

APS Data Capability Framework

User guide



Acknowledgments

The APS Data Professional Stream acknowledges and thanks Stats NZ for the use of their [Data Capability Framework](#). The APS Data Capability Framework has drawn upon this framework, with additional themes included and amendments made to align with the APS context and Data Professional Stream requirements.

We also thank our Project Working Group members from the following agencies who have been pivotal in developing this framework:

Australian Bureau of Statistics

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Department of Social Services

Digital Transformation Agency

Geoscience Australia

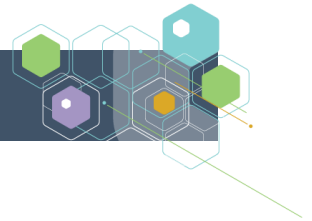
National Indigenous Australians Agency

Services Australia

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Introduction

Data Capability is a core capability for all APS agencies, employees and managers now and increasingly into the future.

The APS Data Capability Framework provides the foundation to building APS data capability and supporting data career paths. It is relevant to all people in the APS who work with and use data in some way.

The Government's APS reform agenda outlines its commitment to *use data better – ensuring the APS has the right capability, tools and processes to securely use, share and understand data and other sources of information for better policy advice, regulation and services...*¹

Ensuring the Australian Public Service (APS) has the right capabilities to use data is a key enabler to Government leveraging the benefits of data and delivering quality services and outcomes to Australians.

The Framework stems from the APS Data Professional Stream Strategy, and connects other Data Profession initiatives that will build data capability and professionalise data expertise across the APS. These initiatives include:

- Data Job role development
- Learning pathways for general data literacy, and data professionals
- Data capability built into SES role descriptions
- Immersion learning experiences
- Data Professional standards and accreditation framework
- Career pathways
- Data capability assessment tool

The framework will help ensure these initiatives share a consistent language and structure.

The framework is also a resource that can guide APS agencies, employees and managers as they build data capabilities, manage workforce requirements and develop careers.

What is the APS Data Capability Framework?

The Framework outlines the 26 data-specific capability areas associated with working with data in the APS. Each has capability indicators (covering skills, knowledge and behaviours) that span across three proficiency levels of foundation, intermediate and advanced.

It focuses solely on data capabilities, and is designed to complement rather than duplicate existing frameworks in use, such as the Integrated Leadership System, or agency specific people capability frameworks.

¹ Commonwealth of Australia, Department of the Prime Minister and Cabinet, Delivering for Australians, 2019.



Who is the Framework for?

This framework is relevant to all APS employees, managers and agencies.

How can we use the Framework?

The Framework has touchpoints across several elements of the Employee Lifecycle and can be used as a guide when involved in activities across the following:

- Attraction and recruitment
- Learning and Performance
- Career development
- Engagement and retention

Agencies can use the framework for a range of **human resource management** activities, including:

- Data capability assessment and baselining
- Mapping data capability resources and courses to the framework to inform agency and employee learning choices
- Recruitment activities
- Workforce planning and mobility initiatives
- Incorporating the data capabilities into their existing people capability framework

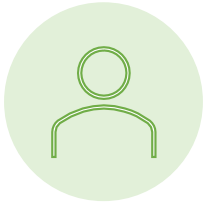
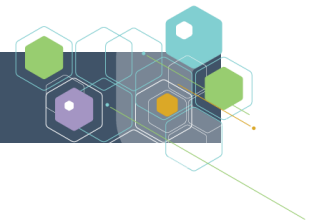
Employees and managers can use the framework as a tool to support individual and team development conversations and planning. Using the Framework can help employees and managers identify particular data capability needs or strengths, and prioritise training and development resource allocation.

Examples of use



APS Employee

This Framework is a tool I can use when thinking about my development, performance, and career goals. Using the Data Lifecycle View to better understand the data capabilities relevant to my work, I can then look at these in more detail to identify my areas of strength, as well as set development goals for myself.



APS Manager

I can use this Framework when considering my team's development and performance. The Data Lifecycle View helps me identify the capability areas relevant to our work. I can then look closer at these to consider my team's strengths and development needs. This allows me to make informed decisions on where to focus development, as well as consider ways to help individuals in my team practise a particular skill, or coach and mentor others to broaden proficiency across the team.



APS Human Resource Manager

Learning and development

This Framework is a resource I can use when partnering with managers and teams in my agency to identify their data capability needs and target development opportunities that address these. I can use the Data Lifecycle View to identify the particular capabilities relevant to their work, and then look at the next level of detail to discuss specific needs.

