

10. Workforce skills and capability

10.1 What is it?

Data skills and capability are core elements of effective data governance. All agencies need to be supported by a workforce that has the right set of skills and capability to manage and use data effectively. This means ensuring all staff have a basic level of data literacy and that there are enough staff with specialised data skills spread across the organisation. Specialised data skills include the ability to manage and analyse large amounts of data, implementation and management of data systems, data engineering and cyber security.

10.2 Why is it important?

Data skills and knowledge are essential for all NSW Government employees to support evidence-based decision-making, whether in policy development, program management or service delivery. These skills also assist in improving operational efficiency, raising service delivery standards, and improving stakeholder engagement. Inadequate data literacy can not only impact the ability of the agency to extract value from the data they collect, it can also leave agencies vulnerable to privacy and security breaches.

10.3 What good looks like

- **Data-literate:** all staff have a foundational level of data literacy.
- **Specialised:** staff with specialised data skills are spread evenly across the organisation and can be leveraged when required.
- **Development-focused:** senior leadership support the professional development of data skills and awareness across all levels of the organisation.
- **Cross-disciplinary:** teams have the right combination of technical data skills, as well as non-technical policy, project and business acumen.
- **Training:** staff have access to data skills resources and are trained in relevant governance policies and procedures.

10.4 How to achieve good practice

- **Assess workforce skills and capabilities needs.** A [capability assessment](#) will help facilitate a conversation within the organisation to identify and address data skills and capability gaps.
- **Develop a workforce strategy to address data skills and capability gaps.** The strategy should include the development of training, resources, and education to build and develop individual capabilities. It is best practice to include a mix of face-to-face, discussion-based and leadership-led training as well as self-guided online training. For self-guided learning resources, refer to the [NSW Data Skills – Learning Resources](#) and the [APS Data Literacy Learning Guide](#).
- **Invest in the development and recruitment of staff with specialised data skills.** The following examples provide a good reference point for identifying the skills required across teams, as well as the agency as a whole:
 - Data analyst – manipulate and interpret data for decision making and to solve problems
 - Data policy and law expert – monitor the effectiveness of controls, resolve compliance challenges, advise on legal rules and controls to meet applicable legislation and standards
 - Data scientists – are hybrid experts in analysis and software programming, possess strong business acumen, coupled with ability to communicate findings
 - Data infrastructure engineers – support the infrastructure required to make data applications and platforms available in agencies and across the public service
 - Data architects – ensure the design of data systems, provide technical support for systems to undertake analysis.
- **Establish multidisciplinary teams to achieve skill-sharing and optimal project outcomes.** If there is a lack of data expertise in your agency, engage staff with specialised data skills during the stage when the skill is required.
- **Ensure role descriptions include the skills and capabilities** relevant to the data governance and management activities staff are expected to undertake.