources are important determinants of overall tribal economic development.
- The current COVID-19 pandemic has already affected the viability of the gaming and other reservation-based industries.
- recent research has estimated that COVID-19 impact on American Indian economies may be as large as $127 billion and 1.1 million jobs.
- These effects will be long-lasting if the underlying industries are weakened by this recent data breach.

Sources:

- HPAIED Recommendations to US Treasury on COVID-19 Response Funds, https://hpaied.org
- Agoyo,Acee and Todd York. “'Broken promises': Tribes decry leak of private data from $8 billion coronavirus relief fund.” Indianz.com website, April 20,2020. https://www.indianz.com/News/2020/04/20/broken-promises-tribes-decry-leak-of-pri.asp
- http://www.ncai.org/news/articles/2020/04/18/ncai-statement-on-the-release-of-sensitive-tribal-data

Indigenous Data Sovereignty Aotearoa New Zealand

Science for Technological Innovation

https://www.sftichallenge.govt.nz/

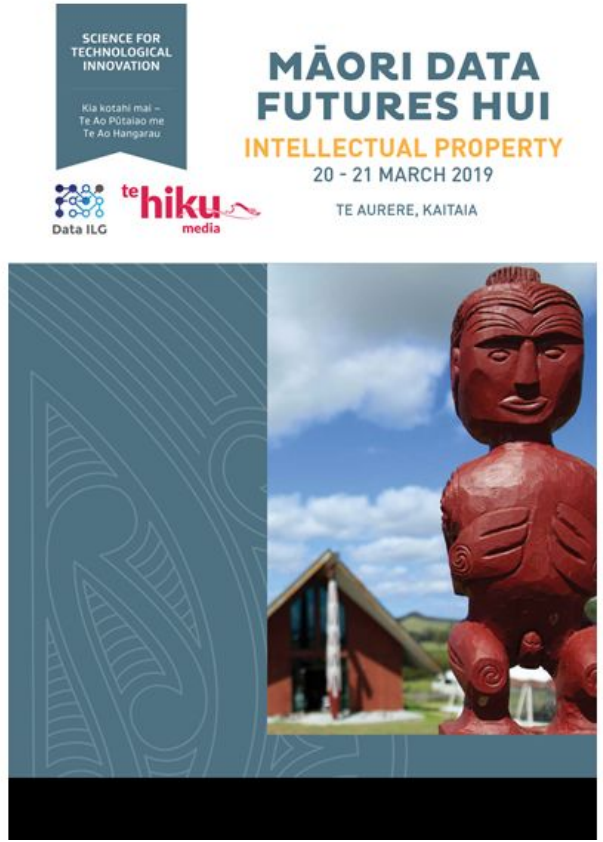
Katharina Ruckstuhl

Activating CARE : Science for Technological Innovation

Analytics to identify and connect successors to whenua [land]

This Spearhead project is creating smart data analytics tools to help track down rightful Māori shareholders to connect them to their land.

Data Land
Economy
Governance
Intellectual Property



Māori innovation policy: Vision Mātauranga

Our Vision Mātauranga goal

Our goal is to unite Māori knowledge and western science to explore new and exciting opportunities to build a vibrant and prosperous technology-driven economy.

The outcomes we are pursuing

- We aim to be an international exemplar of innovation through a two-way exchange between Te Ao Māori (the Māori world) and western science.
- We are realising the potential of the Māori value chain (its businesses and assets) to grow the New Zealand economy.
- More Māori scientists and engineers working in the hi-tech research and business sectors.

Making CARE operational: Acknowledging Indigenous knowledge is "real"

POSTSCRIPT: PROTECTING MĀTAURANGA MĀORI IN TECHNOLOGY DEVELOPMENT

Responding to the lack of protection provided to Mātauranga Māori through existing IP laws, the SfTI Challenge has developed a set of guidelines for its new research projects. The new Intellectual Property Management Plan is aimed at ensuring Mātauranga Māori and taonga species are given appropriate protections throughout the research process and beyond.

A key element of this new approach is acknowledging the status of Mātauranga Māori, taonga species, and more specifically, any Mātauranga Māori IP associated with the research. With this perspective, those working within and alongside a project can determine whether standard IP rules are sufficient, or if alternative options should be implemented.

