Australian Government

Department of Infrastructure, Transport, Regional Development, Communications and the Arts

Data Strategy
2025–29

Smart data use informs
good decisions

March 2025

Acknowledgment of Country

We acknowledge the Traditional Custodians of the lands where we work and live. From the desert to the high Country, connecting to our beaches and sand, through the snow, the rivers and saltwaters, in our cities, the bush and islands, we reflect, respect, and celebrate the unique and diverse communities we serve. We walk with Aboriginal and Torres Strait Islander peoples, celebrating the oldest continuing living cultures in the world — listening, learning, and yarning, to understand the past and work as one towards an inclusive future. We pay our respects to all Elders past and present. We are committed to creating positive change and promoting meaningful reconciliation.

Connections by Mahalia Mabo, a proud Manbarra, Nywaigi, and Meriam woman.

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Contents

Our Data Strategy

The Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the department) is excited to present the Data Strategy 2025–29 (Strategy) – the result of extensive collaboration and consultation.

The Strategy outlines our commitment to increasing data capability to improve the way we work across our diverse department. Over the next 5 years, our Strategy will guide investment into increasing the department's data maturity and the value of its data assets. This includes continuing to develop and support our data users and communities.

Our people will be empowered to cultivate a collaborative culture that values data, promotes ethical data practices and encourages use of innovative methods to solve complex problems. Our relationships will be enhanced, improving our access to suitable data. Data will guide and add value to advice, decision making and delivery of our policies, programs and services.

The Strategy builds on the Data Strategy 2021–24 and is informed by whole-of-government and departmental initiatives. These include the department's 2023 Agency Action Plan: Capability Review Response[1] and the 2024 Data Maturity Assessment. It is shaped by insights and expertise captured during consultation activities with staff across the department. Consultation also included discussions with data leaders in Commonwealth, state and territory agencies. This engagement strengthened our relationships and enabled broader consideration of key issues, opportunities for improvement and lessons learnt.

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1   Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA), Agency Action Plan: Capability Review Response, DITRDCA, Australian Government, 2023, accessed 11 October 2024.
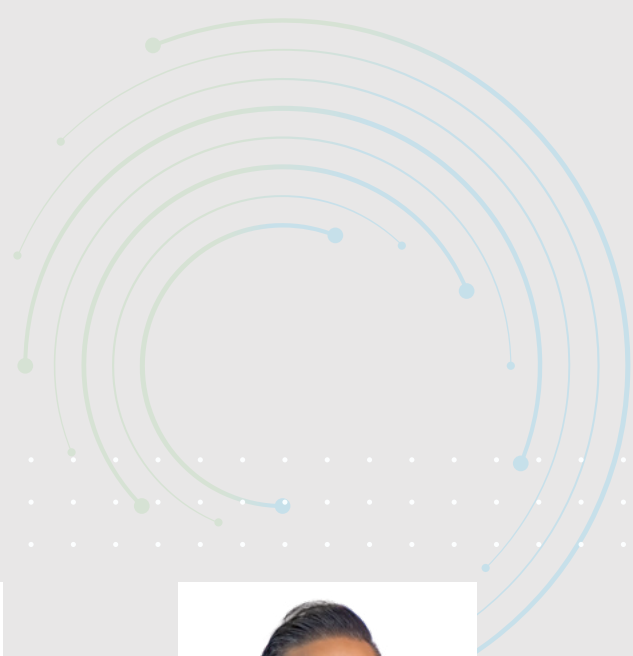
Maree Bridger

Ian Porter

Andreas Bleich

The Strategy facilitates successful delivery of other departmental initiatives such as the Capability Priorities Program and the Research Strategy. It aligns with work taking place across the Commonwealth under the government's Data and Digital Government Strategy to 2030.[2] This includes implementation of the Framework for Governance of Indigenous Data,[3] enabling delivery of Closing the Gap[4] and Reconciliation Action Plan[5] responsibilities.

We are keen to ensure the Strategy delivers tangible outcomes that have real impact. Changes sought are grouped under 4 themes: People, Technology, Data, and Process. Outcomes are described rather than actions, as effectiveness of specific initiatives – especially technology ones – change over time. The Strategy is accompanied by a one-year rolling action plan over the 5 years to allow the department to pivot as systems, tools and practices evolve.

As Strategy implementation progresses, we will evaluate and assess our approach to ensure it remains effective and aligned to our objectives. We will continue to engage and make authentic connection with stakeholders to successfully achieve our shared ambitions.

Maree Bridger
Chief Operating Officer

Ian Porter
Chief Data Officer and First Assistant Secretary, Data, Research, Strategy and Net Zero Division

Andreas Bleich
Data Champion and Assistant Secretary, Data, Systems and Information Management Branch

2   Australian Government, Data and Digital Government Strategy: the data and digital vision for a world-class APS to 2030, Australian Government, 2023, accessed 11 October 2024.

3   National Indigenous Australians Agency (NIAA), Framework for Governance of Indigenous Data: practical guidance for the Australian Public Service, NIAA, Australian Government, 2024, accessed 11 October 2024.

