



Australian Government



Jobs and Skills Australia

2026 Occupation Shortage Drivers Report

October 2026



Contents

Introduction	3
Unit group level outcomes and analysis	3
The 2026 OSD framework	3
Methodology for finding shortage drivers of unit groups	5
Analysis and insights	7
Main shortage driver across the labour market	7
Main shortage driver by major groups	7
Main shortage drivers of large employing unit groups	8
Appendix A	18
Appendix B	19
Data sources	19
Fuzzy C-Means Clustering	20
Variable description	22

Tables

Table 1: Jobs and Skills Australia occupation shortage drivers and descriptions.....	4
Table 2: Jobs and Skills Australia occupation shortage driver typology	5
Table 3: Ten largest employing unit groups with ETG as the main shortage driver, 2026.....	8
Table 4: Ten largest employing unit groups with RG as the main shortage driver, 2026.....	13
Table 5: Ten largest employing unit groups with SG as the main shortage driver, 2026.....	14
Table 6: Retention matrix between 2025 and 2026 methodologies of the 2025 OSD	18
Table 7: Data sources used for occupation shortage drivers	19

Figures

Figure 1: Percentage of unit groups by main shortage drivers (%), 2026	7
Figure 2: Membership to main shortage drivers (%), by major group, 2026.....	8
Figure 3: Main shortage drivers (%), Motor Mechanics	9
Figure 4: Qualified applicants per vacancy (no.), financial year 2020-21 to 2025-26	11
Figure 5: Replacement rates (%), 10 and 3-year average	12
Figure 6: Average qualified applicants per vacancy (no.), financial year 2018-19 to 2025-26.....	15
Figure 7: Replacement rate (%), Cooks and Chefs, financial year 2019-20 to 2024-25.....	17
Figure 8: Fuzzy C-means clustering.....	21
Figure 9: Illustration of the indices created to produce the shortage driver clusters.....	22

Boxes

Box 1: Motor Mechanics – a tale of 2 shortage drivers, a main and secondary	9
Box 2: Aged and Disabled Carers – a single, dominant shortage driver	11
Box 3: The SG and ETG shortage driver pair for Registered Nurses.....	15
Box 4: Chefs and Cooks, similar sector but different main shortage driver profiles.....	17
Box 5: Example with two hypothetical replacement rate scenarios.....	22

Introduction

The Occupation Shortage Driver (OSD) report provides analysis on type of shortages and builds on the Occupation Shortage List, which identifies the shortage among occupations.¹

The purpose of OSD is to identify and quantify the main shortage types or drivers that have national level impacts. That is, the OSD analysis does not consider shortage drivers that are sector or occupation specific.

Such analysis may reveal more nuanced labour market insights, supporting government, industry and education and training providers find solutions to skill gaps in the labour market.

Unit group level outcomes and analysis

OSD results are produced at the 2022 Australian and New Zealand Standard Classification of Occupations (ANZSCO) unit group level.² To do this, a unit group version of the OSL is first created.^{3 4}

ANZSCO 2022 unit group level analysis overcomes data limitations that arise when using occupation level data for OSD analysis. Also, other data are readily available for unit groups and on the ANZSCO basis.⁵ With that, an advantage of producing analysis on ANZSCO unit groups is the ability to test and refine the methodology over time, improving the quality of results produced.

The 2026 OSD framework

The 2026 typology for shortage drivers was informed by a classification framework produced by Richardson (2007).⁶ In Richardson (2007), the following scheme for classifying skills shortages was proposed:

- **Level 1 shortage.** There are few people who have the essential technical skills who are not already using them and there is a long training time to develop the skills.
- **Level 2 shortage.** There are few people who have the essential technical skills who are not already using them but there is a short training time to develop the skills.

¹ The Occupation Shortage List, produced by Jobs and Skills Australia, provides a list of occupations in shortage in Australia.

² ANZSCO is a skill-based classification that is produced by the Australian Bureau of Statistics. The framework is used to define all jobs in the Australian and New Zealand labour markets. It is organised into a 5 level hierarchy: major groups, sub-major groups, minor groups, unit groups and occupations. Unit groups level refers to a 4 digit ANZSCO whereas the occupations level refers to the most granular 6 digit ANZSCO.

³ Refer to Jobs and Skills Australia (2026). *2026 Occupation Shortage List Methodology* for details on mapping occupations to unit groups.

⁴ Unit groups are less detailed than occupations and have fewer job categories with more general titles. In the ANZSCO 2022 version of the 2026 OSL, there were 292 occupations in shortage out of 916 occupations. These translate to 100 unit groups in shortage out of a total of 311 in the OSL scope.

⁵ The Australian Bureau of Statistics released the Occupation Standard Classification for Australia (OSCA), an update to ANZSCO, in December 2024. However, very few data exist on the OSCA basis, preventing OSCA-based OSD analysis from being produced.

⁶ Richardson, S. (2007). *What is a skill shortage?* NCVER.

- **Skills mismatch.** There are sufficient people who have the essential technical skills who are not already using them, but they are not willing to apply for the vacancies under current conditions.
- **Quality gap.** There are sufficient people with the essential technical skills who are not already using them and who are willing to apply for the vacancies, but they lack some qualities that employers consider are important.

Jobs and Skills Australia amended the conceptual framework in Richardson (2007) based on data availability and quality to produce 3 broad, main shortage drivers (Table 1).

Table 1: Jobs and Skills Australia occupation shortage drivers and descriptions

Driver	Definition
Education and training gap (ETG)	An education and training gap shortage focuses on labour supply capacity. The shortage occurs when there are insufficient commencement, completion and qualified applicants. That is, when education and training is not delivering the pipeline supply of workers needed in the labour market.
Retention gap (RG)	A retention gap shortage occurs when employers are unable to retain workers. Workers may not remain in the role due to low pay, poor working conditions or moving to higher skilled roles. Poor pay and conditions affect retention. As such, employers may be required to increase the frequency of recruitment activities to fill the vacant roles.
Suitability gap (SG)	The suitability gap shortage focuses on labour supply capability. The unit group has enough qualified applicants, but the applicants are not deemed suitable by employers. Reasons include a lack of employability skills and work experience.

Source: Jobs and Skills Australia (2026).

ETG broadly captures both Richardson's (2007) Level 1 and Level 2 shortages and SG captures Richardson's (2007) Quality gap.

Due to data limitation, Skills mismatch was not included in the OSD framework and was replaced with RG. Research and consultation with stakeholders suggested that challenges with retaining experienced and skilled workers were an important factor for understanding the type of shortages.

The metrics used to define each shortage driver are shown in Table 2.

Table 2: Jobs and Skills Australia occupation shortage driver typology

Metrics	ETG	RG	SG
Replacement rate	Below average	Above average	Below average
Qualified applicants to vacancy	Below average		Above average
Commencement to IVI ⁷	Below average		
Completion to IVI ⁸	Below average	Above average	
Average completion time of formal education	Above average		
Average length working in unit group		Below average	
Average median annual employee wage (wage level)		Below average	
Change in skill requirements			Above average

Source: Jobs and Skills Australia (2026).

