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The CARE Data Maturity model in practice

Tuesday 14 October 2025 16:00 (1h 30m)

The proposed CARE Data Maturity model and in practice Sessions at SciDataCon will explore research and practice. The interactive session will include presentations and original research.This session highlights the development of the CARE Principles for Indigenous Data Governance (Collective Benefit, Authority to Control, Responsibility, and Ethics) emerged from a workshop convened at the IDW 2018/RDA 12th Plenary in Botswana and were originally published by the RDA International Indigenous Data Sovereignty (IDSov) Interest Group (IG).

The session include three presentations:

Abstract 1: The CARE Data Maturity Model
Presenter/s: Cassandra Sedran-Price, Riley Taitingfong and Stephaine Russo Carroll
Format: Interactive session

Since 2019, the CARE Principles have become a leading resource guiding the development of policies and practices for the governance of Indigenous data. The CARE Principles have informed national and international policies around the world, such as the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) Code of Ethics, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Recommendation on Open Science, and the Policy Partnership on Science, Technology, and Innovation (PPSTI) Statement on Open Science. As universities, repositories, governments, and other data-holding institutions increasingly acknowledge and endorse the CARE Principles, and use them within their organizational policies, new tools are needed to guide, assess, monitor, and ensure that CARE implementation adheres to the rights, interests, and protocols of the Indigenous Peoples and communities.

The CARE Data Maturity Model (CARE DMM) will meet this need, serving to iteratively assess and improve the strength of CARE implementation in data ecosystems and infrastructures. After the release of CARE, RDA International IDSov IG members collaborated with FAIR Data Maturity Model WG members to plan the development of a CARE DMM. The CARE DMM core team will present progress on the CARE DMM, including criteria and indicators (i.e., measurable actions for the governance of Indigenous data) to evaluate an organization or project's policies, practices, relationships, and data infrastructure for alignment to the CARE Principles. Feedback will be sought on the applicability of the CARE DMM to data practitioners'including on criteria and indicators, and how to translate the indicators into a web-based tool. Finally, progress on the application and endorsement of the tool will also be shared. As data actors increasingly look to the CARE Principles to uphold their commitments to Indigenous Data Sovereignty, the CARE DMM will provide concrete guidance for evaluating and enhancing their data practices and policies to uphold Indigenous Peoples' data rights, priorities, and protocols.

The following two sessions will highlight application of CARE:
Title Abstract 2: Reconnecting Indigenous Data to Country
Presenter/s: Rose Barrowcliffe
Indigenous data sits in repositories around the world in the form of legacy records. These records have been created by non-Indigenous people to serve the functions of non-Indigenous governments, organisations or researchers. Due to the lack of Indigenous Data Sovereignty in the creation of this data, the records'metadata is largely absent of fields or keywords that indicate to which First Nations the data relates. This results in a findability gap for Indigenous people trying to find and access their Indigenous data. In this Aboriginal-led project partnership with New York Botanical Gardens (NYBG), we sought to develop processes for reconnecting Indigenous data back to Country even when the record lacks Indigenous metadata.
The NYBG Herbarium holds over 20,000 specimens collected in Australia from the beginning of colonisation. The specimen records'metadata mentions the collector, the species, and sometimes some contextual information in the field notes, but they don't say whose Country the specimens come from. This presentation

discusses the considerations and attempts to reconnect the Indigenous data held at NYBG to the Country from which it was collected. The project was grounded in Indigenous Data Sovereignty and tested different geospatial analysis techniques to propose the First Nation/s that relate to that record with the hope that we can eventually connect the specimen records back to Country.

Title Abstract 3: Embedding Indigenous Data Sovereignty in Environmental Research
Presenter/s: Cassandra Sedran-Price, Rachel A. Ankeny, Riley Taitingfong, Jess Melbourne-Thomas, Rose Barrowcliffe, Lydia Jennings and Stephaine Russo Carroll

In ecology, climate science, and natural resource management, Indigenous data are increasingly used to develop models that guide decision-making for biodiversity conservation, sustainable agrifood systems, and emerging environmental technologies. Supporting Indigenous rights and integrating both Indigenous and Western Knowledges is essential for improving environmental outcomes in the management of Country This inclusive approach benefits Indigenous Peoples and can enhance the development and application of ecological models. For instance, incorporating Indigenous Knowledge into species distribution modelling for threatened and culturally significant species in Australia has led to more accurate models and better-informed management strategies.

Widely promoted data principles enhance data sharing, such as the FAIR Principles (Findable, Accessible, Interoperable, Reusable) while other principles that remind data users of the people and purpose orientation, such as CARE Principles (Collective Benefit, Authority to Control, Responsibility, Ethics), remain underutilised. Embedding the CARE Principles presents a critical opportunity for modellers and researchers to ensure that their work respects Indigenous knowledge systems, strengthens partnerships with Indigenous communities, supports fair and equitable benefits for those on whose Country they work, and benefits from the expertise of Indigenous Peoples intergenerational knowledge of their ecosystems and from where the data and associated modelling derive.

This presentation explores how operationalising the CARE Principles can support Indigenous rights, strengthen the ethical foundations of modelling practices, and ensure Indigenous communities maintain sovereignty over their data while receiving equitable benefits from research outcomes.

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Presenters: Dr SEDRAN-PRICE, Cassandra (Global Indigenous Data Alliance); Ms TAITINGFONG, Riley (Global Indigenous Data Alliance); Dr BARROWCLIFFE, Rose (Maiam Nayri Wingara); Dr RUSSO-CARROLL, Stephanie (Global Indigenous Data Alliance)

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