

**Manufacturing  
Industry Skills  
Alliance**

Appendix D:

# **Priority Manufacturing Occupation Group Profiles**

There are **39** key occupation groups that work in manufacturing.

In the 2023 Skills Priority List, **24** of these occupation groups contained occupations identified as having **a shortage**.

**1334 Manufacturers**

**1335 Production Managers**

2323 Fashion, Industrial and Jewellery Designers

**2342 Chemists, and Food and Wine Scientists**

**3114 Science Technicians**

**3124 Electronic Engineering Draftspersons and Technicians**

**3125 Mechanical Engineering Draftspersons and Technicians**

**3129 Other Building and Engineering Technicians**

3220 Fabrication Engineering Trades Workers, nfd

**3221 Metal Casting, Forging and Finishing Trades Workers**

**3222 Sheetmetal Trades Workers**

**3223 Structural Steel and Welding Trades Workers**

**3231 Aircraft Maintenance Engineers**

**3232 Metal Fitters and Machinists**

**3233 Precision Metal Trades Workers**

**3234 Toolmakers and Engineering Patternmakers**

**3242 Vehicle Body Builders and Trimmers**

**3411 Electricians**

**3421 Airconditioning and Refrigeration Mechanics**

**3511 Bakers and Pastrycooks**

3920 Printing Trades Workers, nfd

**3921 Print Finishers and Screen Printers**

**3922 Graphic Pre-press Trades Workers**

**3923 Printers**

**3991 Boat Builders and Shipwrights**

3994 Jewellers

7111 Clay, Concrete, Glass and Stone Processing Machine Operators

**7115 Plastics and Rubber Production Machine Operators**

**7119 Other Machine Operators**

7123 Engineering Production Workers

8311 Food and Drink Factory Workers

8320 Packers and Product Assemblers, nfd

8322 Product Assemblers

8390 Miscellaneous Factory Process Workers, nfd

8391 Metal Engineering Process Workers

8392 Plastics and Rubber Factory Workers

8393 Product Quality Controllers

8399 Other Factory Process Workers

8995 Printing Assistants and Table Workers

# 1334 Manufacturers

JSA Occupation Profiles data - November 2023

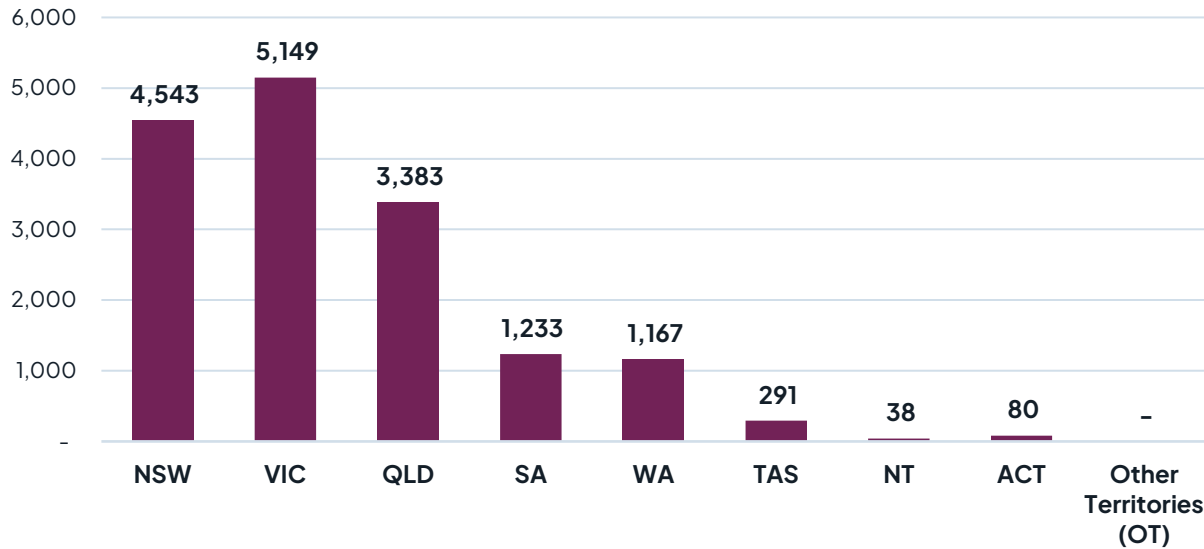
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
19	24	N/A	45	26.75	+21.4%

In 2021, 39% worked in Manufacturing

Manufacturers by state/territory of Australia (2021)



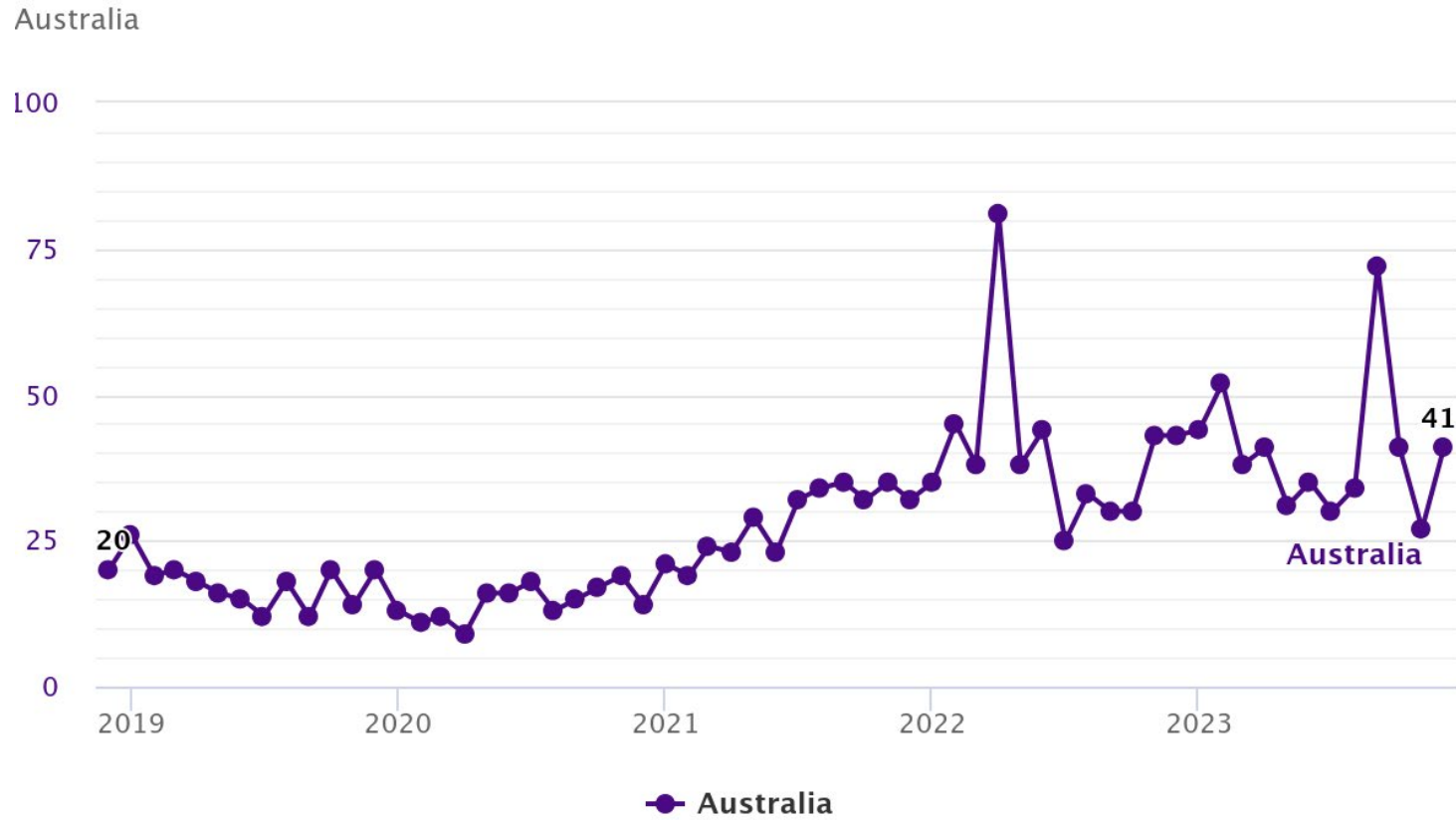
Within this occupation group, 133411 Manufacturer is in shortage in **NSW, QLD and WA** with an estimated 15.9k persons employed as of 2021 (ABS Census).

**While employment is expected to grow, there is no accredited VET training currently available for this occupation.**



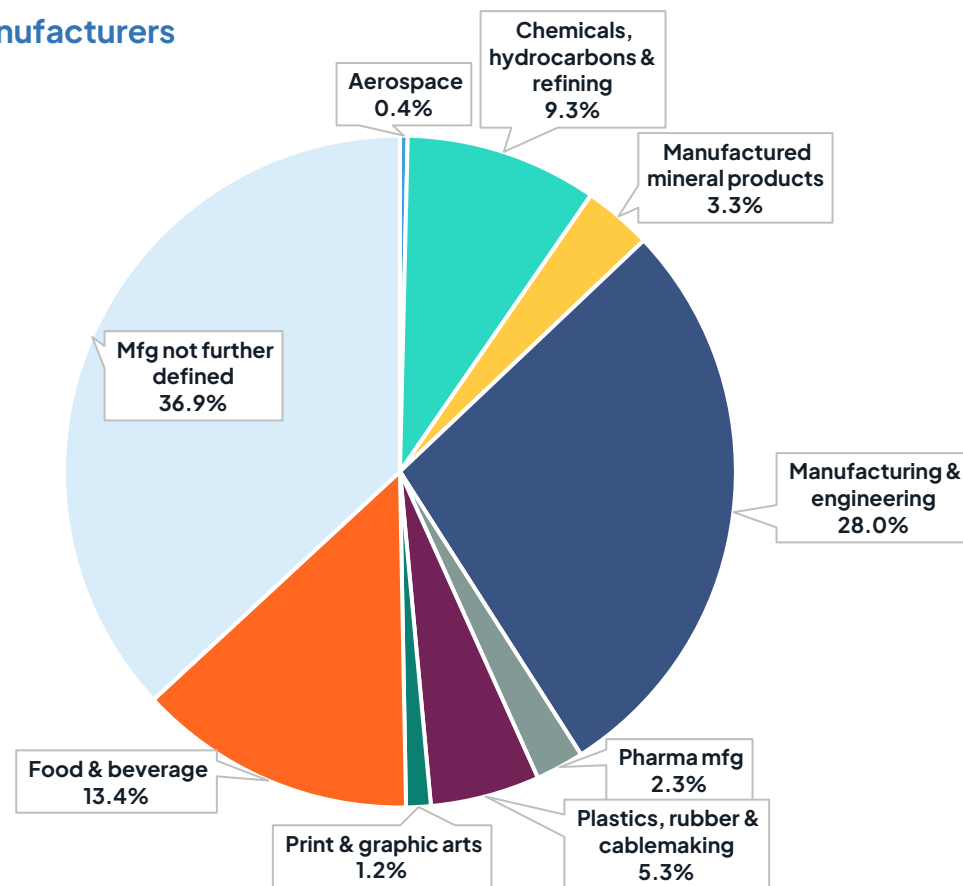
# 1334 Manufacturers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