4   Australian Government, Closing the Gap, Closing the Gap website, n.d., accessed 11 October 2024.

5   Reconciliation Australia, Reconciliation Action Plans, Reconciliation Australia website, n.d., accessed 11 October 2024.

How the Strategy relates to the department's other frameworks and plans for capability uplift and Australian Government data initiatives.

Australian Government data initiatives

Data and Digital Government Strategy	Closing the Gap (National Agreement)
	Framework for Governance of Indigenous Data

Diversity and Inclusion Strategy

Our Stories on Country Agreement

Strategic Workforce Plan

Research Strategy

Technology Strategy

Learning and Development Strategy

Data Strategy

Evaluation Strategy

Corporate Group Strategy

Data Strategy Action Plan

Data Governance Framework

Departmental capability uplift

Review → Response → Action Plan

Department of Infrastructure, Transport, Regional Development, Communications and the Arts

What is data?

For the purposes of the Strategy, data is defined as:

> ... any information in a form capable of being communicated, analysed or processed (whether by an individual or by computer or other automated means)

and

> Public sector data is data lawfully collected, created or held by or on behalf of a Commonwealth body ...[6]

Indigenous data refers to information or knowledge, in any format or medium, which is about and may affect Indigenous peoples both collectively and individually.[7]

Decisions made using Indigenous data should be managed and shared with due consideration to cultural, legal and ethical impacts.

This Strategy applies to all data managed by the department. This includes, but is not limited to:

- program, policy, project and service delivery data – our diverse datasets cover topics from infrastructure, freight, aviation and motor vehicles to media classifications, library lending rights and household wealth

- corporate services data for internal use – for example, data to support human resources, finance, property management and implementation of audit recommendations; data collected, stored and managed about the diversity of our employees and to increase representation and involvement in our workforce[8]

- data collected through regulatory functions

- third-party data provided to the department

- geospatial data – presented as static and interactive maps, location or geo-statistical analysis. Examples are:

  - the Local Drone Rules Map that uses Collaborative Australian Protected Areas terrestrial and marine datasets

  - the Experimental Estimates of Gross Regional Product tool that uses gross regional product and Statistical Area Level 4 datasets.

Diversity groups

Cultural and Linguistic Diversity | Disability, Neurodiversity and Allies | Gender Equality | Pride and Allies | First Nations | Mental Health and Wellbeing

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6   Defined in the *Data Availability and Transparency Act 2022* (Cth).
7   Defined by Maiam nayri Wingara, the Aboriginal and Torres Strait Islander Data Sovereignty Collective, in 2018.
8   Diversity groups: Cultural and Linguistic Diversity, Disability, Neurodiversity and Allies, Gender Equality, Pride and Allies, First Nations, Mental Health and Wellbeing.

Purpose

The purpose of this Strategy is to ensure the department has a comprehensive, long-term plan of action for a key strategic asset – data. It shines a spotlight on data, highlighting the role of data as a fundamental business enabler. The Strategy outlines what needs to be done to ensure the right data is available and that the data can be trusted and used effectively in delivering Australian Government objectives.

The Strategy guides design and implementation of departmental data initiatives, promoting collaboration between the department's business areas and partnerships with key stakeholders. It is vital to building and maintaining a good data culture while enabling us to work efficiently to improve the way we collect, manage and use data. The Strategy supports the department in committing to making sound, ethical and efficient investments in skills uplift, fit-for-purpose data systems, tools and processes.

Vision

Smart data use informs good decisions

The Strategy highlights the importance of being smart in our use of data to inform the decisions taken every day by our staff and stakeholders to deliver the department's objectives. This smart data use is across the 'data life cycle'. It involves:

- enabling our staff – ensuring they understand their role and responsibilities from data creation/collection through to use in decision making; building awareness of the platforms, tools and processes available to support data work; and providing data training, help with data issues, opportunities for collaboration and learning on the job

- being ethical and transparent in our collection, management and use of data, and conscious of the needs of diverse departmental and stakeholder groups

- using a smart approach to data access and sharing, ensuring security and privacy while enabling people to easily access and appropriately share the data they need to do their job

- making well-informed choices regarding the processes, systems, methods and tools we use for data collection, processing, management, analysis, sharing, reporting, archiving and disposal

- looking for opportunities to innovate, while applying sound judgement in assessing risks and benefits.

The Strategy supports the department's vision and purpose:[9]

- Departmental purpose – we work with our partners to enable connected, productive, safe, sustainable and culturally vibrant communities in our cities, regions and territories to improve the lives of Australians.

- Departmental vision – our strategic objectives are to serve the government of the day, with a focus on improving the lives and opportunities of the Australian community by:
  - connecting Australians
  - enriching communities
  - empowering regions.

