



Australian Government

APS Data Profession

Three-year program report: 2020-23

October 2023



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I am thrilled to see the initiatives progressed in the Data Profession over the past 12 months. We have seen favourable outcomes from some of the initiatives launched in the first two years and have built on them in year three.

We were delighted to host the APS Data Awards on 17 May this year. The Awards highlight innovative and resourceful approaches which showcase the use of data by APS teams to make a difference to the Australian community.

I am pleased to see continuing growing interest in data by prospective graduates. The APS Graduate recruitment program expanded for the 2024 intake with over 1,400 applications and 40 agencies seeking around 370 data graduates. The SES Data Leadership Course, which builds foundational data skills for the SES, was piloted in the first year and offered throughout 2022-23. It will continue into 2024, having had 129 SES staff from 22 agencies attend so far.

I encourage all public sector data professionals to sign up to the Data Profession Members' Community Platform, the web-based platform for data professionals to learn about events, job opportunities, communities of interest and resources relevant to their work. Also on the platform are my *In Conversation* videos in which I interview people for whom data plays a big role in their careers.

I look forward to further development of the Data Profession in the year ahead and thank all our partner agencies for their collaboration.





This review is designed to give the reader a sense of what has been achieved over the last three years, complete with case studies and achievements against the Data Profession Strategy's measures of success.

The review touches on the next year's work program, which will deliver initiatives that provide opportunities for data professionals to develop specialist capabilities and skills for career progression and focuses on embedding a data profession that is valued and sustainable.

As noted in previous reports, engaging with colleagues across APS agencies was, and remains, critical to the success of the Data Profession. In year three, we commenced an ambitious work program through a Program Board managed 'APS distributed team' approach. This co-design approach, and close collaboration with agencies, ensures the Data Profession delivers products and programs which are of value across the data domain.

I'd particularly like to thank the following agencies for taking the lead on Data Profession projects: The Department of Home Affairs; The Australian Taxation Office; The Department of Health and Aged Care; and the Australian Institute of Health and Welfare.

I would also like to thank the Data Profession Team at the ABS who continue to coordinate and champion the work program to ensure its success.



Evaluating the success of the program

The Data Professional Stream Strategy contained 16 initiatives grouped into 4 strategy themes. Of these 16 initiatives, 13 were delivered and 3 partially delivered over the period 2020-23. The status of all these initiatives can be found in the [Three Year \(2020-23\) status on a page](#).

There were also additional initiatives added to the Strategy:

- Ongoing Members' Community Platform
- APS Data Awards 2023
- Expansion of Data Job Role Personas
- Data Capability Framework review and development of self-assessment tool
- Creating a strong alignment between the Data Profession and the APS Academy

The success of the Data Profession work program has been evaluated in three ways:

Progress against benefit measures – The Data Profession evaluated its success against a set of measures linked to program benefits. Specifically:

1. Uplift and deepen APS data capability and instil a culture of data excellence
2. APS agencies will offer staff clearer pathways and greater mobility over their careers as data professionals
3. APS agencies will attract, develop and retain a highly talented data workforce

Case studies – Achievements against the Strategy

The Data Profession has drafted a series of case studies to take a detailed look at some of the key achievements against the Strategy.

Challenges, lessons learned and opportunities.

Based on the outcomes of the third-year of the work program.

Year four

This report also provides an indication of key priorities for the fourth year.