Further, the IP Management Plan requires that, for research involving Mātauranga Māori or taonga species, an Identifiable Kaitiaki be named as the owner of any Mātauranga Māori IP associated with the project. This party will lead the protection, management, commercialisation, and subsequent use and ownership decisions.

A third important aspect of the new approach is, unless otherwise agreed, keeping Mātauranga Māori, taonga species and Mātauranga Māori IP out of the public domain, and this is to be formally considered prior to any research publication. The aim here is to protect the data from misuse and misappropriation by third parties.

FAIR data

Helena Cousijn, DataCite

The importance of data

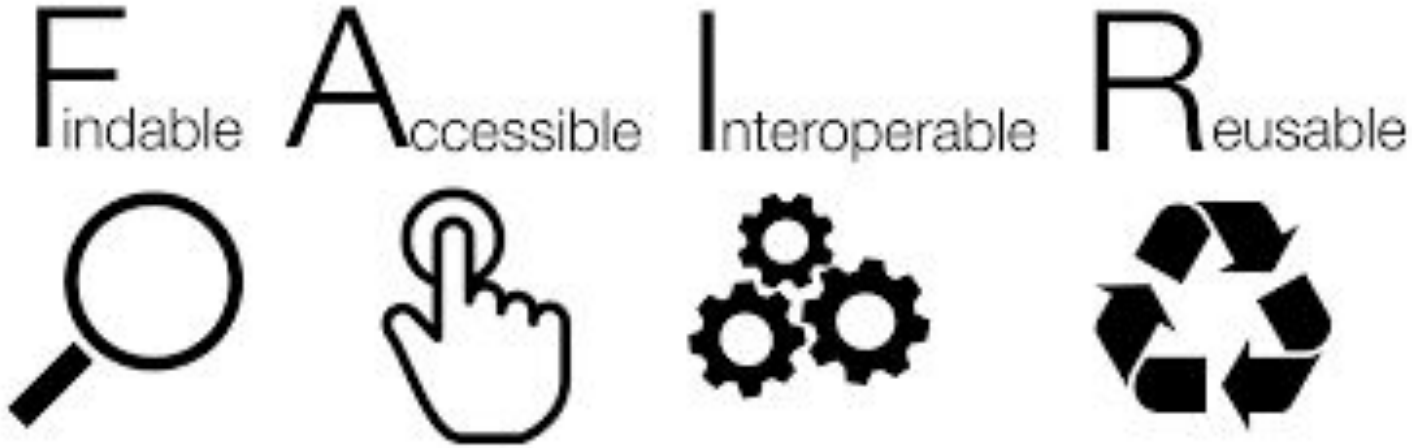
http://aukeherrema.nl CC-BY

Data policies

“In NIH's view, all data should be considered for data sharing. Data should be made as widely and freely available as possible while safeguarding the privacy of participants, and protecting confidential and proprietary data.” (https://grants.nih.gov/grants/policy/data_sharing/data_sharing_guidance.htm)

“Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the primary data, samples, physical collections and other supporting materials created or gathered in the course of work under NSF grants.”
(https://www.nsf.gov/bfa/dias/policy/dmp.jsp)

Making data FAIR



Wilkinson, M et al. 2016. The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3. DOI: https://doi.org/10.1038/sdata.2016.18.

Findable

F1. (Meta)data are assigned a globally unique and persistent identifier

F2. Data are described with rich metadata (defined by R1 below)

F3. Metadata clearly and explicitly include the identifier of the data they describe

F4. (Meta)data are registered or indexed in a searchable resource

Accessible

A1. (Meta)data are retrievable by their identifier using a standardised communications protocol

A1.1 The protocol is open, free, and universally implementable

A1.2 The protocol allows for an authentication and authorisation procedure, where necessary

A2. Metadata are accessible, even when the data are no longer available

Interoperable

I1. (Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.