Departmental vision

Connecting Australians + Enriching communities + Empowering regions

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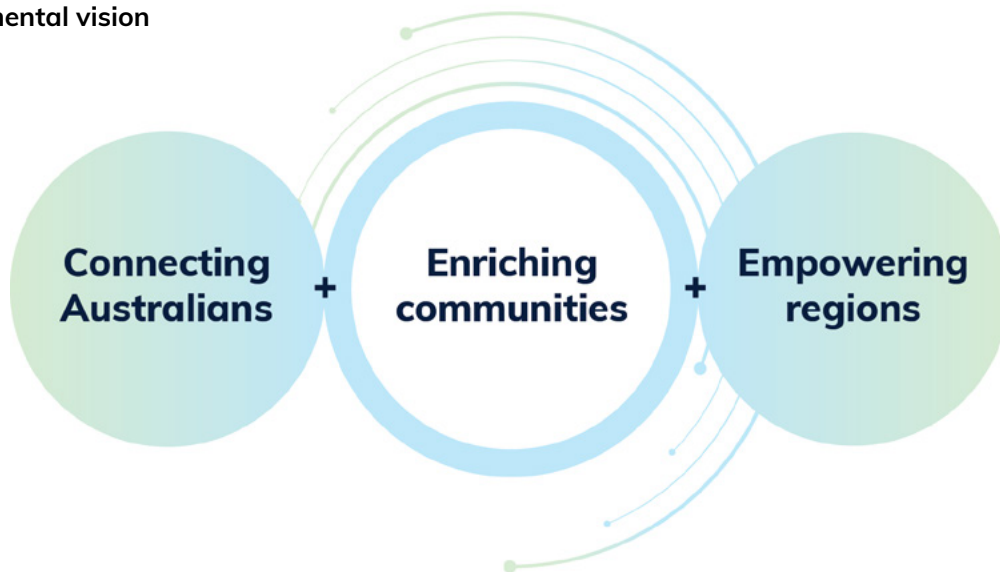
9   Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA), Corporate Plan 2024–25, DITRDCA, Australian Government, 2024, accessed 11 October 2024.

Principles

Principles supporting the Strategy's vision are described through FAIR[10] and CARE.[11]

FAIR – Data is **F**indable, **A**ccessible, **I**nteroperable and **R**eusable, making it easier to share data in a way that will enable maximum use and reuse.

CARE – **C**ollective benefits, **A**uthority to control, **R**esponsibility and **E**thics. These principles are people- and purpose-oriented, reflecting the crucial role of data in advancing Indigenous innovation and self-determination.

FAIR and CARE principles

F Findable	**A** Accessible	**I** Interoperable	**R** Reusable
C Collective benefit	**A** Authority to control	**R** Responsibility	**E** Ethics

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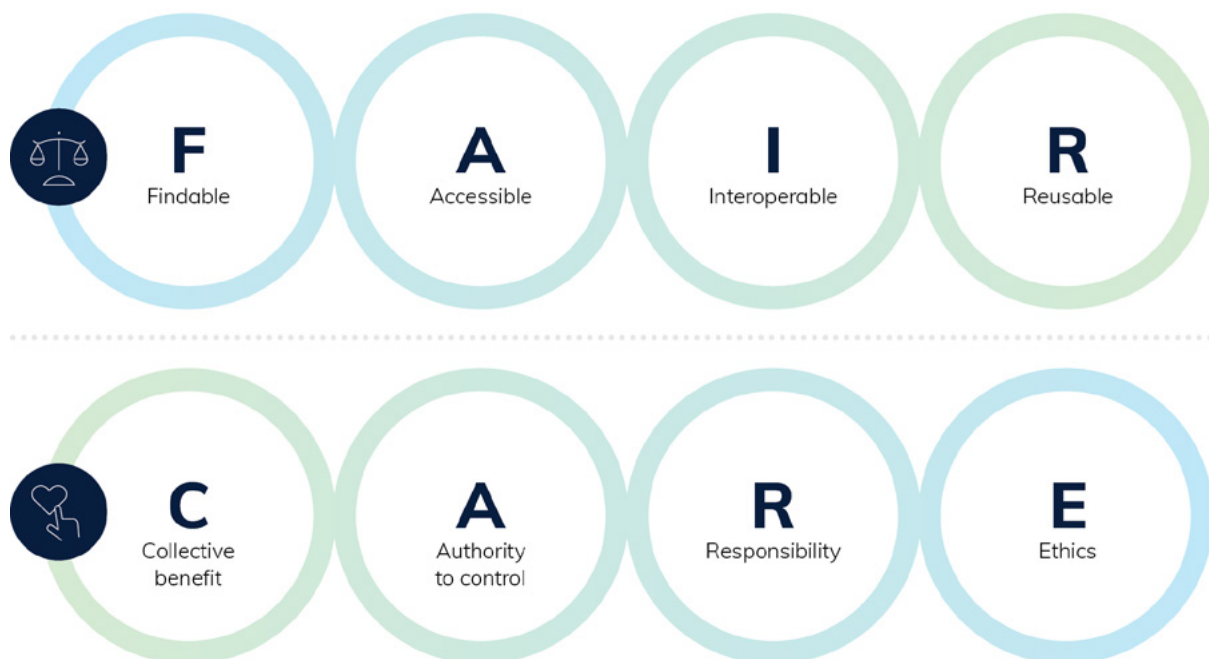
10   Defined by Mark D Wilkinson et al., 'The FAIR Guiding Principles for scientific data management and stewardship', *Scientific Data*, 2016, 3:160018, doi: 10.1038/sdata/2016.18.