The definitions of the main shortage drivers and the metrics used to define them were based on the following:

- Professor Richarson's (2007) typology and other findings in her report.
- Additional research of factors that impact shortages and knowledge of how the labour market works.
- Data availability and quality, including analysis and testing of different metrics and definitions.

Further, these metrics capture similar causes of skill shortages modelled for industries and have global application.⁹

ETG has more metrics compared to RG and SG for 2 reasons: isolate pipeline supply arising from formal education/training system and current data availability.

Over time, as the OSD analysis is refined and improved, additional metrics that impact RG and SG may be added to the framework.

Methodology for finding shortage drivers of unit groups

For 2026, the Fuzzy C-Means (FCM) approach was implemented for identifying unit groups:

- with a single, dominant main shortage driver
- with links to multiple main shortage drivers.

The FCM approach attributes to a unit group a membership share for each of the shortage drivers (ETG, RG and SG). Total membership shares of ETG, RG and SG sum to 1 (or 100%).

⁷ IVI stands for Jobs and Skills Australia's Internet Vacancy Index, which is a proxy measure of demand.

⁸ Ibid.

⁹ Healey, J., Mavromaras, K. and Sloane, J. P. (2012). *Skill Shortages: Prevalence, Causes, Remedies and Consequences for Australian Business*, Monograph Series 09/2012.

For example, the unit group can have a very strong membership share with one shortage driver such as the ETG and much weaker membership with RG and SG. In this instance, ETG would be the main driver of shortage.

Alternatively, the membership shares of the unit group and each of the main drivers can be more uniform. In this case, shortages can be deemed to be multifaceted as ETG, RG and SG all play a role and none of the drivers are dominant.

The analysis produced using the FCM technique should be viewed as 'proof of concept'. Jobs and Skills Australia will continue investigating opportunities to refine the methodology and expand the analysis.

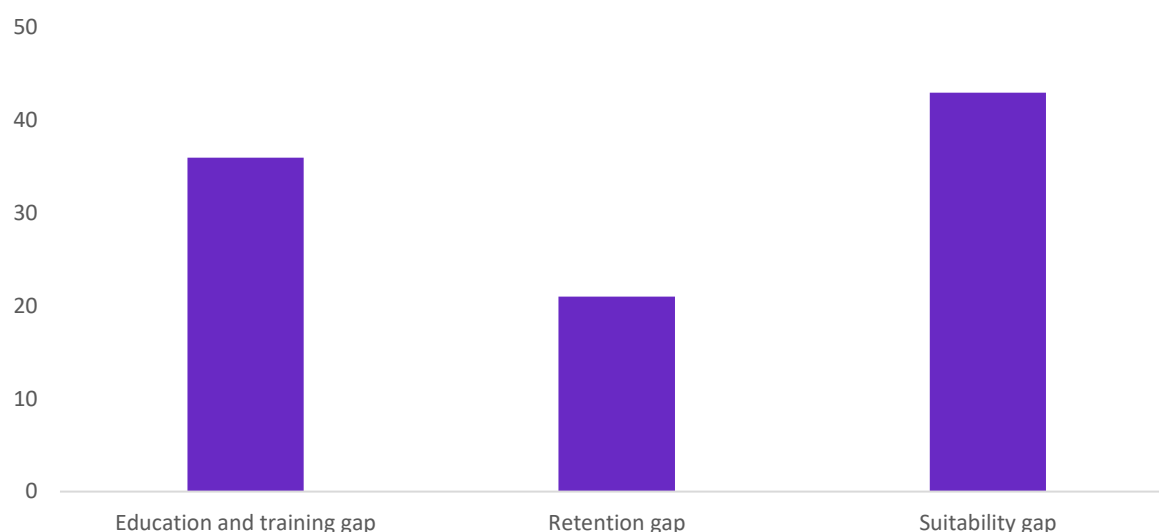
Analysis and insights

Main shortage driver across the labour market

In 2026, the most common, main shortage driver was SG (43 unit groups), ETG (36 unit groups), followed by RG (21 unit groups) (Figure 1).^{10 11}

The results suggest that SG and ETG were the most common, main shortage drivers, implying that shortage pressures could stem primarily from labour supply capability and capacity limitations.

Figure 1: Percentage of unit groups by main shortage drivers (%), 2026



Source: Jobs and Skills Australia (2026).

Main shortage driver by major groups

A breakdown of major groups by main shortage drivers is shown in Figure 2.

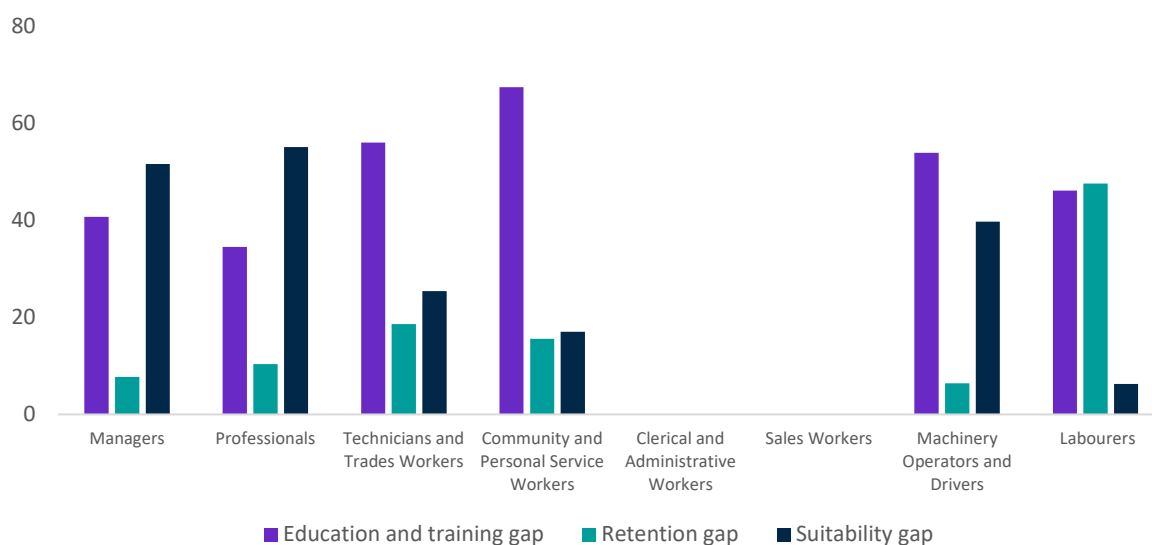
- Shortages in Managers and Professionals were predominantly driven by SG with ETG as a secondary driver.
- Shortages in Technicians and Trades Workers, Community and Personal Service Workers and Machinery Operators and Drivers were primarily driven by ETG and with SG as a secondary driver for Machinery Operators and Drivers.

For Labourers, RG and ETG were equally prominent drivers of shortage.

¹⁰ A main shortage driver for a unit group was based on the largest membership share to a shortage driver. For example, if a unit group has a membership share of 0.45 for ETG, 0.30 for SG and 0.25 for RG, the dominant main shortage driver would be ETG.