I2. (Meta)data use vocabularies that follow FAIR principles

I3. (Meta)data include qualified references to other (meta)data

Reusable

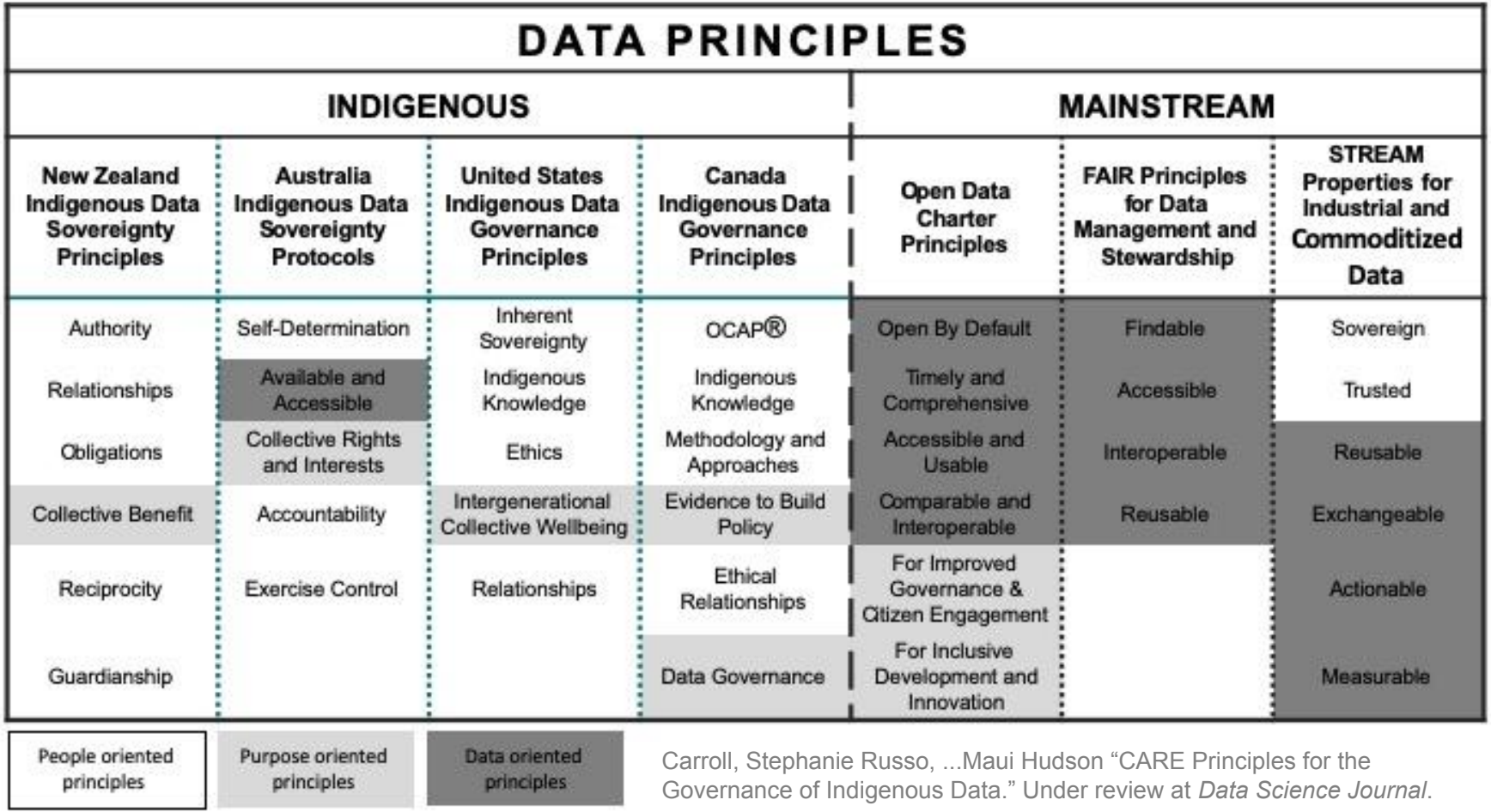
R1. Meta(data) are richly described with a plurality of accurate and relevant attributes