1334 Manufacturers



# 1335 Production Managers

National average of PT workers: 31%\*

JSA Occupation Profiles data – November 2023

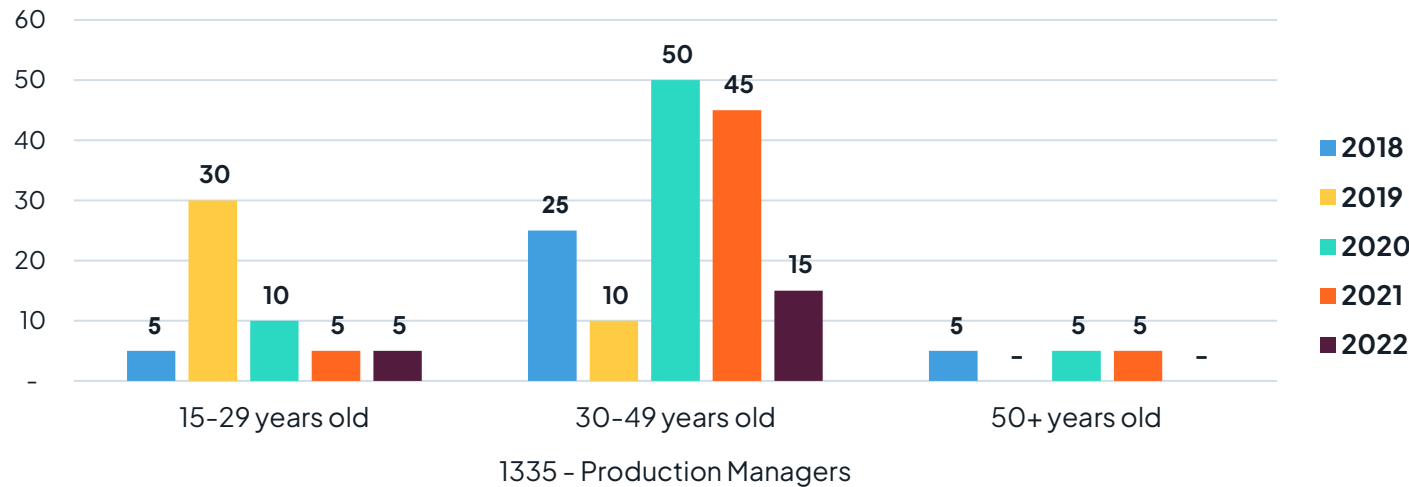
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023–2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
5	17	\$2,332	46	64.15	+19.8%

In 2021, 29% worked in MFG

2018–2022 enrolment trend for related manufacturing training (national)



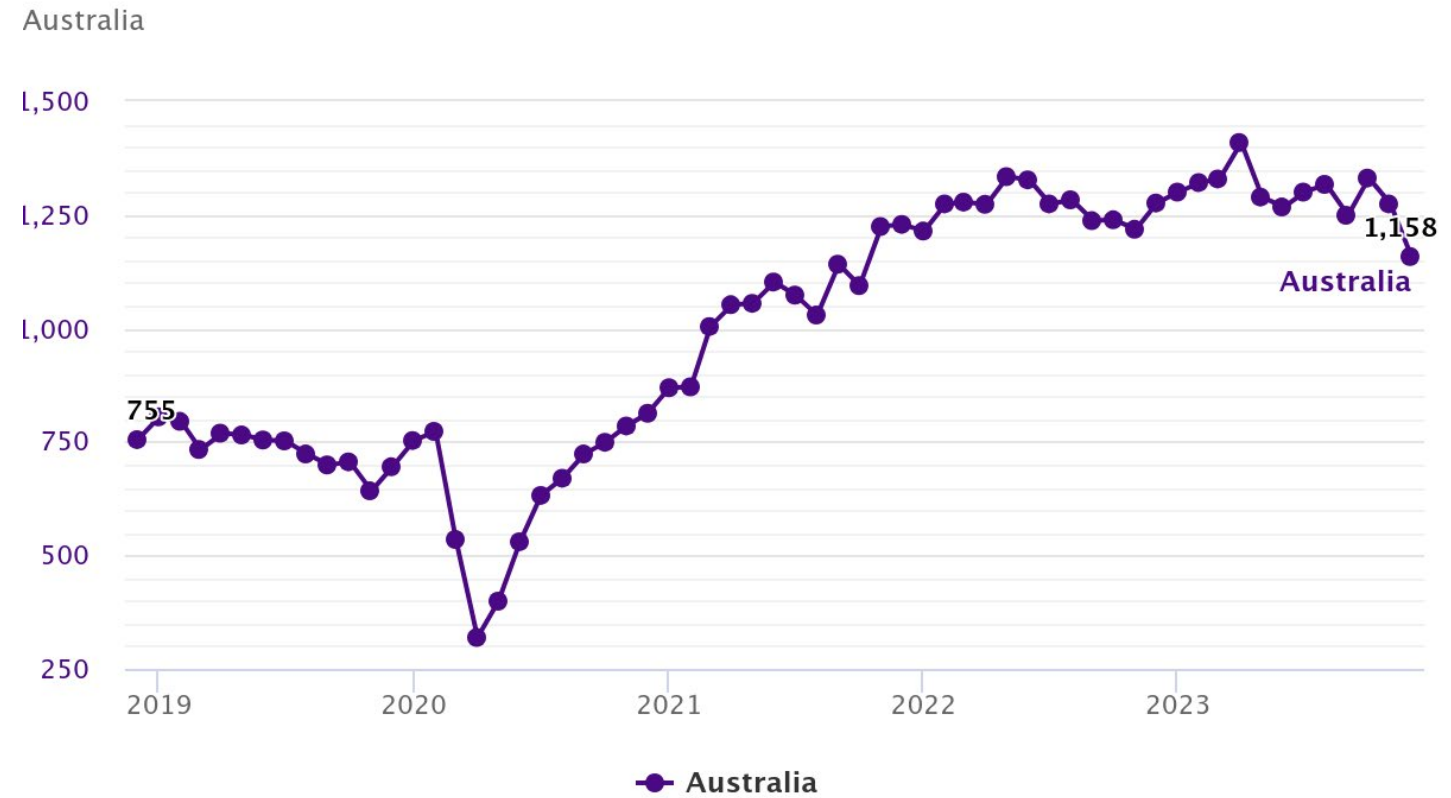
Within this occupation group, 133512 Production Manager (Manufacturing) is in shortage in NT with an estimated 34.8k persons employed as of 2021 (ABS Census) but **only 80 were employed in NT.**

**Qualifications from the MSM and PMA Training Packages provide training for this occupation.** Most enrolments were within the 30–49 age group.

**Trending skill \*\* for 133512 Production Manager (Manufacturing):**  
Business intelligence and decision support software

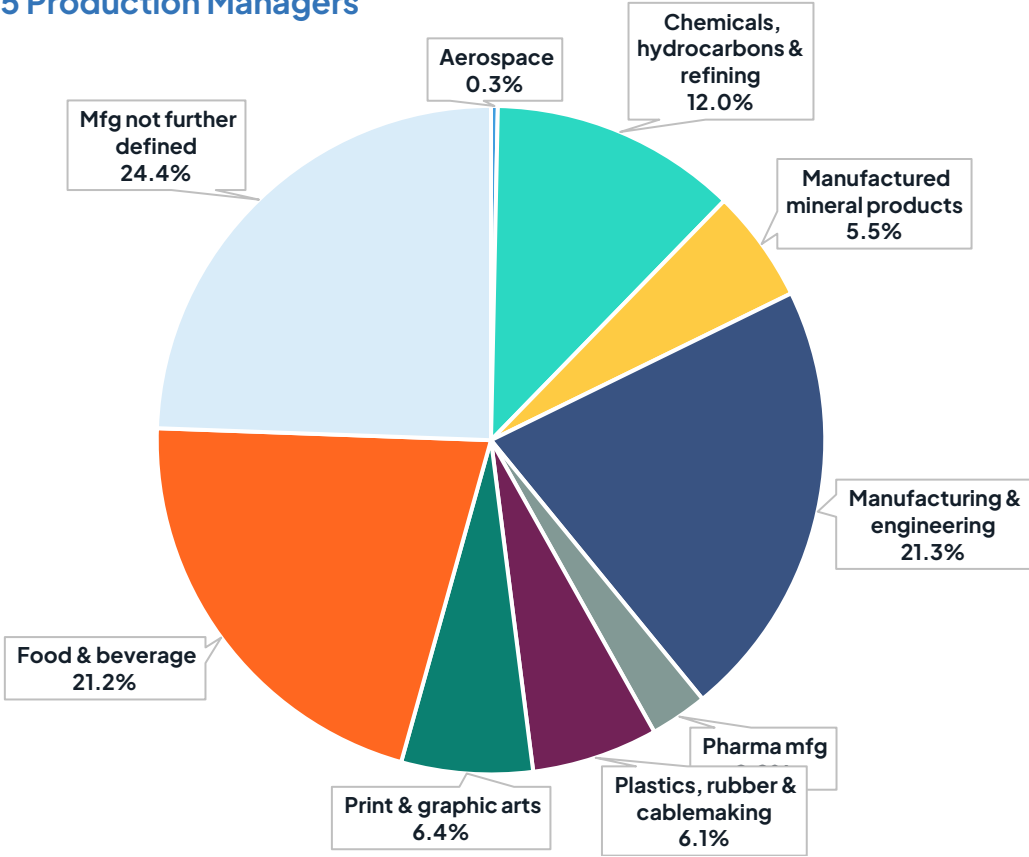
# 1335 Production Managers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