11   Defined at the Indigenous Data Sovereignty Principles for the Governance of Indigenous Data Workshop, Gaborone, Botswana, 8 November 2018.

Shared ambition and objectives

Our shared ambition for the Strategy is to increase confidence, maturity and productivity in the use of data – to drive innovation and evidence-based policy and programs.

The Strategy aims to enable the department to be confident and 'data-rich', where decisions are informed by intelligent use of good quality data, best-practice methodology and up-to-date systems. The focus is to build trust and partner with key stakeholders to manage data as a fundamental business asset that is secure, accessible, interoperable and reusable.
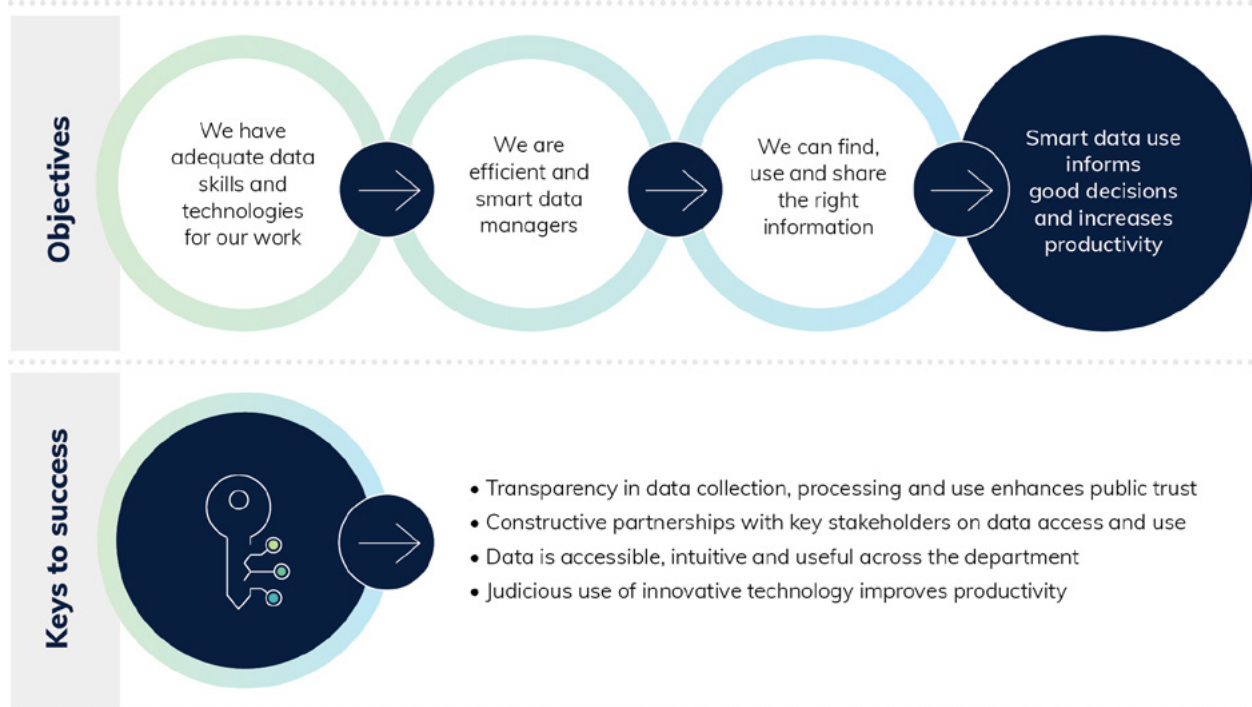
Staff will be encouraged to engage in regular conversations with stakeholders to understand diverse views that complement legislation and policy in guiding appropriate data use. The Strategy aims to remove duplication of data work, storage and effort. Staff will be equipped with the skills, capability, methods and technologies to be smart data users, with confidence to innovate and productively generate insights to inform good decisions.

Objectives and keys to success

Objectives

- We have adequate data skills and technologies for our work
- We are efficient and smart data managers
- We can find, use and share the right information
- Smart data use informs good decisions and increases productivity

Keys to success

- Transparency in data collection, processing and use enhances public trust
- Constructive partnerships with key stakeholders on data access and use
- Data is accessible, intuitive and useful across the department
- Judicious use of innovative technology improves productivity

Our objectives are co-dependent:

- Staff with adequate data skills and technologies can be efficient data users and managers.
- The combination of skills and well-managed data enables people to find, use and share the right information quickly and effectively.
- This smart data use provides quality evidence to support good decisions and increases productivity.

Our keys to success:

- **Transparency in data collection, processing and use** is fundamental to enabling diverse stakeholders to trust the department to use data appropriately. It also enables business areas within the department to work more productively. This key underpins all others. When stakeholders are kept informed and understand how their data is to be managed and used, they can be more confident in allowing the department to access their data. Efficient data management requires use of clear, documented standards, methods and access requirements to ensure data quality, security and privacy. Transparency allows staff to be confident in knowing what data can be shared, and efficiency is increased in providing access. It is also easier to judge the appropriateness of new technologies when data processing requirements are clear.

