Australian Teacher Workforce Data (ATWD) initiative

ATWD Data Access and Reporting Protocols

1 January 2022 to 30 June 2025

Version 2.0 – 18 July 2022

Informing the future of the teaching profession

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Section 1 – Introduction

Introduction to the ATWD

Background

1. In December 2016, Education Council agreed to fund the initial implementation of the Australian Teacher Workforce Data (ATWD) initiative[1] from July 2017 to June 2021. The ATWD Oversight Board (reporting to the Australian Education Senior Officials Committee, or AESOC) was created to oversee the initiative, with the Australian Institute of Teaching and School Leadership (AITSL) tasked to work collaboratively with the education sector to implement it.

2. In May 2021, Education Ministers Meeting agreed to continue funding for the ATWD for a further four years from 1 July 2021 to 30 June 2025.

3. The ATWD initiative is a nationally agreed data-linkage project that unites and connects initial teacher education (ITE) data, the teacher workforce data collected by teacher regulatory authorities (TRAs) in all states and territories, and data provided directly by teachers through the annual ATWD Teacher Survey. This linked data set provides a longitudinal national database of the highest data quality and integrity on trends in teacher education, the teacher workforce and teacher supply.

Purpose of the ATWD

4. The purpose of the ATWD is to create a shared and connected longitudinal national education database of initial teacher education and teacher workforce data, that identifies national workforce trends to effectively support workforce planning and policy. It is designed so that, over time, it will:

   - provide an evidence base for understanding the lifecycle of the modern teaching career, including detailing the characteristics of supply, retention, and attrition in and across local and national labour markets
   - support a data-driven exploration of important policy and research questions
   - enable evidence-led evaluation of the effectiveness of initiatives designed to improve the teaching workforce
   - provide national and jurisdictional level analysis and modelling of supply and demand trends
   - support the evaluation of ITE outcomes.

5. The data in the ATWD is prescribed by the Agreed National Data Set[2] (ANDS), which was agreed by all states and territories through Education Council in December 2016.

The data model for the ATWD

6. The ATWD will unite and link the following source unit-record data annually:

   6.1. Initial teacher education data from the Australian Government Department of Education's Higher Education Student Data Collection (HESDC) and Quality Indicators for Learning and Teaching (QILT).

   6.2. Workforce data from the state and territory teacher regulatory authorities.

   6.3. Workforce data from teachers through the ATWD Teacher Survey.

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[1] Known at the time as the National Initial Teacher Education and Teacher Workforce Data Strategy (NDS).

[2] Originally referred to as the National Minimum Data Set (NMDS).

7.   The ATWD can also include data from follow-up surveys of teachers who have participated in the ATWD Teacher Survey, and other collections added at the direction of the ATWD Oversight Board.

8.   Data for individuals across each of these sources is linked and de-identified to form one source unit-record data set by the Australian Institute of Health and Welfare (the AIHW), the accredited Commonwealth Integrating Authority (CIA) for the ATWD. The AIHW separates and removes all personal information and only provides de-identified data to the ATWD.

9.   This data set is cleaned and transformed to ensure internal consistency, and ensure that it is fit-for-purpose for the analysis of teacher supply and workforce characteristics.

10. A diagram of the data model for the ATWD is at **Appendix A**.

About the *ATWD Data Access and Reporting Protocols*

11. The *ATWD Data Access and Reporting Protocols* (the ATWD Protocols) govern access to, and reporting of, all data in the ATWD. The ATWD Protocols provide a framework for the Australian education community and researchers to access the ATWD that will ensure:

- data use complies with all relevant privacy legislation and legislation governing data sources
- appropriate and secure access to, and reporting of, the data without compromising data privacy
- access to, and reporting of, the data conforms to the intended purpose of the ATWD
- potential users are informed of:
  - how data in the ATWD can be accessed
  - the type of data that can be accessed, and by which users
  - the rules that apply to the reporting or publication of the ATWD
  - processes to access the data in the ATWD.

12. As at the date of publication, the ATWD Protocols outline the:

- general rules that will apply to all decisions about data use and reporting based on the ATWD initiative over its term ('All of project protocols')
- how these rules will be applied for data access and reporting from 1 January 2022.

Guiding principles for the ATWD Protocols

13. The guiding principles of the ATWD Protocols are that use and reporting of data from the ATWD must:

13.1. Maintain data privacy and in particular, ensure that individual teachers and schools remain unidentifiable in any data that is released to data users, and/or made available in the public domain.

13.2. Conform strictly to the intended purpose of the ATWD.

14. The ATWD Protocols are intended to inform policy, facilitate quality research and maximise the benefits of the ATWD for the Australian education community, while mitigating the risk of data misuse, and associated harm to individuals and organisations.

15. While the data providers own their individual source unit-record data, the ATWD represents united and linked data that is collectively owned by Education Ministers Meeting.

16. The ATWD Protocols must conform to the legislation and privacy requirements under which data providers and data custodians first collected the data.

17. The ATWD Protocols provide the guidelines for achieving this and all data users must conform to them.

The ATWD Project Manager

18. The Australian Institute for Teaching and School Leadership (AITSL) has been appointed as the ATWD Project Manager for Phase 1 and 2 (1 July 2017 to 30 June 2025), under the auspices of the ATWD Oversight Board. AITSL has appointed an ATWD Project Team to lead implementation of the ATWD.

19. The ATWD Project Team is responsible for the following:

    19.1. Providing advice to the ATWD Oversight Board on matters relating to implementation of the ATWD, including budget/funding and risk management.

    19.2. Managing the relationship with, and function of, the appointed CIA for the ATWD (refer to next section for more detail).

    19.3. Managing the relationship with source data providers for the ATWD, and providing support in relation to the data supply process.

    19.4. Managing the implementation of the ATWD Teacher Survey annually.

    19.5. Development of the variables, data dictionary, purpose and specifications of the Agreed National Data Set (ANDS – refer below) for the ATWD, and the achievement of the ANDS, with the CIA.

    19.6. Data quality, including assessment of the viability of the linkage solution over time, developing data transformations and assessing fitness-for-purpose, performing statistical data analysis, and the delivery of data products and reporting for the ATWD.

    19.7. Developing and providing advice on protocols and processes for data analysis, data release, and data interpretation and reporting, to ensure that all uses of the ATWD conform to its intended purposes.

    19.8. Establishing and Chairing the ATWD Technical Working Group, with the CIA as Deputy Chair. The purpose of the ATWD Technical Working Group is to provide advice to the ATWD Oversight Board on technical aspects of delivery of the ATWD at the data source level, including:

    o   processes for collating and uploading primary and secondary data into the CIA

    o   implementing the ATWD Teacher Survey into the TRA business processes

    o   working towards achieving harmonised, consistent national data in accordance with the ANDS for the ATWD.