R1.1. (Meta)data are released with a clear and accessible data usage license

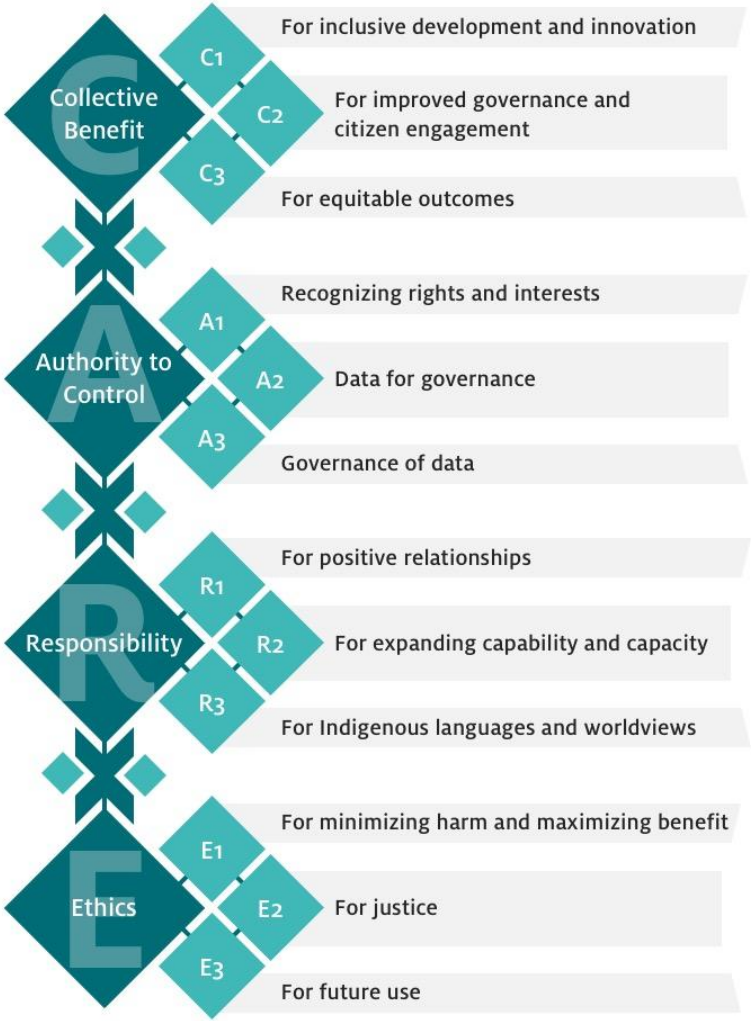
R1.2. (Meta)data are associated with detailed provenance

R1.3. (Meta)data meet domain-relevant community standards

Introducing the CARE Principles for Indigenous Data Governance



Carroll, Stephanie Russo, ...Maui Hudson “CARE Principles for the Governance of Indigenous Data.” Under review at *Data Science Journal*.



Workshop participants
'Indigenous Data Sovereignty Principles for the Governance of Indigenous Data'
International Data Week RDA P12
Gaborone, Botswana, 2018

Data ecosystems shall be designed and function in ways that enable Indigenous Peoples to derive benefit from the data.

C1. For inclusive development and innovation

C2. For improved governance and citizen engagement

C3. For equitable outcomes

Research Data Alliance International Indigenous Data Sovereignty Interest Group. (September 2019). "CARE Principles for Indigenous Data Governance." The Global Indigenous Data Alliance. GIDA-global.org

Indigenous Peoples' rights and interests in Indigenous data must be recognized and their authority to control such data respected. Indigenous data governance enables Indigenous Peoples and governing bodies to determine how Indigenous Peoples, as well as Indigenous lands, territories, resources, knowledges, and geographical indicators are represented by and identified within data.

A1. Recognizing rights and interests

A2. Data for governance

A3. Governance of data

Research Data Alliance International Indigenous Data Sovereignty Interest Group. (September 2019). "CARE Principles for Indigenous Data Governance." The Global Indigenous Data Alliance. GIDA-global.org

Those working with Indigenous data have a responsibility to share how that data are used to support Indigenous Peoples' self-determination and collective benefit. Accountability requires meaningful and openly available evidence of these efforts and the benefits accruing to Indigenous Peoples.