1335 Production Managers





# 2342 Chemists, and Food and Wine Scientists

JSA Occupation Profiles data – November 2023

The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
13	31	\$2,356	50	9.91	+20.5%

In 2021, 47% worked in MFG

Food Technologists by state/territory of Australia (2021)

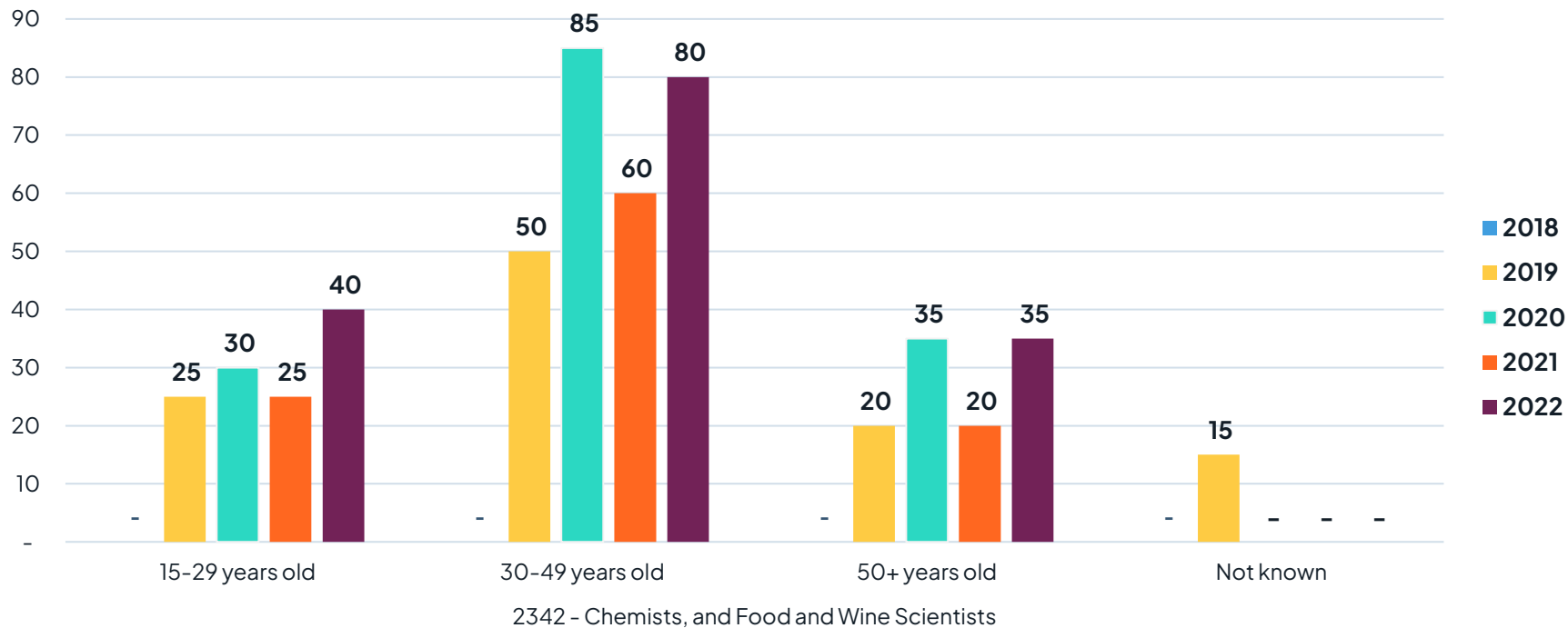


Within this occupation group, 234212 Food Technologist has a **national shortage** with an estimated 1.4k persons employed as of 2021 (ABS Census).



# 2342 Chemists, and Food and Wine Scientists

2018–2022 enrolment trend for related manufacturing training (national)



**Qualifications in the FBP training package provides training for this occupation.** Enrolments have grown over the past few years across student age groups, but it may take some time to flow through the workforce.

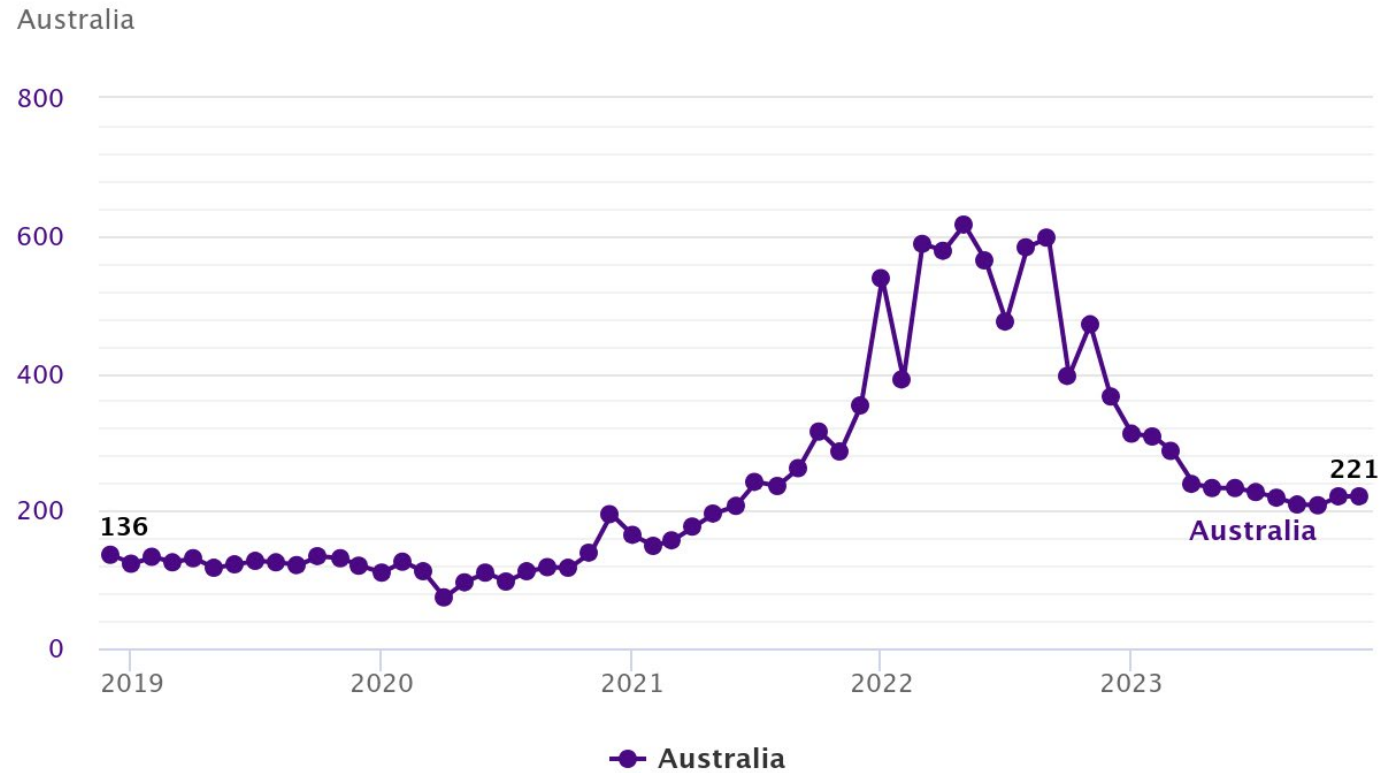
**There have been 15 chemists, food and wine scientists commencing training under a manufacturing apprentice/traineeship from March 2019–2023.**





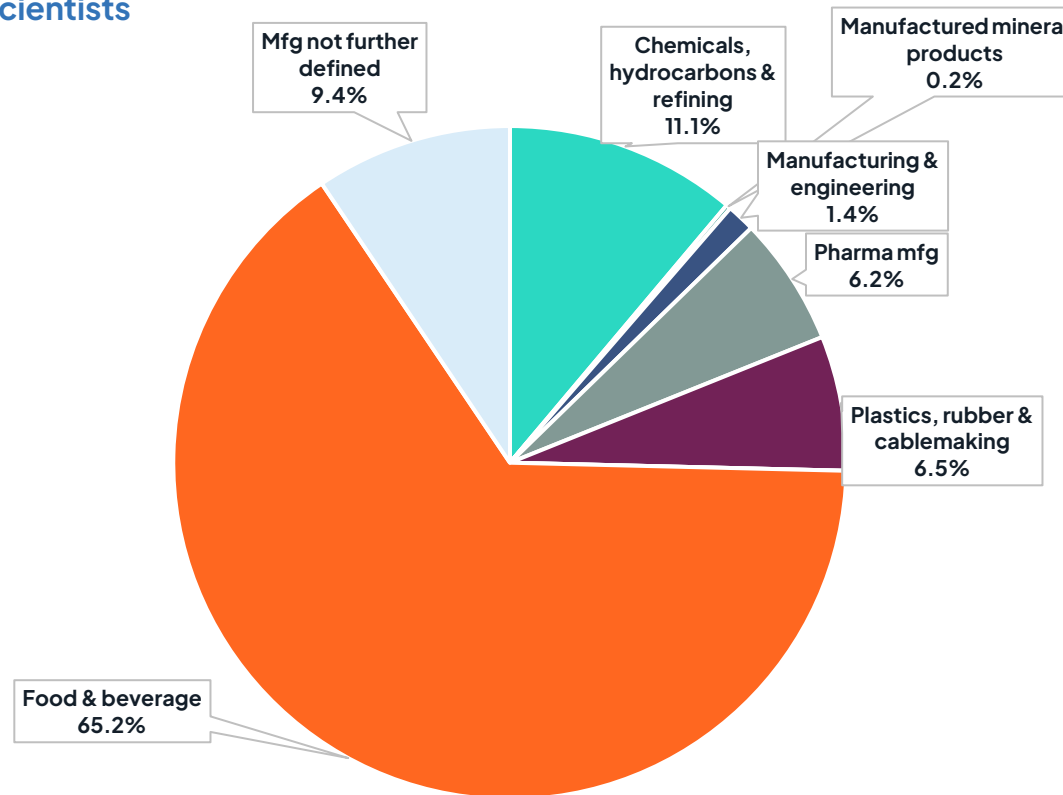
# 2342 Chemists, and Food and Wine Scientists