- **Constructive partnerships with key stakeholders**, such as First Nations representatives, states and territories and academia, enable us to manage data and outputs appropriately and continue to build trust. Through engagement, staff gain access to data and learn how to use it appropriately with due consideration of cultural, legal and ethical impacts.

- **Data is accessible, intuitive and useful and is easily discovered and shared efficiently**.

- **The department has up-to-date technologies** enabling staff to safely, ethically and more efficiently process information and develop insights. When applied suitably using data of required quality, innovation is a key enabler of productivity gains.
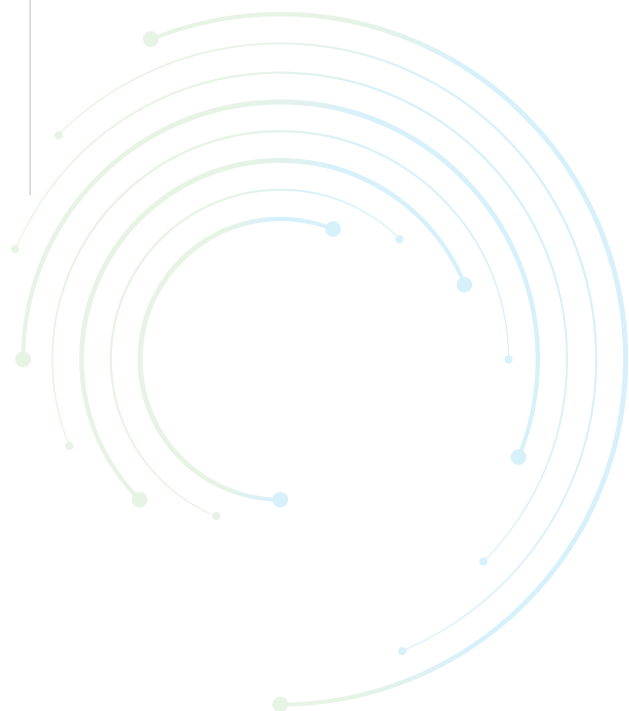
Impact

The Strategy aims to deliver a set of defined outcomes to realise our shared vision and objectives. Outcomes are grouped under the themes of People, Technology, Data, and Process.

Outcomes represent changes as a result of implementing the Strategy – they have a real and measurable impact on the department and can be benchmarked. The focus of the Strategy is on continuous improvement, building on what has been achieved. The Strategy is dynamic to adapt to evolving circumstances to incorporate new trends and insights.

People

Impact – Smart data use culture.

Outcomes

- Short term: Staff know what data training to do and how to access guidance, and are building their data skills.
- Medium term: Staff are accessing assistance with data activities, empowering them to use data with confidence.
- Long term: There is a culture of transparency, trust, collaboration and curiosity around data.

Technology

Impact – Strengthened data intelligence.

Outcomes

- Short term: Staff can easily access suitable data storage, discovery, access and management solutions.
- Medium term: Staff are efficiently generating intelligence from data using enterprise tools.
- Long term: Modern systems and technologies streamline data sharing and reuse.

Data

Impact – Value of data assets is maximised.

Outcomes

- Short term: Staff can easily discover data, and information on its quality, lineage and methodology.
- Medium term: Data is trusted, reused and appropriately shared by staff.
- Long term: Data costs are reduced.

Process

Impact – Data is managed as a key business asset.

Outcomes

- Short term: A consistent departmental framework is implemented to govern data.
- Medium term: Critical data functions are supported for staff.
- Long term: Data is managed consistently across the department.

Outcome themes

People
Culture
Values
Skills and training

Technology
Platforms
Services
Tools

Data
Master and reference data
Metadata
Asset registers

Process
Policy
Governance
Operations
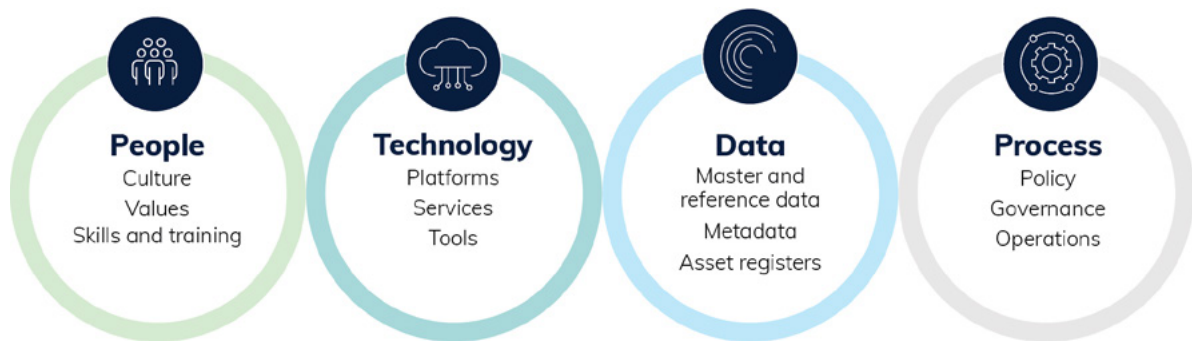
Desired outcomes over the short, medium and long term