R1. For positive relationships

R2. For expanding capability and capacity

R3. For Indigenous languages and worldviews

Research Data Alliance International Indigenous Data Sovereignty Interest Group. (September 2019). "CARE Principles for Indigenous Data Governance." The Global Indigenous Data Alliance. GIDA-global.org

Indigenous Peoples' rights and wellbeing should be the primary concern at all stages of the data life cycle and across the data ecosystem.

E1. For minimizing harm and maximizing benefit

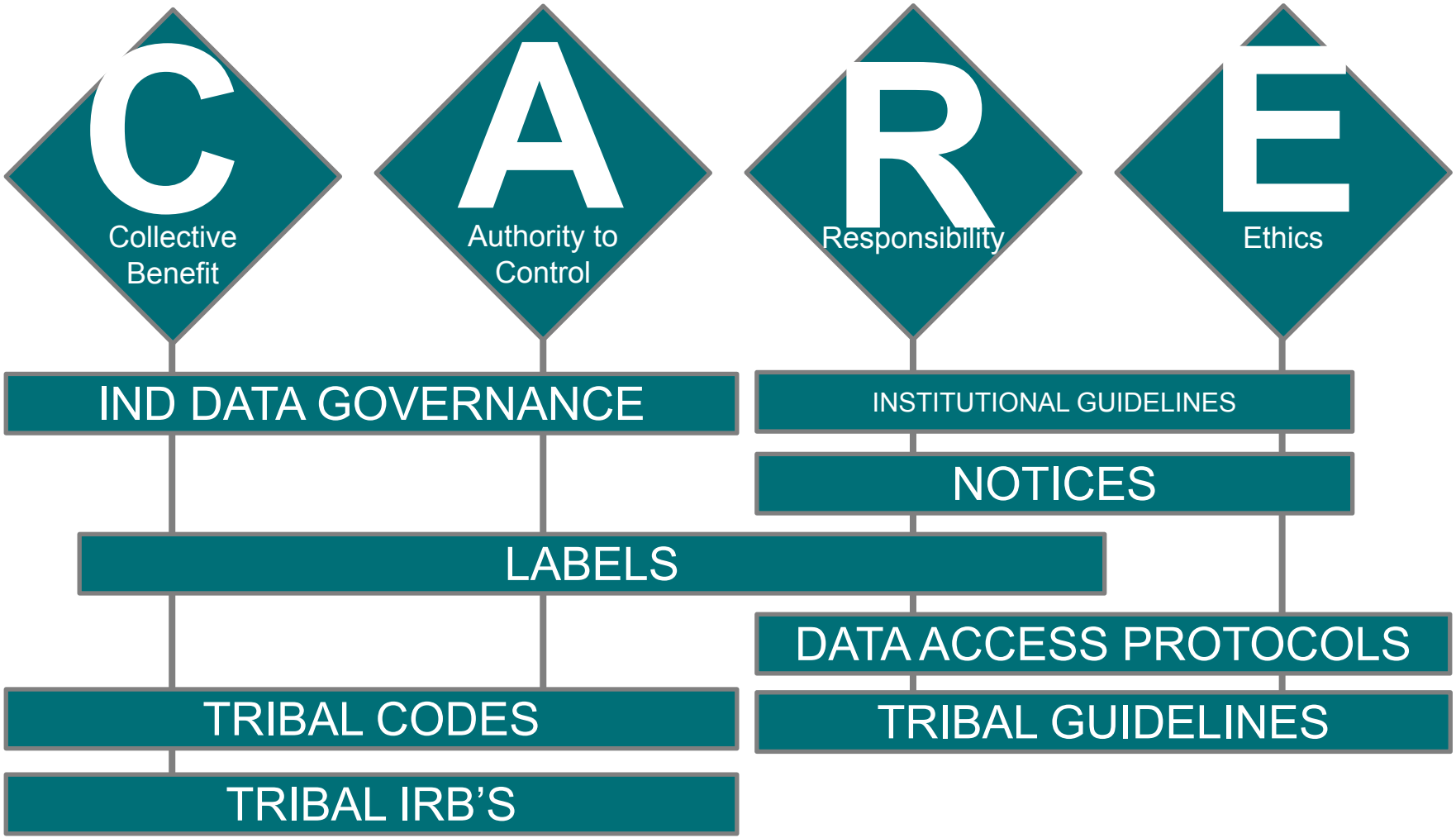
E2. For justice

E3. For future use

Research Data Alliance International Indigenous Data Sovereignty Interest Group. (September 2019). "CARE Principles for Indigenous Data Governance." The Global Indigenous Data Alliance. GIDA-global.org