### Estimated Vacancies – Australia



# Employment by subsector (2021)

2342 Chemists, and Food and Wine Scientists



# 3114 Science Technicians

JSA Occupation Profiles data – November 2023

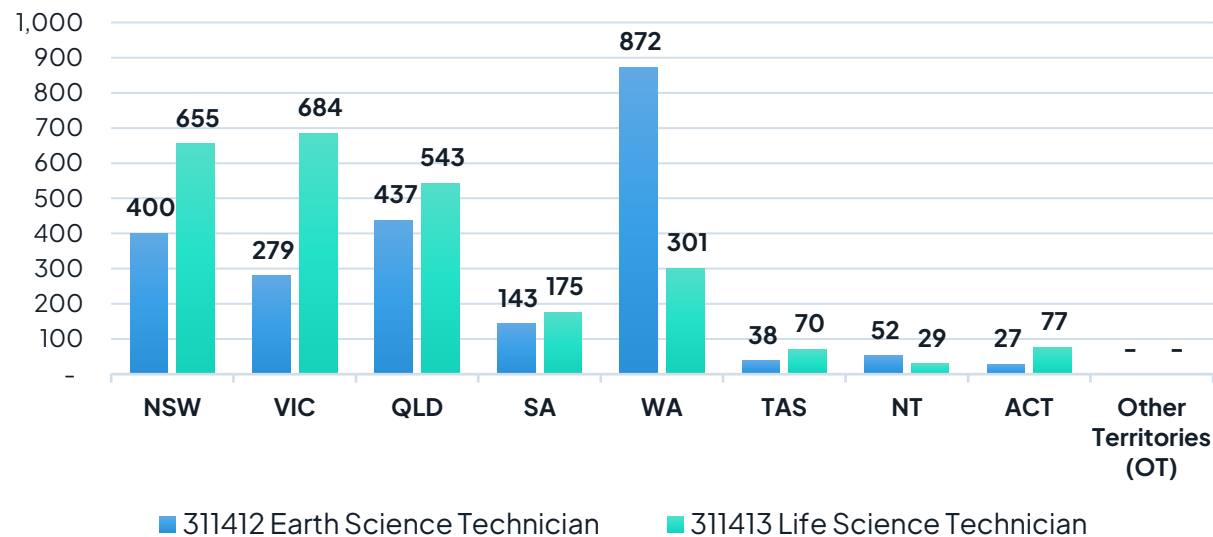
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023–2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
18	39	\$1,441	35	22.2	+12.2%

In 2021, 13% worked in MFG

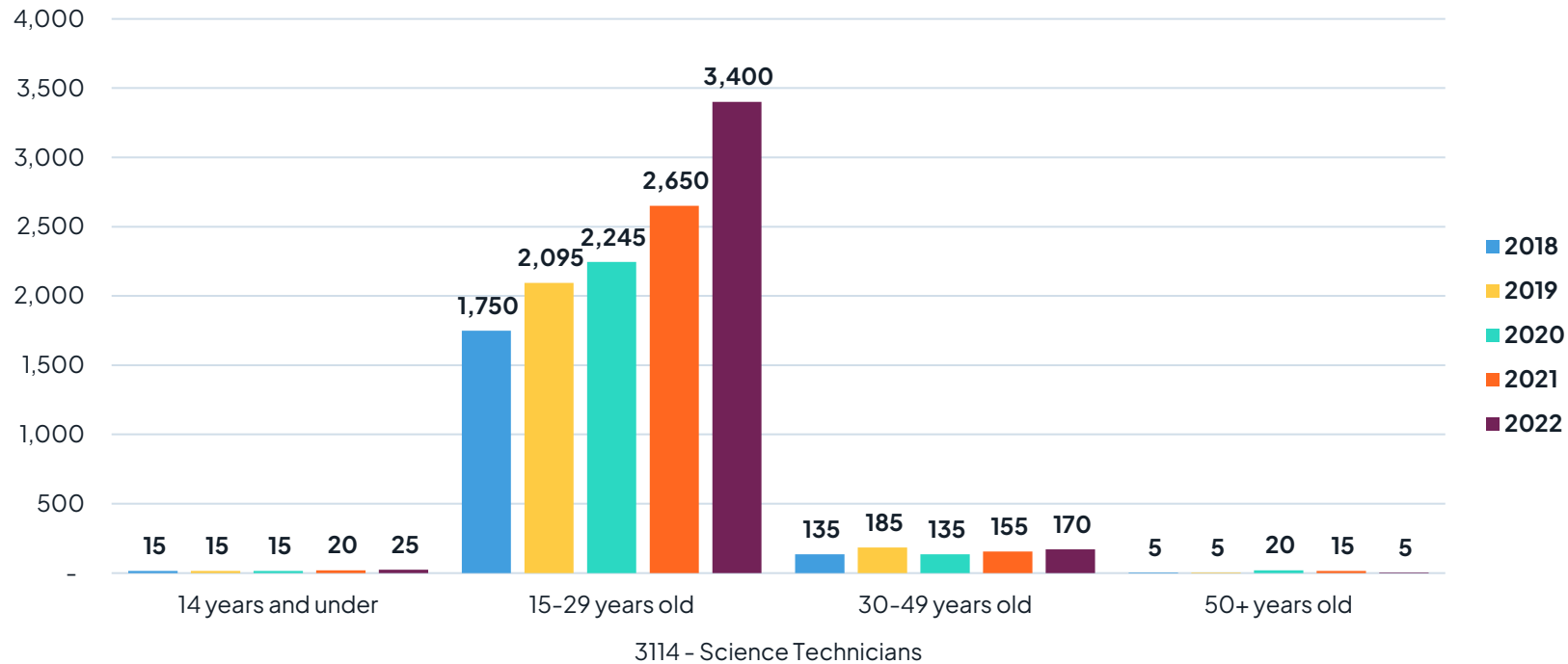
Workers by state/territory of Australia (2021)



Within this occupation group, 311412 Earth Science Technician has a **national shortage** and a shortage of 311413 Life Science Technician in **NSW**.

# 3114 Science Technicians

2018–2022 enrolment trend for related manufacturing training (national)

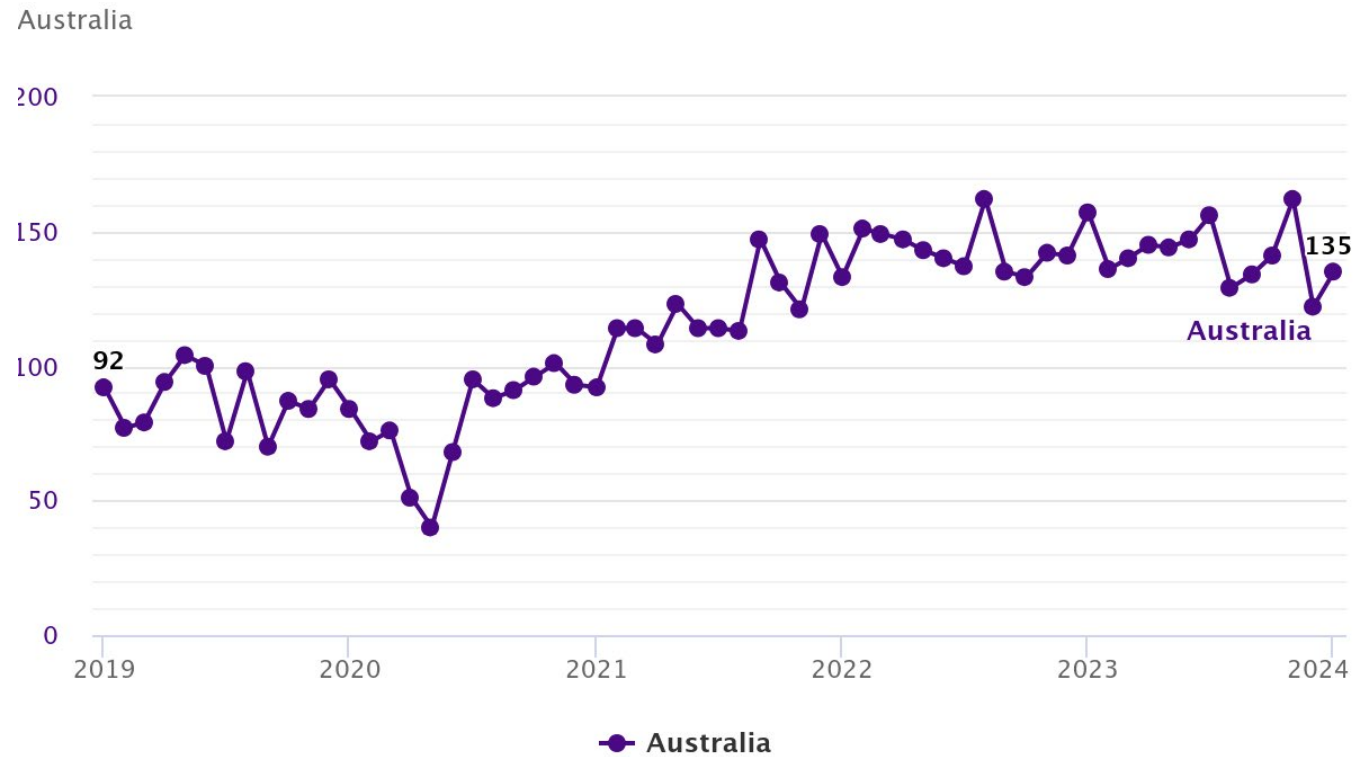


**Qualifications from the MSL and MSS Training Packages provide training for this occupation.**  
Enrolments have grown over the past few years, particular for the 15-29 cohort.