    19.9. Providing governance, secretariat, project management and administrative support for the ATWD Oversight Board, the ATWD Technical Working Group and implementation of the ATWD.

The Commonwealth Integrating Authority

20. The Australian Institute of Health and Welfare (AIHW), the Commonwealth Integrating Authority for the ATWD, is accredited by the Cross Portfolio Data Integration Oversight Board.[3] It has the legislative mandate to securely collect and link data from the Australian, state and territory governments.

21. The AIHW has practices and an organisational structure that conform to the Australian Government Protective Security Policy Framework, and the Australian Government Information Security Manual, ensuring data security and protection of individual privacy and confidentiality.

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[3] The Cross Portfolio Data Integration Oversight Board is a Commonwealth body that oversees the development of a safe and effective cross government environment for integration of Commonwealth Data for statistical and research purposes. It is responsible for accrediting organisations to undertake data integration projects involving Commonwealth and other data that includes personal information.

22. The AIHW is contracted to undertake the following tasks for the ATWD initiative:

    22.1. Provide a legislative environment that will protect data privacy and confidentiality in accordance with the requirements of the *Privacy Act 1988*, the *Australian Privacy Principles* (APPs) and any relevant legislation governing the AIHW.

    22.2. Manage the process of secure data upload, collection and collation from all data providers.

    22.3. Provide the linkage solution and undertake data integration to link data across different sources for the same individual across longitudinal data collections.

    22.4. Separation of all personal and identifying data for secure storage, isolated from the ATWD, and storing all collected data securely.

    22.5. Provide statistical computing and data management tools within a secure access environment for permitted users to enable processing of de-identified unit-record data in the ATWD, in accordance with the ATWD Protocols.

    22.6. Ensuring access to the data in alignment with these protocols.

    22.7. Manage egress of aggregate data by permitted users in accordance with the ATWD Protocols and privacy legislation.

    22.8. Maintain the ATWD throughout the project[4], including the application of transformations and provision of a data dictionary consistent with the data available to all users of the ATWD.

    22.9. Provide ethics overview of the project.

    22.10. Manage and develop the data dictionary and metadata for the ATWD ANDS in a public-facing registry[5].

23. There is a nominated data custodian within the AIHW to ensure the ATWD is managed in accordance with the general conditions of the ethics approval.

24. The AIHW will establish an individual Memorandum of Understanding with each teacher regulatory authority to ensure that data handling conforms to the respective state or territory privacy legislation. All data from all providers will be directly uploaded to the AIHW through its secure data transfer system, Validata™.

ATWD Agreed National Data Set (ANDS)

25. In 2015 '*a Blueprint for initial teacher education and teacher workforce data*'[6] specified a National Minimum Data Set. This was approved by Education Council in 2016 and re-named the Agreed National Data Set (ANDS) in 2019.

26. The data to be progressively collected and stored in the ATWD in accordance with the ANDS will, over time, realise the ATWD Agreed National Data Set.

27. The specifications of the data to be collated and linked for the ATWD, in accordance with the ANDS, are detailed in the document 'Data Set Specifications for the ATWD' at **Appendix B** and provided to users via the AIHW's public facing metadata registry that will contain all variable specifications and metadata information.

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[4] The AIHW's responsibilities end at the point at which data is approved for public release, except as required under law.

[5] https://www.aihw.gov.au/

[6] 2015, Mitchell Institute for Health and Education Policy and the Centre for International Research on Education Systems (CIRES). The NMDS was endorsed in principle by Education Council in March 2016. AITSL's costed proposal for the ATWD was based on the NMDS and was agreed by Education Council in December 2016.

Governance of the ATWD and data privacy

Governance

28. The ATWD Oversight Board was established by Education Council and comprises 14 nominated representatives of key stakeholders involved in teacher education, registration and employment. It includes representatives of the Australian, state and territory education departments, the independent and Catholic school sectors, the state and territory teacher regulatory authorities and ITE providers.

29. The ATWD Oversight Board reports to the Australian Education Senior Officials Committee (AESOC) and is responsible for:

    29.1. Governance of the ATWD including management of the project, funding accountability, privacy and risk management, and change management, to ensure current use and future use of the ATWD conforms to its intended purpose. This includes the provision of an annual workplan and reporting on the annual workplan to AESOC.

    29.2. Data management, access and reporting including:
    - the set of variables, data dictionary and data specifications of the ATWD
    - the ANDS
    - protocols and processes for data security and privacy
    - data access, data analysis, data release and data interpretation and reporting.

30. All decisions relating to data access, use and reporting for the ATWD, including the articulation and implementation of these protocols, are determined and governed by the ATWD Oversight Board.

31. The *ATWD Data Access and Reporting Protocols* will come into effect after being approved by the AIHW Ethics Committee as being in accordance with requirements under the legislation governing the AIHW, the *Privacy Act 1988,* the *Australian Privacy Principles* (APPs) and the APP Guidelines[7]. Any amendments to the ATWD Protocols over the course of the ATWD initiative will also require the approval of the AIHW Ethics Committee and AESOC.

Data privacy and confidentiality

32. Data privacy is provided through the AIHW (refer to section above).

33. The AIHW is required by law to deal with information that it holds in accordance with the confidentiality requirements and legislation that governs it. The AIHW internal privacy policies, procedures and practices also comply with the requirements of the *Privacy Act 1988*, the *Australian Privacy Principles* (APPs) and the APP Guidelines.

34. The APP Guidelines are a legal requirement under Schedule 1 to the *Privacy Act 1988* and are listed on the Federal Register of Legislation. The APP Guidelines are issued by the Office of the Australian Information Commissioner (OAIC), to support understanding and awareness of the APPs and outline:
    - the mandatory APP requirements in Schedule 1 of the *Privacy Act 1988*
    - the Information Commissioner's interpretation of the APPs, including the matters that the OAIC may consider when exercising its powers
    - examples explaining how the APPs may apply to specific circumstances
    - good privacy practice to supplement minimum compliance.

35. The ATWD requires that the AIHW will collect personal data from data providers for the purposes of data linkage. The AIHW will separate the personal information from the rest of the data collated under the ATWD, and store it separately and securely.

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[7] https://www.oaic.gov.au/agencies-and-organisations/app-guidelines/

36. The separation principle is a critical practice adopted by accredited integrating authorities to protect the privacy of the data they are responsible for handling. Under this principle, staff members who have access to personal data will not have access to the de-identified data set and the two are maintained in separate secure locations. Only de-identified data are available in the ATWD for analysis and reporting purposes.

37. In addition to the separation of personal information from the unit-record, the AIHW will apply a number of other standard data management methods as appropriate, to ensure data privacy. These can include but are not limited to aggregation, minimum cell-size restrictions and management of the combination of variables accessed.

Section 2 – The ATWD Protocols

This section outlines the protocols for access to the ATWD.

