Getting to Grips With Indigenous Data

An Actuaries Institute Report exploring aspects of Indigenous Data Governance and Sovereignty

September 2024

Foreword

One of the underlying messages of the Uluru Statement from the Heart was a welcoming to this land of those whose people have arrived since 1788, and a suggested path to bringing together the two sovereignties that now co-exist, with the aim of making the whole greater than the sum of the two parts.

Aboriginal people have a beautiful culture that has developed over millennia, and when the time comes we wish to share our culture with other Australians. It is deep within our culture to pass on a better world to our children and their descendants. We measure success by our relationship with the land and all living things. This is the culture that has arisen from living in this land, and we would like to share it.

It is difficult to allow for such spirit of culture in data captured at an individual level. Information is often collected on Aboriginal people for benign intent, but there is much historical precedent here and elsewhere of data being misused. Many non-Aboriginal people have good intentions to support Aboriginal people, but without knowing our culture and what is meaningful for us, those intentions can result in inadvertent and unfortunate outcomes.

We seek to engage with mainstream Australia in ways that respect our culture. As the Uluru Statement says, "When we have power over our destiny our children will flourish. They will walk in two worlds and their culture will be a gift to their country." In the spirit of walking in two worlds, a lot of work has been done on Indigenous Data Sovereignty. However, even when people are well-intentioned, our requests are ignored, we do not feel heard. Speaking and hearing Aboriginal knowledge within contemporary organisations is challenging and highly stressful. A lot of self-censorship goes on, because Aborigines are wary of talking frankly to people who patronise or dismiss us or appropriate our knowledge.

This report reflects humble listening by the two authors. The Report has clear awareness of the assimilationist undertones of normative metrics. The Report is hopefully the beginning of a two-way exchange, where actuaries and other practitioners honour Indigenous Data Sovereignty.

The Report makes reference to, without engaging with, Aboriginal perspectives on information. Indigenous Data Sovereignty is about appropriate ownership and use of personal data, and the principles are a guide to anyone who is wary of the activities of data collectors. Information gives power, and many Aboriginal people are not comfortable ceding power to anonymous, opaque institutions. The Western approach to data gives to others what is ours, and makes us value only those things we can measure, ignoring what we actually value as humans, such as connection with family, community and the land.

Actuaries are trained to respond to the limitations of known data, and can show leadership by challenging the assumed omniscience of data. I see parallels between Aboriginal custodial responsibility for the land and the actuarial profession's custodial responsibility for data-based systems in welfare and financial services. The Aboriginal perspective is that there is a limit to the extent the world can be understood rationally; that data sets will only dimly reflect complex reality. The Western way conflates the map with the territory. If we are brave enough to admit our limits and humble enough to listen, we have access to Aboriginal insights to work out appropriate ways of measuring a complex relativistic world, rather than use approaches which assume a Newtonian mechanical world, which we all know is limited and can mislead.

Aboriginal people want to share the gift of culture, to show how to live in this land. Aboriginal ways can provide systems, structures, and solutions for resolving sustainability issues. Acknowledging and enabling the wisdom in Aboriginal culture can help all of us to find our role in restoring complexity and connectedness to the dynamic systems that make up human reality, to start the journey towards reclaiming our role as a custodial species.

The actuarial profession can show leadership by taking a custodial role and representing the interests of the land and its people. Data and automation and climate change will bring cultural shifts in the magnitude of colonisation. Can we play a role in making sure we do global cultural transformation better than we have in the past?

Rick Shaw, FIAA
Gamillaroi

About the authors

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About the Actuaries Institute

The Actuaries Institute ("the Institute") is the peak professional body for actuaries in Australia. The Institute provides expert commentary on public policy issues where there is uncertainty of future financial outcomes.

Actuaries have a reputation for a high level of technical financial expertise and integrity. They apply their risk management expertise to allocate resources efficiently, identify and mitigate emerging risks and to help maintain system integrity across multiple segments of the financial and other sectors. This unrivalled expertise enables the profession to comment on a wide range of issues including general, life and health insurance, climate change and sustainability, superannuation and retirement income policy, enterprise risk management, prudential regulation, the digital economy, finance and investment, and wider health issues.

Actuaries use data for good by harnessing the evidence to navigate into the future and make a positive impact. They think deeply about the issues at hand, whether it is advising on commercial strategy, influencing policy, or designing new products. Actuaries are adept at balancing interests of stakeholders, clients and communities. They are called upon to give insight on complex problems, they will look at the full picture. Actuaries analyse the data and model scenarios to form robust and outcome-centred advice.

Acknowledgement of Country

We pay our respect to Elders past and present, and acknowledge their enduring wisdom and unbroken care for this country. We acknowledge that this land always was and always will be Aboriginal land. We acknowledge that we have much to learn from the world's oldest continuing culture. This report is guided by the intent to make use of data appropriate for Aboriginal culture, and is our small part in striving to create a future of abundance, where wisdom is respected.

About this report

This report was commissioned by the Actuaries Institute as part of its Public Policy Thought Leadership program. Enquiries should be directed to the Institute's Public Policy Team at public_policy@actuaries.asn.au. This report has been authored by Hugh Miller, FIAA, and Laura Dixie, FIAA, from Taylor Fry. This work was carried out with the support of Gamarada Universal Indigenous Resources Pty Ltd.

The Institute undertook this work with the aim of contributing to an evolving culture that works with First Nations Australians to enrich societal understanding of issues and promote public wellbeing.

We would like to thank the people who generously contributed to this project, particularly the reference group of Rick Shaw, FIAA (Gamillaroi), Ken Zulumovski (Kubbi Kubbi) and Rick Macourt (Gumbaynggirr), who provided valuable feedback and oversight. Particular thanks and acknowledgement to Ken Zulumovski and Gamarada Universal Indigenous Resources Pty Ltd, who led discussions and sought input from broader community as we developed this report, and to the First Nations people who provided their lived experiences and views, some of which are quoted in this report with permission.

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- The past few decades have seen significant attention on the rights and outcomes of First Nations people, including the recognition of past wrongs. Despite the attention, significant issues remain for First Nations communities.

- Improving the lives and futures of First Nations people, including enabling appropriate control and self-determination, requires action on many fronts. This report examines one of those fronts – how getting the right approach to Indigenous data is central to both enabling and measuring progress.

- Indigenous data has a broader definition than many Western definitions – it spans all mediums and includes information about the environment, land, skies and resources, and both tangible and intangible cultural information.

- Key to the discussion is that First Nations peoples should be able to exercise Indigenous Data Sovereignty. Indigenous Data Sovereignty is inherently tied to the broader concept of Indigenous Sovereignty and the right to self-determination, as endorsed by Australia under the UN Declaration on the Rights of Indigenous Peoples.

- However, many data collections affecting First Nations peoples do not reflect the ideals of Indigenous Data Sovereignty. There is often a deficit narrative, particularly around gaps with non-Indigenous Australians, a lack of context (both geographic and social), and barriers to First Nations communities accessing and controlling the data.

- Closing the Gap is a high-profile policy framework intended to support moving to equality between Aboriginal and Torres Strait Islander people and non-Indigenous Australians. It covers four (relatively new) Priority Reform Areas and 19 socioeconomic targets. However, Closing the Gap also shows ongoing issues with how data is used for First Nations communities:

  - Issues around deficit, contextualisation and control exist for most of the socioeconomic indicators. They also retain a Western, individualistic picture of wellbeing. Supporting indicators, which would provide better context, are often missing.

  - While we regard Priority Reform Areas as good aims, they lack specific tracking of progress and there is confusion around the extent to which Priority Reform 4 is an explicit call to enhance Indigenous Data Sovereignty.

  - Issues also exist for specific indicators. For instance, targets around employment underplay other priorities of First Nations peoples and strong regional patterns that make straight measurement of gaps problematic.

- We focus on Closing the Gap as a high-profile example, but similar issues apply more broadly.

- There are examples of where Indigenous Data Sovereignty principles have been applied well. Section 4 explores the work of The Yoorrook Justice Commission, the Footprints in Time longitudinal study, The Mayi Kuwayu Study, the Bourke (Maranguka) Justice Reinvestment initiative, the use of Alternative Indigenous Court Pathways, and Ngaramanala.

- Additionally, the second Priority Reform Area is about strengthening the community-controlled sector. There appears to be encouraging trends in the number and scale of Aboriginal Community-Controlled Organisations, consistent with the reform area.

- As First Nations research continues, there is an ongoing need to build the capacity for Indigenous-led research, as well as cultural capacity for non-indigenous researchers involved.

- Good frameworks exist for improved data stewardship and sovereignty. We discuss the FAIR and CARE principles in Section 4.
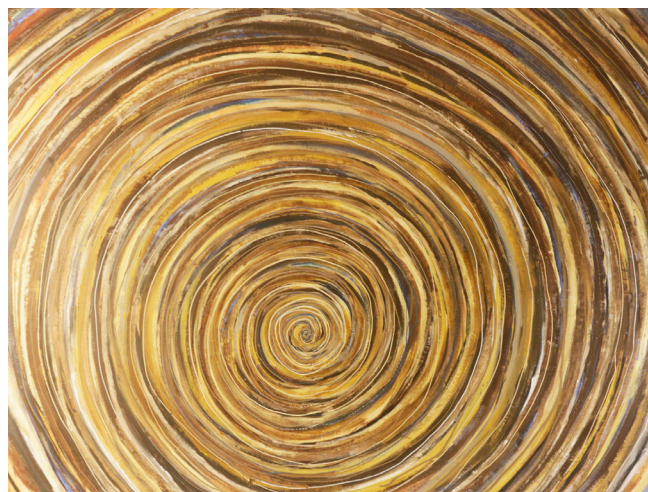
"Oolgna Na Nura" 2023 (meaning: to deeply relate and see Country)
Artist: Professor Liz Belanjee Cameron
Reproduced with permission

1. Introduction

The Slow Path to Reconciliation

Dadirri, a word from the Ngan'gikurunggurr and Ngen'giwumirri languages, referring to "deep listening", encompasses inner contemplation. Miriam-Rose Ungunmerr writes movingly about the spiritual practice on her foundation's website,[1] including its role in bringing peace and renewal. It also recognises the importance of waiting, whether for the seasons, or for a time of deepened understanding.