Three-year (2020-23) status on a page

Initiatives outlined in the Data Professional Stream Strategy

Establishing the Data Professional Stream	Getting it right from the start	Developing sophisticated and specialist data capabilities	Embedding a professional data workforce
<ul style="list-style-type: none"> ✓ Establish a Senior Reference Group Governance fora is well established and instrumental to the co design and success of the work program ✓ Identify the Head of Profession Dr David Gruen continues as the Head of the Data Profession ✓ Develop a Professional Stream Strategy Data Professional Stream Strategy for established and reported against over three-year period ✓ Establish professional network Professional network well established through LinkedIn group, Gov teams space and Member Community Platform 	<ul style="list-style-type: none"> ✓ Streamline recruitment across the APS The ABS has led the central recruitment of data graduates on behalf of the Data Profession with a fourth round underway for the 2024 intake ✓ Develop an APS profile Baseline profile established with APSED results at the beginning of the program ✓ Build inclusion into the professional stream Inclusion is one of the Data Profession's design principles which incorporate inclusion and diversity in all projects ✓ Collaborate with the education sector to uplift entry level capabilities The Profession has undertaken a supportive role in the pilot of entry level programs across regional university hubs ✓ Data Expert on Recruitment Panels The inclusion of a data expert on senior recruitment panels commenced in September 2021 	<ul style="list-style-type: none"> ✓ Design Data Job Role profiles Six key data roles published in December 2022 ✓ Identify and develop capabilities Data Capability Framework (DCF) published in October 2022 ❖ Identify and promote structured learning opportunities ✓ Data Literacy Learning Pathways – published in December 2022 ✓ SES Data Leadership Course – courses are ongoing being delivered through the APS Academy until end of June 2024. ❖ EL cohort training – implementation of pilot commenced ✓ Graduate Learning Module – commenced roll out to data graduates in August 2023 <ul style="list-style-type: none"> ○ ABS/ATO Specialist Speaker Series – ongoing rebranded to Capability Uplift Seminar Series ○ In Conversation Series – ongoing ○ Data Professional Technical Forum – ongoing ❖ Curated Specialist Learning Offerings – a list is available on the MCP with further improvements to be published November 2023. ✓ Encourage learning by immersion 13 immersive learning experiences have been completed and evaluation of learnings sent to APSC 	<ul style="list-style-type: none"> ✓ Support professional communities There are 13 dedicated Data Communities of Practice on the platform, an additional 2 communities are shared between Data and Digital. ❖ Define and promote career pathways The first phase of this was the published Data Capability Framework. Further work will be undertaken on the DCF, data job roles and curated learning which will feed in the APSC Career Pathfinder tool in year four. ❖ Identify professional standards Discovery phase of project to develop function descriptions for data professional specialists that align with the APS work level standards.

Delivered
 Partially delivered
 Ongoing
 Commencing/discovery
 Not started
 Stopped



Progress against benefit measures

Benefit	Measure	2021	2022	2023 (as of 30 Sep)
1	Number of members of APS Data Professionals LinkedIn	680	1053	1380
1	Number of members on Member Community Platform (launched August 2022)	N/A	1766	6717
1	Number of interactions on Member Community Platform (this includes total number of threads and replies as well as library entries, views and downloads)	N/A	1398	11,408
1, 3	Numbers of Communities of Practice on Member Community Platform	N/A	10	13
1, 3	Number of SES participants data leadership course	66 (in Pilot program)	20 (first course of financial year)	129
1, 3	Number of participants in data graduate module delivery	N/A	N/A	65
1	Number of agencies engaged in governance groups	26	27	28
1,2	Number of agencies engaging with the Data Capability Framework Community of Practice	8 - APS	26 - APS agencies 4 – State & territory agencies	49 – APS agencies 7 – state & territory agencies
2, 3	Number of agencies engaged in streamlined data graduate recruitment	23	37	40
3	Number of data graduates successfully placed in roles	181*	251	270

Benefits

1. Uplift and deepen APS data capability and instil a culture of data excellence
2. APS agencies will offer staff clearer pathways and greater mobility over their careers as data professionals
3. APS agencies will attract, develop and retain a highly talented data workforce

Note: * point in time data; doesn't include late withdrawals



Growing the Data Profession through the Data and Digital Members' Community Platform

A central element of the Data Professional Stream Strategy was to establish the professional stream and a network. This has evolved over the three years, with network membership initially administered through a Newsletter, followed by a LinkedIn Group.

The Data Profession took the opportunity to join the Digital Profession on their established web-based member community platform, to streamline communications and engagement with members. A rebranded "Data and Digital Professions Members' Community (MCP)" was launched on 22 August 2022.

The web-based platform is a practical tool for APS Data Professionals from a variety of agencies to access resources, courses and events. On the MCP, Data Profession members can also consult a Directory of Members with whom to engage and network.

The Data Profession has created a space on the platform where Members can share and find short- and long-term data job opportunities.

A key benefit of the co-branded platform is to make collaboration simpler between the two Professions.