CARE
Full Implementation Process

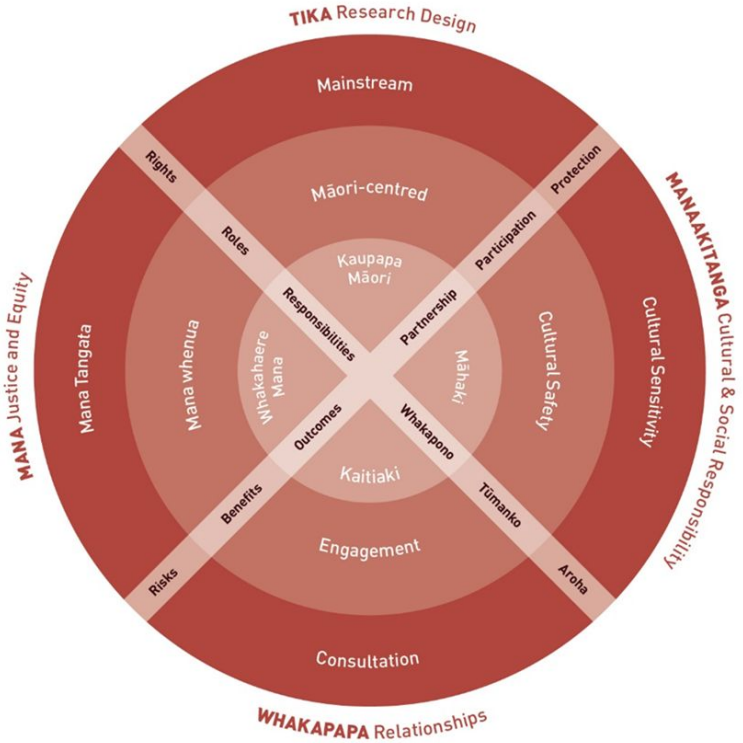
Principles > Policy > Practice


C
Collective Benefit
A
Authority to Control
R
Responsibility
E
Ethics
IND DATA GOVERNANCE
INSTITUTIONAL GUIDELINES
NOTICES
LABELS
DATA ACCESS PROTOCOLS
TRIBAL CODES
TRIBAL GUIDELINES
TRIBAL IRB'S

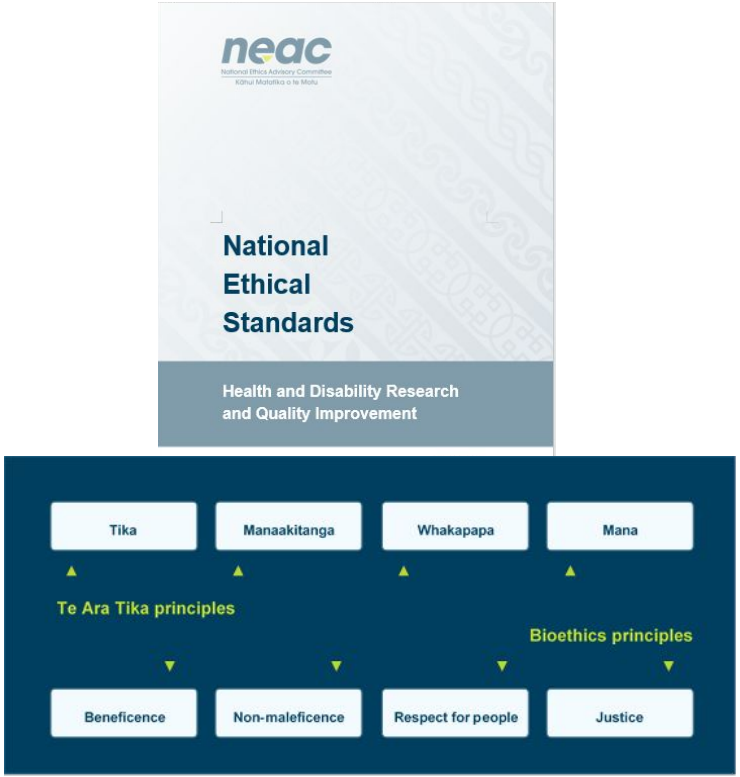
Examples: Indigenous components within mainstream mechanisms (NZ)