¹¹ Due to difference in methodology used and data availability, there were changes to the shortage main drivers for some unit groups between 2025 and 2026. Appendix A provides summary data on the number of unit groups that retained the same main shortage drivers under the previous and new methodologies and those that changed drivers.

Figure 2: Membership to main shortage drivers (%), by major group, 2026¹²



Source: Jobs and Skills Australia (2026).

Note: At the unit group level, there were no unit groups in shortage within Clerical and Administrative Workers and Sales Workers major groups.

Main shortage drivers of large employing unit groups

This section shows the top 10 employing unit groups (in descending order) by each main shortage driver. The level of membership of a unit group across the 3 shortage drivers is also shown.

Table 3: Ten largest employing unit groups with ETG as the main shortage driver, 2026

Unit group	ETG	RG	SG
Aged and Disabled Carers	0.80	0.09	0.11
Child Carers	0.66	0.14	0.20
Secondary School Teachers	0.42	0.17	0.41
Carpenters and Joiners*	0.74	0.17	0.09
Motor Mechanics*	0.59	0.12	0.29
Chefs	0.83	0.04	0.13
Plumbers*	0.79	0.06	0.15
Structural Steel and Welding Trades Workers*	0.66	0.10	0.24
Hairdressers*	0.81	0.13	0.07
Drillers, Miners and Shot Firers	0.71	0.09	0.20

Source: Jobs and Skills Australia (2026). Australian Bureau of Statistics (2022). *Census of Population and Housing 2021*. NCVER (2026). *Total VET Activity Program Enrolments in 2025, by Apprentice / Trainee Status*.

Note: The membership shares for ETG, RG and SG sum to 1. * Unit groups with share of apprenticeship / traineeship to total enrolments (Apprenticeship / traineeship plus and Vocational Education and Training qualifications) greater than 50%.

¹² Membership shares were weighted by employment size (Census 2021) to give weighted average membership for ETG, RG and SG at major group. This was done to account for differences in the number of unit groups in shortage within each major group and to minimise artificially inflating the average membership of unit groups.

Almost all unit groups have a membership share exceeding 66% in ETG (Table 3), indicating supply pipeline constraints might be the key issue driving shortages. For many of these unit groups, improving the volume of qualified workers from the Vocational Education and Training (VET) could alleviate, in part, the shortage pressures in the labour market.

In addition, for 5 out of the 10 unit groups, apprenticeships and traineeships were the predominant VET pathway (indicated by “*”), suggesting that employers also play an important role in increasing supply pipeline.

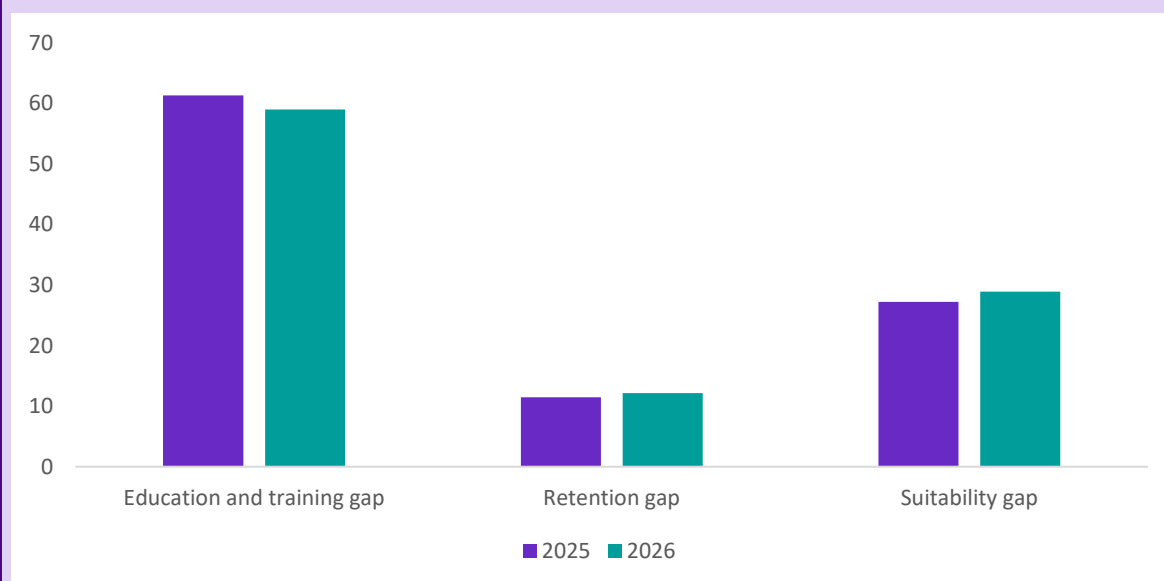
For Motor Mechanics (see Box 1) and Secondary School Teachers, and especially for the latter, there was strong membership with SG too. Therefore, for these 2 unit groups, shortages could be multifaced and might need to be addressed by:

- increasing the number of qualified workers entering the labour market from VET and university, respectively
- improving the attributes of qualified workers through qualifications that could include employability skills and work experience and employers providing additional training. There could also be a discrepancy between employers’ expectations of the level of job-readiness of applicants and the skills that are indicative among workers.

Box 1: Motor Mechanics – a tale of 2 shortage drivers, a main and secondary

The shortage drivers for Motor Mechanics were consistently ETG (as the main driver) and then SG (as a major, secondary driver) between 2025 and 2026 (Figure 3).

Figure 3: Main shortage drivers (%), Motor Mechanics



Source: Jobs and Skills Australia (2026).

For Motor Mechanics, most students undertook an apprenticeship / traineeship. The number of commencing apprentices / trainees declined between 2022 and 2024 but picked up marginally between 2024 and 2025.¹³ Hence, alleviating shortages for Motor Mechanics could involve strategies to increase the uptake and completion of apprenticeship / traineeship, not only from individuals but employers taking on more apprentices / trainees.

¹³ NCVER (2025). *Total VET Students and Courses 2025: Program Enrolments DataBuilder*.

Employer survey data also confirmed that supply of qualified workers was an issue for the unit group.

From 2025 to 2026, the most reported reason for not finding suitable applicants was due to applicants' lack of qualification. Lack of technical skills was also a common reason. Over that time, a lack of experience was an increasing reason for applicants being unsuitable for vacant roles, supporting SG as a prominent secondary shortage driver.

Employers were concerned about the negative perceptions in automotive work, particularly among women and youth.¹⁴ This could partly be due to several factors including a lack of awareness of career opportunities. Improving mentoring programs and opportunities for upskilling for women could help improve perceptions. Negative perceptions could affect the number of people taking up training in the field and in turn reduce pipeline supply problems.

While not a main challenge compared to ETG and SG, consistent with the unit group having some membership to RG, remuneration was also an issue with employers not being able to find suitable applicants.