The platform has proven a valuable way to connect with data professionals across the APS. Prior to the launch of the MCP, the Data Profession had 2123 members on its network mailing list. The MCP has facilitated an almost tripling of Data Profession membership in a little over a year. 6717 members are distributed across 143 entities, with 88 of 99 APS agencies represented. The MCP also has an increasing number of state and territory government members: NSW (325 members); VIC (248 members); QLD (194 members); ACT (60 members); WA (53 members); SA (51 members); TAS (30 members) and NT (23 members).

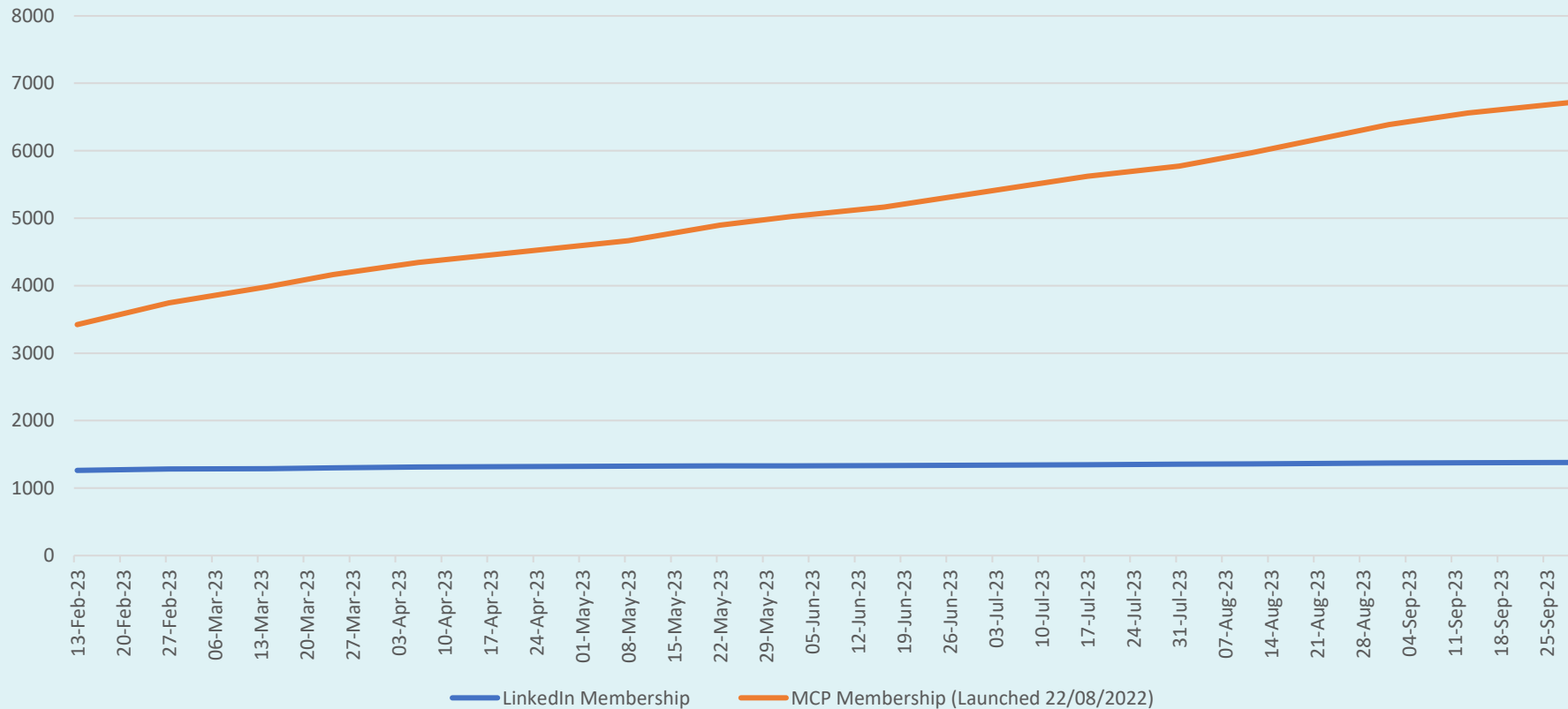
The Data Profession will continue to promote the platform to APS and state and territory employees working with data. By growing the membership and encouraging and supporting networking and collaboration, the MCP is helping realise the vision for the Data Profession as a key conduit for data capability uplift.