**There have been 10 science technicians commencing training under a manufacturing apprentice/traineeship.**

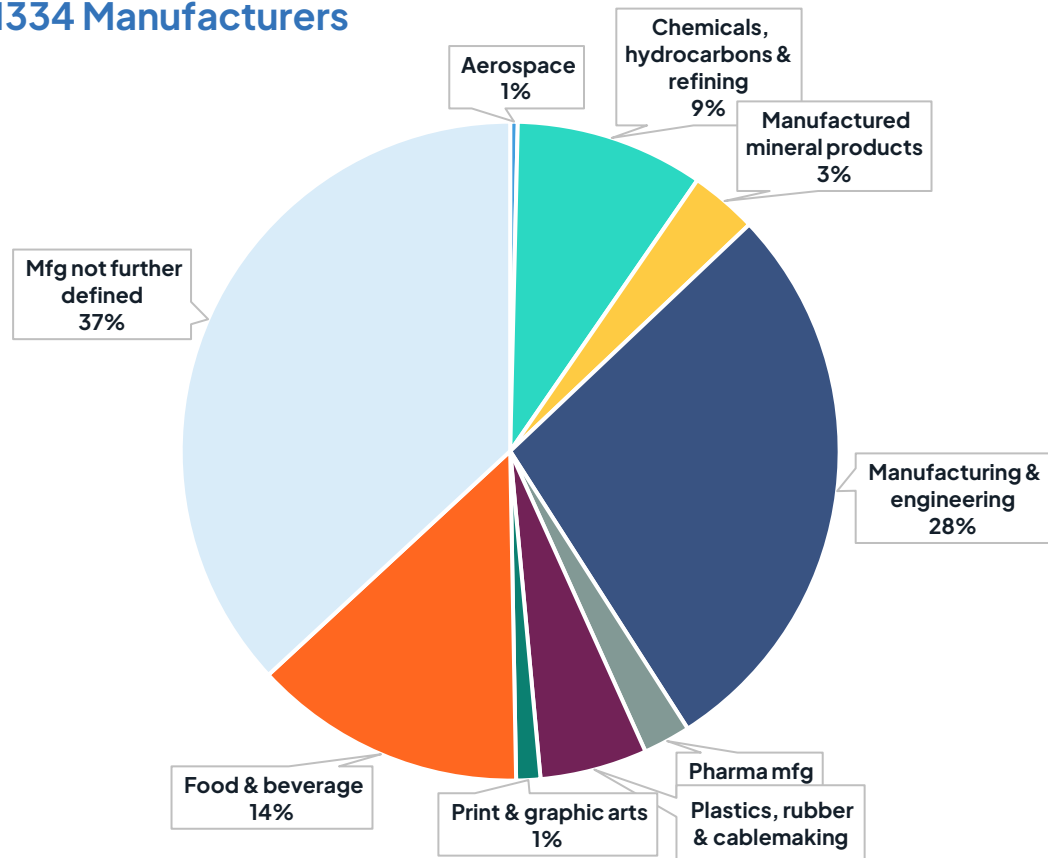
# 3114 Science Technicians

### Estimated Vacancies – Australia



# Employment by subsector (2021)

1334 Manufacturers





# 3124 Electronic Engineering Draftspersons and Technicians

National average of PT workers: 31%\*\*

JSA Occupation Profiles data – November 2023

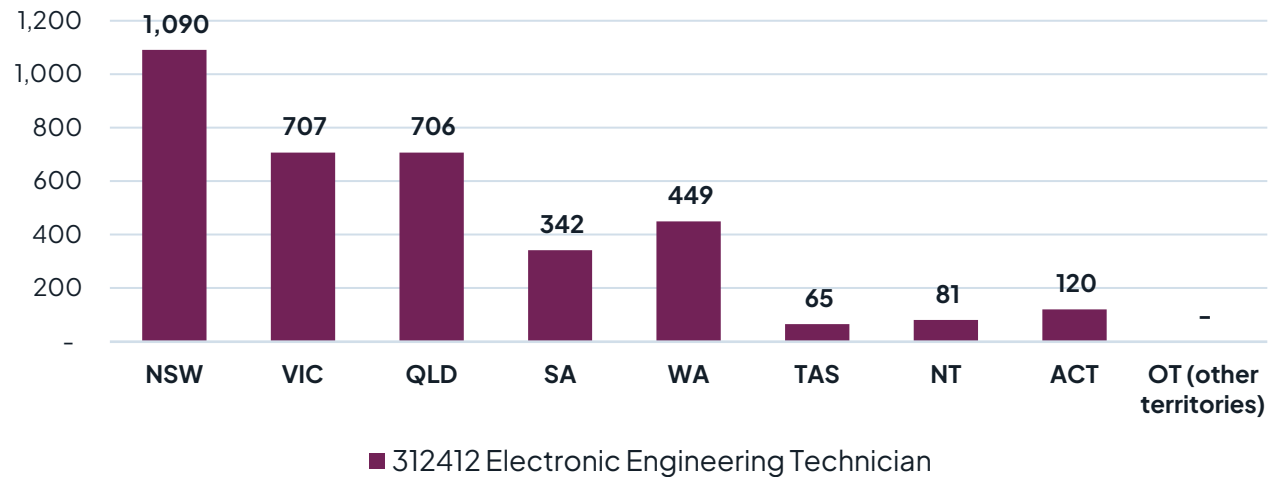
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023–2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
5	14	\$2,184	40	5.6	+15.5%

*In 2021, 16% worked in MFG*

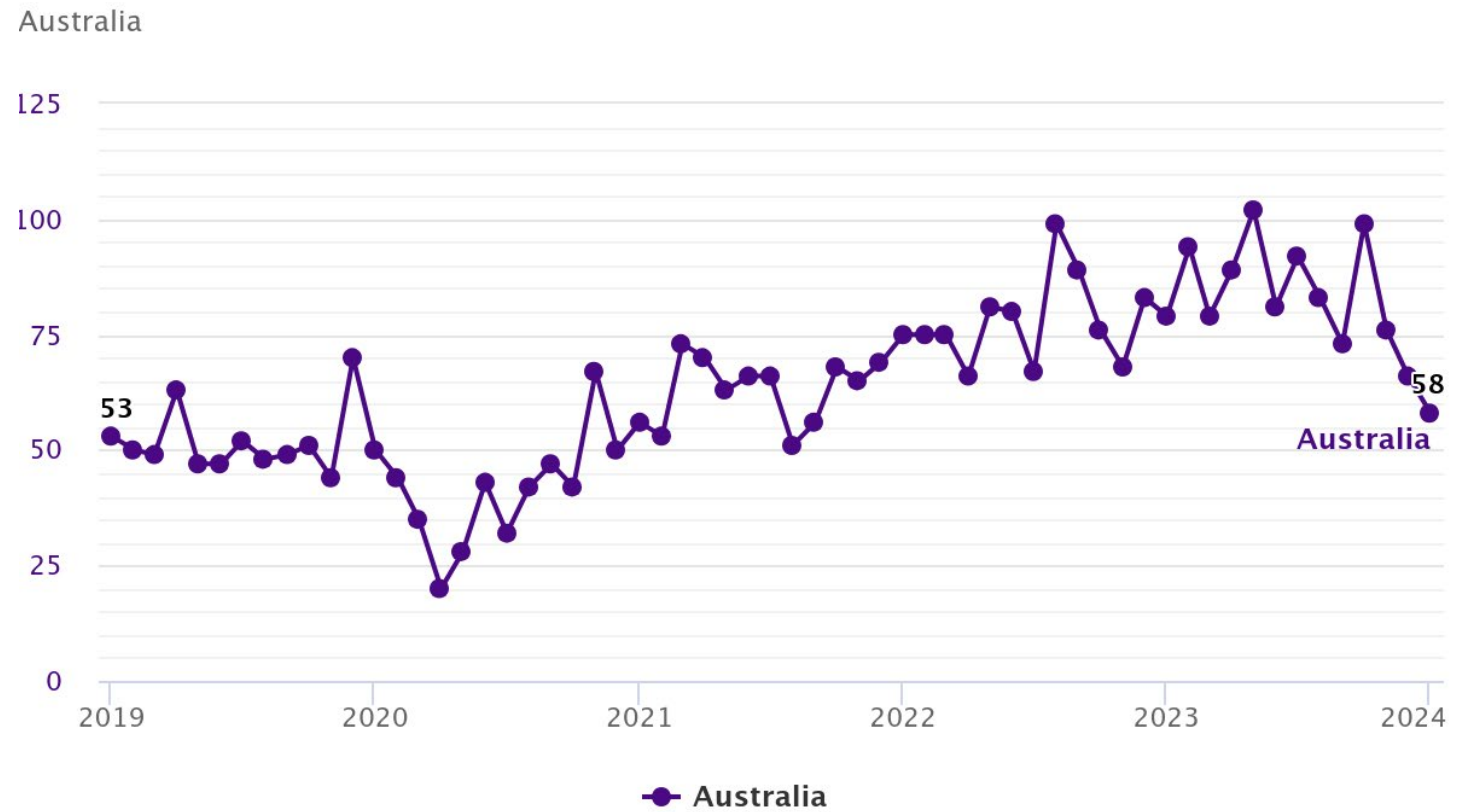
Workers by state/territory of Australia (2021)



Within this occupation group, there is a shortage of 312412 Electronic Engineering Technicians in **SA and WA**.

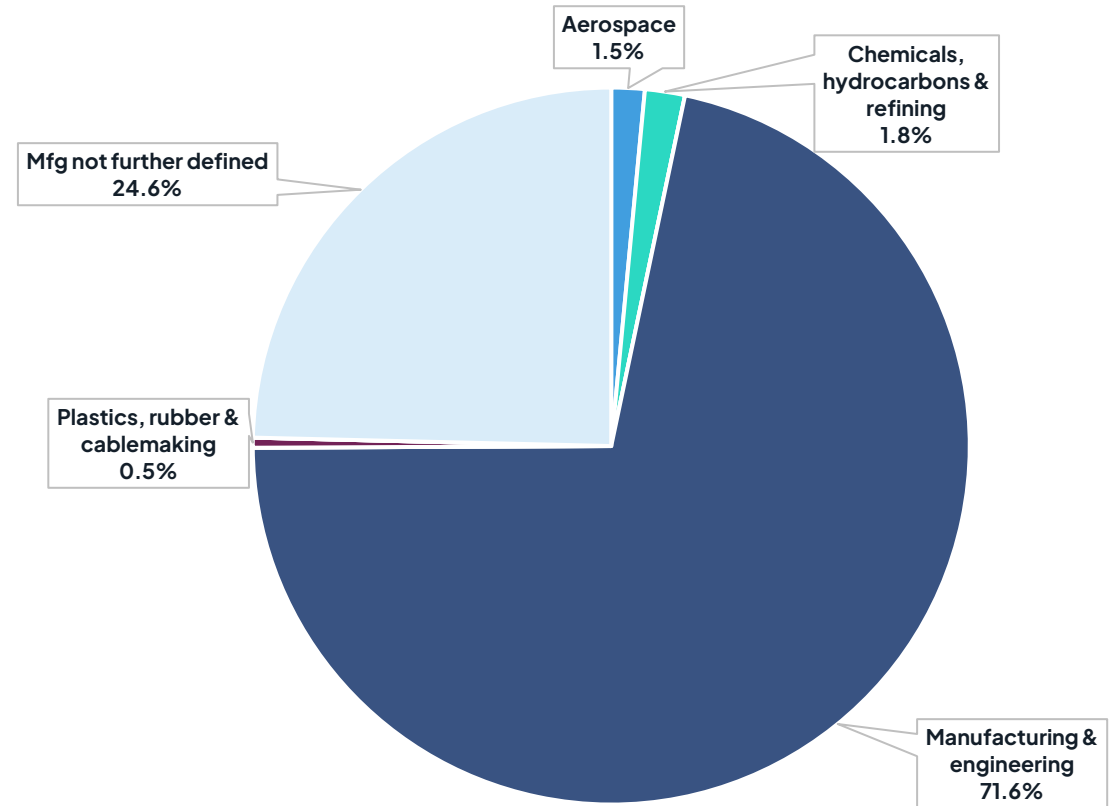
# 3124 Electronic Engineering Draftspersons and Technicians