38. The ATWD Protocols are based on the Five Safes Framework and are designed to maximise timely data access to the ATWD and ease of reporting for approved projects balanced by appropriate governance of data privacy.

39. The processes and approvals required to access data under the ATWD Protocols are provided in this document. Implementation and application processes are available for users and proposed users on the ATWD web page (https://www.aitsl.edu.au/research/australian-teacher-workforce-data).

40. These protocols and the processes supporting them can be updated, at the discretion of the ATWD Oversight Board, to ensure that they are current, accurate and fit-for-purpose. Key definitions for the ATWD Protocols are presented in **Section 4**.

41. A summarised 'User guide' to these protocols is included in **Section 3**.

The Five Safes Framework

42. The Five Safes Framework (the Framework) is an internationally recognised risk management methodology used widely by the Australian Bureau of Statistics, AIHW and in the UK, New Zealand and Europe[8].

43. The Framework enables a governing body to manage risk in the access, release and use of data by providing a strong conceptual approach to inform decision-making regarding:

- who will gain access to what data
- what type of data can be accessed
- based on data accessed, what outputs are permitted to be published or released
- how to maintain the usability of the data
- assessing the threshold of whether or not any individual or organisation is 'reasonably identifiable' from the data.

44. The elements of the Framework are listed in **Table 1** below.

Table 1 : The Five Safes Framework

Dimension	Question
1. Safe settings	Does the access facility prevent unauthorised access and/or use? Is the setting able to control data access so that the data in this setting is safe to all who can access this setting?
2. Safe data	Is there a disclosure risk in the data itself? Is more data disclosed than is necessary?
3. Safe projects	Is this use of the data appropriate and consistent with the purposes of the ATWD?
4. Safe people	Can the user be trusted to use the level of data provided in an appropriate manner?
5. Safe outputs	Are the statistical results non-disclosive and is reporting of those results consistent with the purposes of the ATWD?

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[8] Issues Paper: New Australian Government Data Sharing and Release Legislation

Safe settings

45. There are three security settings through which data is accessed in the ATWD:

    45.1. Public settings (ATWD Digital tools):

    - o ATWD Key Metrics Dashboard
    - o ATWD Explorer.

    45.2. Secure settings (Secure remote access environment)

    45.3. Restricted settings (AIHW internal secure environment)

    - o Data-linkage restricted setting
    - o Data-preparation restricted setting.

Public settings

46. The public settings are delivered through the ATWD Key Metrics Dashboard and the ATWD Explorer. Public settings are safe settings for aggregated data and the results of data modelling, as these outputs have been vetted by the AIHW as not identifying individuals and are deemed safe for public release.

Secure settings

47. The secure settings provide access to the ATWD unit-record data after de-identification (transformed unit-record data). The secure setting is provided through the AIHW Secure Remote Access Environment (currently, SRAE) for the ATWD and it is secure by design. Multi-factor authentication and an approved project are required to access the data.

48. Secure settings are the mechanism through which control over the risk of re-identification is managed. The secure setting:

    - allows control over who can gain access to the data

    - allows control over the fields of data that can be accessed, such that the number of fields released to the user is limited to those required for and relevant to the approved project

    - ensures data export/egress requests are vetted for privacy compliance and approved for egress by AIHW, allowing strict control over minimum cell sizes that can be egressed once access is granted.

Restricted settings

49. The restricted setting provides secure access to the ATWD source unit-record data and source attribute data for the purposes of ATWD implementation and delivery at the direction of the ATWD Oversight Board.

50. Restricted setting applies the same levels of control as secure settings and ensures additional control by heavily restricting the purpose for which the setting can be accessed and by whom.

51. There are two approved reasons for use of the restricted settings:

    51.1. Linkage, harmonisation and de-identification of the source unit-record data, using the data received from data providers to create the source attribute data (de-identified unit record).

    51.2. Preparation and delivery of the ATWD, including using the source attribute data (de-identified unit record) to produce the transformed unit-record data.

The data-linkage restricted setting

52. The data-linkage restricted setting is used for the purposes of linkage, harmonisation and de-identification of the source unit-record data.

53. Data linkage and de-identification takes place in an isolated part of the restricted setting that is accessible only to AIHW, and makes use of the source unit-record data.

54. The data-linkage restricted setting is an isolated part of the restricted setting that is accessible only by the AIHW and is the only setting that may contain data which has not been de-identified.

55. The data-linkage restricted setting is secure by design and managed by the AIHW in accordance with its legislative requirements and obligations. This includes a separate team working with personal information to perform data linkage, and organisational policies which prevent people moving from the linkage portion of the project to broader ATWD functions within the AIHW.

The data-preparation restricted setting

56. The data-linkage preparation restricted setting is used for the purposes of transformation, preparation and quality assurance of the ATWD.

57. The data-preparation restricted setting is provided by the AIHW for the ATWD Project Team and is secure by design. It requires multi-factor authentication and an approved project to access the data, and access is strictly restricted only to organisations in the ATWD Project type, who are responsible for implementation and delivery.

Safe data

58. Data safety is managed by providing different levels of data through different safe settings: public, secure and restricted settings.

Safe data for public settings

59. Safe data that is publicly available through the digital tools (ATWD Key Metrics Dashboard and Explorer tools), includes:

- aggregate data
- customisable tables
- statistical modelling of the unit-record data.

60. The data in the public setting is considered to be safe data because no individual teacher or school can be identified from the data. This is achieved through vetting of data for release into this setting by the AIHW (refer to safe outputs).

Safe data for secure settings

61. The data available in the secure setting via a secure remote access environment is the transformed unit-record data, that:

- is harmonised to ensure cross-source consistency
- has had a high degree of quality assurance performed by the AIHW and the ATWD Project Team
- will be fully consistent with the publicly available metadata in METEOR.

62. The transformed unit-record data, although fully de-identified, can pose a risk of re-identification due to its longitudinal nature in which a large number of fields are available for each de-identified person. This is managed through controls in the secure setting. Outputs from the transformed unit-record data are reviewed by AIHW to ensure the privacy of all data egressed through the secure setting.

63. The transformed unit-record data is considered safe data in a secure setting because it is de-identified and its release is controlled by the AIHW such that:

- the AIHW can ensure that no individual can be re-identified from any individual variable
- an approved application is required to ensure that access is only granted to safe projects and safe people approved by the ATWD Oversight Board.

64. When necessary, safety is further assured through the ATWD Project Team and the AIHW applying standard data perturbation techniques such as cell suppression, cell swapping and the addition of small amounts of random noise as necessary to ensure data privacy, under advice from the AIHW.

65. Requests for transformations and development of the transformed unit-record data can be made to the ATWD Project Team. Such requests will be considered by the ATWD Project Team, the AIHW, the ATWD Technical Working Group and the ATWD Oversight Board.