The concept feels apt following the 2023 referendum result, which has led to significant reflection for First Nations people as well as a continued need for all Australians to be prepared to engage in deep listening in determining next steps.

The rights and outcomes of First Nations people have seen significant attention over the past few decades.

- The early 90s saw significant progress on reconciliation and recognition of past wrongs, including *The Royal Commission into Aboriginal Deaths in Custody* and the *Native Title Act 1993* (following the landmark *Mabo v Queensland (No 2)* court case overturning centuries of Terra Nullius principles).

- The 2000s saw significant planning around reconciliation, the launch of Closing the Gap, and the formal apology to the Stolen Generations on behalf of the Australian Parliament. The Declaration on the Rights of Indigenous Peoples (UNDRIP) was passed by the United Nations in 2007 and formally endorsed by Australia in 2009.

- The 2010s saw many organisations across Australia engaging with the reconciliation process, work by the Expert Panel on Constitutional Recognition of Aboriginal and Torres Strait Islander peoples, and the 2017 Uluru Statement from the Heart.

- Most recently, the Voice referendum has illustrated ongoing debate on the best way to recognise and engage with Aboriginal and Torres Strait Islander people. Closing the Gap continues to be a high profile, cross-jurisdictional policy, focused on improving outcomes for First Nations people.

Despite the attention, significant issues remain for First Nations communities. Three decades on, many of the issues and recommendations of the Royal Commission remain as relevant as ever. First Nations people are incarcerated at almost 10 times the rate of the general population, making up a third of Australia's prison population. Little progress has been made on this issue despite many calls for reform; the percentage has actually increased from 27% to 33% over the past 10 years (Australian Bureau of Statistics, 2024). Similarly, rates of roughly 10 times overrepresentation are seen in out-of-home care, homelessness, and welfare benefits for young people seeking employment.[2] This reflects historical racism and systemic disadvantage that continue to impact the lives of First Nations people. The No result in the Voice referendum means that alternative effective mechanisms for recognition, consultation and sovereignty need to be found.

Some key dates for Aboriginal rights

1967
Referendum successful in removing exclusionary provisions for Aboriginal people

1991
The Royal Commission into Aboriginal Deaths in Custody

1992
Mabo v Queensland (No 2) decision – first native title recognition

1992
Paul Keating's Redfern Park speech recognising challenges for Indigenous Australians

1997
The *Bringing Them Home* report on the Stolen Generations released

2006
Development of Close the Gap campaign

2008
Kevin Rudd apology to the Stolen Generation

2009
Australia endorses UN Declaration on the Rights of Indigenous Peoples

2011
Consultations begin on constitution recognition

2017
Uluru Statement from the Heart released by Aboriginal and Torres Strait Islander Referendum Convention

2023
Referendum for establishment of First Nations Voice to Parliament fails

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1   https://www.miriamrosefoundation.org.au/dadirri/
2   Supporting tables of AIHW: Child protection Australia 2022–23, Table S5.5. https://www.aihw.gov.au/reports/child-protection/child-protection-australia-insights/data
    Homelessness - AIHW Specialist Homelessness Services Annual Report 2022–23.
    Welfare - DSS Benefit and Payment Recipient Demographics data. https://data.gov.au/dataset/ds-dga-cff2ae8a-55e4-47db-a66d-e177fe0ac6a0/distribution/dist-dga-6c93023e-9c64-484d-9503-69cc8209afa6/details?q=

The Importance of Data

Improving the lives and futures of First Nations people, including enabling appropriate control and self-determination, requires action on many fronts. This report examines one of those fronts – how getting the right approach to Indigenous data is central to both enabling and measuring progress.

This report represents a continuation of Actuaries Institute research exploring inequality (Miller et al., 2020, 2021; Miller & Dixie, 2023a, 2023b). Here, we take a markedly different approach to exploring inequality for Aboriginal and Torres Strait Islander peoples; before talking about outcome gaps and wellbeing frameworks, we have to first step back and reexamine what we are measuring and why. Indeed, more work is required in this area before we can genuinely think about "closing the gap". Happily, significant thought and effort has already been made exploring these questions, although they do raise challenges to how we as a country do data governance and reporting.

The topic of data is close to the heart of much modern work, including that of actuaries. Our hope is that this report is a timely reminder to think deeply about the way we undertake analysis in the age of big data and the efforts needed to improve Indigenous Data Sovereignty in our work.

The remainder of the paper is organised in three sections:

- exploring the fundamentals of Indigenous data;
- case studies of current use, with a focus on Closing the Gap; and
- areas of progress and the future.

In writing this report, we have benefitted greatly from the wisdom and contributions of First Nations people. Key sources, among many others, include the writings of Professor Raymond Lovett, Professor Maggie Walter, Dr Terri Janke, and the work of Maiam nayri Wingara – references are provided at the end of the report.

Relevance for Actuaries

Issues around the stewardship of Indigenous data and how data can contribute to better outcomes for First Nations people are not a traditional actuarial area. Yet the topic is of direct and indirect relevance:

- Actuaries working beyond financial services in areas such as government social policy routinely have to consider First Nations issues and outcomes, aided by a good understanding of Indigenous data.

- A growing number of organisations where actuaries work have Reconciliation Action Plans. Such plans can vary in scope, but the need to learn and engage with First Nations issues, including data and stories, is common.

More broadly, there are lessons and parallels for actuaries in First Nations perspectives. One key theme is about the importance of narrative and context, beyond what is visible in data. Understanding a dataset involves also understanding the people it concerns, the way data was collected, and the types of stories that it represents. Actuarial judgement benefits from this deeper understanding.

The theme of custodianship is a second parallel. First Nations people have long-standing traditions and practices in their custodial responsibility of the land and ensuring it can be passed on to future generations. Actuaries have similar custodial responsibility for the datasets and models that inform our work. Particularly in a world with increased use of automated decision-making, we help apply strong governance principles and processes to ensure datasets and models remain fit for purpose over time.

2. Indigenous Data Fundamentals

2.1   What is Indigenous Data?

The collection and use of data has rapidly increased over the past century. As actuaries, we have discussed big data, debated ethical use of data, and considered how artificial intelligence (AI) models built on data will change our work. Implicit in these conversations has been an understanding of what we mean by data. A standard Western definition of data (here from the Cambridge Dictionary) is:

"information, especially facts or numbers, collected to be examined and considered and used to help decision-making, or information in an electronic form that can be stored and used by a computer."

Compare this with the definition of "Indigenous Data" by Maiam nayri Wingara (2018), a leading Australian data sovereignty collective:

"information or knowledge, in any format or medium, which is about and may affect Indigenous peoples both collectively and individually."

Under this definition, the scope of datasets is expanded to all mediums. Indigenous data are not restricted to data about Indigenous people collected through administrative processes such as censuses or health, social or commercial information. Indigenous data are also information about the environment, land, skies and resources, and include tangible and intangible cultural information (e.g., oral histories, cultural sites and stories) (Carroll et al., 2020).

There is relatively less emphasis on quantitative and electronic data collections. Importantly, attempting to distil Indigenous data into an administrative collection often strips it of important context and narrative, and even affects the knowledge itself (Janke et al., 2021).

In May 2024, the Australian Government released its *Framework for Governance of Indigenous Data* (Commonwealth of Australia, 2024). The Framework aligns well with the principles we explore in this report, and is also designed to reflect the areas of Priority Reform under the Closing the Gap Agreement, as discussed in Section 3. While much work remains for departments to embed these guidelines, they are a useful initial step for better handling of Indigenous data.

2.2   Indigenous Data Sovereignty

Key to the discussion is that First Nations peoples should be able to exercise data sovereignty. Indigenous Data Sovereignty is defined as the right of Indigenous peoples to own, control, access and possess data that derive from them, and which pertain to their members, knowledge systems, customs or territories. The common catchphrase is "nothing about us, without us."

Indigenous Data Sovereignty is inherently tied to the broader concept of Indigenous Sovereignty and the right to self-determination. Much of this sense is captured in the UNDRIP, which Australia formally endorsed in 2009 (after initially being one of four countries to reject the declaration in 2007). The UNDRIP emphasises self-determination in the exercising of indigenous rights. For example, Article 3 states that:

"Indigenous peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development."

Other articles talk to related concepts around the protection of culture, land access, and participation and consultation in decision-making. This concept of sovereignty extends to Indigenous data, since the ability to define, collect and interpret data is fundamental to the ability to exercise self-determination.