## Estimated Vacancies – Australia



# Employment by subsector (2021)

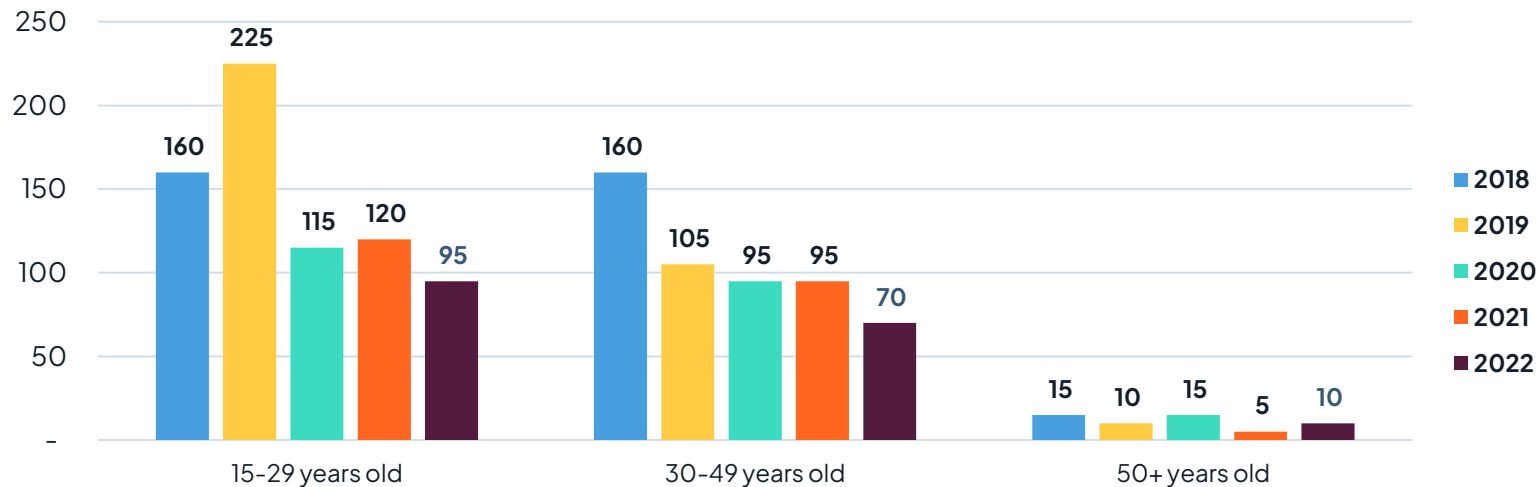
## 3124 Electronic Engineering Draftspersons and Technicians



# 3124 Electronic Engineering Draftspersons and Technicians



2018–2022 enrolment trend for related manufacturing training (national)



3120 - Building and Engineering Technicians - nfd

There is training available for the **broader** occupation group through MEM qualification *Diploma of Engineering - Advanced Trade*.

Preliminary estimated driver:  
RETENTION GAP\*

# 3125 Mechanical Engineering Draftspersons & Technicians

National average of PT workers: 31%\*\*

JSA Occupation Profiles data - November 2023

The median age across all occupations is 42

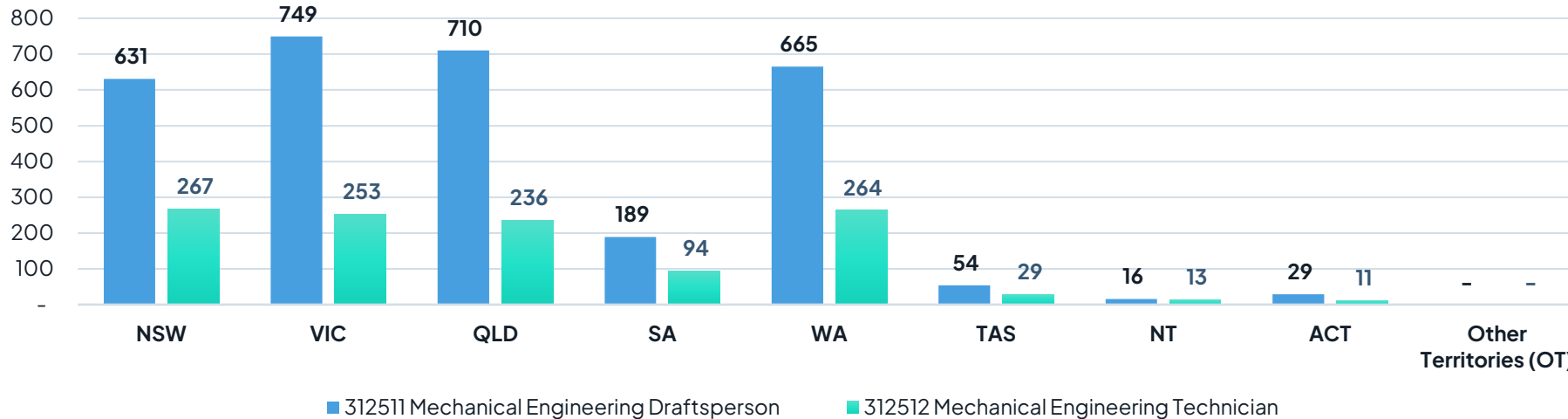
Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
9	18	N/A	45	5.94	+16.5%

In 2021, 25% worked in MFG

Sources: JSA Occupation Profiles Data - November 2023, JSA Employment projections May 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22.

## Workers by state/territory of Australia (2021)



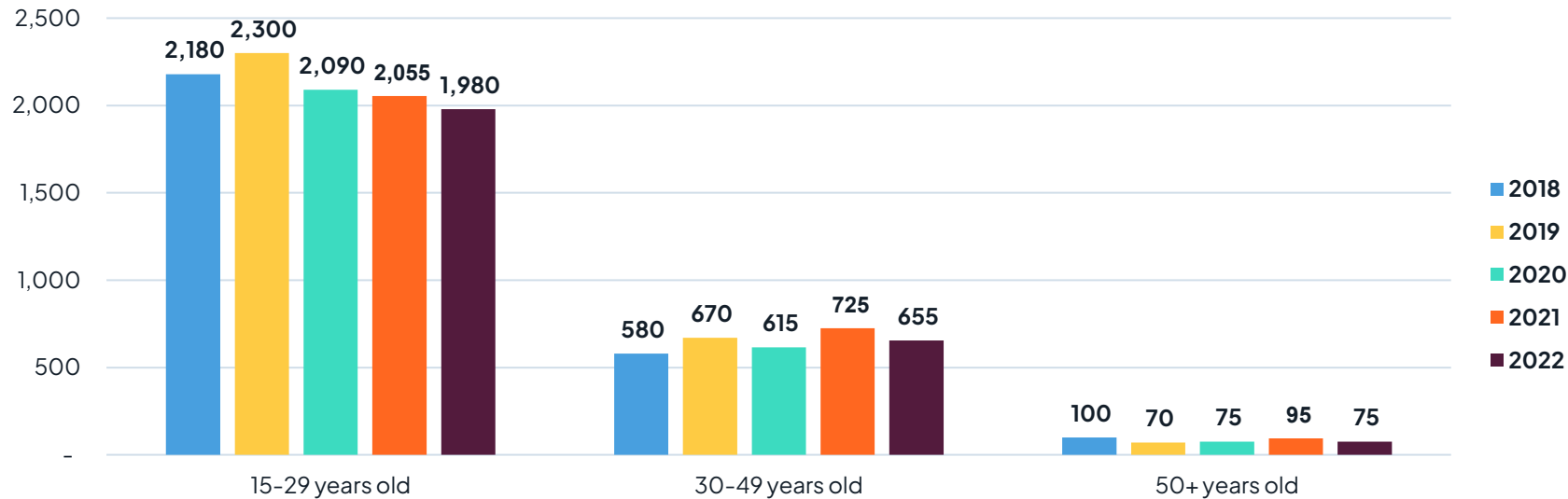
All occupations within this group have a **national shortage** with an estimated 6k persons employed as of 2023.

Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22. \*Retention gap shortages are where there are below average rates of retention, potentially reinforced by low numbers of new applicants per vacancy. This is a category where increasing the throughput of qualified applicants is unlikely to solve the problem because of the low likelihood of retaining them. Ways to enhance the attractiveness of the occupation through improved remuneration and/or working conditions, professional development and clearer career pathways would be potential solutions to alleviate this kind of shortage. Source: JSA Atlas Pro, accessed 22/2/24. \*\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results - January 2024)



# 3125 Mechanical Engineering Draftspersons & Technicians

2018–2022 enrolment trend for related manufacturing training (national)