APS agency counts sourced from APS Employment Data 30 June 2023: [APS Employment Data 30 June 2023](#) | [Australian Public Service Commission \(apsc.gov.au\)](#)



Growing the Data Profession through the Data and Digital Members' Community Platform

Data Profession Membership - MCP and LinkedIn



Peer based learning through Communities of Practice

The Data Profession Members' Community Platform offers Data Profession network members a platform to discover and connect with other Data Professionals across the APS and state and local government employees. Peer-based learning is facilitated by the platform, with one of the main learning avenues provided through Communities of Practice (CoPs). CoPs feature discussion boards, blogs, and resource libraries, as well as offering an events promotion facility. The development and promotion of best practice, opportunity to crowd source solutions, develop strategy and discuss issues affecting members is facilitated by the CoPs.

Data professionals on the MCP can join one or many Communities of Practice. As of 30 September 2023, there were 13 Data Profession CoPs on the MCP – 11 dedicated Data Profession CoPs and 2 CoPs shared between the Data and Digital Professions (see accompanying list).

The Women in Data and Digital CoP was nominated in the Diversity in Data category in the 2023 APS Data Awards and won the award in this category. This indicates the outstanding work being done in this CoP, and the power of CoPs in raising data capability.

While the most visible sign of activity within CoPs is the discussion threads, CoP libraries have proven very popular and effective means of sharing resources. The activity in the CoP libraries – adding resources, viewing and downloading them – reached 11,408 interactions between the MCP launch in August 2022 and 30 September 2023.

<i>Data Profession Communities of Practice</i>
API Developer Community
Data Capability Framework
Data Governance and Stewardship Programs
Data Profession Community
Fraud Analytical Detection
Geospatial Community
Graduate Data Network
Innovation Community (shared between Data and Digital Profession)
Machine Learning
Metadata
ONDC Data Discovery Program
SES Data Leadership Course Community
Women in Data and Digital (shared between Data and Digital Profession)



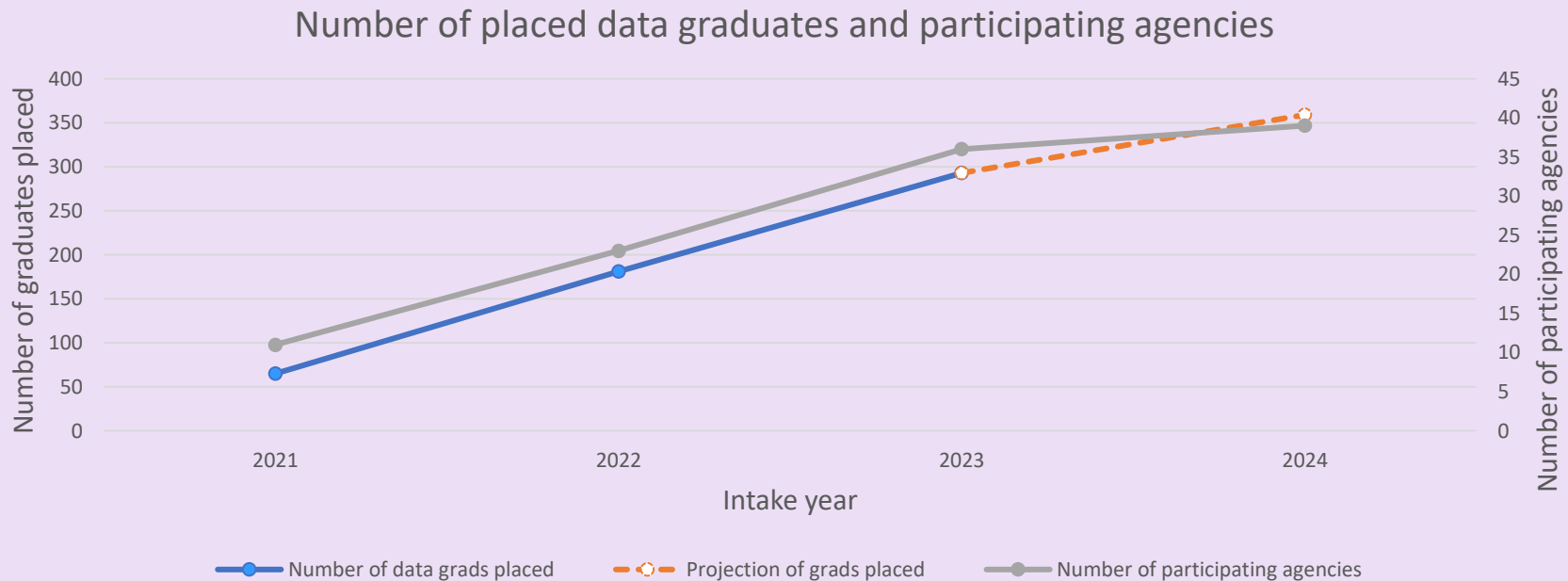
2024 Australian Government Graduate Program Data Stream