Short
(0–2 years)
→ • Uplift in skills, knowledge, attitudes, awareness or motivation

Medium
(2–4 years)
→ • Changes in behavior, practice or systems, or the application of skills and knowledge

Long
(4–5 years)
→ • Delivery of vision – may be influenced by a range of external factors outside the Strategy
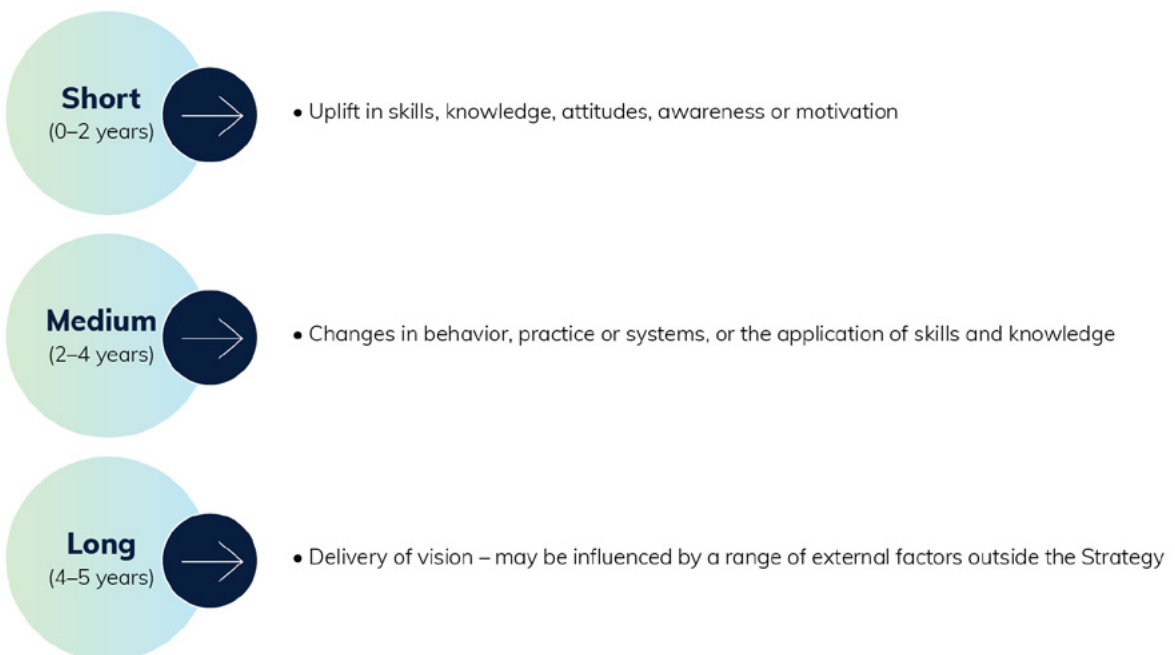
Implementation

Action Plan and Roadmap

To implement measures under the Strategy, actions will be developed in an accompanying one-year rolling Action Plan, over 5 years. Each action contributes to a Strategy outcome.

The Action Plan will identify linkages to other initiatives, such as the Corporate Group Strategy, Capability Priorities Program, Technology Strategy and Strategic Workforce Plan.

The Strategy will be accompanied by a Monitoring, Evaluation and Learning Framework to ensure it is on track to achieve outcomes, identify delivery risks and inform continual learning and improvement. Monitoring, evaluation and change management will be incorporated into a roadmap.

Strategy governance

The Strategy's governance mechanisms will support consistent data management and continuous improvement to the department's data capability, promoting the whole-of-government data agenda. Implementation will be governed through the department's broader data governance arrangements. Funding will also go through the department's usual budget processes.

The Chief Data Officer (CDO) will lead implementation of the Strategy, in collaboration with business areas across the department. The CDO is supported by the Data Champion and Data Stewards Network. This federated approach enables consistency across business areas as data governance is prioritised and coordinated.

A committee will be established to support the CDO in overseeing Strategy implementation. This committee will support prioritisation of actions for each annual action plan and subsequent delivery and closure of actions. It will also work to ensure alignment of Strategy initiatives with relevant Commonwealth-wide policies and strategies.
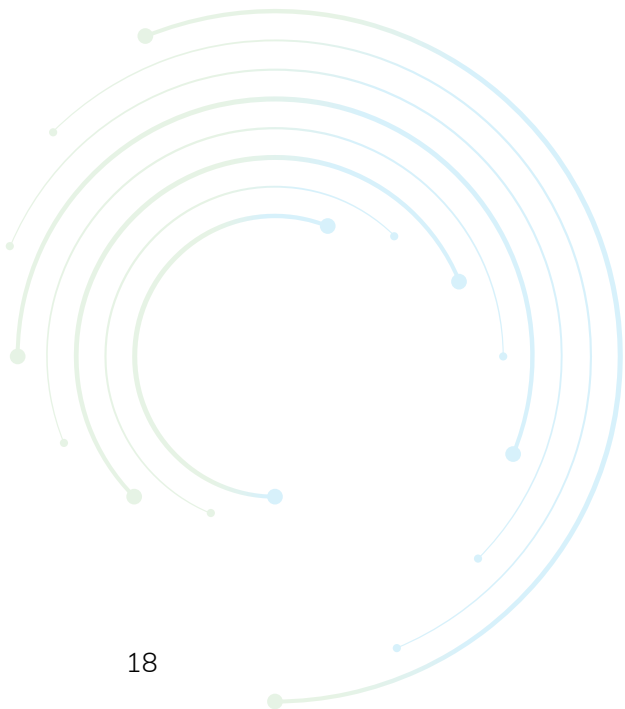
Data governance

