



Collaboratory for Indigenous Data Governance

Research, Policy, and Practice for Indigenous Data Sovereignty

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OUR PEOPLES HAVE ALWAYS BEEN DATA EXPERTS





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 NATIONS

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

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

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MAINSTREAM DATA SOVEREIGNTY & DATA GOVERNANCE

+ DATA SOVEREIGNTY:

the concept that information which has been converted and stored in binary digital form is subject to the laws of the country in which it is located.

+ DATA GOVERNANCE:

refers to the ownership, collection, control, analysis, and use of data.

(Rouse M, 2013; http://whatis.techtarget.com/definition/data-sovereignty

(The Data Governance Institute, 2015; http://www.datagovernance.com/adg_data_governance_definition/)

INDIGENOUS DATA SOVEREIGNTY

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

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

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

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

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

See Kukutai T & Taylor J. (Eds). (2016). Indigenous Data Sovereignty. Canberra: Australian National University Press.

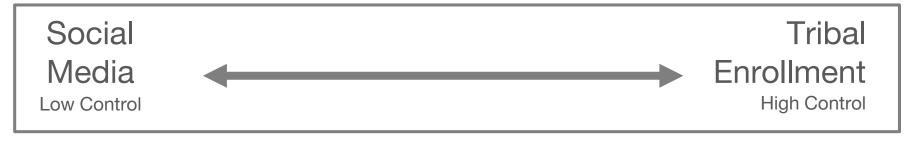
Centering Sovereignty: The Interdependence of Nation Rebuilding and Data Rebuilding

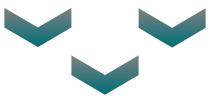


Carroll, Stephanie Russo, Desi Rodriguez-Lonebear, Andrew Martinez. "Indigenous Data Governance: Strategies from United States Native Nations."

Data Science Journal 18(1)p.31. DOI: 10.5334/dsj-2019-031. informed by Smith, D. 2016. Governing data and data for governance: the everyday practice of Indigenous sovereignty. In: Kukutai, T and Taylor, J (eds.), Indigenous data sovereignty: Toward an agenda, pp. 253–272. Canberra, Australia: Aus

INDIGENOUS DATA GOVERNANCE





Data stewards managing by tribal standards

ENHANCING DATA RELATIONSHIPS

Tribes governing tribal data

Rainie, S., and Jorgensen, M. DOI Tribal Data Meeting, July 2017, Flagstaff, AZ. Adapted from Kukutai, T. Indigenous Data Sovereignty and Governance Masterclass. Australian Indigenous Governance Institute. March 31 2017. Brisbane;

RIGHTSHOLDERS

AND OTHER DATA ACTORS

INDIGENOUS DATA SOVEREIGNTY >> RELATIONSHIPS FOR INDIGENOUS DATA GOVERNANCE



IDGOV PRINCIPLES

BROAD PRINCIPLES



CARE Principles for Indigenous Data Governance

REGIONAL PRINCIPLES



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 data², and for the ethical use of data to enhance the wellbeing of our people, language and culture.

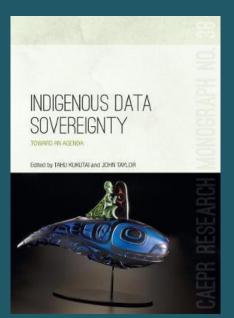
"He rei ngã niho, he paraoa ngã kauae"

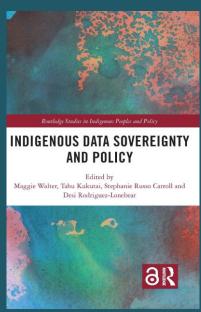
"One must have the right principles for important endeavours."

INDIGENOUS NATION

Governance, Policy & Protocol

PUBLICATIONS



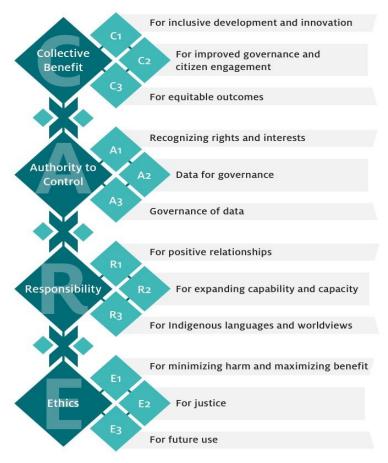


Operationalizing
the CARE and
FAIR Principles
for Indigenous
Data Futures

NATURE SCIENTIFIC DATA

Indigenous Data
Governance:
Strategies from
United States
Native Nations

CODATA
SCIENCE JOURNAL



Indigenous Frameworks

CARE Principles for Indigenous Data Governance



Carroll, SC, Garba, I, Figueroa-Rodríguez, OL, Holbrook, J, Lovett, R, Materechera, S, Parsons, M, Raseroka, K, Rodríguez-Lonebear, D, Rowe, R, Sara, R, Walker, JD, Anderson, J and Hudson, M. 2020. The CARE Principles for Indigenous Data Governance. Data Science Journal, 19: 43, pp. 1–12. DOI: https://doi.org/10.5334/dsj-2020-043







Wilkinson, M. D. et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci. Data 3:160018 doi: 10.1038/sdata.2016.18 (2016).



What is FAIR DATA?



Data and supplementary materials have sufficiently rich metadata and a unique and persistent identifier.

FINDABLE



Metadata and data are understandable to humans and machines. Data is deposited in a trusted repository.

ACCESSIBLE



Metadata use a formal, accessible, shared, and broadly applicable language for knowledge representation.