    65.1. The fulfilment of the delivery of such requests will be performed by the ATWD Project Team and the AIHW, and will be applied to the transformed unit-record data by the AIHW.

Safe data for restricted settings

The data-linkage restricted setting

66. The data available in the data-linkage restricted setting is the source unit-record data.

67. The data in this setting is identifiable data, but is considered safe data in this setting due to the highly restricted access, even among AIHW staff members. The source unit-record data is only safe data for AIHW staff members involved in the data linkage process.

The data-preparation restricted setting

68. The data available in the data-preparation restricted setting is the source attribute data.

69. The data in this setting is de-identified, but can contain fields that could be identifying, but which are necessary to create the transformed unit-record data set. It is considered safe data in this setting due to access being restricted to those involved in ATWD Project delivery.

70. The source attribute data is only safe data for the nominated ATWD Project organisations, which are AIHW and the ATWD Project Team (refer to safe people).

    70.1. The source attribute data set is not available to ATWD Partners and 'other education organisations'.

    70.2. Projects undertaken by ATWD Partners and 'other education organisations' will all be completed using the transformed unit-record data in the secure setting, which is accompanied by complete metadata (refer to safe projects, Category 2 projects), or using the data available in a public setting (refer to safe projects, Category 1 project).

Safe projects

71. A safe project falls within an allowed category and has a valid purpose that is aligned with the purpose of the ATWD (refer to **Section 1**). A safe project is of public benefit and is not used for compliance and regulatory purposes.

72. All uses of the ATWD must meet the safe project criteria. There are three categories of safe project and each is aligned to a safe setting.

73. Not all categories and sub-categories of projects are available to all organisations. The categories of projects that are available to different organisations are defined in safe people.

Category 1 safe projects *(public setting, aggregate data and prepared modelling)*

74. Category 1 projects are conducted using the two ATWD public tools, and do not require a project application. The two public tools are the ATWD Key Metrics Dashboard and the ATWD Explorer.

ATWD Key Metrics Dashboard

75. **Project purpose:** State and national supply and teacher workforce characteristics data projects, including the use of aggregate and longitudinal data trends.

ATWD Explorer

76. **Project purpose:** State and national supply and teacher workforce characteristics modelling projects, including multivariate and longitudinal analysis, and geospatial reporting.

Category 2 safe projects *(secure setting, transformed unit-record data)*

77. Category 2 projects require access to the transformed unit-record data for complex statistical analysis and modelling that is not able to be completed as a Category 1 project through the data available in the public setting.

78. Category 2 projects carry greater risk than Category 1 projects and this risk is controlled through safe data and safe people.

79. Category 2 projects require the use of the transformed unit-record data, and will require a project application (refer to the Application Processes section).

   79.1. ATWD Partners (refer to safe people) are able to use an expedited application form for their projects.

   79.2. Other Education Organisations (refer to safe people) require a full application for their projects.

80. If a proposed Category 2 project can be made available as a Category 1 project by adding more safe data into the public setting in a timely manner, this approach will be prioritised to lower the overall risk of the project.

81. As part of the application process, the ATWD Project Team may recommend to the ATWD Oversight Board that a specific Category 2 project application can be converted into a Category 1 project. The decision to enable data access in this manner will be at the discretion of the ATWD Oversight Board.

82. Category 2 projects will be assessed in accordance with the following criteria:

   82.1. Information that is provided about the organisation (ATWD Partner, or Other Education Organisation) and the specific staff who will be working on the project.

   82.2. The specific question or purpose for which the data will be used, including if the requested analysis is already available through, or could be better provided through, public data release via the ATWD Key Metrics Dashboard or ATWD Explorer.

   82.3. The number and combination of variables requested and whether they are aligned with, and are limited to those required for, the purposes of the project.

   82.4. The application of appropriate controls to prevent re-identification of individuals from project outputs when those outputs are used separately or in combination with ATWD reporting and other requested external outputs.

Category 3 safe projects *(restricted setting, source unit-record and source attribute data)*

83. Category 3 projects allow for ATWD development, quality improvement and reporting projects that allow the ATWD Project Team and the AIHW to deliver data to projects and settings, and to produce ATWD reporting at the direction of the ATWD Oversight Board.

84. Category 3 projects are designated as specific, safe projects with a stated purpose, with known data access requirements and expected outputs. They are performed by designated 'safe people' who have been defined as such by the ATWD Oversight Board they are considered ongoing; and as such, no specific application is required for Category 3 projects.

The data-linkage restricted setting

85. Only one sub-category of Category 3 projects takes place in the data-linkage restricted setting.

   85.1. **Category 3a** – Performing linkage, harmonisation and de-identification. This project uses the source-unit-record data to produce the source-attribute data set (de-identified unit record), and is performed by the AIHW.

The data-preparation restricted setting

86. There are four Category 3 project sub-categories that take place in the data-preparation restricted setting.

   86.1. **Category 3b** – Transformation and data development

   o The ATWD Project Team is responsible for identifying and managing data transformations under advice from the ATWD Technical Working Group and the ATWD Oversight Board.

   o The AIHW is responsible for applying transformations to convert the source-attribute data set into the transformed unit-record data for use in the secure setting, under direction from the ATWD Project Team.

   o Assessment of fitness-for-purpose of the transformed unit-record data will be undertaken by the ATWD Project Team, to ensure that the data meets the requirements of the ATWD.

   86.2. **Category 3c** – provision of data for the ATWD Key Metrics Dashboard and ATWD Explorer

   86.3. **Category 3d** – preparation of ATWD reporting

   86.4. **Category 3e** – evaluation of data egress requests from the transformed unit-record data set.

Safe people

87. There are two aspects to safe people, the organisation and the individual. A safe organisation is one which is eligible to undertake a particular category of project. The individuals within the organisation granted access to the data are termed safe individuals.

Safe organisations

Category 1 Projects – Public settings

88. Everyone may access the data provided through a public setting (ATWD Key Metrics Dashboard and ATWD Explorer) as data in the public setting is considered to be low risk.

Category 2 Projects – Secure settings

89. There are two groups of safe organisations for access to data in the secure setting, ATWD Partners and 'other education organisations'.

90. Organisations that do not belong to a safe organisation may only gain access to the ATWD via a public setting such as the ATWD Key Metrics Dashboard or ATWD Explorer.

ATWD Partners

91. ATWD Partners are defined by their close relationship to the ATWD through their involvement in governance or supply of the source unit-record data, and as a result have a vested interest in the ongoing success of the ATWD. ATWD Partners have the highest of level of safety for Category 2 projects and therefore:

   • can make expedited project applications (refer to Application processes)

   • are pre-approved for ongoing, internal supply projects (refer to Application processes)

   • may contract third parties to undertake work (refer to Applications processes)

   • may always undertake internal reporting (refer to safe outputs)

   • may engage in external reporting as approved in the application (refer to safe outputs)

   • may egress vetted data from the secure setting (refer to safe outputs).