Data governance roles and responsibilities

Chief Data Officer

The CDO leads the delivery of the Strategy and empowers our staff to have the right tools, skills and resources to make sound decisions, manage data as an asset and continuously improve the department's data capability.

The CDO reports to the Chief Operating Officer, who has accountability for managing data security risks.

Committee

The committee oversees implementation of the Strategy, guided by the Action Plan. It monitors progress, closes completed actions and prioritises actions for annual action plans.

The committee supports the CDO by:

- monitoring and progressing departmental data, artificial intelligence (AI) and information management initiatives
- advising on departmental input to and engagement on whole-of-government data, AI and information management initiatives.

Data Champion

The Data Champion leads the work to promote and embed best practices in the use, sharing and reuse of data across our department.

### Data Stewards Network

The Data Stewards Network:

- champions and encourages business areas to value data as a key asset
- promotes the safe and ethical use of data to ensure the department gains and maintains the trust of those represented in the data
- encourages consistent data practices
- ensures the department's Data Asset Register and Data Catalogue are reliable sources of truth.

Data Strategy and Policy team

The team supports the department to deliver the Strategy actions and achieve intended benefits. It engages data owners, custodians, stewards and users and assists them in uplift of data management, use, sharing and reuse practice.

Communities
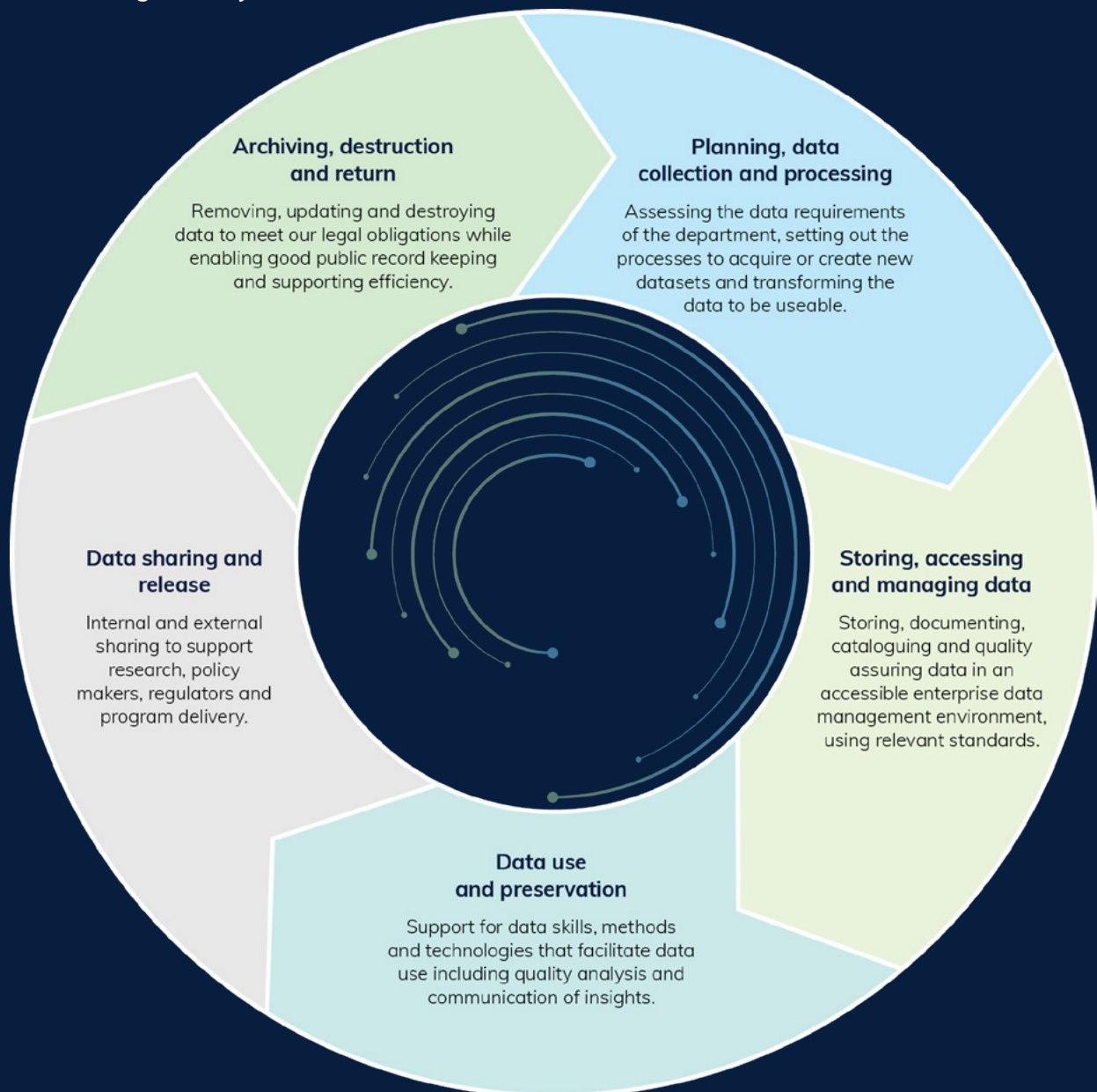
Data and AI communities support a culture of continuous improvement in the department. They provide a space to collaborate on projects, interact with peers, ask questions and learn from the experience of others in the fields of data and AI. Community reflections on opportunities, constraints, problems and lessons learnt contribute to delivering better governance outcomes at all levels.
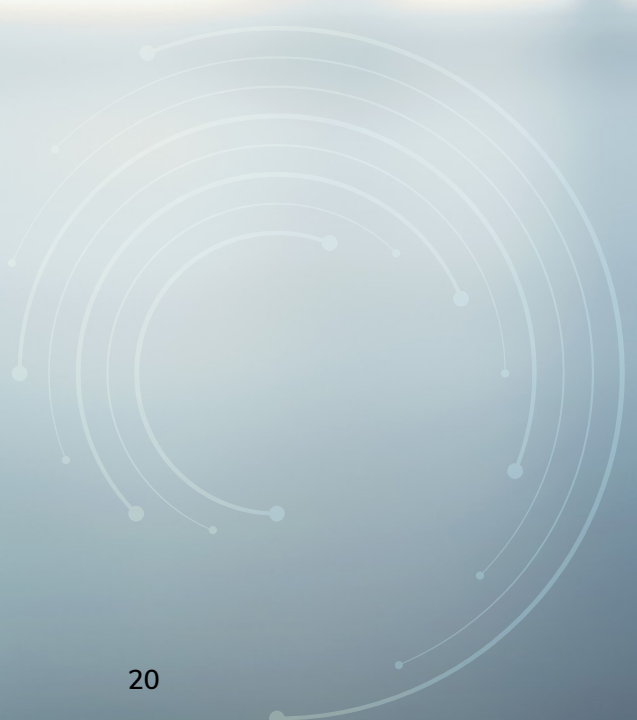
Data management