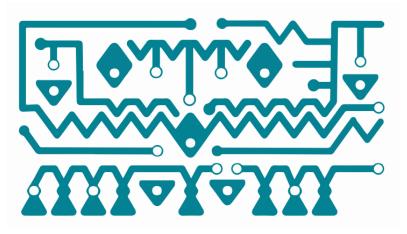
INTEROPERABLE



Data and collections have a clear usage licenses and provide accurate information on provenance.

REUSABLE

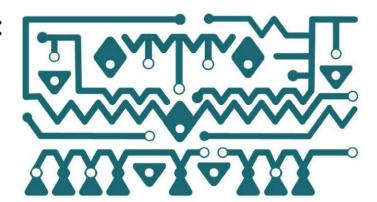
Association of European Research Libraries. (2017). Implementing FAIR Data Principles: The Role of Libraries. https://libereurope.eu/wp-content/uploads/2017/12/LIBER-FAIR-Data.pdf



Principios CREA para la Gobernanza de Datos Indigenas

Published in:

Māori English Spanish German Vietnamese



Các nguyên tắc CARE đối với quản trị dữ liệu bản địa







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 be empowered. 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 and identified within data.

Responsibility Those working with Indigenous data have a responsibility to share how those 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.

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

CARE 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.

C1. For inclusive development and innovation

C2. For improved governance and citizen engagement

C3. For equitable outcomes

Responsibility.

Those working with Indigenous data have a responsibility to share how those data are used to support Indigenous Peoples' self determination and collective benefit.

- R1. For positive relationships
- R2. For expanding capability and capacity
- R3. For Indigenous languages and worldviews

Authority to Control.

Indigenous Peoples' rights and interests in Indigenous data must be recognized and their authority to control such data respected.

- A1. Recognizing rights and interests
- A2. Data for governance
- A3. Governance of data

Ethics.

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





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

COLLECTIVE BENEFIT

- For inclusive development and innovation
 - Governments and institutions must actively support the use and reuse of data by Indigenous nations and communities by facilitating the establishment of the foundations for Indigenous innovation, value generation, and the promotion of local self-determined development processes.
- C2 For improved governance and citizen engagement

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Data enrich the planning, implementation, and evaluation processes that support the service and policy needs of Indigenous communities. Data also enable better engagement between citizens, institutions, and governments to improve decision-making. Ethical use of open data has the capacity to improve transparency and decision-making by providing Indigenous nations and communities with a better understanding of their peoples, territories, and resources. It similarly can provide greater insight into third-party policies and programs affecting Indigenous Peoples.

- 7 For equitable outcomes
 - Indigenous data are grounded in community values, which extend to society at large. Any value created from Indigenous data should benefit Indigenous communities in an equitable manner and contribute to Indigenous aspirations for wellbeing.



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

AUTHORITY TO CONTROL

A1 Recognizing rights and interests

Indigenous Peoples have rights and interests in both Indigenous Knowledge and Indigenous data. Indigenous Peoples have collective and individual rights to free, prior, and informed consent in the collection and use of such data, including the development of data policies and protocols for collection.

A2 Data for governance

Indigenous Peoples have the right to data that are relevant to their world views and empower self-determination and effective self-governance. Indigenous data must be made available and accessible to Indigenous nations and communities in order to support Indigenous governance.

A3 Governance of data

Indigenous Peoples have the right to develop cultural governance protocols for Indigenous data and be active leaders in the stewardship of, and access to, Indigenous data especially in the context of Indigenous Knowledge.



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

RESPONSIBILITY

P 1 For positive relationships

Indigenous data use is unviable unless linked to relationships built on respect, reciprocity, trust, and mutual understanding, as defined by the Indigenous Peoples to whom those data relate. Those working with Indigenous data are responsible for ensuring that the creation, interpretation, and use of those data uphold, or are respectful of, the dignity of Indigenous nations and communities.

P for expanding capability and capacity

Use of Indigenous data invokes a reciprocal responsibility to enhance data literacy within Indigenous communities and to support the development of an Indigenous data workforce and digital infrastructure to enable the creation, collection, management, security, governance, and application of data.

P3 For Indigenous languages and worldviews

Resources must be provided to generate data grounded in the languages, worldviews, and lived experiences (including values and principles) of Indigenous Peoples.



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

ETHICS

For minimizing harm and maximizing benefit

Ethical data are data that do not stigmatize or portray Indigenous Peoples, cultures, or knowledges in terms of deficit. Ethical data are collected and used in ways that align with Indigenous ethical frameworks and with rights affirmed in UNDRIP. Assessing ethical benefits and harms should be done from the perspective of the Indigenous Peoples, nations, or communities to whom the data relate.

E2 For justice

Ethical processes address imbalances in power, resources, and how these affect the expression of Indigenous rights and human rights. Ethical processes must include representation from relevant Indigenous communities.

For future use

Data governance should take into account the potential future use and future harm based on ethical frameworks grounded in the values and principles of the relevant Indigenous community. Metadata should acknowledge the provenance and purpose and any limitations or obligations in secondary use inclusive of issues of consent.



Tips to Supporting Indigenous Data Sovereignty

- 1. Recognize and promote sovereignty.
- 2. Center Indigenous values when working in Indigenous communities.
- 3. Conduct scholarship in service to community and support community-driven research
- 4. Build research and/or development capacity within communities.
- 5. Use existing tribal and Indigenous data governance protocols and procedures.
- 6.Support Indigenous scholars, whether they are in communities or in the academy. Include them at the decision-making table, as co-authors, and as grant reviewers.

ACKNOWLEDGEMENTS









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Maiam nayri Wingara