92. ATWD Partners are:

- Australian Government Department of Education (DOE)
- teacher regulatory authorities
- state education departments (jurisdictions)
- national and state non-government education sector bodies
- the Australian Institute for Teaching and School Leadership (AITSL)
- Universities Australia
- The Australian Council of Deans of Education.

Other Education Organisations

93. 'Other education organisations' are defined as education organisations, associations and researchers in Australia and:

- are required to make a full project application to obtain approval (refer to Application processes)
- may egress vetted data from the secure setting (refer to safe outputs)
- may engage in external or internal reporting as approved in the application (refer to safe outputs)

94. Other Education Organisations are:

- education employer groups and education employer associations
- teacher unions
- the Australian Curriculum, Assessment and Reporting Authority (ACARA)
- the Australian Children's Education and Care Quality Authority (ACECQA)
- the Australian Education Research Organisation (AERO)
- Education Services Australia (ESA)
- Initial teacher education providers
  - o For a university with an ITE program, this category is limited to only the school/department within the university which provides the ITE program. Other schools/departments within the university may apply to be added to the list of research and policy institutions who can apply for access.
- Research and policy institutions
  - o Other research and policy institutions approved by the ATWD Oversight Board.
- PhD and Masters (research) candidates at Australian universities when their supervisor is also approved for access due to their membership of the initial teacher education providers subcategory or as a member of a research and policy institution approved by the ATWD Oversight Board.

95. Research and policy institutions may apply to the ATWD Oversight Board for approval to be added to the list of 'Other Education Organisations' who may then apply for access to Category 2 projects.

95.1. Other research and policy institutions will be considered at the discretion of the ATWD Oversight Board against the following criteria:
  - o the organisation is Australian
  - o the primary purpose of the organisation is policy and/or research
  - o the organisation has produced a body of policy research on one or more of the purposes of the ATWD (refer to section **Error! Reference source not found.**)
  - o there is agreement from data source owners
  - o where access to ATWD data includes ITE data, an organisation will be required to be specified in the relevant data sharing agreement held between the Department of Education and AITSL.

Category 3 Projects – Restricted settings

96. Only ATWD Project organisations may operate in the restricted settings. ATWD Project organisations are:

- the ATWD Project Team within AITSL
- the AIHW.

Data-linkage restricted setting

97. The only safe organisation for Category 3 projects in the data-linkage restricted setting is the AIHW.

Data-preparation restricted setting

98. ATWD Project organisations (ATWD Project Team within AITSL and the AIHW) are safe organisations in the data-preparation restricted setting.

Safe individuals

99. Only safe individuals may access the ATWD through the secure or restricted settings.

100. A safe individual for an approved project is someone who has:

    100.1. Signed an agreement that they will comply with the ATWD Protocols.

    100.2. Signed a confidentiality undertaking and any other agreements as per AIHW legislation.

    100.3. Completed all required output training and competency testing.

101. An application for a Category 2 project must nominate the individual(s) within the organisation who will work with the unit-record data. Once a project application is approved, the nominated individual(s) will be required to become a safe individual to access the ATWD unit record.

102. For Category 3 projects, individuals from ATWD Project organisations must become safe individuals before being granted access to data in the restricted setting.

103. Safe individuals nominated to a project may communicate about the data and its outputs within the set of safe individuals for the purposes of conducting the project, this is considered separate to the reporting described in safe outputs.

104. Any individual who deliberately breaches the ATWD Protocols ceases to be a safe individual and cannot be considered a safe individual on future projects.

Safe outputs

105. Three broad types of outputs are produced by and from the ATWD:

    105.1. Microdata outputs are outputs that are prepared in a restricted setting and outputted to the secure setting. These contain de-identified data at the unit-record level.

    105.2. Data outputs are outputs that move data from the secure setting into the public setting, including into ATWD tools, or data included in internal or external reporting. This includes any type of output that may contain data, such as the results of statistical modelling or aggregate data in any format.

    105.3. Reporting outputs refers to outputs that are produced from data in any setting for the purpose of communicating findings from the data – this includes both internal and external reporting.

Microdata outputs

106. Microdata outputs include the source attribute data set (which is an output of the data linkage process) and the transformed unit-record data set (which is an output of the data transformation process).

107. To be considered safe outputs, microdata outputs must always be located in a restricted or secure settings.

108. AIHW is responsible for ensuring that microdata outputs meet legislative and privacy requirements appropriate to the setting in which the data set will reside.

Data outputs

109. All data outputs from a secure setting require approval by the AIHW to ensure that they meet legislative compliance with the *Privacy Act 1988*, the *Australian Privacy Principles* (APPs), and any other legislation governing the AIHW, and to ensure that they do not and cannot be used to identify an individual or a school or early childhood service. This includes both data and written files (i.e. Word documents, code and so on).

110. No data may be removed or copied from the secure remote access environment without the express approval from the AIHW, through a formal data egress request to the AIHW.

111. Data outputs should be clearly associated with internal reporting or planned external reporting that conforms with the purpose of the ATWD.

112. All work using the transformed unit-record data should be undertaken in the secure remote setting, and analysis and aggregate data to be egressed only when ready for reporting.

113. The AIHW may impose requirements and/or limitations on storage of data outputs if deemed necessary.

114. The AIHW will consider, advise on, and make decisions on whether to permit or reject all data output 17 in the context of strict preservation of data privacy. This applies even when a data output will be used for the purposes of 'internal supply modelling'.

115. Data output assessments will include:

115.1. Assessment of cell sizes.
- o For tabular data, a minimum cell size requirement of 5 per cell will apply for initial teacher education data alone, and a requirement of 10 per cell will apply for tables including regulatory authority data or ATWD Teacher Survey data.
- o For 'all groups' of cells (e.g., row totals, column totals, table total) a total cell size of 50 will apply.

115.2. Assessment of the requested output in the 'whole of project context' including:
- o Whether a single table that contains cell sizes that exceed the minimum cell size required, could, when considered in combination with other ATWD data outputs, reveal a cell size which is too small through differencing.
- o The constraints a data output request would place on future reporting from the ATWD by other Category 2 projects and the ATWD Project Team.
- o To facilitate assessment of a requested data output in the 'whole of project context', the AIHW may require a data egress to follow a specified data format.

115.3. Assessment of whether the data output could lead to re-identification even after the application of 115.1 and 115.2.
- o Statistical analysis and modelling is not subject to the minimum cell size criteria, but still requires vetting as some methods may allow re-construction of the unit-record data.
- o Some highly identifying variables may not preserve privacy in aggregated data, even when the cell exceeds the minimum cell size.