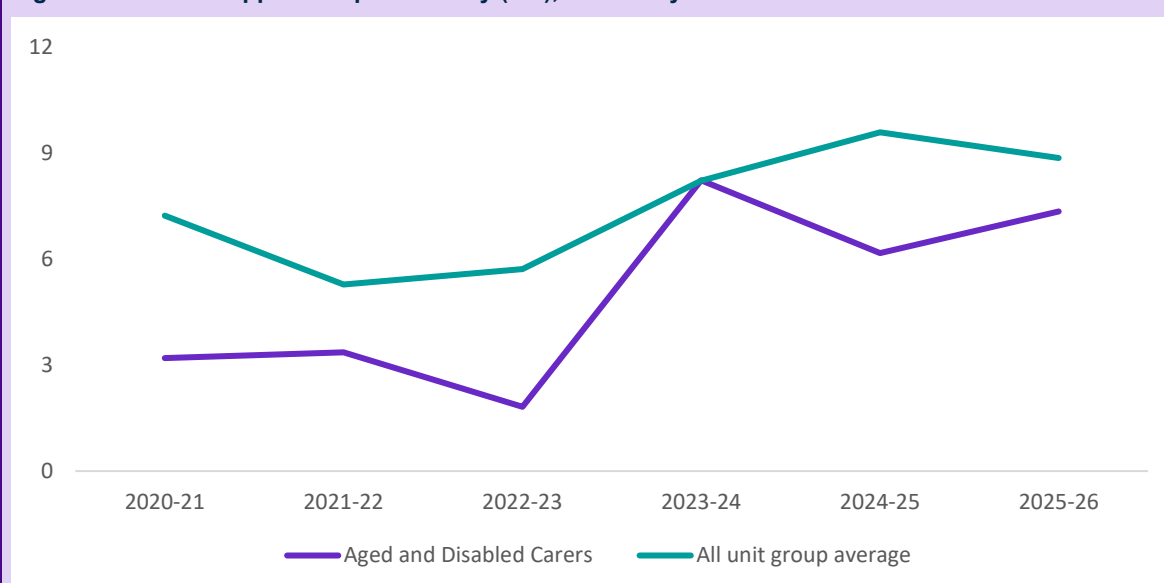
¹⁴ Mining and Automotive Skills Alliance (2025). *Insights for Tomorrow: 2025 Workforce Plan*.

Box 2: Aged and Disabled Carers – a single, dominant shortage driver

Despite strong recent growth in employment levels (of around 58% over 5 years from February 2021 to February 2026), Aged and Disabled Carers have been persistent shortage.¹⁵ This might be due to demand outpacing supply. With that, there might be constraints in the capacity of current higher education and VET infrastructure (number of placements and the size of education and training workforce) to increase the flow of qualified workers and meet the rising demand.

Aged and Disabled Carers have also had an increasing membership with ETG in 2025 and 2026. The training pipeline issue for Aged and Disabled Carers is reflected in the number of qualified applicants for the role. From 2020-21 to 2025-26, qualified applicants per vacancy for the unit group has remained well below the all-unit group average (Figure 4).

Figure 4: Qualified applicants per vacancy (no.), financial year 2020-21 to 2025-26



Source: Jobs and Skills Australia (2026). *SERA 2020-21 to 2025-26*.

In 2023-24, the two were on par. This coincided with the increase of 15% award wages to care workers in 2023 and changes to support better and fairer wages for aged carers across multiple stages.¹⁶

Aged and disabled carers have been experiencing labour supply constraints reflected from low commencement and completion. A lower completion-to-commencement ratio can indicate a training issue. From 2019 to 2025, completion-to-commencement ratios have been lower than the all-unit group average.

While the ratios do not capture those who commenced and completed in the same level of qualification, it reflects potential issue with attraction into the profession relative to other professions. When looking at commencements and completion rates separately, these have been improving since 2023. It may be possible, that the improved wages may be affecting attraction into the profession.

¹⁵ Jobs and Skills Australia (2026). *Labour Force Trending – National Occupation Trend (February 2026)*.

¹⁶ See *Aged Care Work Value Case*, Department of Health Disability and Aging.

While increasing wages can improve general attraction to the unit group, other government programs focusing on tuition fee aids and improving training pipeline may also attract more to commence and complete their training.^{17,18}

Overall, both the below average qualified applicants per vacancy and ratios of completion-to-commencement suggest that there could be labour supply pressures upstream and downstream in the training pipeline.

The unit group, relative to supply constraints, faces lower retention challenges as indicated by the 9% membership share with RG.

Figure 5: Replacement rates (%), 10 and 3-year average



Source: Replacement rate was constructed from Data on Occupation Mobility using Person Level Integrated Data Asset, 2010-11 to 2023-24, Income Tax Return data, ABS DataLab.

Replacement rates for Aged and Disabled Carers have been similar to the all-unit group average, historically. From 2016 to 2025, the all-unit group average was 15.8% compared to 16.8% for Aged and Disabled Carers. While the difference in replacement rates has generally remained within a narrow band and slightly above the all-unit group average rate, the gap widened from 2022 to 2023 before converging again from 2024 to 2025. This can be seen from the difference in the 3-year average replacement rate (2023 to 2025) between Aged and Disabled Carers and all-unit group average (Figure 5).

Under the previous methodology, this gap was sufficient to identify RG as the main shortage driver in previous years. This was because the previous method was based on a static assignment of shortage drivers where each unit group could only belong to one driver. But the qualified applicants per vacancy data also pointed to ETG being a significant secondary driver each year.

The new methodology is a relative comparison of ETG, RG and SG. In relation to the supply pipeline constraints and the gap in replacement rates converging between 2024 and 2025, the extent to which RG was the primary driver reduced in 2025 both under the old and new methodologies. It is possible that a secondary increase in wage in 2025 could flatten the replacement rates further, leading to a slower loss of workers.¹⁹

¹⁷ Department of Health, Disability and Ageing, *Learning and development*.

¹⁸ Department of Health Disability and Aging, *New training and learning system for My Aged Care Workforce*.

¹⁹ Department of Health, Disability and Ageing, *Better and fairer wages for aged care workers*.

Table 4: Ten largest employing unit groups with RG as the main shortage driver, 2026

Unit group	ETG	RG	SG
Cooks	0.40	0.49	0.11
Landscape Gardeners and Irrigation Technicians*	0.41	0.45	0.13
Plasterers and Renderers*	0.25	0.68	0.07
Bricklayers and Stonemasons	0.45	0.46	0.09
Wall and Floor Tilers	0.30	0.60	0.10
Butchers and Smallgoods Makers*	0.39	0.53	0.08
Motor Vehicle Parts and Accessories Fitters	0.18	0.78	0.04
Vehicle Painters*	0.39	0.52	0.08
Floor Finishers*	0.17	0.76	0.06
Meat Boners and Slicers, and Slaughterers*	0.07	0.90	0.03

Source: Jobs and Skills Australia (2026). Australian Bureau of Statistics (2022). *Census of Population and Housing 2021*. NCVER (2026). *Total VET Activity Program Enrolments in 2025, by Apprentice / Trainee Status*.

Note: The membership shares for ETG, RG and SG sum to 1. * Unit groups with share of apprenticeship / traineeship to total enrolments (Apprenticeship / traineeship plus and Vocational Education and Training qualifications) greater than 50%.

Most unit groups in Table 4 are Technicians and Trades Workers spanning food and hospitality, automotive, and construction sectors. The membership shares with RG for these unit groups exceeded 45%. For these unit groups, addressing pay, working conditions and culture, and possibly access to social infrastructure and services could assist with retention of workers.

