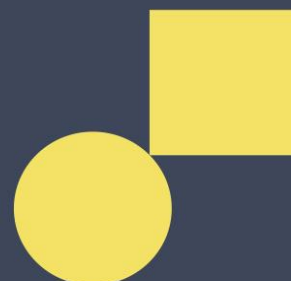
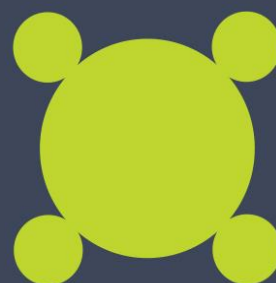




Public Sector  
Commission

# 2023 WA Public Sector Census Methodology



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## **Introduction**

In March 2023, the Western Australian Public Sector Commission conducted a Census of all employees in the WA public sector.

The Census was designed to use information obtained from employees about their experiences and behaviours in the sector to better understand and identify ways to build the capacity and capability of the workforce now and into the future, and benchmark areas of strength and development.

The Census used and improved on the systems, processes and methods used in a Census pilot conducted in 2021 involving 17 public sector agencies.

## **Relevance**

### Scope

The Census included permanent, fixed term contract, casual, sessional and chief executive officer/Senior Executive Service employees from the sector including sworn police officers.

An estimated 165,340 employees in the sector from 66 agency groups (116 agencies) were invited to participate.

All regional and metropolitan areas of Western Australia were included. In addition, employees working for the sector based in overseas locations were also in scope.

Topics in the Census included demographics, tenure, diversity, education, job type, integrity and risk, flexible working, bullying and harassment, discrimination, and workforce experience.

### Questions

Employees were sequenced through the questions based on their responses. As a result, not all questions were displayed to all employees. The maximum number of questions an employee could answer was 89 and the minimum was 52.

Some questions included the option 'prefer not to say'.

For agencies with more than 200 employees, a question on work area was included.

There were no other agency specific questions in the Census.

## **Accuracy**

### Collection method

The Census was a voluntary, self administered online questionnaire. Access to the questionnaire was provided by individual agencies to employees via a hyperlink or quick response (QR) code distributed by individual agencies.

Multiple channels were used to distribute the link and QR code including direct email, and agency intranet and communications collateral including posters and QR cards.

The Census did not collect names, email addresses or employee numbers of respondents.

## Coverage

The online platform used to collect responses included detection rules which flag unusual or potential duplicate or spurious responses. These records were then reviewed as part of data cleansing. As a result, the likelihood of a respondent completing the Census multiple times is low.

## Questionnaire and form design

The Census questions were tested in the 2021 pilot. These questions were designed using best practice principles from the Australian Bureau of Statistics (ABS) Form Design Manual.

During development, extensive consultation was undertaken in the WA Public Sector Commission and other Australian, state and territory commissions; and with external bodies such as the Australian Bureau of Statistics, Reconciliation WA, National Disability Services WA, Pride at Work and TransFolk of WA.

The questions were cognitively tested with people from diverse backgrounds, age groups, salary ranges, genders and jobs to ensure they were easy to understand and answer, and captured the concepts required.

Minor updates and new questions included in the 2023 Census underwent extensive development and testing as per the pilot.

The online questionnaire complies with WA's accessibility and inclusivity guidelines. In addition, the online questionnaire underwent usability testing including testing with screen reader technology so the form could be navigated quickly and easily.

## Prefer not to say

To reduce the likelihood of respondents not completing the Census, the response option 'prefer not to say' was used in gender, home or work postcode, salary, diversity, bullying, harassment, discrimination, and reasons for time off work response options.

## Frame

All 116 agencies in the sector were included in the 2023 Census. Agencies were grouped into 66 entity groups. All entities included in the Census are on [wa.gov.au/Census](https://wa.gov.au/Census).

## Response rate

The final sector response rate for the 2023 Census is 28.5%. The response rate is calculated based on the number of valid responses received from approximately 165,340 employees. The 2023 Census received 47,115 valid responses.

## Partial non-response

Partial non-response occurs when a respondent starts the Census but does not complete and submit it before the Census closes. Partial non-response records were

included in the overall counts of the Census if the minimum response threshold had been met.

