



Australian Government

# APS Data Profession

Two year program report  
October 2022



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As the head of the Data Profession, it has been exciting to watch the initiatives we have progressed over the last 12 months. We saw positive outcomes from some of the initiatives undertaken in the first year and have worked to ensure they are sustained, while continuing to generate new offerings to help build the data profession across the APS.

I was pleased to see the APS Graduate recruitment program expanded for the 2023 intake with over 1,690 applications and 37 agencies seeking around 300 data graduate placements. I have continued to post *In Conversation* videos with people for whom data plays a big role in their working lives. The team will continue to provide topical articles through the Data Profession Members Community Platform, launched on 22 August. I encourage all government data professionals to sign up to the platform to engage with data communities of interest.

Several projects launched in the first year are now coming to fruition. These include the SES Data Leadership course, APS Data Capability Framework, Data Job Role personas and Data Literacy Pathways. Work continues on the *Growing Data and Digital Talent Pipelines* and I am excited to see the outcomes of the pilot program.

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





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

The past two years has not been without its challenges, as the APS and the wider community withstood the disruption of COVID, fires and adverse weather events. These events have exacerbated challenges in attracting and retaining the skills we need in critical areas.

Maintaining traction for the Data Profession amid so many competing priorities required a strong connection with the importance of quality data and effective data skills. Engaging with colleagues across APS agencies was, and remains, critical to the success of the data profession. Continually asking what agencies value; what would be of most use during these and future times, helped keep the team focused on initiatives that delivered real value to the APS.

As we firm up our year three and four program, pausing to reflect on where we are against initial aspirations is a prudent and useful exercise. Lessons learned from experiences to date will inform an even stronger program of work over the next two years. The primary focus remains to embed a data profession that is valued and sustainable.

I thank the Data Profession Team and the Enterprise Program Management Office at the ABS who continue to champion the strategy and initiatives. The teams work together to implement standards and frameworks that have kept the work program successful and accountable.

As SRO, I also thank those agencies that have actively contributed over the last two years. The co-design approach and close collaboration ensures the Data Profession delivers products and programs of value for all APS agencies.





Establishing the professional stream



Getting it right from the start



Developing sophisticated and specialist capabilities



Embedding a professional workforce

In the Data Professional Stream Strategy there were 16 initiatives outlined across 4 strategy themes. Of these 16 initiatives, 11 were achieved, 4 are partially delivered and 1 was not initiated. The status of all these initiatives can be found in the [Two Year \(2020-22\) status on a page](#).

There were additional initiatives taken forward to support the Strategy. These were:

- Development of a virtual Members' Community Platform
- Data and Digital Entry Pipeline
- Development of a Data Employee Value Proposition
- Establishment of SES Data Capability Principles
- Creating a strong alignment between the Data Profession and the APSC Academy

There are three ways in which the success of the two-year Data Profession work program has been evaluated:

**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 and lessons learned:**

Based on the outcomes of the two-year work program the Data Profession has evaluated what worked well, what did not and how it could be improved looking forward.

**Year three**

This report also provides an indication of key priorities for the third year, building on the above.