Many in the list also have a sizeable membership with ETG, suggesting this is a secondary main driver.

- In particular, Landscape Gardeners and Irrigation Technicians and Bricklayers and Stonemasons have an almost equally similar share of membership to ETG. For these two occupations, Jobs and Skills Australia's shortage driver analysis in previous years has found that the dominant shortage driver has been RG in some years and ETG in others, further illustrating that shortages in these occupations are significantly influenced by both drivers.
- For those with a sizeable membership to ETG, in addition to improving worker retention, solutions may require increasing the throughput of qualified workers from the VET system and for those where apprenticeships and traineeships are the predominant VET pathway (indicated by "**"), increasing the intake of apprentices and traineeships.

Job switching within the same unit group or exiting the unit group or sector entirely for better pay and work conditions could reflect a well-functioning labour market, which supports upward mobility. For example, certain unit groups such as Cooks may be seen as a pathway to a higher skilled unit group, such as Chefs, and the short length of stay or high replacement rate for Cooks, contributing to RG as the main shortage driver, could in part reflect, this upward mobility.

Table 5: Ten largest employing unit groups with SG as the main shortage driver, 2026

Unit group	ETG	RG	SG
Registered Nurses	0.27	0.10	0.63
Truck Drivers	0.35	0.05	0.60
Electricians*	0.29	0.08	0.64
Construction Managers	0.41	0.08	0.52
Metal Fitters and Machinists*	0.38	0.08	0.54
Solicitors	0.24	0.10	0.67
General Practitioners and Resident Medical Officers	0.39	0.10	0.51
Civil Engineering Professionals	0.23	0.07	0.69
Industrial, Mechanical and Production Engineers	0.07	0.03	0.89
Physiotherapists	0.27	0.10	0.63

Source: Jobs and Skills Australia (2026). Australian Bureau of Statistics (2022) *Census of Population and Housing 2021*. NCVER (2026). *Total VET Activity Program Enrolments in 2025, by Apprentice / Trainee Status*.

Note: The membership shares for ETG, RG and SG sum to 1. * Unit groups with share of apprenticeship / traineeship to total enrolments (Apprenticeship / traineeship plus and Vocational Education and Training qualifications) greater than 50%.

Higher education is the primary pathway for most unit groups in Table 5. Further, the list includes roles in health, engineering and construction. All have a membership share with SG above 50%.

For 9 of the unit groups, ETG was a secondary driver (see Box 3 on Registered Nurses), with membership share ranging from 24% to 41%.

Due to the multifaceted shortage driver profiles of these unit groups, strategies may require:

- increasing the supply pipeline of qualified workers from higher education and VET
- improving the skills and experience to make workers more job ready, as well as aligning employers' expectations with the skills of workers.

Further, embedding technology advances in production processes, service delivery and transition to clean energy could explain the rapid changes in the skills in demand among Electricians, Metal Fitters and Machinists, and the engineering roles and their strong membership with SG.²⁰

²⁰ Jobs and Skills Australia (2023), *The Clean Energy Generation: Workforce needs for a net zero economy*.

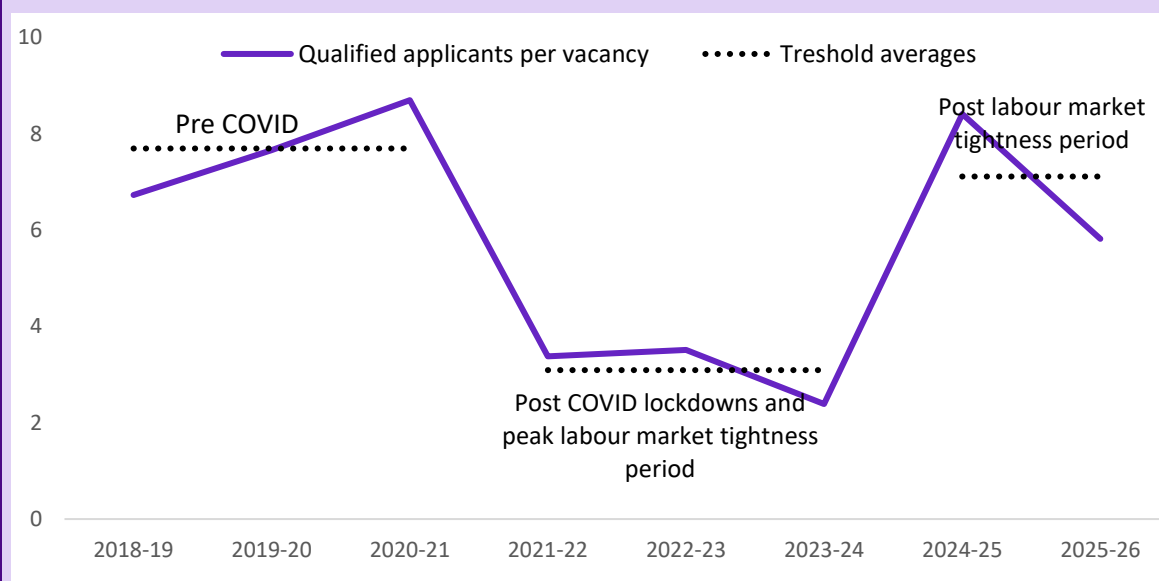
Box 3: The SG and ETG shortage driver pair for Registered Nurses

The main shortage driver for Registered Nurses was assessed as uncertain in 2025 under the previous methodology and SG in 2026 under the new methodology. The membership share with each of the two drivers for 2026 was 63% for SG and 27% for ETG (see Table 5). For 2025, the equivalent shares with SG and ETG were more even, consistent with Jobs and Skills Australia assessing that the dominant main shortage driver was uncertain under the previous methodology in 2025.

Analysis of employer survey data suggests that 64% of employers identified a lack of experience as the reason applicants were unsuitable for vacant roles and 25% identified a lack of qualification. Practice standards also include accessing, analysing and using evidence for safe quality practice, communicating, providing support, directing people to resources to optimise health-related decisions and interpret diagnostic test results and reports.²¹ These all indicate that employers seek highly skilled, experienced and technically qualified workers.

Data also show improving trend in the number of qualified applicants per vacancy post the period in which labour market conditions were tightest, which occurred after easing of COVID lockdowns (Figure 6).

Figure 6: Average qualified applicants per vacancy (no.), financial year 2018-19 to 2025-26



Source: Jobs and Skills Australia (2026). *SERA 2018-19 to 2025-26*.

Note: Threshold averages - Pre Covid and Post COVID lockdown are 3-year moving average, Post labour market tightness period is 2-year moving average.

The data show three distinct periods: pre-COVID, post-COVID and during the period of tight labour market conditions and post-peak tight labour market conditions. The data suggest that qualified applicants per vacancy are trending back towards their pre-COVID average and is a key driver of SG becoming an increasingly important shortage driver over the past two years.

This suggests the training pipeline for Registered Nurses has been improving post the COVID-19 pandemic and since the end of lockdown restrictions.