- Indigenous values within ethical frameworks
  - https://neac.health.govt.nz/publications-and-resources/neac-publications/national-ethical-standards-health-and-disability
- Indigenous ethics within data access protocols
  - https://www.data.govt.nz/use-data/data-ethics/nga-tikanga-paihere/
- Indigenous participation within governance / data access committees
  - https://www.aucklandregionaltissuebank.ac.nz/scientific-advisory-board/

Integration of Indigenous Values in Ethical Standards

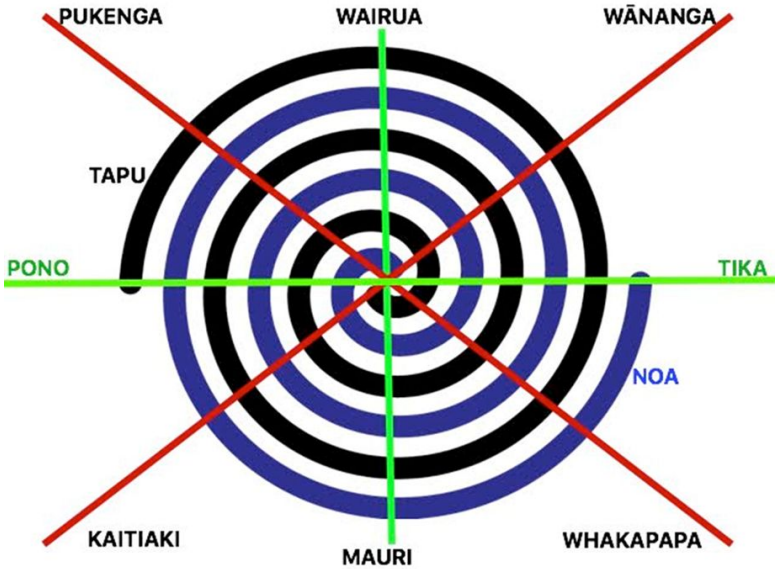


Te Ara Tika: Guidelines for Maori Research Ethics (2010)



National Ethical Standards (2018)

Maori Data Access Model



- Uses the Takarangi to reflect the duality that informs Te Ao Māori
- **Assessment of the Data**
- **Assessment of the Data Use**
- **Assessment of the Data Users**

Hudson, M., Anderson, T., Dewes, T.K., Temara, P., Whaanga, H., Roa, T. (2018). He Matapihi ki te Mana Raraunga: Conceptualising Big Data through a Maori lens. In H. Whaanga, T. T. Keegan, T. T., & M. Apperley (Eds.) (2018), *He Whare Hangarau Māori - Language, culture & technology* [Ebook] (pp. 62-71). Hamilton: Te Pua Wānanga ki te Ao, Te Whare Wānanga o Waikato.