# Two year (2020-22) 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"> <li>✓ <b><u>Establish a Senior Reference Group</u></b><br/>Established governance fora which has been instrumental to the co design and success of the work program</li> <li>✓ <b><u>Identify the Head of Profession</u></b><br/>Dr David Gruen identified as the Head of the Data Profession</li> <li>✓ <b><u>Develop a Professional Stream Strategy</u></b><br/>Data Professional Stream Strategy for two year period established and reported against</li> <li>✓ <b><u>Establish professional network</u></b><br/>Professional network well established through mailing list, newsletters, LinkedIn group, Gov teams space and Member Community Platform</li> </ul> | <ul style="list-style-type: none"> <li>✓ <b><u>Streamline recruitment across the APS</u></b><br/>The ABS has led the central recruitment of data graduates on behalf of the Data Profession with a third round underway for the 2023 intake.</li> <li>✓ <b><u>Develop an APS profile</u></b><br/>Baseline profile established with APSED results at the beginning of the program</li> <li>❖ <b><u>Build inclusion into the professional stream</u></b><br/>Inclusion is one of the Data Profession's design principles Analysis into inclusive and diverse employment (DISR) completed with recommendations</li> <li>❖ <b><u>Collaborate with the education sector to uplift entry level capabilities</u></b><br/>The Profession has undertaken a supportive role in the establishment of entry level programs across regional university hubs.</li> <li>✓ <b><u>Data Expert on Recruitment Panels</u></b><br/>The inclusion of a data expert on senior recruitment panels commenced in September 2021</li> </ul> | <ul style="list-style-type: none"> <li>✓ <b><u>Design job role profiles</u></b><br/>Six key data roles have been identified and will be published by November 2022</li> <li>✓ <b><u>Identify and develop capabilities</u></b><br/>Data Capability Framework production version will be published by November 2022</li> <li>❖ <b><u>Identify and promote structured learning opportunities</u></b></li> <li>✓ Data Literacy Learning Pathways – will be published by December 2022</li> <li>✓ SES Data Leadership Course – the first course commenced on 30 September with subsequent courses ongoing until June 2023.</li> <li>❖ Graduate Learning Module – learning modules have been drafted and ready for review <ul style="list-style-type: none"> <li>○ ABS/ATO Specialist Speaker Series – ongoing</li> <li>○ Data Professional Technical Forum – ongoing</li> </ul> </li> <li>❖ Curated Specialist Learning Offerings – a list is available on the MCP</li> <li>✓ <b><u>Encourage learning by immersion</u></b><br/>13 immersive learning experiences have been completed and evaluation of learnings sent to APSC</li> </ul> | <ul style="list-style-type: none"> <li>✓ <b><u>Support professional communities</u></b><br/>13 professional communities have been established on the member community platform</li> <li>❖ <b><u>Define and promote career pathways</u></b><br/>The first phase of this was the development of the Data Capability Framework. Further work will be undertaken in year three. <ul style="list-style-type: none"> <li>▪ <b><u>Identify professional standards</u></b><br/>Was not commenced due to other priorities to establish foundational initiatives</li> </ul> </li> </ul> |

## Additional initiatives in the Data Professional Stream Work Program

| 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"> <li>✓ <b><u>Members' Community Platform (MCP)</u></b><br/>- Developed a member management and engagement platform.<br/>- 1766 members as at 24 October 2022 and growing fast.</li> </ul> | <ul style="list-style-type: none"> <li>○ <b><u>Data and Digital Entry Level Pipeline</u></b><br/>The APSC in partnership with the ABS and Data Profession is increasing the data and digital talent pipeline into the APS by developing new entry level programs (data cadets, data and digital interns)</li> <li>❖ <b><u>Employee Value Proposition</u></b><br/>Desktop research and workshops completed and evaluated. Further work to be considered in year three.</li> </ul> | <ul style="list-style-type: none"> <li>✓ <b><u>SES Data Capability Principles (DISR)</u></b><br/>Finalised and sent to the APS Academy for inclusion in SES Orientation Program</li> </ul> | <ul style="list-style-type: none"> <li>❖ <b><u>Alignment Professions &amp; Academy</u></b><br/>- Engaged in co design workshops with the other Professions and the APS Academy to align work program<br/>- Provided input into APS Professions Guidebook</li> </ul> |

✓ Delivered   ❖ Partially delivered   ○ Ongoing   > Commencing/discovery   ▪ Not started   □ Stopped