²¹ Nursing and Midwifery Board AHPRA (2024). *Fact Sheet: Scope of practice and capabilities of nurses*.

The improvement does not mean there are enough qualified and suitable workers. Instead, the results suggest that both SG and ETG drive shortages for Registered Nurses, with SG as the more (relatively) dominant main driver in 2026.

While the analysis suggests that SG and ETG were the two dominant main and secondary drivers of shortage, there was still a 10% membership share with RG. This is consistent with incidents of bullying in the workplace, violence from patients, inadequate staff-to-patient ratios, and lack of professional satisfaction.²²

For unit groups where SG was the dominant main driver, employers tend to require a high average number of years of required experience.²³ This is consistent with research and feedback from Commonwealth Jobs and Skills Councils, indicating the increasing challenges faced by entry-level workers in finding jobs.²⁴

Relevant industry and occupation experiences can also be acquired through on-the-job training. These would be especially relevant for unit groups where apprenticeships and traineeships are the predominant VET pathway such as Electricians and Metal Fitters and Machinists. Therefore, increasing the intake of apprentices and trainees could also increase the pool of workers with skills and experience required by employers.

The mean, median and mode years of required experience is around 3 years. However, for some of the SG unit groups, the figure is above 3 years. For example, the years of experience required by employers for:

- Electricians were between 3 (for general roles) and 10 years (for specialist roles)
- Construction Managers was 6 years
- Solicitors were 4 years.

This suggests that suitability reflects job requirements such as highly developed soft skills and know-how, honed through greater level of labour market experience. However, with such high level of employer expectations, the finding could imply that there could be limits to how much the national education and training system can alleviate the SG shortage. With that, SG could also capture unconscious bias of employers, including unrealistic expectations of graduates and workers.

In addition to differences in shortage drivers at unit group level, there were differences across unit groups within the same sector (see Box 4).

²² AHPRA (2025) Research provides clues to boost health workforce retention.

²³ Based on analysis of Survey of Employers who have Recently Advertised (SERA).

²⁴ Jobs and Skills Australia (2025). *REOS Spotlight, Entry level jobs across city, coastal, inland and remote regions*, December 2025.

Box 4: Chefs and Cooks, similar sector but different main shortage driver profiles

Results for the main shortage drivers show nuances across unit groups in the same or similar sector or with similar task profiles.

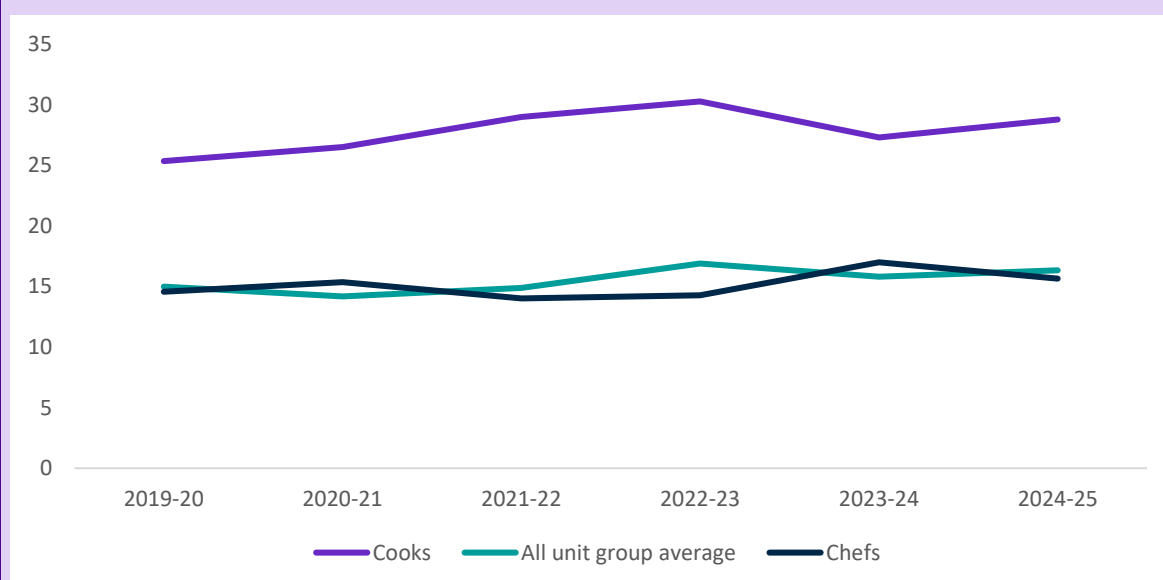
Cooks and Chefs, while predominantly employed in the food and hospitality sector, experienced different shortage pressures.

- Shortages for Cooks were more evenly spread between RG (0.49) and ETG (0.41).
- Chefs shortages were mainly from ETG (0.83), followed by SG (0.13).

Chef's replacement rate is similar to the average for all unit groups compared to Cooks which has a considerably higher rate (Figure 7). Chefs also have a lower commencement to IVI and completion to IVI relative to Cooks, which could imply greater supply pipeline constraints.

Additional analysis suggests that Chefs may change employers but not necessarily exit the occupation. Hence, this could explain why RG was not a dominant driver of shortage.

Figure 7: Replacement rate (%), Cooks and Chefs, financial year 2019-20 to 2024-25



Source: Replacement rate was constructed from Data on Occupation Mobility using Person Level Integrated Data Asset, 2010-11 to 2023-24, Income Tax Return data, ABS DataLab.

Shortage for Cooks in both 2025 and 2026 were primarily driven by RG but with a significant secondary role played by ETG. It is possible that Cooks could be seen as a transition into Chefs and this could, in part, lead to high exits.

Within the education and teaching sector, unit groups have different main drivers.

- Secondary School Teachers shortages were driven by ETG (0.42) closely followed by SG (0.41).
- Vocational Education Teachers / Polytechnic Teachers shortages were mostly driven by ETG (0.93).

For both, analysis of employer survey data indicates that most employers reported a lack of experience and qualification as the reasons applicants were unsuitable.

Appendix A

Differences between 2025 OSD and 2026 OSD results could be attributed to the following:

- Different methodology used in 2026. Unit groups were assigned to more than one shortage driver and membership to the dominant main driver was assessed relative to other drivers. This includes the ability to attribute unit groups, that were previously in the uncertain category in 2025, to one or multiple shortage drivers. The 2025 methodology assigned unit groups to a single driver.
- Additional data inputs into the model for ETG to capture pipeline labour supply constraints as well as additional data for RG and SG.

Jobs and Skills Australia recreated the 2025 OSD using 2026 methodology, then compared it to the published 2025 OSD results. A summary of the changes across 2 methodologies are shown in Table 6. SG has the highest retention rate followed by RG and ETG across different methodologies.

Table 6: Retention matrix between 2025 and 2026 methodologies of the 2025 OSD

		2026 Methodology		
		ETG	RG	SG
2025 Methodology	ETG	56%	3%	42%
	RG	38%	62%	0%
	SG	7%	0%	93%
	Uncertain	42%	19%	39%

Source: Jobs and Skills Australia (2026).