A life cycle approach will be taken to improving the department's data management, with consideration of practical measures at all stages from data collection to archiving and destruction.

Data management cycle

Archiving, destruction and return

Removing, updating and destroying data to meet our legal obligations while enabling good public record keeping and supporting efficiency.

Planning, data collection and processing

Assessing the data requirements of the department, setting out the processes to acquire or create new datasets and transforming the data to be useable.

Data sharing and release

Internal and external sharing to support research, policy makers, regulators and program delivery.

Storing, accessing and managing data

Storing, documenting, cataloguing and quality assuring data in an accessible enterprise data management environment, using relevant standards.

Data use and preservation

Support for data skills, methods and technologies that facilitate data use including quality analysis and communication of insights.

Glossary

Artificial intelligence (AI): an AI system is a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment.

Data: any information in a form capable of being communicated, analysed or processed (whether by an individual or by computer or other automated means).

Data analytics: describes processes or activities designed to obtain and evaluate data to extract useful information.

Data asset: a structured collection of data developed for a purpose.

Data asset register: an inventory of the department's data assets, designed to help make data more discoverable and accessible. It describes each data asset, identifying the purpose for which data is collected, the data owner and data stewards who manage the data. It also provides information supporting appropriate access and use enabling regulatory compliance.

Data Catalogue: a detailed source of information regarding datasets (e.g. database, table, file) and data elements (e.g. table column) stored in the department's enterprise data repository. It is designed to help staff find and access specific data items for use in analysis and reporting. The data catalogue can also be used to manage data access and support data processing activities such as data validation.

Data Custodian: the person who has custody of an externally owned dataset. They must protect the interests and rights of the Data Owner.

Data maturity: a measure of an organisation's current data management capabilities and capacity.

Data Owner: the person or organisation with the ultimate authority over the dataset. They are the approval authority for decisions about the sharing and release of the dataset.

Data sharing: the process of making the same data resources available to multiple applications, users or organisations (includes technologies, practices, legal frameworks and cultural elements that facilitate secure data access for multiple entities without compromising data integrity).

Dataset: a collection of data associated with one or more of the department's policies and programs, in a structured form (e.g. tables in a database) or semi-structured form (e.g. xml or json file).

Geospatial data: location-specific data and information related to features on the earth's surface and their geographic area.

Metadata: the information that defines and describes the data.