# Progress against benefit measures

| Benefit | Measure   | Baseline 2020 | Result - 2021         | Result - 2022   |
|---------|---|---------------|-----------------------|---|
| 1       | Number of members of Data Professional Network mailing list           | 498           | 1521                  | 2123  |
| 1       | Number of members of APS Data Professionals LinkedIn                  | 0             | 680                   | 1053  |
| 1       | Number of members on Member Community Platform (launched August 2022) | N/A           | N/A                   | 1766 as of 24 October 2022  |
| 1, 2    | Number of SES participants data leadership course                     | N/A           | 66 (in Pilot program) | 20 participants have signed up to the first course offering (Sept/October 2022). Three further courses scheduled for 2022-23. |
| 1       | Number of agencies engaged in governance groups                       | 18            | 26                    | 27  |
| 1,2     | Number of agencies using the Data Capability Framework                | N/A           | 8                     | 38 - APS agencies<br>4 – State & territory agencies   |
| 1,2     | Total number of immersions completed                                  | N/A           | 10                    | 13  |
| 2, 3    | Number of agencies engaged in streamlined data graduate recruitment   | 11            | 23                    | 37 as at 17 October 2022  |
| 3       | Number of data graduates successfully placed in roles                 | 65*           | 181*                  | 251 as at 17 October 2022   |

## 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: \* indicates point in time data that doesn't take into account late withdrawals



### Member Community Platform

A central theme of the Data Professional Stream Strategy was to establish the professional stream and a network. This has evolved over the two-year period, with network membership initially being awarded to interested data professionals signing up to the Newsletter in the first instance, followed by the LinkedIn Group. While both communication channels enabled us to deliver information and updates on developments across the APS data landscape; provided examples of innovative and interesting data initiatives; as well as information on upcoming events and development opportunities and profile pieces on data professionals in the APS, they were unable to easily facilitate broader networking and collaboration opportunities for members. The Newsletter publication schedule prevented just in time communication with members, and the total views of the Newsletter were not reflecting membership numbers.

The Data Professional Stream took the opportunity to join the Digital Profession on their established web-based member community platform to improve the networking opportunities for members and streamline our communications and engagement with data professionals. A rebranded platform, the “Data and Digital Professions Members Community” was launched on 22<sup>nd</sup> August, 2022.

We now offer an online hub for Data Profession members. The web-based platform has proved easy to access for APS Data Professionals from all agencies, overcoming some of the barriers experienced by other collaborative systems such as GovTeams.

On the member community platform, Data Profession members can consult a Directory of Members to engage and network with. The platform also provides an easily accessible home for Communities of Practice to undertake online discussions, promote and manage meetings and events and share resources via a library.

The Data Profession has created a space on the platform for a Data Project Register where teams across the APS can post information about their projects to enable collaboration and shared learnings.

Members can also share and find data job opportunities including mobility opportunities.

A key benefit of being on the co-branded platform means collaboration across the two Professions is now simpler as well.

While still early days, membership on the platform has grown quickly, with 1000 members reached in the first month. The Data Profession will continue to promote the platform to APS staff, and staff in state /territory and local governments working with data. By growing the membership and encouraging and supporting networking and collaboration, the member community platform is helping us realise the vision for the Data Profession as another conduit for capability uplift.





## 2023 Australian Government Graduate Program Data Stream

Streamlining Data Graduate Recruitment was listed as one of the six initial signature initiatives of the Data Professional Stream and categorized under Objective 3 of the Strategy. The stream continues to progress this objective by pursuing streamlined graduate recruitment across the APS as part of the Australian Government Career Pathways program.

The aim of this streamlined recruitment is to continue to grow the Data Profession at the entry level through enabling modern recruitment practices to bring data graduates into the APS, thereby building foundational data capability. The ABS is once again leading the centralised recruitment of data graduates for the 2023 intake. This is the third year that the ABS had led this recruitment and it continues to see growth. For the 2023 Program, the ABS partnered with 37 agencies, which was an increase of 13 agencies from the previous year. Demand for data graduates has increased year on year with a peak of around 300 data graduate positions for the 2023 intake. This is the largest Data Graduate program to date.