116. The use of data perturbation or resampling methods can enable the reporting of data which otherwise may not be reported as it would lead to a risk of re-identification. Through the ATWD Project Team the AIHW will advise applicants whether perturbation of their planned data outputs are likely to be required at the time of application.

117. To optimise data privacy, Category 2 projects will be required to use and report on aggregate data from the information provided in the ATWD Key Metrics Dashboard and ATWD Explorer when it is available in these tools.

118. The application of this will be monitored and reviewed after 12 months.

Reporting outputs

119. Reporting outputs are any published or communicated outputs, reports or interpretations of the data.

120. There are four types of reporting outputs:

120.1. **ATWD reporting** refers to all ATWD-branded reporting produced by Category 3 projects, as well as in-confidence reporting to AESOC and/or Education Ministers Meeting provided by the ATWD Oversight Board.

120.2. **Internal reporting** refers to reporting within the project's approved safe organisation, which extends beyond the safe individuals on a particular project for internal business purposes (Category 2 and 3 projects).

   o Internal reporting is always approved for ATWD Partners and Category 3 projects.

   o Internal reporting includes an ATWD Partner reporting to the minister in charge of the organisation.

   o When a third party is contracted by an ATWD Partner, internal reporting covers only reporting to the contracting ATWD Partner organisation, reporting within the third-party organisation is not included, unless approved in the application or for the purpose of communication between define safe individuals for the purposes of undertaking the project.

   o An 'Other Education User' may apply for specific forms of internal reporting, for example, a report to the board, or a PhD student seminar. Reporting which will be distributed or presented to staff outside of the safe organisation and safe individuals on the project is considered external reporting.

120.3. **External reporting** refers to all reporting which extends beyond an approved project's safe individuals and safe organisations, this includes reporting of a Category 2 project that is made public (Category 2 projects).

   o External reporting requires approval for both ATWD Partners and Other Education Organisations. Wherever possible, external reporting will be pre-approved at the time of applications.

   o All sharing of data outputs with other organisations is considered to be 'external reporting'.

120.4. **Secondary reporting** refers to reporting on publicly released data from the ATWD (Category 1 projects) or on publicly released findings. Secondary reporting is always allowed because the data is public.

120.5. Secondary reporting only includes:

   o reporting on data contained in the ATWD Key Metrics Dashboard and the ATWD Explorer,

   o reporting on data/findings contained in external reporting or ATWD reporting.

Approval of External Reporting

121. All external reporting from safe projects that have used unit-record data in a secure or restricted setting (Category 2 projects) require approval by the ATWD Oversight Board. Where possible, this will be pre-approved at the time of application.

121.1. At the time of application, the ATWD Oversight Board may prescribe any limitations to the reporting pre-approval.

121.2. Pre-approval is not available for reporting on Aboriginal and Torres Strait Islander teachers.

121.3. Where the ATWD Oversight Board or its delegated committee has concerns about how a topic or data may be reported on, it may decline pre-approval and request the opportunity to review any reporting outputs prior to their publication and/or communication:

  o   the need for such a review will be communicated prior to data access being granted

  o   the ATWD Oversight Board may seek advice from the ATWD Technical Working Group, the ATWD Project team, or the AIHW to help determine whether the reporting is an appropriate interpretation of the ATWD

  o   the ATWD Oversight Board reserves the right to direct that reporting requires alteration prior to publication, or that it cannot be reported.

121.4. Where the process of undertaking a Category 2 project leads to a substantial change in the pre-approved reporting, the reporting is no longer considered pre-approved and a project amendment is required.

122. In the event of unapproved external reporting (including approved internal reporting published as external reporting without approval) the ATWD Oversight Board may, at its discretion, temporarily or permanently revoke the organisation's ability to:

- engage in internal reporting
- obtain pre-approval for external reporting
- be considered a safe organisation.

Section 3 – Application processes

Introduction

123. Applications are only required for Category 2 projects.

124. Applications are at the level of a specific project, not the level of the organisation, and an organisation may have multiple active Category 2 projects. Having multiple active projects has the benefit that they may allow for more data to be made available to an organisation without affecting safe data – this is at the discretion of the AIHW (refer to safe outputs).

Eligibility

125. Access to the unit-record data that is accessible in a secure setting (Category 2 projects), may only be made by an organisation in the category of ATWD Partner or 'other education organisation'.

Required information

126. A project application requires applicants to provide the following information to enable the application to be assessed against the Five Safes Framework:

- What is the purpose of accessing the data:
  - o for an ATWD Partner undertaking an expedited application, 'internal supply modelling' is considered a suitable purpose.
- What data fields and records are required to undertake the project?
- How will the unit-record data be used?
- What are the planned outputs? (refer to safe outputs):
  - o this includes data outputs from the secure setting, as well as internal or external reporting
  - o ATWD Partners are always approved for internal reporting
  - o specifying the planned data outputs in the application allows guidance to be provided as early as possible about potential limitations to the planned data egress.
- The organisation and individuals within the organisation who will be accessing the data in the secure setting:
  - o ATWD Partners may nominate a contracted third party to work on the data, which requires a full application
  - o the contracted third party must be an Australian business with experience working with data.

Approvals

127. The following approvals are required for access to data in the secure setting (safe setting).

- Safe people: The ATWD Oversight Board
  - o The ATWD Oversight Board must approve any third-party organisation working with an ATWD Partner on their project.
- Safe project: The ATWD Oversight Board.
- Safe outputs: The ATWD Oversight Board.
- Safe data: The AIHW.

128. The ATWD Oversight Board may delegate its approval powers to a sub-committee or to a working group appointed by the board.

Process

129. Applications for Category 2 projects will be submitted to the ATWD Project Team for advice to the ATWD Oversight Board. The ATWD Project Team will provide advice on:

129.1. Applicant eligibility to apply for access to the transformed unit-record data.

129.2. Whether the request may be satisfied by data that is already publicly available; in that case:

- o   the ATWD Project Team will direct the applicant to this data
- o   the applicant will be required to amend their application to articulate how the existing data does not satisfy the needs of the project.

129.3. Whether the request could be fulfilled by an update to ATWD Key Metrics Dashboard and/or ATWD Explorer in a timely manner.

129.4. The potential to create conflict with any reporting planned or in development at the direction of the ATWD Oversight Board.

129.5. When data on Aboriginal and Torres Strait Islander teachers and/or ITE students is requested, that the required consultation has been undertaken.

130. The application will then be assessed by the AIHW to:

130.1. Confirm that the requested fields and records would constitute safe data in the secure setting, and to identify any potential concerns about the privacy of the proposed data outputs.

130.2. Determine whether the proposed project is covered by the ATWD ethics approval.

- o   An additional ethics approval, as specified by the AIHW as a condition of approval, may be required when the proposed project is outside of the existing ATWD ethics approval but inside the scope of the ATWD purpose.