There are clear intuitive benefits from Indigenous communities having greater control over the collection and use of their data. As summarised by the Maiam nayri Wingara Indigenous Data Sovereignty Collective and Australian Indigenous Governance Institute following the 2018 Indigenous Data Sovereignty Summit (Maiam nayri Wingara, 2018):

> " There have been numerous cases where government actions or decisions have not fully understood the proper context when it comes to Indigenous issues in Australia. For example, policies related to land rights, education, healthcare, and social welfare have often been criticised for not taking into account the historical, cultural, and socio-economic contexts of Indigenous communities. "

Mel Merritt, Miwi Connections

"Exercising Indigenous Data Governance enables Indigenous peoples, our representative and governing bodies to accurately reflect our stories. It provides the necessary tools to identify what works, what does not and why. Effective Indigenous Data Governance empowers our peoples to make the best decisions to support our communities and First Nations in the ways that meet our development needs and aspirations."

The increasing prominence of Indigenous Data Sovereignty rights in Australia parallel those internationally. The Global Indigenous Data Alliance (GIDA) is an international network of organisations working to progress International Indigenous Data Sovereignty and Indigenous Data Governance in order to advance Indigenous control of Indigenous data.[3]

The concept of Indigenous Data Sovereignty is sometimes split into two arms, "Governance of Data" and "Data for Governance", to reflect the need for First Nations peoples to both decide how data about them are collected, stored and used (Governance of Data) and to have access to data about them to support self-determination (Data for Governance). This data needs to reflect First Nations peoples' priorities, values, culture and diversity. On the Data for Governance side, this enables First Nations communities to better design and deliver programs and monitoring tools, but must also be accompanied by capacity building in the management and use of data.

Currently, most Indigenous data are held by non-Indigenous governments, institutions, and agencies. Therefore, increasing Indigenous peoples' participation in data governance activities is core to Indigenous Data Sovereignty (Carroll et al., 2021).

2.3   Pitfalls of Current Practice

Indigenous Data Sovereignty has arisen out of the mismatch between how data relating to First Nations peoples is collected, reported and used and what data First Nations peoples need in order to support their rights of self-determination and support collective wellbeing (Walter et al., 2020). Walter et al. (2020) explore this issue in detail and proposes the Blaming, Aggregate, Decontextualised, Deficit-based and has Restricted access (BADDR) framework for how data collection and use falls short of Indigenous data needs. We have reproduced their summary table in Table 1.

Table 1 – *BADDR data and Indigenous data needs*

Dominant BADDR data	Indigenous data needs
Blaming data: Too much data contrasts Indigenous/non-Indigenous data, rating the problematic Indigene against the normed Australian as the ubiquitous pejorative standard.	Lifeworld data: We need data to inform a comprehensive, nuanced narrative of who we are as peoples, of our culture, our communities, of our resilience, our goals and our successes.
Aggregate data: Too much data are aggregated at the national and/or state level implying Indigenous cultural and geographical homogeneity.	Disaggregated data: We need data that recognises our cultural and geographical diversity and can provide evidence for community-level planning and service delivery.
Decontextualised data: Too much data are simplistic and decontextualised focusing on individuals and families outside of their social/cultural context.	Contextualised data: We need data that are inclusive of the wider social structural context/complexities in which Indigenous disadvantage occurs.
Deficit, government priority data: Too much (way too much) "5D data": This is data that focus on disadvantage, disparity, dysfunction, difference, deficit (Walter, 2016) collected to service government priorities.	Indigenous priority data: We need data that measures not just our problems but data that address our priorities and agendas.
Restricted access data: Too much data are barricaded away by official statistical agencies and institutions.	Available amenable data: We need data that are accessible and amenable to our requirements.

Source: Reproduced from Walter et al. (2020)

The table largely summarises some important outworkings of data sovereignty principles:

- The comparison between Indigenous and non-Indigenous groups is not always helpful. While such comparisons can highlight disadvantage and are sometimes appropriate, they implicitly assume that the social norms and priorities between the groups are comparable. First Nations wellbeing has different characteristics to some Western frameworks, so attempting to measure on the same scale is inherently problematic. The approach also reinforces a deficit narrative, which historically has led to harmful policies, including the Stolen Generations (ABS, 2023).

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3   https://www.gida-global.org/purpose

- Community-level solutions require community-level data. Many official statistics report on Indigenous outcomes as a whole. However, Aboriginal and Torres Strait Islander people comprise hundreds of different people groups with differing language and culture. Communities will have different needs and priorities. This diversity tends to not be captured in data collections. For instance, the Census does not collect information more granular than Aboriginal / Torres Strait Island / non-Indigenous (additional cultural identity is being considered for 2026) (ABS, 2023).

- Many administrative datasets lack context. We explore some examples in Section 3, but the greater emphasis on family and culture in Aboriginal cultures is not well captured in administrative databases.

- Existing data collection systems make exercising Indigenous Data Sovereignty challenging. Many government data collections are sensitive, and rules restrict their use and dissemination. For example, the Australian Bureau of Statistics (ABS) and other agencies are bound by the *Privacy Act 1998,* which includes strong limits on the disclosure of personal information. While this delivers privacy benefits, it means there is an inherent power imbalance where government agencies will contain more detailed information than First Nations communities, and the release of deidentified data (e.g., aggregated community-level data) is subject to careful governance and negotiations.

Progress has been made in some areas, and government departments are alert to the need to improve data access for First Nations peoples. Some examples are discussed in Section 4.

2.4   Other Challenges Related to Indigenous Data Sovereignty

We note some practical challenges in the application of Indigenous Data Sovereignty.

Defining First Nations people

A fairly common government definition of Indigenous is the threefold definition based on descent, identification and acceptance developed by the Commonwealth Department of Aboriginal Affairs (1981):

"An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he [or she] lives."

Rates of identification are changing over time. Between the 2006 and 2021 censuses, the Indigenous population grew by 79%, about three times the rate of the general population. The ABS estimates that 53% of this growth is non-demographic (ABS, 2021) – that is, cannot be explained by births, deaths and migration rates. 10-year growth rates are shown in Figure 1. The change is not entirely understood but is likely driven by increased identification, perhaps due to reduced fear of stigma or discrimination.

Additionally, people who identify as Indigenous may not always choose to declare this in all contexts – for example, if they feel that identification will increase the risk of discrimination. Community members can feel it is an inflicted categorisation which does not reflect the richness of their heritage, and the process of identification is inherently linked to colonisation. Or people do not engage with data collection activities. Even the most recent Census saw an estimated 17% undercount of the First Nations population (ABS, 2022) – perhaps unsurprising given First Nations people were only included in the Census from 1971. Poor data can have direct implications for resource planning and service delivery.

I think the Government is not fully understanding the diversity in our communities, the internal disparity that is broadening due to the recent change in the number of people identifying as First Nations Australians.

Maria Douglas, Turtle Yarns

Inaccurate census data collection and analysis have resulted in insufficient funding and resources for Aboriginal education and social services, perpetuating systemic inequalities.

Damien House

Figure 1 – *10-year percentage increase in the Australian population by First Nations identification*
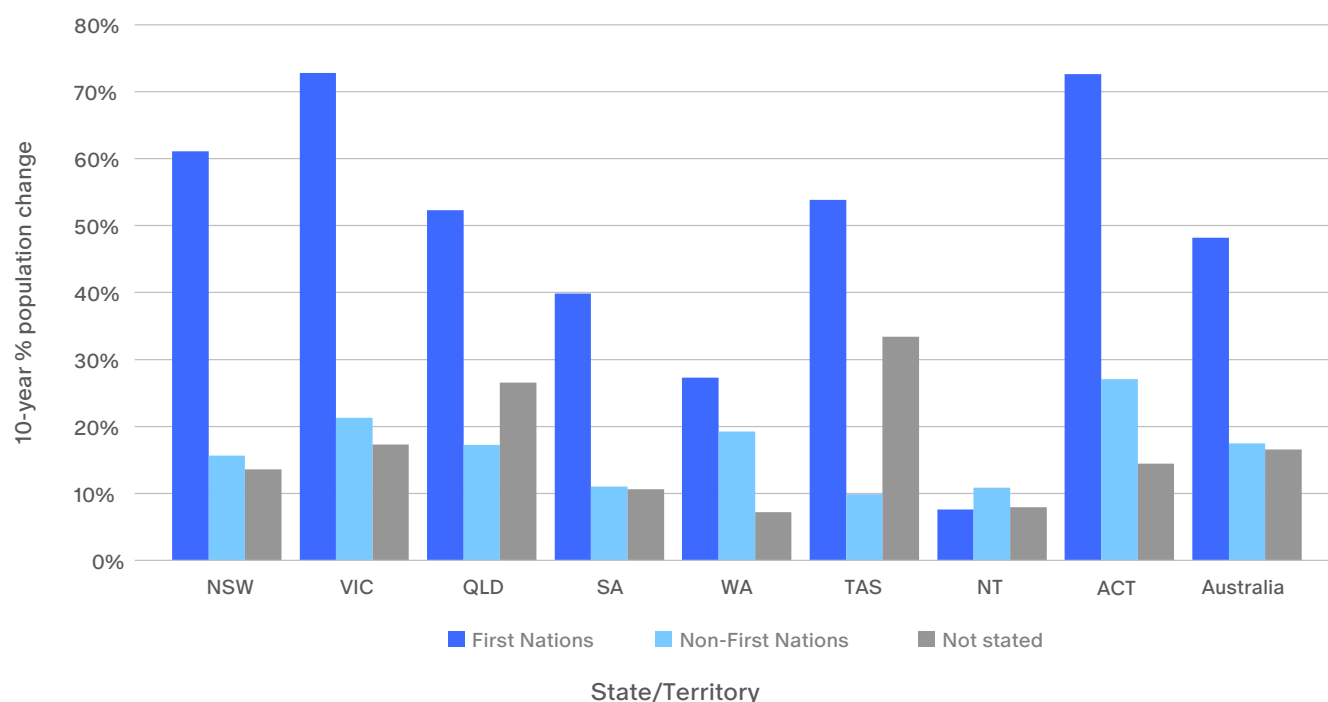
Source: ABS Census data

While greater cultural awareness and willingness to disclose self-identification are a positive sign, it creates challenges in measuring change. With the recorded First Nations population growing, and not uniformly, any changes in measurements based on rates become less meaningful. For example, an improvement in youth engagement in employment or education could be driven by structural changes and improved outcomes, or it could reflect population growth, which skews to more metro areas (where employment and education rates are typically higher anyway).