### Connecting with candidates

This year the Data Graduate Program had a key focus on connectivity of candidates with Agencies. ABS' experience and research showed that graduates felt disconnected from others and from the workplace prior to commencing in their Agency. To improve candidate experience and build connection early, the ABS data graduate team implemented approximately 20 touch points with candidates. This included creating and designing a series of videos from the recruitment managers to put faces to names and show candidates the professional and personal attributes of the people and Agencies that they will be working with. The feedback from candidates has been overwhelmingly positive largely due to this connectedness.

### Connecting with agencies

Focus continued on promoting partner agencies. Key highlights:

- o A new initiative giving partner agencies the opportunity to present at a 'Meet and Greet Session'. These were attended by more than 300 candidates on each day with positive feedback from participants and Agencies.
- o Early engagement with key stakeholders interested in the Statistical Methodologist and Data science streams to ensure a shared understanding of job roles, resulting in expectations of both candidates and Agencies being met.
- o Collaborated with partner agencies to design a new 'placement to agencies' process which was more aligned to candidate preferences to reduce the withdrawal rate and impact of a tight labour market.

The success of the program has seen a merit pool of 441 candidates with over 230 placements already confirmed which is on track to achieve the 2023 demand.



### Laying the foundations

The APS Data Capability Framework (DCF), the Data Roles and the Data Literacy Pathways documents are significant initiatives that lay the foundations for being a data professional. All three provide clear and consistent language to use when talking about data capability needs, strengths, roles and learning solutions.

The DCF outlines 26 data specific capabilities associated with working with data in the APS. Each capability has three proficiency levels: foundation, intermediate and advanced.

The DCF feeds into a range of capability building and workforce initiatives being developed by the Profession. Two of these are the Data Roles and the Data Literacy Pathways documents.

The high-level Data Roles include the skills, knowledge and attributes required for data users and producers across the APS. These roles provide job persona information, which is consistent and scalable. There are four core data roles: Data Analyst, Data Manager, Data Scientist and Data Engineer in addition to two specialisation roles: Geospatial Analyst and Statistician.

The Data Literacy Pathways document informs APS agencies on how to build a data literacy learning pathway in their workforce. The pathway details five learning clusters that include learning outcomes in addition to learning resources and activities that suggest options through which data literacy can be lifted.

Both the Data Roles and the Data Literacy Pathways documents map back to the APS Data Capability Framework.

### *Release of the foundation products*

The Data Profession has spent the year refining the Data Capability Framework in the lead up to the production release at the end of October 2022. The Data Roles and the Data Literacy Pathways documents are due to be released by the end of November 2022.

The Data Profession thanks all of the agencies that have been involved in progressing these initiatives.



### SES Data Leadership Course

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 maximise 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 senior executives at all levels 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.

The APS Academy took responsibility for the administration of the course, which commenced in September 2022. The course follows a modularised format and includes both face-to-face and virtual learning components. Post-course collaboration among course participants and alumni is enabled via a dedicated group on the Data Profession Members' Community Platform.



### Uplifting Capabilities through Communities of Practice

With the launch of the Member Community Platform, a new, more accessible space for Data related CoPs was offered to data professionals wanting to engage and collaborate.

CoPs are well recognised as a vehicle to support capability development in a modern workplace. Peer based learning contributes importantly to employees' knowledge and skills development and CoPs can facilitate this.

Through CoPs, community members are communicating, sharing information and collaborating. The development and promotion of best practice, opportunity to crowd source solutions, develop strategy and discuss issues affecting members via CoPs is well recognised and facilitated by the MCP.

As part of work on an employee value proposition we heard data professionals highly value the opportunity and capability to collaborate across agencies. By collaborating, lessons learnt through projects could be shared, and “reinventing the wheel” within the public service could be reduced. In turn, employee satisfaction and retention can be increased.