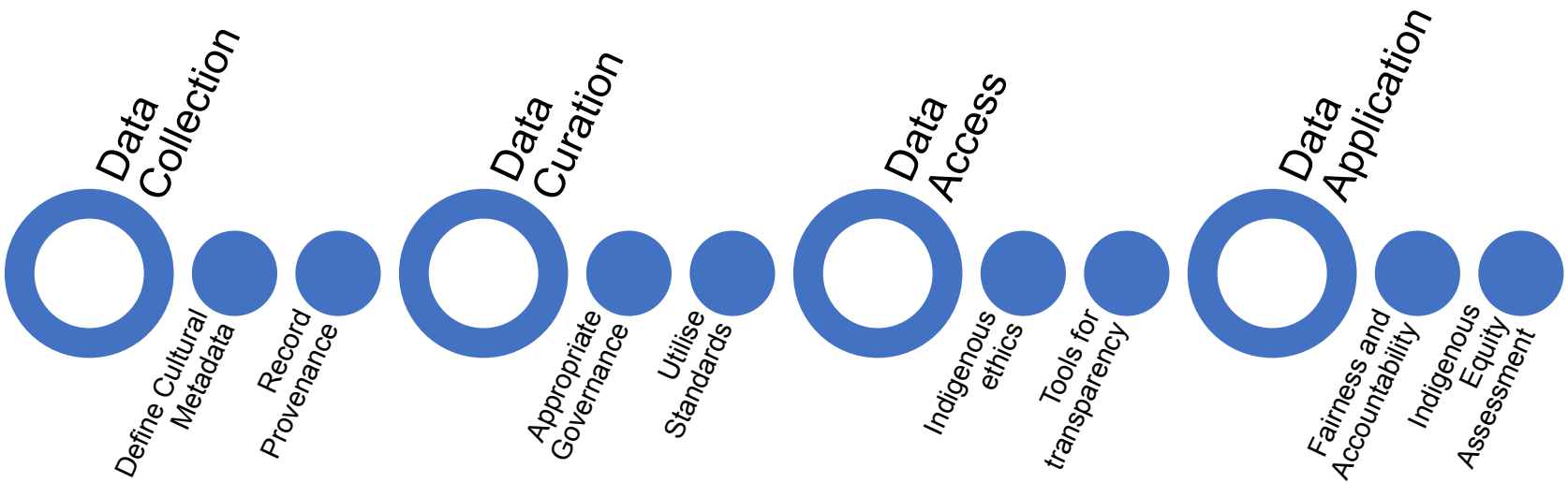
Concept	Characteristic	Assessment Question	High	Med	Low
Tapu	Level of sensitivity	“How sensitive is the data?”			
Noa	Level of accessibility	“How accessible should this data be?”			
Tika	Level of value	“How does the use of this data add value to the community?”			
Pono	Level of trust	“Will the community 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?”			

Stats NZ
Tatauranga Aotearoa

Tikanga Paihere framework

Safe people	Pūkenga	Whakapapa
Researchers can be trusted to use data appropriately	Researchers have experience researching Te Ao Māori topics	Researchers have existing relationships with the communities the data comes from
Safe Projects	**Pono**	**Tika**
The project has a statistical purpose and is in the public interest	Level of accountability to community of research is explained	Use of data will add value to Māori and improve outcomes for Māori and NZ
Safe Settings	**Kaitiaki**	**Wānanga**
Ensuring the data is secure and preventing unauthorised access to the data	Decision-makers of the project are identified and Māori are involved in decision-making	Institutions have established systems, policies and procedures to ensure data is used in culturally appropriate and ethical ways
Safe Data	**Wairua**	**Mauri**
Personal information is not identified	Māori community objectives align with project research objectives	Level of transformation of the data from its original collection purpose is explained
Safe Output	**Noa**	**Tapu**
Stats NZ results do not contain identifying results. Outputs must be confidentialised.	Accessibility of data and awareness of the impact on Māori	Sensitivities in the use of data are identified including privacy issues for individuals and communities

Supporting CARE across the Data Lifecycle




Be
FAIR
Findable
Accessible
Interoperable
Reusable
and
CARE
Collective Benefit
Authority to Control
Responsibility
Ethics

WHY AND HOW SHOULD WE CARE ABOUT THE WHAT?

WHO

Who collected it?

- What was their motivation?
- What methods did they use?

Who created it?

- What do they have to say about acknowledgment and access?

WHAT

rock
DNA
song
story
ice core
algorithm
painting
antibody
textile
book
precedent
catalyst
butterfly

HOW

How should it be accessed?

- What are community ethics?
- What are privacy, cultural rights of individuals?
- What are the privacy, cultural rights of collectives?

How should it be curated?

- How do we determine metadata and preservation?
- How do we acknowledge collectors, creators, and curators?

FRAMEWORKS	CARE	FAIR	CARE
TOOLS	ORCID, ROR, RAiD, TK and BC Notices	DOI	TK and BC Labels

Break into groups

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