I can also look at the entire set of capabilities in the Framework when reviewing our current development offerings, or collating a learning and development catalogue of data related courses, resources and programs.

Recruitment

I can use the capabilities in the Framework to create targeted and consistent role descriptions and advertisements, referencing specific data capabilities required in certain roles.

I can also use the capabilities in the Framework to create questions to draw out specific data capabilities during a selection process.

Workforce Management (strategic and operational)

I can incorporate the Framework into our existing people capability framework to gain an expanded view of the capability requirements for my agency.

I can also use the Framework to better understand agency data capability strengths, needs and gaps when considering succession planning, as well as when identifying secondment priorities and opportunities within my agency and beyond.



Navigating the Framework

To navigate the framework, you can either refer to the complete set of 26 capability areas, or you can target specific ones that are relevant to a category within the data lifecycle.

Example: using the data lifecycle view

Step 1: Looking at the data lifecycle view, identify which categories¹ are most relevant to your situation.

Step 2: Identify the capability areas² that relate to these data lifecycle categories

Step 3: Refer to the relevant capability indicators³ in the Framework. You can click on the cell in the data lifecycle view to navigate directly to the related capability indicators.

		Data Life-cycle Categories ¹						
		PLAN	COLLECT	DESCRIBE	STORE	PREPARE	ANALYSE & USE	SAVE / DESTROY
1.	Value organisational data as assets	✓	✓	✓	✓	✓	✓	✓
2.	Data communication	✓	✓	✓	✓	✓	✓	✓
3.	Improvement and Innovation - Data processes/systems and tools/products	✓	✓	✓	✓	✓	✓	✓
4.	Data governance	✓	✓	✓	✓	✓	✓	✓
5.	Data availability	✓	✓	✓	✓	✓	✓	✓
6.	Data access	✓	✓	✓	✓	✓	✓	✓
7.	Sourcing and use of administrative data	✓	✓	✓	✓	✓	✓	✓
8.	Data collection	✓	✓	✓	✓	✓	✓	✓
9.	Subject matter expertise	✓	✓	✓	✓	✓	✓	✓
10.	Identify research questions	✓	✓	✓	✓	✓	✓	✓
11.	Data outputs, products or services	✓	✓	✓	✓	✓	✓	✓
12.	Data collection methodology	✓	✓	✓	✓	✓	✓	✓
13.	Data integrity and quality assurance	✓	✓	✓	✓	✓	✓	✓
14.	Statistical concepts and methodologies	✓	✓	✓	✓	✓	✓	✓
15.	Data and information management	✓	✓	✓	✓	✓	✓	✓
16.	Data classification	✓	✓	✓	✓	✓	✓	✓
17.	Integrate data	✓	✓	✓	✓	✓	✓	✓
18.	Data editing	✓	✓	✓	✓	✓	✓	✓
19.	Metadata - Describe and summarise data	✓	✓	✓	✓	✓	✓	✓
20.	Data use and re-use	✓	✓	✓	✓	✓	✓	✓
21.	Data processing methodology	✓	✓	✓	✓	✓	✓	✓
22.	Exploratory data analysis	✓	✓	✓	✓	✓	✓	✓
23.	Visualise data	✓	✓	✓	✓	✓	✓	✓
24.	Statistical data analysis	✓	✓	✓	✓	✓	✓	✓
25.	Specialist data analysis	✓	✓	✓	✓	✓	✓	✓
26.	Business intelligence data analysis	✓	✓	✓	✓	✓	✓	✓

5. Data collection ³	
Advanced	<ul style="list-style-type: none"> Is an expert resource in all aspects of data collection, including why data is collected and the roles associated with collection. Can write custom scripts and code (programming language) to collect data. Can make justifiable decisions about how data is collected.
Intermediate	<ul style="list-style-type: none"> Has a comprehensive knowledge of the full range of data collection options, including costs and benefits. Is able to understand and amend existing code (programming language) to collect data. Knows how to mitigate issues arising from different collection modes.
Foundation	<ul style="list-style-type: none"> Understands the role of data collection and the value propositions of different collection approaches. Can collect data by following established processes, using the systems and tools provided.
Associated Categories	

What is next for the Framework?

Over the coming months, the Data Profession will engage with agencies about real use cases they have in using and applying the Framework (beta release).

Hearing from Framework users and early adopters helps us better understand its impact. This feedback also provides opportunities for improvement, and will inform Framework refinements before the final version is released in mid-2022.

We would love to hear about your experience using this Framework.

You can contact the APS Data Professional Stream team via email:

aps.dataprofessionalstream@abs.gov.au.