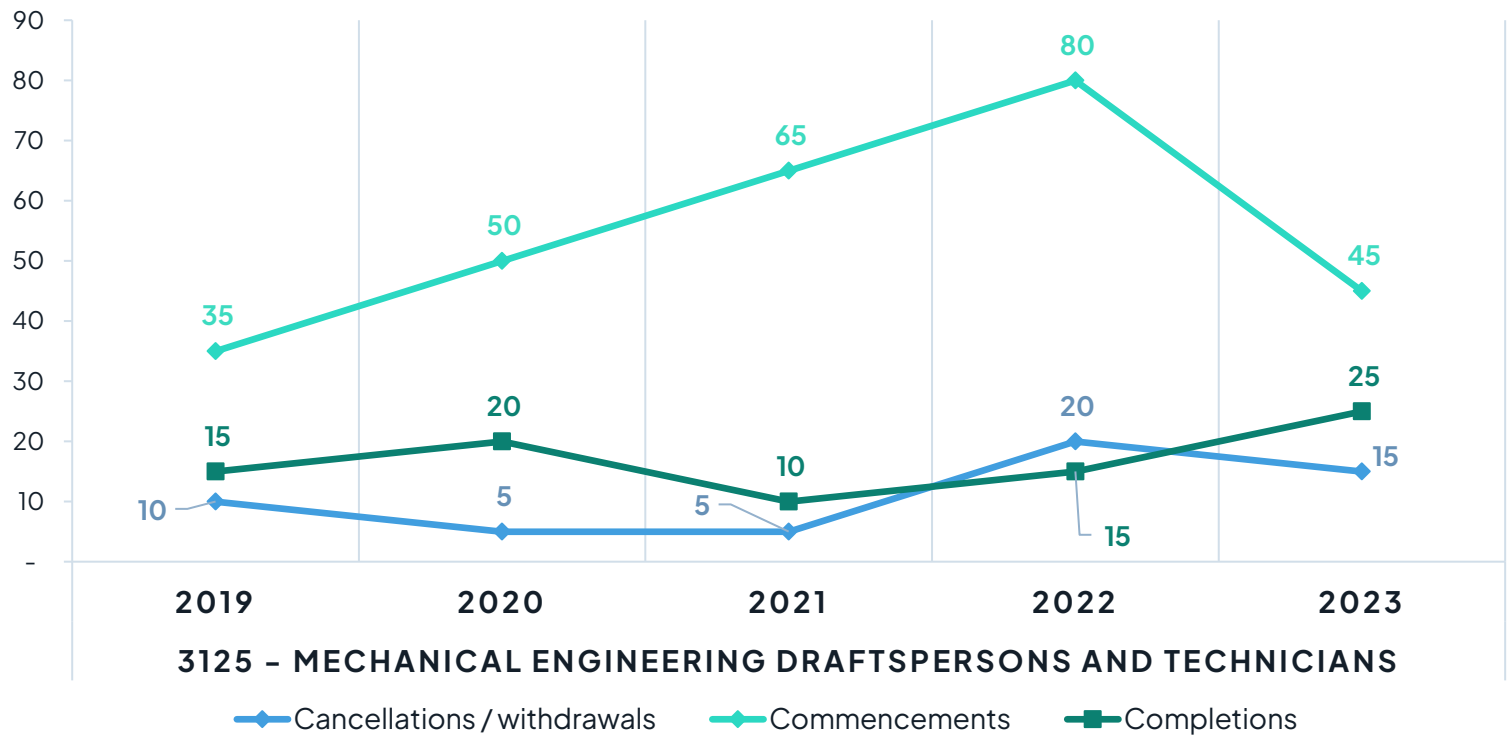


3125 - Mechanical Engineering Draftspersons and Technicians

Qualifications from the MEM Training Package provide training for these occupations.