Potential inconsistency in the identification of First Nations people in datasets encourages greater use of longitudinal data and linked data, where identification can be cross-referenced over time or service.

Unit record data and privacy issues

Increasing amounts of research leverage individual-level data ("unit record"). For example, understanding cross-sectoral service use requires unit record data for the linkage to be performed prior to analysis. Unit record data is valuable but carries greater privacy risks. When restricted to smaller communities, numbers can be low and risks of re-identification heightened. Data custodians are also obliged to manage the risk of privacy breaches. In practice, this means that even if First Nations peoples are able to access unit record data, it is subject to significant restrictions on its use.

Issues can also arise with trust at the point of government services. If First Nations people fear that information will be "used against them" at future points in time, this can reduce the effectiveness of support services.

Potential incentives for not reporting First Nations outcomes

One risk with strong Indigenous Data Sovereignty principles in place is that it reduces the amount of reporting on First Nations outcomes in some areas. In many areas of research, the target might be the whole population using a service or program (e.g., all people interacting with the justice system), rather than specifically the Indigenous population. If some reporting of Indigenous outcomes is desired (e.g., splitting a result by Indigenous identification), then current best practice would be to:

- have the research project approved by an Indigenous-specific ethics agency; and

- set up an Aboriginal reference group or engage an Aboriginal researcher to ensure data is interpreted and discussed correctly.

This can add significant time and cost to a research project. In some cases, researchers may choose not to report on Indigenous outcomes separately (although they would still typically be included in the broader population results). While conforming to the principle of "nothing about us without us", this may reduce the evidence base for First Nations peoples in areas where information would be beneficial.

Intersectionality

Issues of intersectionality arise frequently for First Nations people. For example:

- rates of disability and long-term health conditions are higher for First Nations people; and
- First Nations people are more likely to live in regional and remote areas of Australia.

This intersectionality can cloud comparisons. For example, access to services may be lower for First Nations Australians but might be similar after controlling for regional and remoteness factors (suggesting the issue is related to access outside urban centres, rather than a specific issue for First Nations communities).

Indigenous data capacity

Improvements in data sovereignty and governance for First Nations communities must be accompanied with developing the capacity and expertise to work with data effectively within communities. Building capability includes empowering people and organisations, but also developing technical and policy capabilities.

Overseas, New Zealand faces similar challenges with a need to grow the pool of Māori quantitative researchers. There are significant structural changes needed to address this, including reducing discrimination and other barriers to attending university, increasing access to role models, and greater coverage of Māori Data Sovereignty in university courses. Some shorter-term measures suggested include (Greaves et al. 2024):

- networks of Māori researchers who can provide mentoring and are funded externally to not overburden existing researchers; and
- clear and funded pathways for Māori into quantitative research and statistics, in which the student focuses on developing their skills and not on giving a Māori perspective.

In Australia, groups such as the Indigenous Data Network can help support improved collection and use of data by Indigenous organisations over time.

The Indigenous Data Network[4] is a national network of Aboriginal community-controlled organisations, university research partners, Indigenous businesses, and government agencies and departments. It is maintained with the University of Melbourne. The stated purpose is to **support and coordinate the governance of Indigenous data** for Aboriginal and Torres Strait Islander peoples and empower Aboriginal and Torres Strait Islander communities to decide their own local data priorities.

This is enacted through projects such as:

- **Community Data Project:** This project will primarily support the delivery of the Closing the Gap Priority Reform Four by strengthening Indigenous data ecosystems in Aboriginal and Torres Strait Islander community-controlled organisations to increase their technical, institutional, social, and economic data capacity.
- **Improving Indigenous Research Capabilities:** An Aboriginal and Torres Strait Islander Research Data Commons. This project will develop Indigenous research data tools and infrastructure.

Tension between Indigenous Data Sovereignty and open data initiatives
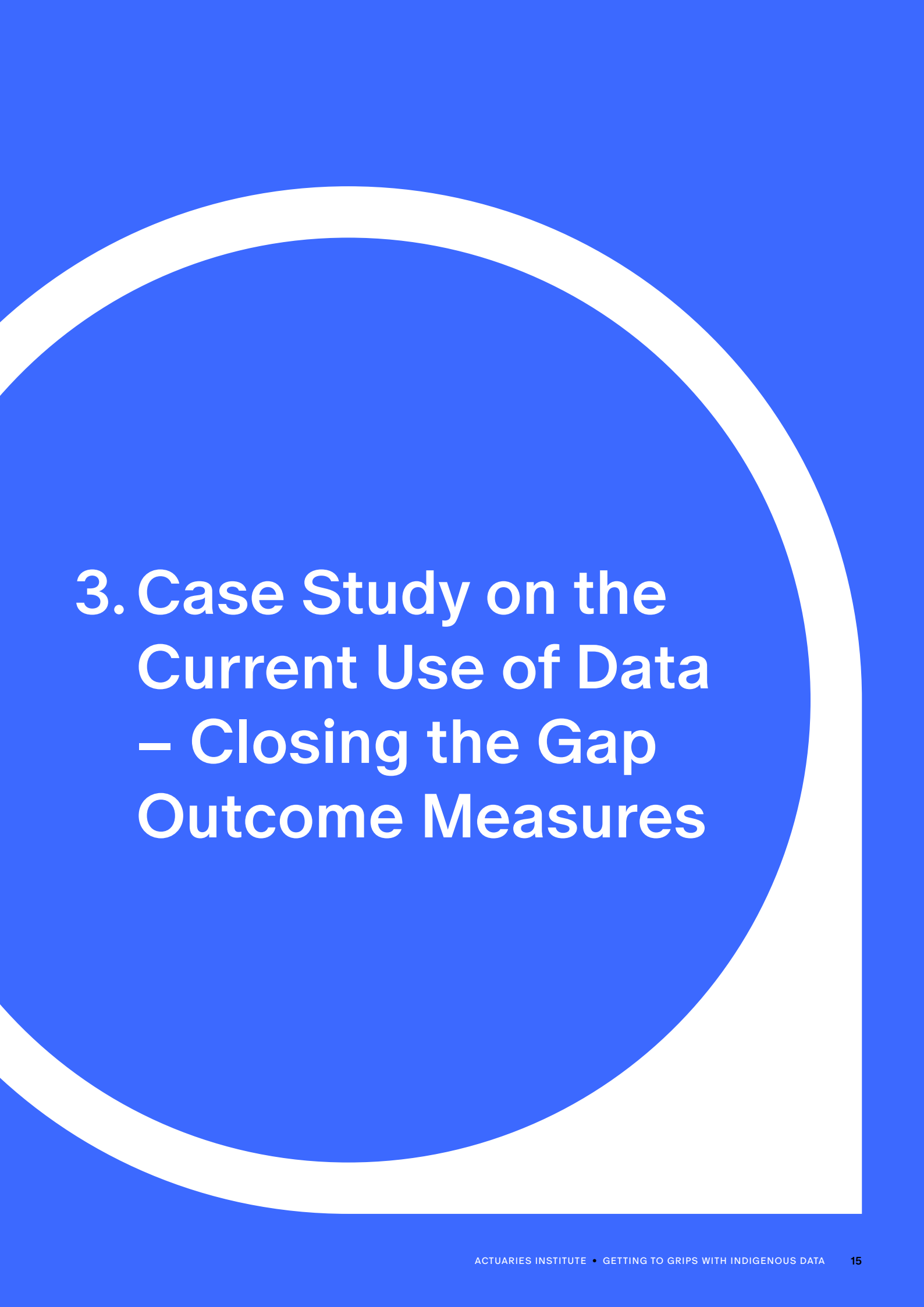
The "open data" movement seeks to recognise the broader value of government data collections and make them available to more people. For example, the data.gov.au website collates a large number of Commonwealth data sources.

There are some tensions between open data and Indigenous Data Sovereignty, including:

- First Nations peoples are typically not consulted on the publishing of datasets;
- the emphasis of published data collections may not align with the priorities with First Nations peoples; and
- to the extent that Indigenous Australians are overrepresented or have poorer outcomes in a dataset, they will often lack context and emphasise deficit.

Potential risks are that open data collections are used to inform and design policies that affect Indigenous communities without their input.

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4   https://mspgh.unimelb.edu.au/centres-institutes/onemda/research-group/indigenous-data-network#about-us

3. Case Study on the Current Use of Data – Closing the Gap Outcome Measures

In this section we explore how commonly reported Western outcome measures do not align well with Indigenous measures of wellbeing and the desire for self-determination. While much of the discussion is around a subset of the Closing the Gap measures, issues extend to other areas.

3.1   Closing the Gap

Closing the Gap[5] is a high-profile policy framework intended to support moving to equality between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians. The first framework was formed in 2008 and at the time represented the key action supporting our endorsement of the UNDRIP. Its prominence makes it a good candidate for considering the interplay with Indigenous Data Sovereignty and Governance.