Note: 2025 OSD main drivers of Long training gap and Short training gap were combined into ETG for the purpose of aligning them with 2026 methodology. Uncertain is when unit groups do not satisfy any of the main drivers in 2025.

The list of unit groups where the main, shortage driver was the same across both the 2025 and 2026 OSD methodologies are available in the *2026 OSD Report Downloadable Figures and Tables*.

Appendix B

Data sources

Table 7: Data sources used for occupation shortage drivers

Data source	Time period of data	Source
Survey of Employers who have Recently Advertised	2023–2025	Jobs and Skills Australia
2026 Occupation Shortage List	2026	Jobs and Skills Australia
Internet Vacancy Index	2023–2025	Jobs and Skills Australia
Census Employment data	2021	Australian Bureau of Statistics
Total Vet Activity Survey	2023–2025	National Centre for Vocational Education and Research
Higher education data	2022–2024	Department of Education
Data on employee earnings	2022–2024	Person Level Integrated Data Asset
Data on Occupation Mobility (DOM)	2023–2025	Person Level Integrated Data Asset
Duration in Occupation (DIO)	2015–2025	Person Level Integrated Data Asset
Length of training	2026	Person Level Integrated Data Asset
Online job advertisements	2022–2025	Lightcast

Source: Jobs and Skills Australia (2026). DOM was created using Person Level Integrated Data Asset, 2010-11 to 2023-24, Income Tax Return data, ABS DataLab. Duration in Occupation was created using Person Level Integrated Data Asset, 2010-11 to 2021-22, Income Tax Return data, ABS DataLab. Data on employee earnings was created using Person Level Integrated Data Asset, 2010-12 to 2023-24, Income Tax Return data and 2010-11 to 2023-24 Payment Summaries ABS DataLab. Length of training was created using Person Level Integrated Data Asset, 2014 to 2021 Higher Education and 2014 to 2021 Total VET Activity, ABS DataLab.

Some data sources were available at the financial year while others were only available at the calendar year basis. Further, some data were also lagged while others were closer to real time and had different scales.

To ensure consistent use of metrics, minimise bias in the analysis and support meaningful interpretation of results, including accurate comparison between unit groups, data was:

- where possible, reconstructed on a calendar year basis
- time coverage of the different metrics was aligned by limiting the latest end point to December 2025
- transformed and standardised so that data had a normal distribution and were all on the same scale.²⁵

²⁵ A z-score standardisation was used to quantify the number of standard deviations a data point is away from the mean. It was calculated by subtracting the mean from the data point and dividing the result by the standard deviation: $z = \frac{x - \mu}{\delta}$

Transforming and standardising the data also helped identify and control for outliers and minimise the impact of data volatility. This resulted in more meaningful and easier-to-interpret analyses.

Fuzzy C-Means Clustering

The Fuzzy C-Means (FCM) clustering is a machine learning algorithm that examines and identifies whether a group has a strong or weak membership share to a defined cluster of data. The equation below is run across all unit groups to obtain their membership shares to Education and Training Gap (ETG), Retention Gap (RG) and Suitability Gap (SG).

This method allows each data point (in this case a unit group) to belong to multiple clusters (in this case ETG, RG and SG) with varying degree of membership share. The strength of the membership share is based on a value between 0 and 1, with values closer to 1 signalling stronger membership.

FCM uses a fuzziness parameter (m) to control how strict or relaxed the assignments to a particular cluster is. That is, the parameter impacts how many data points (or unit groups) can belong to multiple clusters (or main shortage drivers) at the same time.

- A m value set to 1 (the lower end of possible values for the parameter) will lead to unit groups being grouped into one or another shortage driver only.
- Higher m values will allow unit groups to belong to multiple shortage drivers.

FCM minimises the below function

$$J = \sum_{i=1}^n \sum_{j=1}^c \mu_{ij}^m \|x_i - c_j\|^2$$

where

μ_{ij} = membership of point i (unit group) in cluster j (*primary shortage driver*)

c_j = centre of a cluster j

n = number of data points (unit group)

m = fuzziness parameter.

Note, for a data point x_i , its membership in cluster j is denoted as

$$\mu_{ij} \in [0,1]$$

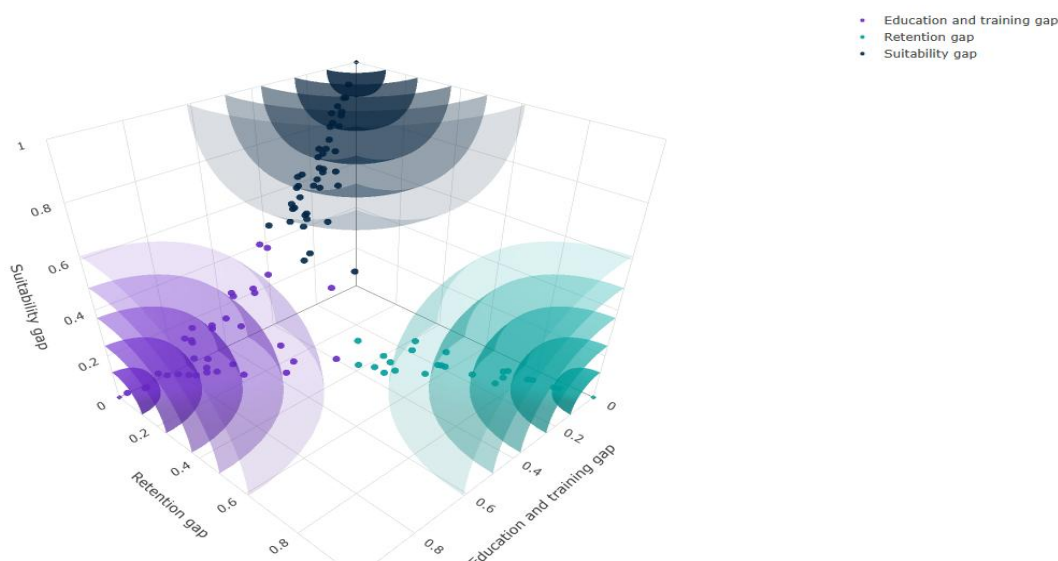
The sum of memberships for a point across all clusters equals 1.

FCM shows how much does a unit group belongs to a driver relative to other drivers. The membership share is determined by how far the unit group is located from the centre of each main driver. In other words, with that the membership shares can change depending on:

- the number unit groups used in the OSD framework
- the number of and changes in the metrics used to define the main drivers.
- There is likely to be collinearity with some of the variables that defines each shortage driver. The impact of collinearity and whether certain variables need to be removed or replaced will be tested.

- For 2026 OSD, the sample size is reasonably large, hence the results for the main drivers of shortage were stable. The FCM is also expected to produce stable, reliable results going forward as the labour market is expected to remain stable.

Figure 8: Fuzzy C-means clustering



Source: Jobs and Skills Australia (2026).

Figure 8 is a graphical representation of how FCM works. The main drivers are shown and the values on the axes are membership shares that link the unit group to the main driver. Each dot represents a unit group. The closer the unit group is to the centre of the cluster (darkest shade rim), the higher the membership share is to that main driver. Unit groups that sit on the outer rim (lighter areas) have lower membership share for that main driver.