130.3. Determine whether approval from another ethics committee (e.g., a university ethics committee) satisfies the requirements. If review is required by the AIHW Ethics Committee, the cost may be passed on to the applicant.

131. A project will only progress to the ATWD Oversight Board after AIHW grants approval of safe data.

132. The application will then be assessed by the ATWD Oversight Board for final approval on the advice received and to confirm that the project and reporting is within the scope of the ATWD.

Reporting pre-approvals

133. External reporting (safe outputs) may be pre-approved at the time of application.

134. Pre-approval is not guaranteed and is at the discretion of the ATWD Oversight Board. Pre-approval will be more likely when more detail about the intended reporting, and frameworks that will be used to guide interpretation of the data, is provided during the application process.

135. Pre-approval for reporting cannot be granted for external reporting on Aboriginal and Torres Strait Islander teacher and ITE student data.

Expedited Applications – ATWD Partners

136. Expedited applications are only available for ATWD Partner organisations and these will be processed before full applications. The purpose of expedited applications is to:

- •   provide streamlined options for pre-approved projects including:
  - o   access to the data an ATWD Partner contributes to the ATWD
  - o   access to the data for internal reporting focussed on 'supply modelling' projects
  - o   specified planned external reporting.

- minimise the collection of information from ATWD Partners which is already known, and ensure fast processing of these applications.
  - o Some parts of the application form are not required where, by virtue of the ATWD Partner's relationship to the ATWD, the additional level of detail needed from other education organisations is not necessary to evaluate the suitability of an ATWD Partner's project.

Accessing the secure setting after approval

137. Once an application has been approved by the ATWD Oversight Board, data access will be granted after the following steps have been completed:

137.1. The individuals nominated as working on the project have undertaken the training required to be classified as a safe individual (refer to sections 99–104).

137.2. The organisation has signed an agreement that they will comply with the ATWD Protocols and any agreements required by AIHW to fulfill its legislative obligations.

137.3. Fees that may apply to cover the cost of the provision of data to the user, including the secure remote access environment service that is used to access data in the secure setting, have been paid to the AIHW.

Monitoring and review

138. The ATWD Oversight Board, supported by the ATWD Project Team will maintain a regular process of monitoring and reviewing the ATWD Protocols, and the associated processes and agreements.

139. The ATWD Oversight Board, through its secretariat, will maintain a register of all:

- requests and approvals for Category 2 projects
- data released through Category 2 projects
- names and contact details of the safe individuals and safe organisations for each approved Category 2 project
- specific variable combinations that have been deemed unable to be accessed together in a Category 2 project due to their combination being highly identifying, along with the specific reason for this restriction.

140. Details of all ATWD Oversight Board decisions relating to data access will be reported to AESOC through its regular annual reporting process.

Section 4 – Quick reference guide

Data access and reporting for the ATWD

3.1 Data access

Table 2 presents an easy-to-use summary of:

- how to gain access to, and report on data from, the ATWD
- the categories of projects and which organisations may undertake them
- the associated processes, requirements and limitations.

Section 2 provides the details that underpin this summary and that will be applied to all applications for, and use of, the data.

Table 2: Data access summary

Safe Projects	Safe People			Safe Setting	Safe Data	Safe Outputs		
	Org. Type	Eligible	Application required			Data	Internal reporting	External reporting
Category 1[9] State and national supply and workforce characteristics data and modelling projects.	ATWD Partners[10]	Yes	No	ATWD public tools: ATWD KMD and ATWD Explorer	Aggregate data analysis and modelling	Outputs generated through the use of the ATWD public tools are considered 'secondary outputs' and are always allowed.		
	Other Education[11]	Yes	No					
	Public	Yes	No					
Category 2[9] Complex statistical analysis and modelling that is not able to be completed as a Category 1 project and is aligned with purpose of ATWD.	ATWD Partners[10]	Yes	Expedited application	Secure Remote Access	Transformed unit-record data set	Yes, vetted by AIHW	Yes	Yes, on application
	Other Education[11]	Yes	Full application				No – unless approved by application	Yes, as pre-approved at application
	Public	No	N/A				N/A	N/A

3.2 Project types

Category 1 projects

Category 1 projects include aggregate and longitudinal data trends, multivariate analyses and geospatial reporting. **Examples of Category 1 projects** include, but are not limited to:

- analysing the number of ITE completions in a state/territory over time to assist in projecting supply
- understanding the demographic characteristics of classroom teachers compared to school leaders
- comparing the working hours of classroom teachers in regional compared to metropolitan areas to understand workload differences across a state/territory
- the number of men and women commencing postgraduate and undergraduate ITE degrees in primary education at regional universities to understand supply through ITE

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[9] See examples in following sections

Category 1 digital access tools: ATWD Key Metrics Dashboard and ATWD Explorer

The **ATWD Key Metrics Dashboard** contains downloadable data tables and interactive visualisations of supply data and trends, as well as written descriptions of the data and trends.

The **ATWD Explorer** contains downloadable data tables, interactive visualisations, forecasts, and the output of statistical modelling for supply data.

Available to: The general public.

Application process: Not applicable as ATWD digital access tools are publicly available.

Reporting requirements: Reporting from the ATWD digital access tools is allowed without approval.

Category 2 projects

Category 2 projects are projects that require data analysis or modelling that is not available in the ATWD Key Metrics Dashboard or ATWD Explorer. All data, modelling and analysis output performed in the secure remote access environment must be vetted by AIHW before being reported.

Some **examples of Category 2 projects** include, but are not limited to:

- analysis of whether men or women from regional areas commencing ITE are more likely to study at regional universities or move to metropolitan universities
- clustering of demographic attributes of teachers, and examining whether these clusters differ between school leaders and classroom teachers
- survival analysis of how long teachers remain in the profession, based on the clusters of reasons they give for intending to leave the profession, and their demographic characteristics.

If the data required for these projects becomes available through the ATWD public tools, then they must be conducted as Category 1 projects.

Category 2 digital tool: Secure remote access environment

Available to: ATWD Partners[10] and 'other education organisations'.[11] Category 2 projects are not available to individuals or the general public.

Application process *(refer to Section 3)*:

- Expedited application: ATWD Partners only
- Full application: 'Other education organisations' and third-party contractors appointed by ATWD Partners, with specific individuals nominated as the safe people (refer to **Section 2**).

Reporting requirements: Pre-approval is required for reporting and is part of the application process.

- **Internal reporting**: ATWD Partners are pre-approved, 'other education organisations' on application.
- **External reporting**: Approved during the application process.

Internal and external reporting on Aboriginal and Torres Strait Islander teachers or ITE students cannot be pre-approved and requires evidence of support from an approved Aboriginal and Torres Strait Islander organisation prior to dissemination.