Closing the Gap was established following a 2005 call by the then Aboriginal and Torres Strait Islander Social Justice Commissioner for Australian governments to commit to achieving equality for Aboriginal and Torres Strait Islander people in health and life expectancy, within 25 years. The first National Indigenous Reform Agreement agreed to by the Council of Australian Governments in 2008 included six "closing the gap" targets relating to health, education and employment outcomes and seven "building blocks" to support this (NIAA, 2019).

Over time, the framework has evolved and expanded in order to try and better meet its objectives. The current National Agreement (2020) includes four priority reforms in addition to 19 socioeconomic targets (see 2020 Closing the Gap components on the following page). The priority reforms are to change the way governments work with First Nations peoples and communities and represent a new component of the Closing the Gap framework, responding to feedback concerning previous iterations. They "focus on measuring the change governments are making in the way they work with Aboriginal and Torres Strait Islander people." Most relevant to this report, Priority Reform 4 speaks to the importance of improved data sharing as a way of empowering local communities.

The 19 socioeconomic targets are intended to monitor outcomes in areas that have an impact on life outcomes for First Nations people. Progress against the targets is publicly monitored to improve accountability. Many of them are further expanded by additional "supporting indicators" that add context, although availability of data for these is patchy.

2020 Closing the Gap components

Four priority reform groups

1. **Formal Partnerships and Shared Decision Making:** More shared decision-making authority for First Nations peoples for both places and priority areas (e.g., justice).

2. **Building the Community-Controlled Sector:** Increased funding for First Nations programs and services provided by Aboriginal and Torres Strait Island community-controlled organisations.

3. **Transforming Government Organisations:** Making departments and agencies more culturally safe and responsive to the needs of Aboriginal and Torres Strait Islander people, and reducing the proportion of people experiencing racism.

4. **Shared Access to Data and Information at a Regional Level:** Increase the number of regional data projects to support Aboriginal and Torres Strait Islander communities to make decisions about Closing the Gap and their development.

Indicator targets related to socioeconomic outcome areas:

1. Close the Gap in life expectancy within a generation, by 2031.

2. By 2031, increase the proportion of Aboriginal and Torres Strait Islander babies with a healthy birthweight to 91 per cent.

3. By 2025, increase the proportion of Aboriginal and Torres Strait Islander children enrolled in Year Before Fulltime Schooling (YBFS) early childhood education to 95 per cent.

4. By 2031, increase the proportion of Aboriginal and Torres Strait Islander children assessed as developmentally on track in all five domains of the Australian Early Development Census (AEDC) to 55 per cent.

5. By 2031, increase the proportion of Aboriginal and Torres Strait Islander people (age 20-24) attaining year 12 or equivalent qualification to 96 per cent.

6. By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25-34 years who have completed a tertiary qualification (Certificate III and above) to 70 per cent.

7. By 2031, increase the proportion of Aboriginal and Torres Strait Islander youth (15-24 years) who are in employment, education or training to 67 per cent.

8. By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25-64 who are employed to 62 per cent.

9. a. By 2031, increase the proportion of Aboriginal and Torres Strait Islander people living in appropriately sized (not overcrowded) housing to 88 per cent.

   b. By 2031, all Aboriginal and Torres Strait Islander households:

      i. within discrete Aboriginal or Torres Strait Islander communities receive essential services that meet or exceed the relevant jurisdictional standard

      ii. in or near to a town receive essential services that meet or exceed the same standard as applies generally within the town (including if the household might be classified for other purposes as a part of a discrete settlement such as a "town camp" or "town based reserve").

10. By 2031, reduce the rate of Aboriginal and Torres Strait Islander adults held in incarceration by at least 15 per cent.

11. By 2031, reduce the rate of Aboriginal and Torres Strait Islander young people (10-17 years) in detention by at least 30 per cent.

12. By 2031, reduce the rate of overrepresentation of Aboriginal and Torres Strait Islander children (0-17 years old) in out-of-home care by 45 per cent.

13. By 2031, the rate of all forms of family violence and abuse against Aboriginal and Torres Strait Islander women and children is reduced at least by 50 per cent, as progress towards zero.

14. Significant and sustained reduction in suicide of Aboriginal and Torres Strait Islander people towards zero.

15. a. By 2030, a 15 per cent increase in Australia's land mass subject to Aboriginal and Torres Strait Islander people's legal rights or interests.

    b. By 2030, a 15 per cent increase in areas covered by Aboriginal and Torres Strait Islander people's legal rights or interests in the sea.

16. By 2031, there is a sustained increase in number and strength of Aboriginal and Torres Strait Islander languages being spoken.

17. By 2026, Aboriginal and Torres Strait Islander people have equal levels of digital inclusion.

Disappointingly, recent evidence has pointed to a lack of progress on the 2020 National Agreement:

- The *Closing the Gap Annual Data Compilation Report July 2024* (Productivity Commission, 2024b) found that only five of the 19 socioeconomic targets were on track to be met (targets on track were 2, 3, 8, 15a and 15b). Five others have improved but not at the required rate to meet the target (targets 1, 5, 6, 7 and 9a).

- Some targets have less regular updating cycles. For instance, data supporting targets 4, 5, 6, 7, 8, 9a, 13, 16 and 17 did not have updates in the 2024 Report.

- The Report also noted that measures were still not in place for tracking the progress of the Priority Reforms. While these are areas where new data sources need to be developed, the omission is a significant shortcoming in the Closing the Gap framework. Development of the measurement frameworks is ongoing (Productivity Commission, 2024b), with additional time required thereafter to collect new data and commence reporting.

- The Productivity Commission also undertook a broader review of the National Agreement on Closing the Gap (Productivity Commission, 2024a). It found that progress, particularly on the priority reforms, is falling short of envisaged expectations. The review found the Agreement's reforms have not been prioritised by governments and change is not occurring – despite some evidence that governments demonstrate ability and willingness to partner in shared decision-making. The Joint Council agreed to almost all Commission recommendations in their July 2024 meeting (Joint Council on Closing the Gap, 2024).

- Interestingly, there have been differing expectations around Priority Reform 4. First Nations peoples view the reform area as a call to enhance Indigenous Data Sovereignty. However, the exact wording talks of sharing without acknowledging sovereignty issues. The Australian Institute of Health and Welfare launched the Regional Insights for Indigenous Communities website[6] in late 2021, which is consistent with data sharing, but less so with sovereignty. Even still, much of the data on the site is not available at a geographic level below state or territory, a significant limitation. The Productivity Commission recommends this is resolved by the recognition and support of Indigenous Data Sovereignty in the Agreement.

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6   Regional Insights for Indigenous Communities: https://www.rific.gov.au

3.2   Issues with the Use of Existing Data in the Socioeconomic Targets

Closing the Gap is Australia's most prominent example of reporting outcomes for First Nations peoples. The framework has been developed in consultation with Aboriginal and Torres Strait Islander peoples. At its core is the recognition that First Nations peoples need a genuine say in the design and delivery of policies, programs and services that affect them and that this self-determination is what will achieve better outcomes. While this ethos is clear, stakeholders provided useful framing that the Closing the Gap framework is a positive step in collaboration but would look different if designed entirely by First Nations peoples. It also does not guarantee an enduring structure for power sharing and data sovereignty, and so requires ongoing complementary work.

The socioeconomic targets have, out of practical necessity, been based on existing data collections. While the primary function of the targets is to hold government to account, the targets have faced criticisms related to being BADDR data (as introduced in Section 2.3). Aspects of the surrounding monitoring framework have also been criticised as potentially misleading.

To summarise some of the critiques (see, for example, Fogarty et al., 2018a and Walter et al., 2021):

- Most indicators compare the gap to non-Indigenous Australians with the target statistic of equality, emphasising disadvantage and sometimes obscuring progress. While not a Closing the Gap target, this is exemplified by smoking rates. The absolute rate of smoking fell for Aboriginal and Torres Strait Islander people over 2008–2015 indicating significant progress, yet by other gap-based measures no progress was made due to the higher baseline (Lovett et al., 2017).

- Most indicators align with existing administrative data collections and are more consistent with a Western, individualistic view of wellbeing (Yu, 2011). That said, indicators 15 and 16, relatively recent additions to the framework, speak to connection to land and language.

- The emphasis on gaps reinforces a deficit narrative, often devoid of the context that helps explain the differences, such as access to appropriate health services, structural inequalities, racism, and as the different values and life choices made by Aboriginal and Torres Strait Islander people (Dawson et al. 2020).

- The framework, particularly earlier forms, were seen as "top-down" impositions with little improvement in partnerships with First Nations people (Murawin, 2018).

- The framework has not led to consistency in governance or funding for programs. Furthermore, there is little visibility on what has been funded and the outcomes achieved (Mundine, 2024). We note some recent progress on this has been made through jurisdiction-level Indigenous Expenditure Reporting.[7]

Stakeholders noted that one by-product of the socioeconomic targets are that they split issues into specific domains, undermining their inherent interconnectedness. For example, health outcomes such as life expectancy will be affected by income, housing and justice outcomes. This is obviously an issue that affects government policy more broadly (that is, it is true for non-Indigenous people too), and is consistent with some efforts by government to implement more person-centred understanding of need and support.