The purple dots are concentrated near ETG cluster centre, that is those unit groups have relatively larger membership share to ETG than to RG and SG. The green dots are concentrated near the RG cluster centre, meaning RG is dominant driver for those unit groups. The dark blue dots sit near SG cluster centre, showing SG is the main driver of shortage. Dots that sit on the outer rims of ETG, RG and SG indicate that the unit groups are linked to all 3 drivers of shortage. That is, no single driver is the main cause of shortage.

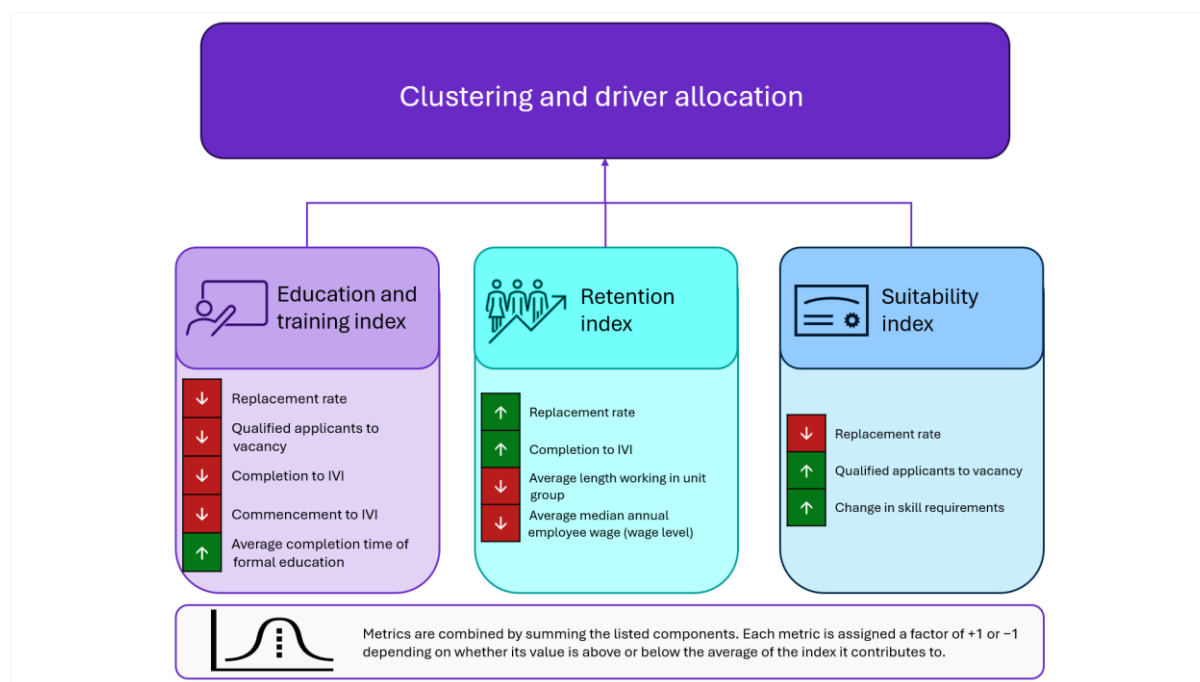
Additional data preparation for FCM

The metrics that defined each shortage driver (see Table 2 and Figure 9) were combined to create an individual shortage driver index. That is, the ETG metrics were combined to create an ETG index, and the metrics defining RG were combined to create an RG index. The same was done for the SG metrics.

Figure 9 shows the indices used in the FCM process.²⁶

²⁶ The positive and negative signs for each index show whether an increase or decrease in the data contributes to a shortage driver. For example, low commencement and high time to complete training can indicate problems in the education and training pipeline for an occupation.

Figure 9: Illustration of the indices created to produce the shortage driver clusters



Source: Jobs and Skills Australia (2026).

Variable description

Replacement rates

DOM was derived from administrative data on individuals' Income Tax Returns from the Australian Taxation Office. The data set shows the inflows and outflows of workers to and from occupations on a financial year basis. A net inflow indicated there were more workers entering the occupation than leaving. Conversely, net outflow indicated there were more workers leaving than entering the occupation.²⁷

$$\text{Replacement rate} = 100 * \frac{\text{Gross replacements}}{\text{Previous year stock of workers}}$$

where

Gross replacements = gross outflows, if new employment growth ≥ 0

Gross replacements = gross inflows, if new employment growth ≤ 0

Box 5: Example with two hypothetical replacement rate scenarios

Scenario 1: Employment Growth (starting the year with 100 employees)

- 70 of the initial 100 employees were still present by the end of the year.
- Over the year, the total number of employees has grown to 110 (10 additional employees).
- Therefore 40 new employees were hired (110 in total; 70 who stayed from initial stock).
- 30 people needed to be replaced (as 30 workers left during the year).
- In this scenario, the replacement rate was 0.3, representing the proportion of workers who left.

²⁷Jobs and Skills Australia (2024). *Data on Occupation Mobility: Unpacking Worker Movements*.

- The extra 10 hires were classified as additional stock (employment growth), not replacements.

Scenario 2: Employment Decline (starting the year with 100 employees)

- By the end of the year, 70 were still present.
- But over the year, the total number of employees has reduced to 90.
- Therefore 20 new workers were hired over the year (90 workers in total; 70 workers who stayed).
- 30 workers left (100 workers initially; 70 workers who stayed).
- In this scenario, the replacement rate was 0.2, representing the proportion of workers hired.
- All the hires were considered as replacement for the workers who left, with no employment growth.

Source: Jobs and Skills Australia (2026).

Changing skill requirements index (CSRI)

The CSRI measures how much of the occupation's skill mix changes based on observed changes in skills required in job advertisements.²⁸ The metric looks at how much of the change is real (structural change) from skills expansion and skills contraction within the unit group over time, after removing the effect of skill inflation in job advertisements.²⁹ The time periods covered were 2020-2023, 2021-2024 and 2022-2025.

$$CSRI = \left(\frac{\text{Structural change}}{\text{Total change}} \right) \times \text{Skill change index adjusted}$$

Structural change is the share of skill mix that comes from skills appearing for the first time or disappearing completely between the start year and end year. This measures how much a unit group is replacing old skills with new skills rather than just changing the importance of existing skills.

Total change is the total amount of movement in the unit group's skill mix between the start year and end year. This measures the total reshuffling of the skill distribution such as growing skills, declining skills, skill news appearing and skills disappearing.

Skill change index adjusted is the extent to which a unit group's skill profile has changed over time, after adjusting for changes in how many skills are listed in job advertisements. This is a measure of observed skill change after accounting for growth or shrinkage in the number of skills being listed.

²⁸ Analysis was undertaken using Lightcast job advertisements administrative data 2020-2025.

²⁹ Skill inflation arises from the number of skills appearing in job advertisements growing over time, even when the underlying job has not changed significantly. For example, a job advertisement for a Data Analyst in 2020 required SQL and Excel and in 2023 the same position required SQL, Excel, SQL Optimisation, Advanced Excel. While the actual job description and tasks may be the same, the employer is being more specific, using more modern terminology, or listing skills separately instead of grouping them together.