The MCP has seen CoPs set up for a variety of purposes, including an online home for the Graduate Data Network and the Australian Data Network (managed by the Department of Finance), where information is shared with members across the APS and the entire Australian Government system.

CoPs that share a common interest in a topic are also being established. The Data Champions Network Metadata CoP is using the blog feature to provide monthly updates on the activities of the Community, including community meetings and updates from connected projects. Discussions are ongoing through the Threads feature and the library now houses recordings of previous meetings and events for members to access.

All CoPs are self managed by a small group of members known as Community Ambassadors. The Data Profession provides ongoing support to Ambassadors to assist them to use the platform features and encourage engagement and interaction within the community.

With additional Communities seeking to join the platform, the Data Profession will continue to manage and curate Communities of Practice on the platform to enable data professionals to exchange ideas and develop capabilities specific to their niche area of expertise whilst avoiding duplication where possible.




# Challenges and lessons learned

| Work program challenges   | Cause   | Lessons learned   | Recommendation   |
|---|---|---|--|
| <p>Immersion:</p> <p>Sourcing suitable projects or candidates for experience</p> <p>Secondments with academia</p> | <ul style="list-style-type: none"> <li>Projects have to be meaningful work and broadly match secondees' existing skillset</li> <li>While there is usually senior support for immersions, organising them is very resource intensive</li> <li>Academia includes a substantial cohort who are not Australian citizens; non-citizens may not be eligible for employment in the APS.</li> </ul> | <ul style="list-style-type: none"> <li>Need buy-in from both home and host agencies</li> <li>Having a pool of available candidates offers more flexibility</li> <li>Where projects require security clearances and training this needs to be organised early</li> <li>Need to ensure citizenship requirements are communicated clearly to stakeholders</li> </ul> | <ul style="list-style-type: none"> <li>Closer monitoring of the candidate selection process</li> <li>Couch secondments in terms of their strategic alignment with the APS professions model; champion a "one-APS" mindset.</li> <li>Selection processes should aim to provide more than one candidate.</li> <li>Ensure citizenship requirements (if applicable) are understood by academic institutions prior to organising secondments into the APS.</li> </ul> |
| Agency capacity to lead projects  | <ul style="list-style-type: none"> <li>Machinery of Government (MoGs) reduced resources in agencies leading projects</li> </ul>   | <ul style="list-style-type: none"> <li>Effects of MoG changes may cause longer delays than originally anticipated</li> </ul>  | <ul style="list-style-type: none"> <li>Need to environmentally scan often to foresee potential impacts of schedule on delivery</li> </ul>  |
| Additional initiatives added to work program outside of the Strategy  | <ul style="list-style-type: none"> <li>Other initiatives agreed as important priorities by Data Profession governance groups</li> <li>Funding approval for an additional initiative</li> </ul>  | <ul style="list-style-type: none"> <li>Early consultation with governance groups is needed when establishing the strategy and work plan</li> </ul>  | <ul style="list-style-type: none"> <li>Review prioritisation of initiatives regularly with governance groups</li> </ul>  |
| Internal and external requests on Data Profession progress and activities   | <ul style="list-style-type: none"> <li>Requests for presentations, engagement pieces, reports and papers</li> <li>Short turn around provided with some requests</li> </ul>  | <ul style="list-style-type: none"> <li>Requests from internal and external stakeholders should be factored into forward work planning where possible</li> </ul>   | <ul style="list-style-type: none"> <li>Maintain a fora schedule document that allows team to anticipate requests</li> <li>Ask secretariats to provide advanced notice which will allow team to prepare points in advance</li> </ul>  |



# Looking forward – Year Three


Looking forward to year three, the Data Profession will focus on **maintaining, iterating and embedding a sustainable profession.**




**Member Community Platform continuation**




**Alignment with APS Academy**




**Career pathways for data professionals**



**Leadership of the profession**



**Data Entry level pipeline**



**Learning offerings**