The minimum response threshold consists of 9 questions covering gender, age group, home postcode, agency, work area, work postcode, employment status and pay range or pay rate. There were 2,803 partial response records that met the minimum response threshold.

The minimum response threshold is comparable to other jurisdictional practices, such as the Australian Public Service Commission (APSC).

### Non-sampling error

Non-sampling errors are errors and inconsistencies arising from responses provided rather than arising from characteristics of the larger cohort. For example, imperfections in reporting by respondents can only partially be resolved in the final data that is produced. These non-sampling errors have a limited impact on the overall data.

Discernment should be used when interpreting smaller subsets of the data as these inaccuracies may be more apparent for agencies with lower response rates. While every effort has been made to reduce non-sampling errors by the design of the questionnaire and effective processing procedures, some non-sampling errors are unavoidable.

### Editing

Responses to the questions relating to tenure in the WA government, in an agency and a role, were edited to address inconsistencies in reported information. For example, a respondent could not have worked in their agency for longer than they have worked in total in the sector. Similarly, a respondent could not have worked in their current role for longer than they have worked in their agency.

Editing was also performed on responses with logical errors regarding the number of employees immediately supervised compared to the total number of employees managed overall.

Fluency in a language other than English provided a free text option for employees to list additional languages that were not displayed in the pick list. This information was then processed and used to populate the final list of languages for the Census results.

### Imputation

During enumeration, it was discovered that some employees in WA Health agencies were selecting the Department of Health as their organisation. Donor imputation was used to adjust these records.

### Information technology

Responses were collected via a secure online survey platform. The platform was compatible with mobile devices including smartphones and tablets. There were no outages during enumeration. The survey was accessible 24 hours a day across enumeration.

Approximately 6 agencies were impacted by their agency internet access issues on 13 March 2023. These were unrelated to the survey platform. This impacted their employees' access to the Census on one day during enumeration. The overall effect of this outage on the response rate is insignificant given the length of the 2023 Census enumeration.

## **Timeliness**

### Enumeration

The Census enumeration was scheduled for 3 weeks from 13 March to 2 April 2023. A one week extension was provided for 44 of the 66 agency groups. A 'soft' opening and close of one week on either side of enumeration occurred which was not widely promoted. Therefore, the Census was open for 6 weeks from 6 March to 16 April 2023 for employees to participate.

### Duration of survey

The average duration for completing the 2023 Census was 12 minutes.

## **Coherence**

### Census pilot

For those agencies that participated in the 2021 Census Pilot, the Census is comparable with the pilot as most questions remained unchanged.

### Other workforce data

The Public Sector Commission publishes information on the workforce based on other sources of data. These can be accessed on the Commission's website.

The Census collects sectorwide information not currently available through other sources such as additional information on diversity and why employees plan to stay or leave an agency. For example, additional questions on cultural and linguistic diversity were asked in the Census, allowing for different measures of cultural and linguistic diversity to be derived.

## **Interpretability**

### Questionnaire sequencing

Questions were sequenced to respondents based on answers to previous questions. For example, all employees are asked whether they have experienced bullying and harassment. However, only those that answered yes to this question were asked subsequent questions about that experience.

### Multiple response questions

Most questions only allowed one response to be selected. However, there are questions where a respondent could choose more than one response (multiple

responses). For example, type of work, main topic(s) of education, reasons for not sharing or declaring. This means that the count of response options for a multiple response question may be higher than the number of employees who responded.

As a result, it is not possible to accurately recreate the counts in the data using the dashboard reports where only percentages are provided.

## Data visualisations

The percentage presented for each question is based on the total number of responses.

In the Sector Insight report, the calculation of summary percentages for each section are based on the total number of respondents for the sector. For example the percentage for time off work (83.5%) is calculated based on the number of respondents who took time off work (39,328) divided by the total number of respondents for the sector (47,115).

Subsequent percentages and visualisations relevant to the summary percentage are based on a subset of the total population relevant to the insight. For example, when percentages for females or males are shown, they are based on the responses as a percentage of the total number of females or males who responded to the census and answered a given question.