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[10] ATWD Partners are the Australian Government Department of Education; teacher regulatory authorities; state and federal government education departments (jurisdictions); national and state sector bodies; the Australian Institute for Teaching and School Leadership (AITSL), the Council of Deans, and Universities Australia.

[11] Other education organisations are employer groups and employer associations; teacher unions; the Australian Curriculum, Assessment and Reporting Authority (ACARA); the Australian Children's Education and Care Quality Authority (ACECQA); the Australian Education Research Organisation (AERO); Education Services Australia (ESA); initial teacher education providers; research and policy institutions (as approved by the ATWD Oversight Board).

Section 5 – Definitions

Term	Definition
Aggregate data	Data combined from several measurements. When data are aggregated, groups of observations are replaced with summary statistics based on those observations.
Data perturbation	A statistical technique to randomly adjust the count values in aggregated data that fall below pre-determined safe limits in order to maintain data privacy, e.g. the number of male teachers in a small rural community might be below the minimum allowable cell value so the count value would be randomly adjusted. The process introduces small random error to the resulting table. While this will affect the quality of the data for small cell counts, it has a minimal impact on the overall data quality with the benefit of ensuring data privacy.
Data source owner	A data source owner may be an individual within an organisation that supplies the data and who is charged with this responsibility, or the organisation supplying the data itself.
De-identified record	A record in the ATWD that does not include any identifying information e.g. name, address, date of birth, email address, teacher registration number or student number.
Linkage data	Data that includes linkage keys and identifying information that will be used to link the records for an individual from different sources and across time. The AIHW will be responsible for generating and maintaining the linkage files. The separation principle is applied to the data so that once it has been linked, all identifying information is removed and stored securely and separately from the remaining, de-identified unit-record data.
Source attribute data	The source unit-record data after it has been linked using the approved linkage solution, and de-identified by removing most of the identifying and personal information. Personal information that has been approved by AIHW's Ethics Committee and which forms part of the Agreed National Data Set for the ATWD is retained in the data. At present this includes variables such as year of birth, and residential postcode.
Source unit-record data	All data records as supplied by the data providers, including all personal information and including all variables in accordance with the Agreed National Data Set, and specified in the *ATWD Data Collection Manual*. The source data will be in the form of the files below as specified in the *ATWD Data Collection Manual* • teacher, alternative names, registration & employment • qualifications • subjects qualified to teach • survey concordance file.
Transformed unit-record data *(Also called transformed data)*	De-identified, source unit-record attribute data that has been fully cleansed, harmonised and labelled, and includes derived variables to be used for reporting. For example, employment sector, re-coded detailed field of education and so on. The process of transforming the unit-record data will be documented in the metadata for the transformed unit-record data. All the variables, including the derived variables, will be listed in the data dictionary.

Appendix A:

Data model for the ATWD
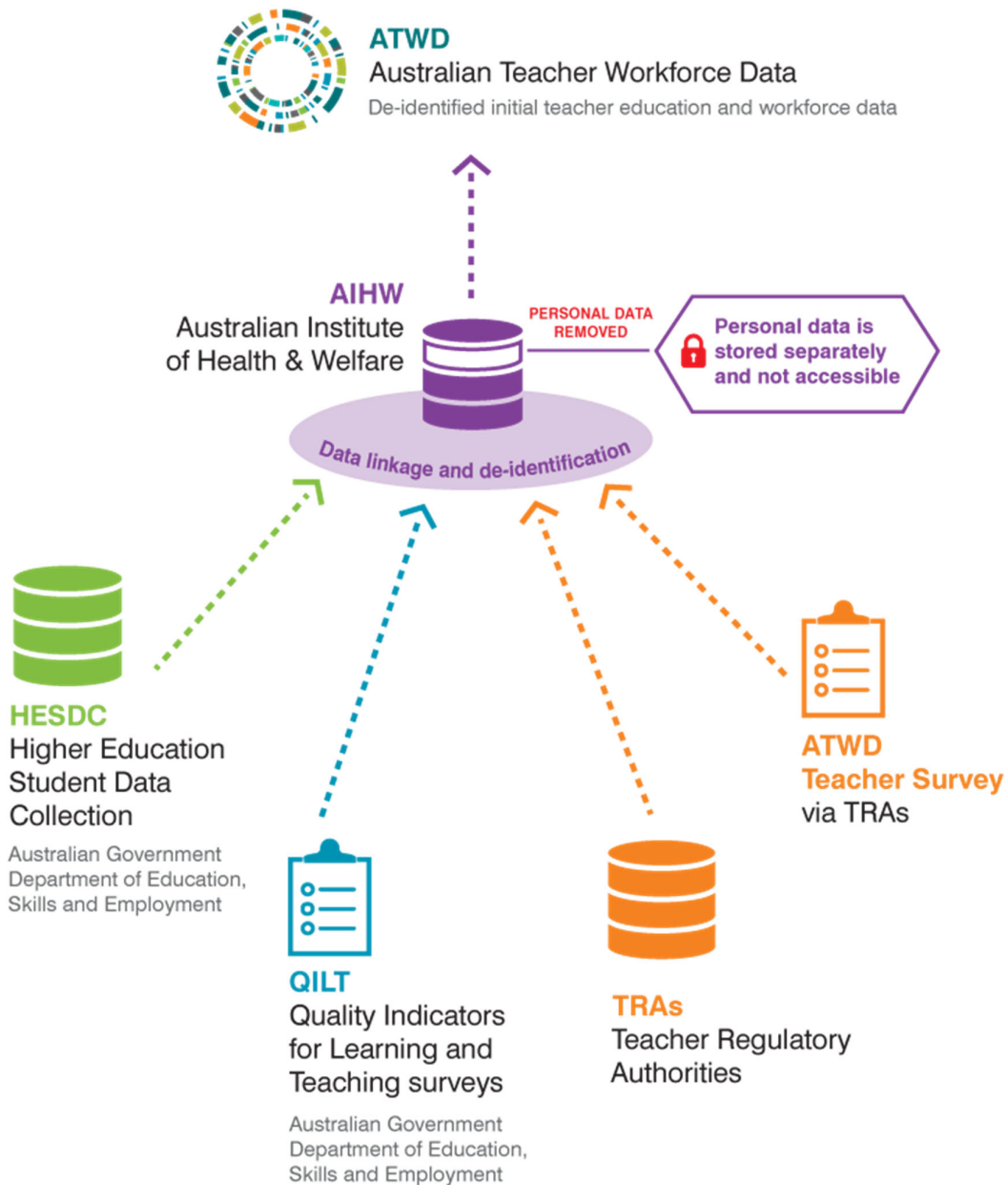
Appendix B

Agreed National Data Set

(Appendix provided as separate document[12])

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[12] The ATWD Agreed National Data Set has not changed since the ATWD Protocols (2018–2019) were first approved so they have not been included. However, they can be provided upon request by atwd.secretariat@aitsl.edu.au)