Other specific issues arise. For example, the current monitoring framework fits trajectories to recent data to assign whether an indicator is on track. Applying this line of best fit to a wide array of data series situations has led to a number of edge cases and oddities. For example, for target 11 relating to the number of young people in detention:

- there was a general decreasing trend over 2010–11 to 2018–19

- there were then large decreases over 2019–20 and 2020–21

- this was followed by increases over 2021–22 and 2022–23

- overall the level is now slightly below that from 2018–19

The extrapolated trend is a flat line over 2019–20 to 2022–23, indicating no change. This ignores the data and trend prior to 2019–20. A better fit would likely be extrapolating a continued decrease, albeit subject to a high degree of uncertainty. This has drawn criticism as being misleading and not serving the interest of First Nations peoples (Ring and Griffiths, 2021). A review and revision of the monitoring framework has been commissioned.

In the table below, we explore how many of the socioeconomic targets are limited in their ability to meet the needs for Aboriginal and Torres Strait Islanders. This can be because of context, because of aggregation over diverse communities and people, or because of different cultural values. Our point is to highlight the limitations of existing data collections with examples, not criticise the framework nor provide extensive review. If the required data was available, it would have been identified and used in the Closing the Gap framework.

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7   See, for example, NSW report, https://www.treasury.nsw.gov.au/ier

Table 2 – *Selection of socioeconomic targets under Closing the Gap framework and some limitations of the indicator*

Socioeconomic target	Limitations and what is needed
1. Aboriginal and Torres Strait Islander people enjoy long and healthy lives: Close the Gap in life expectancy within a generation, by 2031.	The interaction between life expectancy with remoteness/regional and socioeconomic status will exacerbate observed gaps and makes a target of zero gap unrealistic. Greater emphasis on supporting indicators such as risk factor prevalence (e.g., smoking) and access to health services may be better.
12. Children are not overrepresented in the child protection system: By 2031, reduce the rate of over-representation of Aboriginal and Torres Strait Islander children in out-of-home care by 45 per cent.	There are concerns that a lack of cultural awareness and an unwillingness to accept community testimony when judging safety and neglect can lead to too many removals of Aboriginal children. Similarly, there is an importance on appropriate placements to ensure ongoing cultural connection. Indicators around rates of kinship care, cultural connection for children in care and sustained family restorations would improve reporting, consistent with the Aboriginal and Torres Strait Islander Child Placement Principle indicators.[8] Indicators around perceptions of child protection services would also be valuable.
8. Strong economic participation and development of people and their communities: By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25–64 who are employed to 62 per cent.	Collective community wellbeing is a greater priority than individual-level employment and income (for example, Garvey et al., 2021). Employment trends have strong geographic drivers (Biddle & Markham, 2017) not accounted for in the main comparison, as well as intersectionality with disability. Measures of material deprivation would augment employment.
7. Youth are engaged in employment or education: By 2031, increase the proportion of Aboriginal and Torres Strait Islander youth (15–24 years) who are in employment, education or training to 67 per cent.	A need to recognise other cultural norms, such as being on land, being in community, or caring for family members, all could be additional priorities for young people.
4. Children thrive in their early years: By 2031, increase the proportion of Aboriginal and Torres Strait Islander children assessed as developmentally on track in all five domains of the Australian Early Development Census (AEDC) to 55 per cent.	Historical exclusion of First Nations people from the education system has caused harm which still impacts the students. While the AEDC assesses resilience early in a school career, there is less measurement around the quality and appropriateness of education for First Nations children.
10. Adults are not overrepresented in the criminal justice system: By 2031, reduce the rate of Aboriginal and Torres Strait Islander adults held in incarceration by at least 15 per cent.	Concerns around over-policing and harsh sentencing contribute to higher rates of police and justice system interaction for Indigenous peoples. Treatment while in prison, and deaths in custody, are both important features of understanding the operation of the justice system, with many issues from the 1991 Royal Commission findings still relevant.

8   https://www.aihw.gov.au/reports/child-protection/atsicpp-indicators/contents/summary

3.3   Closing the Gap Is Just One Example

We have discussed Closing the Gap due to its prominence. But issues are regularly observable in other contexts, too.

Wealth and home ownership

Wealth and home ownership rates are commonly reported in Australia and sometimes compared for Indigenous Australians and non-Indigenous Australians. Much wealth in Australia relates to home ownership. Therefore, a discussion of wealth (or housing) needs to consider that First Nations cultures can have different perceptions of home ownership compared to non-Indigenous Australians. First Nations peoples may live on communal-title lands. Communal title lands are jointly held in a trust to the broader "community". These are more common in remote areas, but also exist within the boundaries of several regional towns and metropolitan cities in Australia (Memmott et al. 2009). This will reduce home ownership rates (and lower net wealth) for First Nations people – however, not to the extent of the difference observed. Research has shown (Memmott et. al., 2009):

- First Nations peoples value the social benefits of home ownership, in particular the ability to pass a house down in the family, although they are less attracted to the economic benefits of home ownership; and

- attitudes towards home ownership did not differ according to whether people lived on Indigenous communal title land or other rental housing.

Education and regionality

As an example of the impacts on aggregation, the recent Report on Government Services (RoGS) – School Education (Productivity Commission, 2024) includes data on attendance rates by jurisdiction, remoteness, Indigenous status and school level. While this breakdown is available and shows clear trends in attendance rates by remoteness, it is the aggregate figures that are picked up and reported.[9] The RoGS itself highlights an average attendance rate for years 1–6 in New South Wales (NSW) of 85.7% for First Nations children compared to 91.4% for non-Indigenous children. The figure below shows a comparison for government schools and by remoteness. The disaggregation shows far larger gaps for remote and very remote locations. Further disaggregation may well reveal more specific communities with poor attendance rates.

Figure 2 – 2023 attendance rates for years 1–6 for government schools in NSW
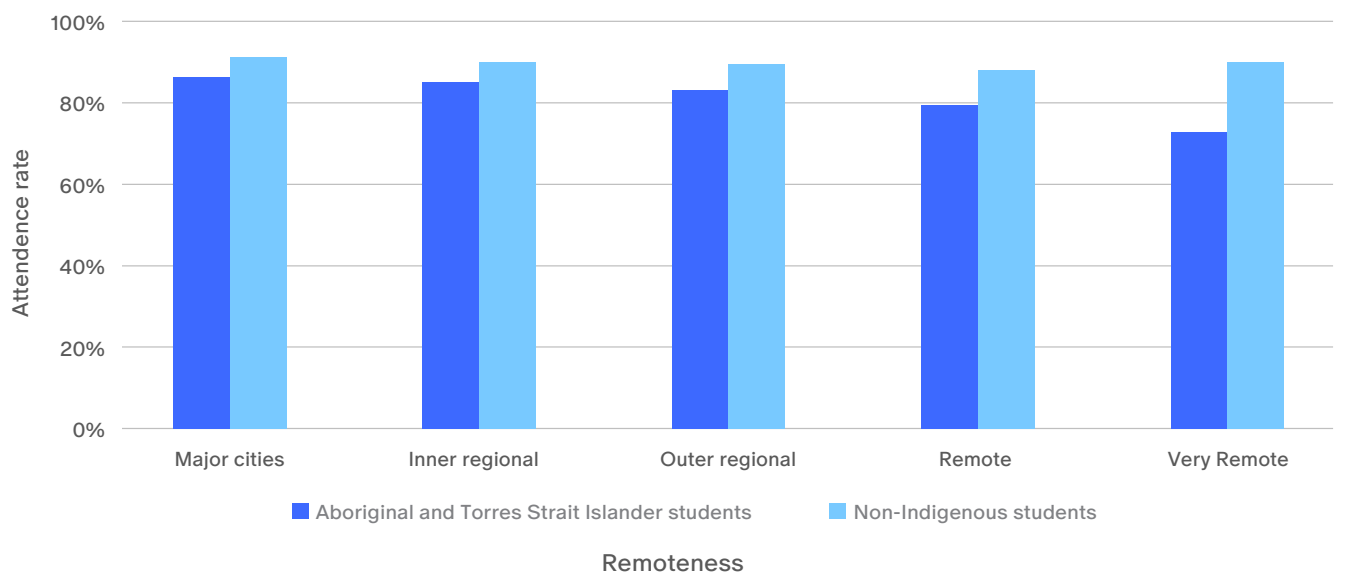
Source: Report on Government Services 2024. Part B, Section 4: Released on 5 February 2024

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9   For example: https://amp.theguardian.com/australia-news/2024/feb/06/productivity-report-education-latest-drop-outs-school-refusal-funding-public-school-private-school

Areas requiring more, or continued, attention

Discussions with the reference group and other stakeholders in writing this report raised other areas where good data was lacking:

- **Broader justice outcomes:** While incarceration rates for First Nations people have highest prominence, there is a need to understand all steps of the justice process, including the intensity of policing, police interactions, time incarcerated before sentence, and bail outcomes. These, and related components, are part of the Closing the Gap supporting indicator set but are not well-populated.

- **First Nations and Defence:** Census data suggest 4% of the Australian Defence Force regular service are First Nations, slightly above the adult population percentage. However, there is relatively less attention about cultural safety and issues faced by First Nations soldiers and veterans. For example, the Royal Commission into Defence and Veterans Suicide has collected some qualitative evidence regarding particular risks faced by First Nations people, but the number of deaths by suicide for Indigenous soldiers and veterans is unknown, or unreported (Varker et al., 2023).

4. Areas of Progress and the Future

In this section, we explore:

- a selection of examples of Indigenous Data Sovereignty in practice;
- the rising role of Aboriginal Community-Controlled Organisations (ACCOs); and
- better management of systems to support Indigenous Data Sovereignty and concepts of wellbeing.