The Data Profession continues to streamline graduate recruitment across the APS as part of the Australian Government Career Pathways program.

The aim of this initiative is to build foundational data capability across the APS by growing the Data Profession at the entry level. The ABS leads the centralised recruitment of data graduates, with the 2024 intake the third year for this recruitment. There are now ten streams through which graduates can enter the APS – a generalist stream and nine specialist streams. It gives a sense of the level of interest in data by prospective graduates that there have been more applicants to the data graduate stream (1,462) for the 2024 intake than to any of the other specialist streams.

For the 2024 Program, the ABS partnered with 40 agencies, an increase of 3 agencies from the previous year. Demand for data graduates has increased year on year with around 380 data graduate positions for the 2024 intake – the largest Data Graduate program to date.

The success of the program has seen a merit pool of 541 candidates with over 270 placements confirmed which is on track to achieve the 2024 demand.



Providing contextual understanding of data in government to APS Data Graduates

In 2021 a project team from the Department of Education (DESE at the time) was tasked with scoping user needs and identifying training gaps to recommend what learning objectives would be most valuable to be included in a training package for APS Data Graduates. The topics recommended from this exercise included: Data in the APS context; APS data landscape; Data governance and management; Data communications; Foundational technical data skills; Content hub/resources.

The Data Profession, together with the Department of Education, Department of Social Services and the Australian Bureau of Statistics, developed an 'Introduction to Data in Government' training module to be delivered virtually to APS Data Graduates by data experts from Data Profession partner agencies.

These modules provide Data Graduates with an understanding of:

- The importance of data in government and how data is used in the APS
- Why we need trust in data and government
- How evidence-based decision-making needs great data storytelling and visualisation
- The APS Data Profession and uplifting data capability

Following a successful pilot in April 2023, the Data Profession engaged APS agencies to roll out this training package to their 2023 data graduate cohort. 22 agencies have registered their data graduates, and it is expected almost 140 data graduate will complete these modules by the end of November 2023. Additionally, the ATO is rolling out the course in-house to around 80 data graduates using ATO facilitators and slightly modified content tailored to their agency.

The APS Academy is using a subset of content from these modules to develop a new component of their APS Graduate Development Program – “Using Data for Insight and Evidence” – which is being delivered to 290 graduates from 23 agencies.

In early 2024, the Data Profession will continue to provide access to data development opportunities by working closely with the APSC to embed the entire training package into the APS Academy’s Cahoot Learning program.



Uplifting Data Leadership for SES and Executive Level staff

The Senior Executive Service (SES) Data Leadership Course was developed to raise data capability for senior executives in the APS. The course aims to build a data-driven culture across the APS, and to increase the value of public sector data through greater use and re-use. The course was developed in collaboration with the Australian National University (ANU), based on a similar course run for the Department of Industry, Science, Energy and Resources in 2019.

The course is aimed at SES staff who are not data professionals. The objectives are to provide foundational data skills and awareness required by SES leaders to source, use and communicate data appropriately; recognise the important role data plays in government decision making, policy development, program and service delivery; and create an environment where data capabilities are understood and prioritised by APS leaders.

Following a successful pilot program in 2021, the Data Profession engaged ANU to develop an ongoing course to be delivered through the APS Academy in 2022-23. To ensure fitness for purpose, a group of APS data experts provided feedback on course content. This advisory group included SES in senior data roles, alumni from the pilot program, and representatives of ABS' Data Strategy, Integration and Services Division.

From September 2022 the APS Academy has been responsible for the administration of course delivery. The course has a modular format and includes both face-to-face and virtual learning components.