For questions that included a 'prefer not to say' option, results presented for these questions exclude these responses when calculating percentages. For example, counts by metropolitan and regional employees exclude those who answered 'prefer not to say' when asked about home postcode.

For questions that allow multiple responses, percentages are based on the count of individuals who responded to that question. For example, the percentage of respondents who 'observed behaviours not aligned to proper process' is based on the count of individuals who selected any option other than 'I have not observed any of above behaviours', irrespective of how many options they selected.

Payroll information presented in these reports differs to sectorwide published information. For example, appointment type is shown by headcount to match Census methodology whereas full time equivalent (FTE) is often published for sectorwide workforce statistics. In addition, WA Police Force sworn officers are included in the payroll figures to match the scope of the Census.

## Null values

Partial responses have been included if they met the minimum response threshold. This means that for some questions there may be 'null' values where not every respondent has answered every question.

## Questions and answers document

A [frequently asked questions](https://www.wa.gov.au/Census) document is on [WA.gov.au/Census](https://www.wa.gov.au/Census). This document contains general information on the Census and more specific information and guidance on the questions.

## Languages

A list of 25 languages is provided for respondents to choose from if they consider themselves fluent in a language other than English. The list follows the Australian Bureau of Statistics' standard for languages, [Australian Standard Classification of Languages, 2016, \(cat.no 1267.0\)](#). In addition, respondents can specify another language if it is not included in the list.

The list of 25 languages is derived from the most common responses to the 2022 Human Resource Minimum Obligatory Information Requirement data (WA public sector), 2021 Australian Bureau of Statistics Census – Western Australian results, and 2021 WA Public Sector Census Pilot results.

## Country of birth

The Australian Bureau of Statistics [Standard Australian Classification of Countries \(SACC\), 2016, \(cat. No. 1269.0\)](#) was used for the list of countries of birth. This list was tested during the 2021 Census Pilot resulting in a minor change to the listing of “Gaza Strip and West Bank” to “Gaza Strip/Palestine/West Bank” which aligns to Statistics New Zealand’s country classification, [Country-New Zealand Standard Classification 1999 – 2 Alpha V13.0.0](#).

## Education

The Australian Bureau of Statistics [Australian Standard Classification of Education, 2001, \(cat. No. 1272.0\)](#) was used for education questions. The list of topics for a qualification were based on this standard, with specific qualifications of interest separately identified, for example data science.

## Job type

The question relating to ‘type of work’ was based on the [Australian Public Service Commission Job Family Model](#) with additional options added to the list to cater for the needs of the WA public sector.

## Geographical regions

Postcode data has been displayed using regional boundaries derived from the Regional Development Commission Regions (regional) and Main Roads regions (metropolitan).

Where overlaps occurred between regional and metropolitan boundaries, regional boundaries were used. Postcode boundaries may fall in multiple regions. A centroid of the postcode region was used to allocate postcodes to a region.

Postcodes with the response option of ‘prefer not to say’ are not represented in the geographical regions.

## Accessibility

### Data

Access to individual level data in the Public Sector Commission is restricted on a need to know basis. User access permissions ensure only authorised staff have access to this data.

Data is stored in a secure environment that:

- meets industry data encryption standard 256-bit Advanced Encryption Standard (AES)
- is Infosec Registered Assessors Program (IRAP) assessed and certified by the Australian Cyber Security Centre at a PROTECTED level
- uses automated data processing to minimise access to individual level data.

Only aggregate statistics (grouped in totals) are produced from the Census, with data governance rules for confidentiality applied to limit the risk of identification of individuals. These aggregate statistics are provided to WA public sector agencies that are responsible for communicating their results to their employees and responding to enquiries. Individual responses are not provided to agencies. The [2023 WA Public Sector Census Privacy Statement](#) has more details on how personal information from the Census is collected, used and disclosed.

### Questionnaire

The Census was completed by respondents using an anonymous link (97%) or QR code (3%) which could be accessed using a portable device such as a mobile phone. The questionnaire was only available in English and agency groups were responsible for distributing the link and QR codes to their employees. No telephone interviews were conducted for the Census.