4.1   How Indigenous Data Sovereignty Can Work

The Yoorrook Justice Commission

Victoria's Yoorrook Justice Commission is the first formal truth-telling process into injustices experienced by First Peoples. It will examine experiences of First Nations peoples in Victoria in all areas of life since colonisation. The stated purpose is to:

- Establish an official record of the impact of colonisation on First Peoples in Victoria.
- Develop a shared understanding among all Victorians of the impact of colonisation, as well as the diversity, strength and resilience of First Peoples' cultures.
- Make recommendations for healing, system reform and practical changes to laws, policy and education, as well as to matters to be included in future treaties.[10]

This is also the first inquiry, royal commission or truth-telling process to apply Indigenous Data Sovereignty principles to the collection, handling, storage and use of information (Yoorrook Justice Commission, 2022). The Indigenous Data Sovereignty and Data Governance plan:

- defines relevant sources of information to which it applies, both new and existing;
- specifies how the information will be attributed, for groups, individuals and other sources;
- outlines the data governance for both use and publication, and future access and use by third parties;
  - For individuals and groups, free, prior, and informed consent and preferences are to be sought. There are three confidentiality options for use and publication: full, partial and no confidentiality. There are also four options for future use: not accessible, limited access, restricted access, and fully accessible.
  - For other sources, attribution will first be sought, but if this is not possible, there is a First Peoples Data Governance Committee to provide advice.
- specifies the method for identifying sensitive data; and
- specifies the handling and storage of all data.

Footprints in Time: The Longitudinal Study of Indigenous Children

The Longitudinal Study of Indigenous Children, funded by the Australian Government, is led by an Indigenous majority Steering Committee, and managed by the Department of Social Services. It is one of the largest longitudinal studies of Indigenous people worldwide (Department of Social Services, 2022). It provides a good example of changes from past practices with the Indigenous majority Steering Committee providing a critical role in ensuring the data collected meets First Nations peoples' needs. Based on discussions with the Steering Committee (Indigenous Data Sovereignty Symposium, 2018a):

- the initial study aims were changed to focus on what Aboriginal communities wanted to know to help their children grow up strong (rather than focus on what the Government wants to know);
- the 18-month timeline for consultation was significantly extended (to three years) to allow time to ensure communities were invested in the study; and
- every year, feedback is provided back to communities at the community level.

The survey is now on its thirteenth annual wave and, prior to impacts of COVID-19, had a response rate of close to 80% and retention rate above 70%. The high rates likely reflect the care taken in designing the survey.

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10 https://yoorrookjusticecommission.org.au/about/

The Mayi Kuwayu Study

The Mayi Kuwayu Study provides an example of Indigenous Data Sovereignty in practice. This is a new national Aboriginal and Torres Strait Islander longitudinal study. The aim of the study is to develop national-level cultural indicators and examine how culture interacts with health and wellbeing.[11]

The study is carefully designed to adhere to Indigenous Data Sovereignty. This has included (Lovett R. et al., 2018):

- ensuring Aboriginal and Torres Strait Islander leadership and management from the outset;

- development of new data items that represent cultural expression and practice. These were developed through focus groups with a diverse range of Aboriginal and Torres Strait islander groups across Australia, seeking their priorities for measurement and suggestions on cultural appropriateness of questions and methods;

- data collection and ownership of the dataset being shared between the research institute and participants under an institutional policy; and

- development of protocols for data storage, access, analysis and dissemination.

Bourke (Maranguka) Justice Reinvestment

Bourke is a small town in north-west NSW. Maranguka is the earliest Aboriginal-led place-based model of justice reinvestment in Australia.[12] This approach reinvests resources away from the criminal justice system to community-led, place-based initiatives that address the drivers of crime and incarceration. The approach has been associated with reductions in driving offences, violent reoffending and increased education engagement for young people (Indigenous Data Sovereignty Symposium, 2018b).

Indigenous Data Sovereignty is an important component. To enact this, Maranguka have developed a performance framework and platform to build a shared understanding of how change is happening. A dashboard is used to publish data back to community. The data-informed approach is allowing effective mapping of supply and demand of services, changes where needed, and self-determination (Indigenous Data Sovereignty Symposium, 2018b). The Bourke Tribal Council governs the data, however the data itself is owned by Aboriginal peoples, whose life experience it reflects.[13]

The platform now has data coming from 15 different sources including government health, justice and welfare sources as well as local schools and organisations. This data has been put to good use (Sier, 2021, December 17):

- Identifying violent behaviour in schools was increasing in line with family violence reoffending. Working groups then identified this was because suspended teenagers were often sent straight back home into a difficult environment. This led to a Bourke-wide decision to require suspended children to conduct their suspension at school so they were not influenced by violence in the home.

- Showing that school attendance rates and engagement programs reduce offending. Working groups then worked to connect schools, police and community leaders to boost the number of in-school programs. The number of supervised school holiday programs then increased.

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11 https://mkstudy.com.au/
12 https://www.justreinvest.org.au/community/bourke-maranguka/
13 https://maranguka.org.au/data-sovereignty/

Alternative Indigenous Court Pathways

Alternative sentencing courts exist in most jurisdictions, in various forms. The Nunga Court in South Australia is the earliest example, established in 1999. Murri Courts in Queensland have run from 2002 (although were disestablished between 2012 and 2016). Aboriginal Community Court operated in Western Australian between 2006 and 2015. Koori Courts have been established at various locations in Victoria from 2005 (now available for children and adults) and in NSW since 2015 (for children). They are an alternative court system that First Nations people can elect to be transferred to, and place greater emphasis on cultural context, involvement of Elders and Respected Persons, and use of ongoing support plans. The experience of users of the system has generally been favourable, leading to greater respect for the legal system and improved relations with First Nations communities. Outcomes related to imprisonment and recidivism have been mixed. Some studies have found associations with lower rates of imprisonment and recidivism (Ooi & Rahman, 2022), whereas lack of impact were reasons cited for disestablishment in Western Australia and Queensland.

Ngaramanala and the Pathways of Care Longitudinal Study

Ngaramanala[14] is an Aboriginal Knowledge Program within NSW Department of Communities and Justice (DCJ). Key aims are to improve the collection, use and governance of data that impacts Aboriginal peoples within DCJ. This is supported by the NSW Data Strategy,[15] which promotes the implementation of Indigenous Data Sovereignty and Governance.

One application of Ngaramanala's work is the support of the Pathways of Care Longitudinal Study (POCLS). POCLS is a large longitudinal study following the experiences of children and young people in out-of-home care, funded and led by the NSW DCJ (NSW Department of Communities and Justice, n.d.). The study matches administrative records to first-hand accounts from children, caregivers, caseworkers and teachers.

In addition to reviewing data collection instruments, Ngaramanala has provided guidance on the ways in which results and insights should be drawn from the data in a culturally appropriate way that retains appropriate context. The program has also seen good collaboration between community leadership and government, as documented in Riboldi (2021). The POCLS has a close relationship to policy, with numerous Evidence to Action notes[16] released which show the ties between the study and policy.

> **Data is better in mediated outcomes – e.g., Aboriginal led family mediation for children, Koori courts – rather than in mainstream courts where the court and state controls the data.**
>
> Thalia Anthony, University of Sydney

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14 *Ngaramanala* is a Gadigal word that means "let's listen, think, collect, and gather Indigenous Knowledge."
15 https://data.nsw.gov.au/nsw-government-data-strategy
16 https://dcj.nsw.gov.au/about-us/facsiar/pathways-of-care-longitudinal-study.html

4.2   The Growing Role of Aboriginal Community-Controlled Organisations (ACCOs)

The second priority reform under Closing the Gap is strengthening the community-controlled sector, such as Aboriginal Community-Controlled Organisations (ACCOs).[17]

ACCOs are organisations delivering services that build the strength and empowerment of Aboriginal and Torres Strait Islander communities and people. They are (Productivity Commission, 2023):

- incorporated under relevant legislation and not-for-profit;
- controlled and operated by Aboriginal and/or Torres Strait Islander people;
- connected to the community, or communities, in which they deliver the services; and
- governed by a majority Aboriginal and/or Torres Strait Islander governing body.

The purpose of ACCOs is to design and deliver high quality, holistic and culturally safe services. This enables self-determination and reflects examples of outcomes for communities greatly improving when service delivery was both designed and controlled by ACCOs (Productivity Commission, 2023).

In reporting on the Aboriginal and Torres Strait Islander Health Performance, it is noted that improving health outcomes for First Nations Australians requires improvements in the health system (AIHW, 2023). This includes developing culturally competent service delivery and the need to partner with and share decision-making with First Nations peoples in the design of services and programs that affect them. This means ACCOs are likely to provide an increasingly key role in the future. The role of ACCOs in the health system includes (SNAICC, 2022):

- offering comprehensive care, with integrated and holistic services including primary health, social and emotional wellbeing, housing, aged care, disability, outreach, and children and family services;
- contributing to making the whole service system more culturally safe and accessible for First Nations people; and
- advocating for their communities and performing essential functions in pushing for policy reform.

The recent review of the National Reforms notes that current actions are not supporting ACCOs to thrive. Further changes are needed; particularly recognition of the knowledge and expertise ACCOs bring in developing services as well as changes to the approach to funding contracts to better support ACCOs (Productivity Commission, 2024a).