There have been 4 deliveries of the post pilot course with the ANU contract extended to allow for quarterly deliveries in 2023-24.

Including the pilot there have been:

- 22 Agencies/Departments represented (22% of all APS agencies*)
- 129 SES attend (4.1% of SES cohort*)

Post-course collaboration among course participants and alumni is encouraged via a dedicated group on the Data and Digital Profession Members' Community Platform.

Following the successful rollout of the SES Data Leadership course it was decided that the APS EL2 Cohort would benefit from a similar offering.

The Data Profession team is currently undertaking a procurement to engage a provider to develop a course to be delivered virtually to the cohort.

The course will be piloted in 2023 with a view to making it available in early 2024.

*APS agency and SES cohort count sourced from APS Employment Data 30 June 2023: [APS Employment Data 30 June 2023](#) | [Australian Public Service Commission \(apsc.gov.au\)](#)



In Conversation with Dr Gruen

The Data Profession aims to publish four In Conversation videos each year. As Australian Statistician and Head of the Data Profession, Dr Gruen discusses with a range of professionals the role data has played in their careers, the future of data in the public and private sectors, and what advice they would give APS data professionals aspiring to make their mark as leaders of the future.

Feedback from the Data Profession community:

“It was a wonderful and very informative session. It is good to see two elites of their respective professions sharing ideas and thoughts. I am starting my career in APS and really appreciate advice from Prof. Brian Schmidt to learn about tools and underlying concepts. Big thanks to Data Profession community for sharing.”



“Thanks to Dr David and Prof Lisa for such an interesting podcast. What data has done so far knowingly and unknowingly, and what it can offer in future is beyond one’s imagination. Listening to Prof. Lisa was very encouraging. Thanks again to both of you and others who were involved in publishing this podcast.”



“Good engaging and conversational format. The story really illustrates the diverse routes one can take into the fascinating world of data-based facts.”



Published In Conversations videos:

Interviewee	Role
Anthony Goldbloom	Founder and CEO of Kaggle
Alan Kohler	Australian financial journalist and InvestSMART Editor in Chief
Professor Genevieve Bell	Director of the 3A Institute, ANU and inaugural Florence Violet McKinsey Chairholder. Will commence role as ANU Vice-Chancellor in 2024
Professor Lisa Harvey-Smith	First Australian Government’s Women in STEM Ambassador, astrophysics researcher, author and broadcaster
Phil Gaetjens	Secretary of the Dept. of The Prime Minister and Cabinet
Dr Luci Ellis	Assistant Governor (Economic), Reserve Bank of Australia
Professor Jodie McVernon	Professor and Director of Doherty Epidemiology at the Doherty Institute
Abi Bradshaw	Head of the Australian Cyber Security Centre and Deputy Director-General of the Australian Signals Directorate
Minister Andrew Leigh	Assistant Minister for Competition, Charities and Treasury, and Federal Member for Fenner in the ACT
Dr Leanne Ward	Partner at Kearney
Professor Lisa Jackson Pulver	Deputy Vice-Chancellor Indigenous Strategy and Services at the University of Sydney and Professor of Public Health and Epidemiology at the Sydney Medical School
Professor Brian Schmidt	Vice-Chancellor of the Australian National University (ANU) and joint winner of the 2011 Nobel Prize for Physics



Implementing the Data Capability Framework (DCF) across the APS

The APS Data Capability Framework (DCF) defines the data skills, knowledge and behaviours required to work with data in the APS. It provides clear and consistent language to use when talking about data capability needs, strengths and programs. It also guides APS employees, managers and HR areas on how to build data capability.

The Framework is a foundation piece that feeds into a range of capability building initiatives developed by the Data Profession including: The Data capability assessment tool; the Data Literacy pathway; Data Job Role personas; Curated learning offerings; and Career pathways.

Engagement with user groups

After the release of the beta version, the Data Profession engaged six APS agencies to provide user case studies for the Framework. Several agencies and departments adopted the DCF in the following ways:

- National Measurement Institute - Organisational planning and strategy
- Australian Taxation Office - Alignment with agency capability framework
- Australian Public Service Commission - Role enrichment workshops
- Department of Social Services - Development and career planning workshop
- Commonwealth Fraud Prevention Centre - Capability assessment – agency level
- Australian Bureau of Statistics - Self-assessment survey approach

More details on these user case studies can be viewed in the [DCF user guide](#).