Despite challenges in quantification, we believe there have been significant efforts to promote and grow the role of ACCOs. Submissions to the 2024 Productivity Commission Review suggest a significant amount of funding has been shifted to ACCOs, despite issues associated with the pace and nature of change. Some ACCOs have seen rapid growth; for example, the Victorian Aboriginal Child and Community Agency has seen funding almost triple in the five years to 2023 (Victorian Aboriginal Child and Community Agency, n.d.) as the Victorian Government has relied more heavily on ACCOs to deliver child protection and other services in different First Nations communities. The Disability Royal Commission also points to a large future role for First Nations Community-Controlled Organisations in the effective support of First Nations people with disability. Still, some stakeholders have noted that the pace of growth has been too slow, with governments reluctant to shift funding out of existing services to support ACCOs.

Comprehensive data collections to understand the number and size of ACCOs would be valuable to better track the growth of the sector, consistent with the Priority Reform. There is also value in supporting ACCOs to collect data and use data in meaningful ways, particularly demonstrating the value of their activities.

More generally, initiatives such as Supply Nation have made it easier to support Indigenous businesses across a broad range of sectors and locations.

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17   Here we include Aboriginal Community-Controlled Health Organisations (ACCHOs) as ACCOs

> **Case Study – Together Home Program**
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> The Together Home Program is a large investment by the NSW Government which aims to support over 1,000 people sleeping rough into stable accommodation, linked to wraparound support. The Together Home Program uses Housing First principles.[18]
>
> With a third of clients being Aboriginal, the need to provide culturally tailored support is key. This was recognised as a significant gap early in the implementation of the Together Home Program. Contracting was primarily through Community Housing Providers in a particular program which had no Aboriginal housing providers. This gap led to the introduction of the Aboriginal-led model, in which an ACCO, Yerin Eleanor Duncan Aboriginal Health Services (Yerin), was directly contracted to provide services alongside a non-Aboriginal community housing provider in the Central Coast region (Brackertz et al., 2023).
>
> In the interim evaluation of the Together Home Program, it was noted that positioning the ACCO as the lead had dual benefits for both (Brackertz et al. 2023):
>
> - prioritising a culturally safe operational framework; and
>
> - building the capacity of the ACCO – as lead, Yerin felt enabled to self-determine ways of operating that best fit their model and organisation.

4.3 The Indigenous Business Sector

The Indigenous business sector is also growing; for example, the average annual growth in First Nations sole traders was 11.3% over the ten years to 2022 (Evans M. et al., 2024). Indigenous businesses are well placed to develop and deliver culturally sensitive services, and potentially provide a more culturally supportive working environment. Further, they empower First Nations people, their families and communities to develop economic independence. The Australian Government recognised their importance in the Indigenous Business Sector Strategy 2018–2028[19] which invested in supporting First Nations people to build sustainable businesses.

The Indigenous business sector is substantial. It is estimated that Indigenous businesses and corporations generated $16.1 billion in revenue in 2021–22 (comparable to the size of the timber industry) and provided jobs for 116,795 employees (Evans et al., 2024).

> **Case Study – Indigenous Economic Power Project**
>
> Starting in 2018, researchers from the Indigenous Business Research Group at the University of Melbourne (now Dilin Duwa)[20] worked to develop an annual snapshot of the Australian Indigenous Business sector. They worked to bring together disparate lists of Indigenous businesses to support informing the business sector ecosystem and enabling measurement of the value of the sector and impact of sector support (Evans et al., 2021).
>
> Their most recent report on Indigenous businesses and corporations provides statistics for:
>
> - businesses that appear on five different Indigenous business registries;
>
> - corporations on the Office of the Registrar of Indigenous Corporations; and
>
> - unregistered sole traders and partnerships with at least 50 per cent self-identified Indigenous ownership, the data for which comes from linked administrative sources (Evans et al., 2024).
>
> The group is working in collaboration with partners to build a national longitudinal Indigenous business and economic dataset. This is an example of a significant effort to develop Indigenous data resources requiring input from numerous custodians. They state the dataset will be used to produce research to inform policy, decision makers, and Indigenous businesses and corporations endeavouring to grow the visibility of their contribution to the Australian economy.

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18 This means people are given access to permanent accommodation as well as wraparound support, which is functionally separate.
    This means the accommodation and support are not contingent on one another. The full principals are described by Homelessness Australia:
    https://homelessnessaustralia.org.au/wp-content/uploads/2022/07/Housing-First-Principles.pdf
19 https://www.niaa.gov.au/resource-centre/indigenous-business-sector-strategy
20 https://dilinduwa.com.au/about

4.4   Championing Indigenous-Led Research

Indigenous peoples are one of, if not the, most studied peoples in the world – although this has not translated into better outcomes.[21] There is growing acceptance that much of this work is best done by empowered First Nations researchers, both at research institutions and Aboriginal-owned businesses. This aligns better with principles of self-determination under the UNDRIP.

Indigenous Data Sovereignty principles apply here, too, although not without some complications:

- Most projects involving First Nations communities, as part of ethics requirements, would generally require the involvement Indigenous researchers or other Indigenous reference group consultation. Increasingly, there is a desire to see such projects led by First Nations researchers.

- Even if Aboriginal researchers are involved in a research project, there are broader questions around how empowered Aboriginal researchers are to set research agenda (compared to university and research council priorities), ensuring topics are of most benefit to community.

- However, there remains a significant gap between the number of First Nations researchers and amount of funded research. The shortage means that First Nations researchers are often overburdened with requests for support on projects. Continued usage of non-Indigenous researchers also creates the heightened risk of falling short on Indigenous Data Governance and Sovereignty principles.

The current state means there is effort needed to:

- continue building First Nations capacity among universities, research councils, businesses and government to encourage Indigenous researchers;

- ensure that communities being studied benefit from the research (e.g., by retaining rights to intellectual property generated from the work); and

- ensure that non-Indigenous researchers are held to high standards when undertaking First Nations research. There is a growing body of knowledge on how to undertake culturally appropriate First Nations research. See, for instance, Williams (2018) and AIATSIS (2011, 2013).

4.5   Better Management of Systems to Support Indigenous Data Sovereignty and Concepts of Wellbeing

There are plenty of instances of large gaps between current practices and the positive examples of Indigenous Data Sovereignty above. Some common themes on how we need to better manage current systems and approaches are (see also Ring and Griffiths, 2021):

- **Access and control of community level data.** First Nations communities need data which is relevant to the local community and not aggregated to the state or national level. This is important to support shared decision making.

- **Culturally robust measures of wellbeing.** This is critical to being able to identify what is working, not working and to improve wellbeing. While there are efforts to create standard measures, none of these have reached systematic reporting.

- **Socially contextualised data.** Reporting on data which recognises the social context and does not just focus on gaps. This includes effort to collect new information that aligns with First Nations peoples' priorities.

- **Address power imbalances.** The current dynamic sees government as the primary custodian of data, as well as with full authority over funding. This leads to a significant power imbalance, however these can be addressed through governance changes. The Productivity Commission (2024a) notes a number of ways funding and contracting arrangements can be changed for ACCOs that both enable greater certainty over funding and more ability to draw on ACCO expertise in how those resources should be spent.

- **Continued engagement with First Nations peoples.** There is clear engagement fatigue that has been heighted by the 2023 referendum result. However, Australia's history shows that implementing policies with limited engagement have not yielded the desired improvements for First Nations peoples. Genuine engagement, backed by appropriate enabling of self-determination, must continue.

FAIR and CARE principles

The FAIR and CARE principles are helpful for thinking about improved Indigenous Data Governance and Sovereignty. The FAIR principles provide general guidelines on managing data. These state data should be:

- Findable: Metadata and data should be easy to find for both humans and computers.

- Accessible: Given data exists, metadata should be freely available, and data should be straightforward to access, following appropriate authentication and authorisation.

- Interoperable: The data usually need to be integrated with other data. In addition, the data need to interoperate with applications or workflows for analysis, storage, and processing.

- Reusable: The ultimate goal of FAIR is to optimise the reuse of data. To achieve this, metadata and data should be well-described so that they can be replicated and/or combined in different settings.[22]

The CARE principles have been developed by the Global Indigenous Data Alliance to complement the FAIR principles and support Indigenous data sovereignty. These are:

- 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.

- 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.

- Ethics: Indigenous peoples' rights and wellbeing should be the primary concern at all stages of the data life cycle and across the data ecosystem.[23]

Figure 3 – *FAIR and CARE principles*

Source: Global Indigenous Data Alliance (n.d.)[24]

As climate change, environmental and, more broadly, sustainability concerns have risen over the past 20 years, there has been a rapid increase in interest in applying Indigenous knowledges to environmental science applications. While this is largely welcomed, there are risks in sharing valuable Indigenous knowledge, particularly unintended consequences of Indigenous knowledge theft (Williamson et al, 2023). Williamson et al. (2023) provide three practical steps for partnerships between Indigenous groups and research or government organisations to protect against such risks:

- provide educational opportunities to Indigenous groups so as to be aware of their inherent data rights and mechanisms to protect their environmental data;

- formally endorse the CARE Principles for Indigenous Data Governance; and

- have clear data agreements.

4.6   Final Comments

22 https://www.go-fair.org/fair-principles/
23 https://www.gida-global.org/care
24 https://www.gida-global.org/care

There has been much thinking on the best way to progress reconciliation. Community members identified the Uluru Statement from the Heart remains an important statement on where First Nations people are up to and what they seek. Government and non-government organisations can be guided by this.

First Nations peoples in Australia have retained their knowledge and wisdom for tens of thousands of years. By championing Indigenous Data Sovereignty principles, we can ensure that this knowledge is available for use in community and stored for future generations. Following these principles will also help promote connection to culture in all its richness.

Progressing better First Nations data requires a collaborative and respectful relationship with governments. This work is not easy, or fast, but it is already underway.

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