The Data Profession also leads a Data Capability Framework Community of Practice (CoP) on the Members' Community Platform (MCP). This Community provides the opportunity for members to learn from each other, discuss ideas and solve problems together when using the Framework. As of 30 September 2023, there were 343 members of the community across 49 APS agencies.

Release of the APS Data Capability Framework

The Data Profession launched the [APS Data Capability Framework](#) on 31 October 2022.

From August 2023 the Department of Health and Aged Care is leading a project to review and refine the DCF. An element of the project, the development of a self-assessment tool, will further encourage adoption of the Framework.

The Data Profession thanks all agencies that have assisted with the ongoing implementation of the Framework.



APS Data Awards

Recognition and Celebration of Data expertise and innovation

The APS Data Awards recognise and celebrate the value of the skills of data professionals and the importance of data innovation. These have become more important now that the passage of the *Data Availability and Transparency Act 2022* and the intergovernmental agreement on data are enabling greater sharing and use of data by and across government – necessitating a broad capability uplift across the public sector.

Background

The early impetus for the Data Awards came in 2022 from Gayle Milnes, the National Data Commissioner, for an inaugural event to be held in 2023. The aim was to create an event that celebrated innovative and resourceful solutions implemented across the APS which use data to make a difference to the Australian community.

The Data Profession team led and coordinated the Data Awards program with plans to hold the awards in the evening following the Graduate Data Network (GDN) Data Forum. The Institute of Public Affairs Australia – ACT, which assisted with the delivery of the GDN Data Forum in 2022, partnered with the ABS to deliver the awards.

Success of Awards

The Awards attracted 58 nominations from 23 agencies, across the six Award categories: Data Leadership; Data Sharing; Data Analytics and Visualisation; Data Architecture; Early Data Career; and Diversity in Data. The Awards were presented by the Hon Dr Andrew Leigh MP, Assistant Minister for Competition, Charities and Treasury on 17 May 2023. There is strong support for another awards program to be held in 2024.

Post-awards, some agencies reported exchanging knowledge relating to finalist projects to raise capability in their own teams.

Material partially sourced from: <https://www.act.ipaa.org.au/join-for-inaugural-aps-data-awards>



Challenges, lessons learned and opportunities

Work program challenges	Issue	Lessons learned	Opportunities
APS Data Awards	Determining award categories that cater to the breadth of data work across the APS.	Different APS agencies produce and use data in different ways.	Further consultation is required in the lead up to the next awards to ensure that awards categories reflect APS-wide data projects.
SES Data Leadership Course	Feedback from course participants highlights interest in more practical content.	Course participants prefer practical content, e.g., case studies over theoretical content. Virtual sessions need more engagement activities	Data Profession team to work with APS Academy and ANU professors to improve content and marketing for remainder of courses until June 2024.
Graduate Data Modules	Arranging times that are suitable to both data graduates and the facilitators to undertake the modules has been difficult in the second half of the year.	Graduates have tight schedules with the graduate development program in addition to business-as-usual work requirements.	Engage with data graduate agencies as early as possible to allow for more periods of availability that don't clash with graduate development obligations.
Data Profession team capacity to lead projects	Data Profession team reduced resources; unable to lead all projects on the 2023-24 work program.	Engagement and relationships with other agencies are key to the successful delivery of work program.	Rely on the co-design principle of the Data Profession and form a distributed team amongst governance member agencies along with project working groups.



Looking forward to year four, the Data Profession, under an APS distributed team approach, will focus on **maintaining, iterating and embedding a sustainable profession.**



Member Community Platform

- Communities of Practice
- Engagement & events
- Job opportunities & networking



Alignment with APS Academy

- Partnering to deliver offerings
- Communications and engagement
- Measurement and evaluation



Career pathways for data professionals

- Data job roles (lead Australian Tax Office)
- Data Capability Framework assessment tool (lead Department of Health and Aged Care)
- Standards (lead AIHW)
- Curated learning offerings (lead Home Affairs)
- APSC alignment



Supporting the head of the profession

- Governance groups
- In Conversation series
- Engagements



Entry level programs

- Graduate recruitment
- Data cadets



Development of learning offerings

- EL cohort training
- Graduate data modules