# 3125 Mechanical Engineering Draftspersons & Technicians

APPRENTICESHIP AND TRAINEE TRENDS

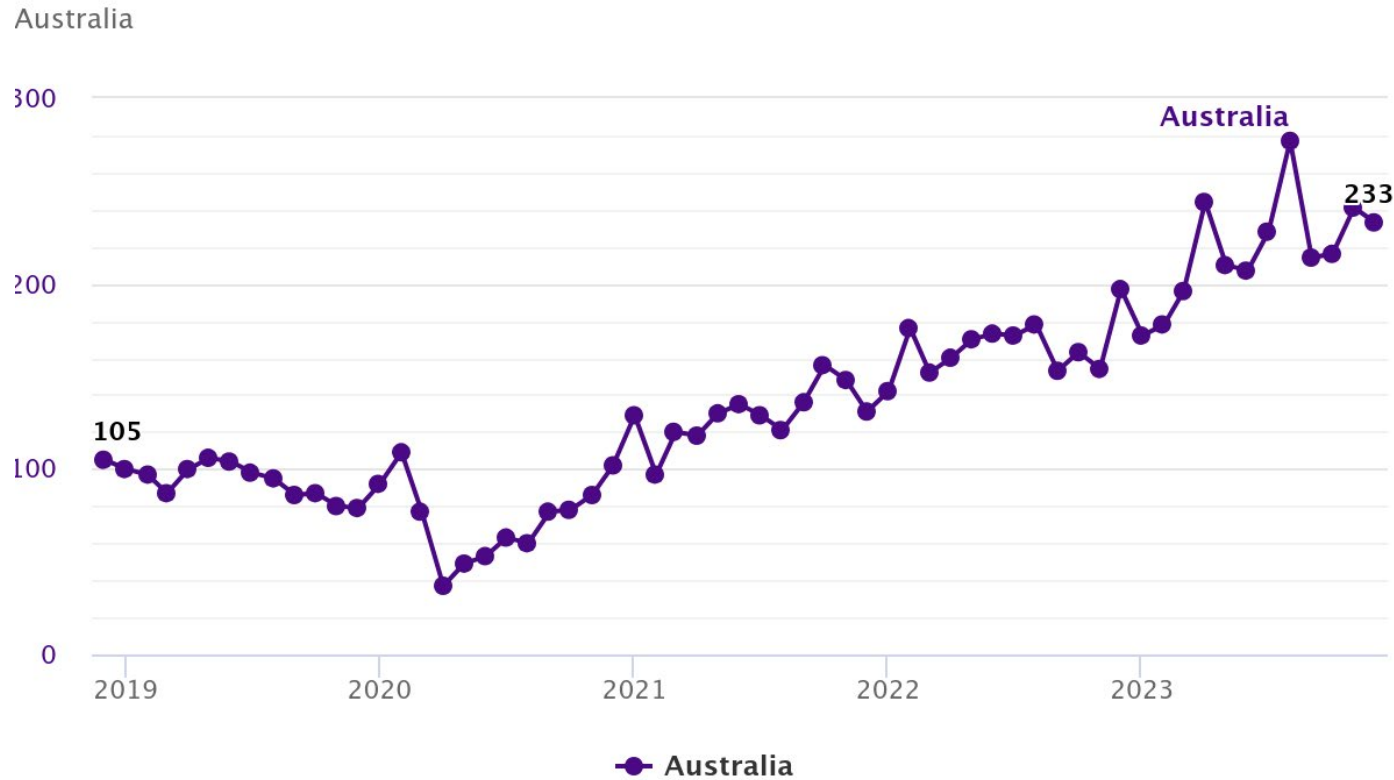


3125 - MECHANICAL ENGINEERING DRAFTSPERSONS AND TECHNICIANS



# 3125 Mechanical Engineering Draftspersons & Technicians

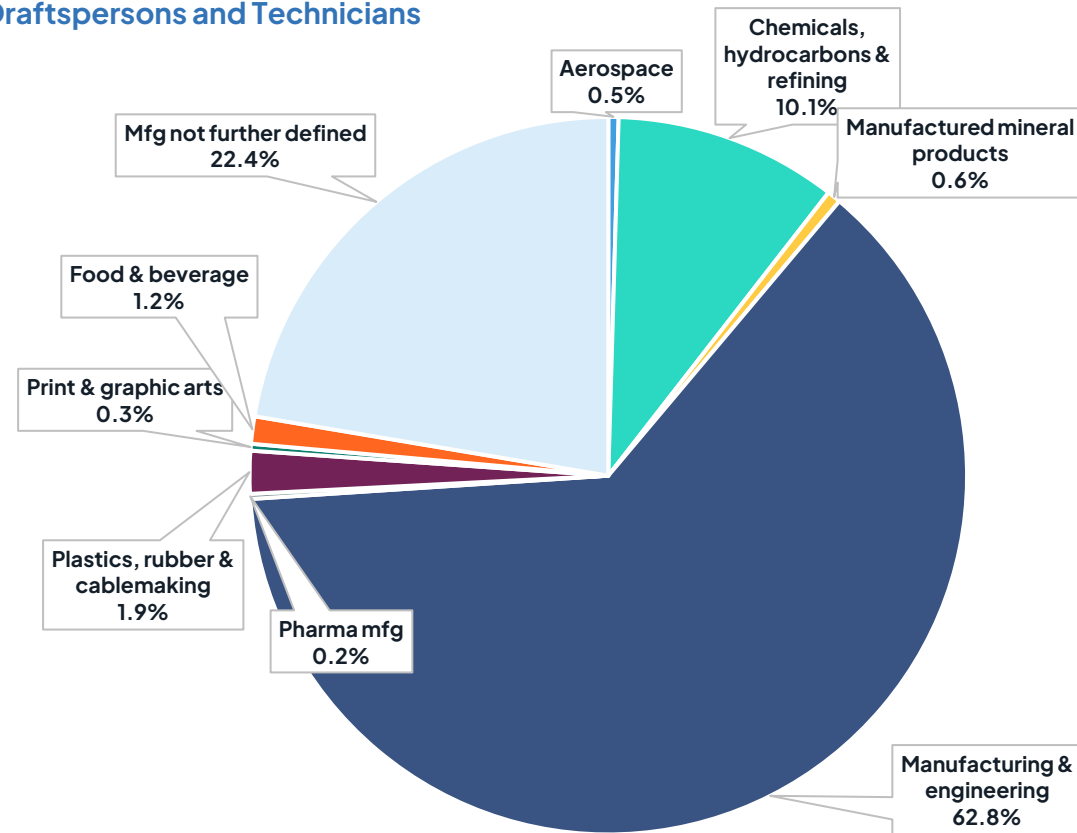
## Estimated Vacancies – Australia





# Employment by subsector (2021)

## 3125 Mechanical Engineering Draftspersons and Technicians



Preliminary estimated driver:  
**RETENTION GAP\***



# 3129 Other Building and Engineering Technicians

National average of PT workers: 31%\*\*

JSA Occupation Profiles data – November 2023

The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

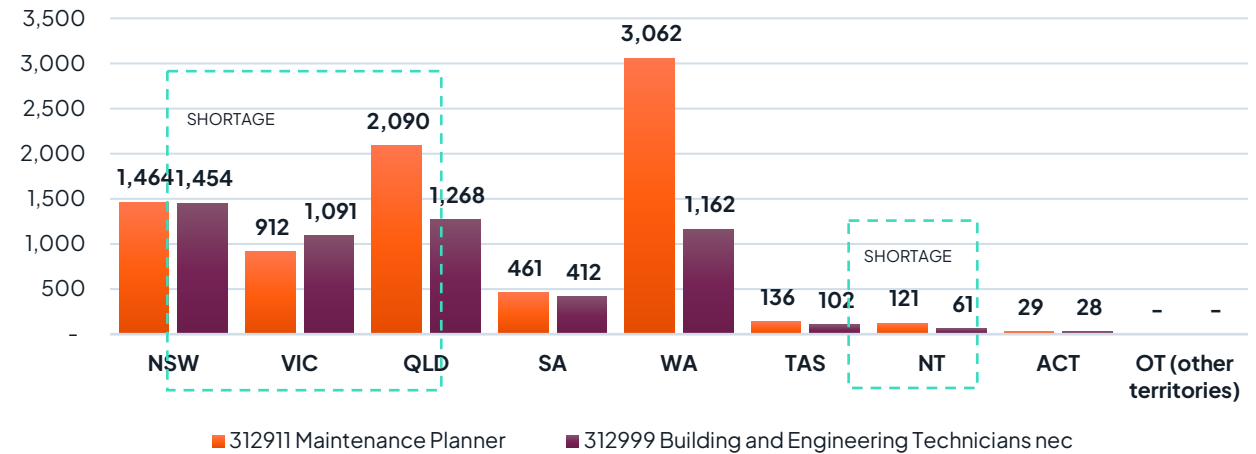
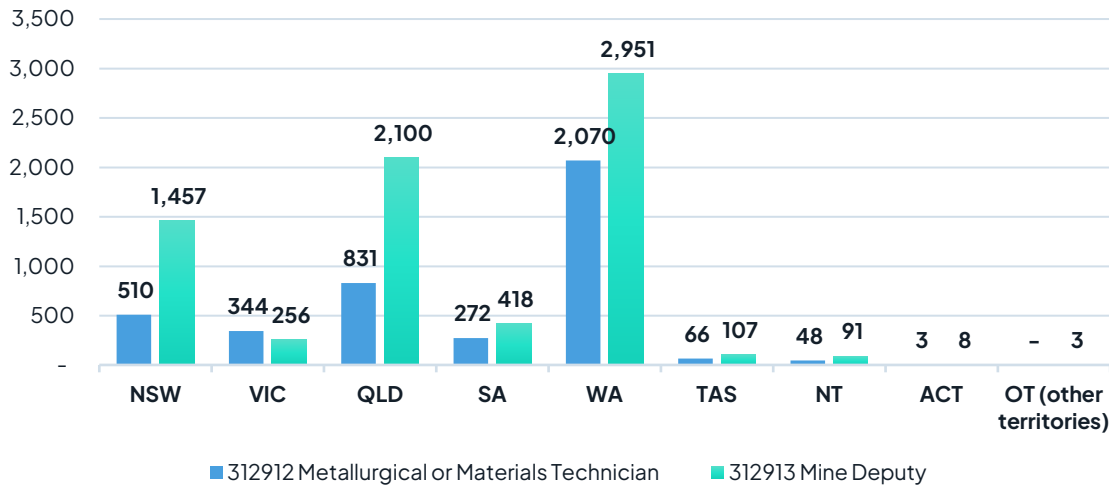
Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
2	14	\$2,419	46	34.3	+17.3%

In 2021, 14% worked in MFG

Within this occupation group, there is a **national shortage** of 312912 Metallurgical or Materials Technician and 312913 Mine Deputy, a shortage of 312911 Maintenance Planner in NT, 312999 Building and Engineering Technicians nec in **VIC and QLD**, and 312914 Other Draftsperson in **VIC** (no employment data available in 2021).

Sources: JSA Occupation Profiles Data - November 2023, JSA Employment projections May 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22.

Workers by state/territory of Australia (2021)

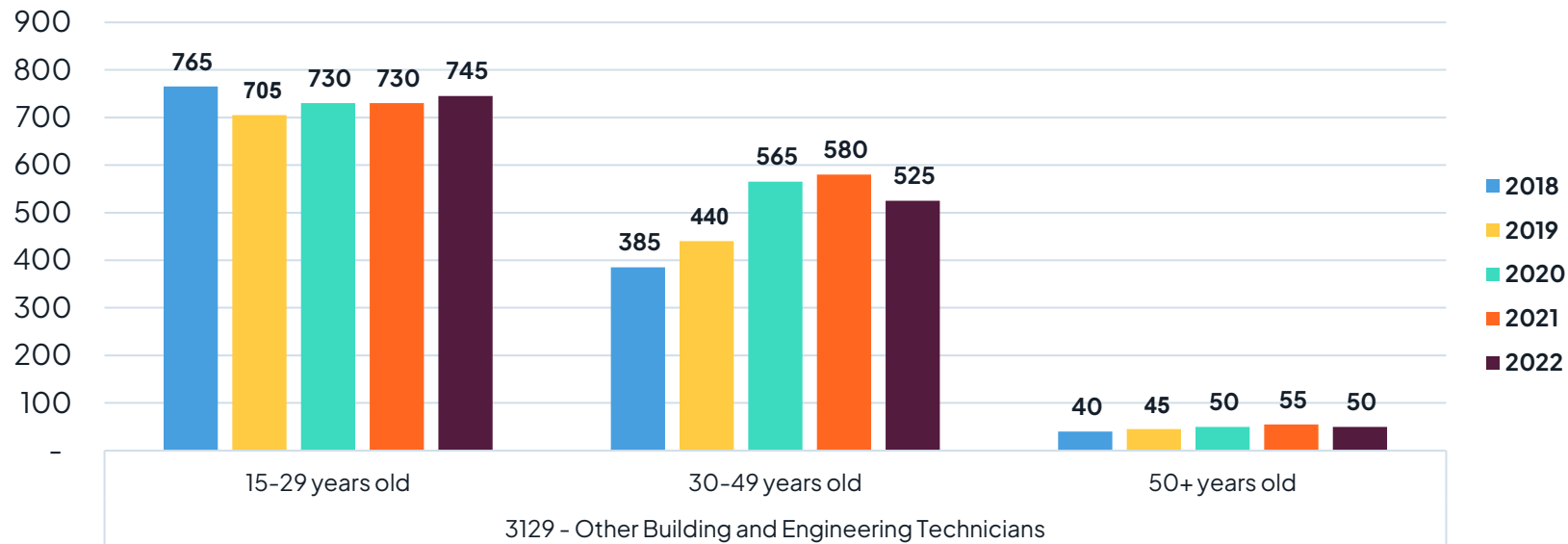


Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22. \*Retention gap shortages are where there are below average rates of retention, potentially reinforced by low numbers of new applicants per vacancy. This is a category where increasing the throughput of qualified applicants is unlikely to solve the problem because of the low likelihood of retaining them. Ways to enhance the attractiveness of the occupation through improved remuneration and/or working conditions, professional development and clearer career pathways would be potential solutions to alleviate this kind of shortage. Source: JSA Atlas Pro, accessed 22/2/24. \*\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results - January 2024)



# 3129 Other Building and Engineering Technicians

2018–2022 enrolment trend for related manufacturing training (national)

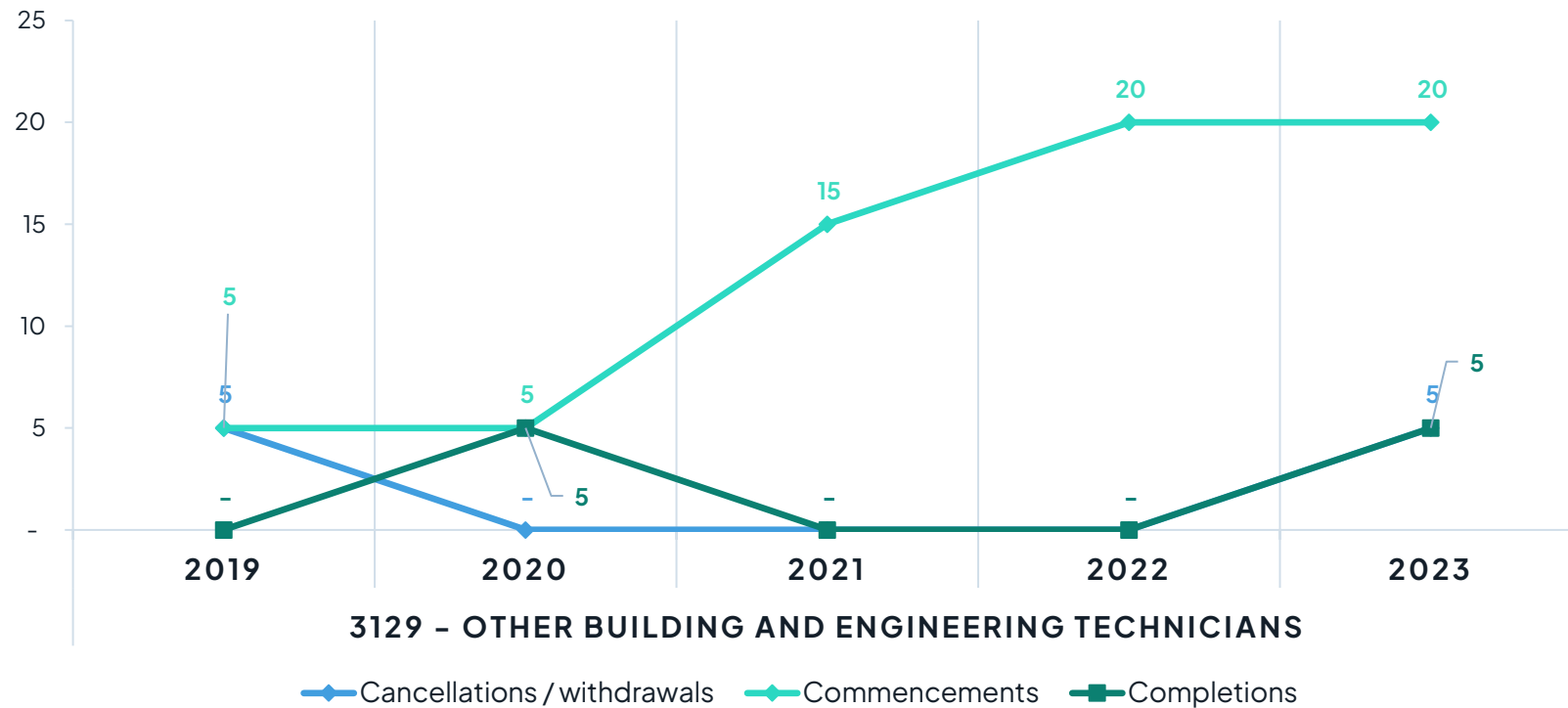


**Qualifications from the MEM Training Package provide training for these occupations.**



# 3129 Other Building and Engineering Technicians

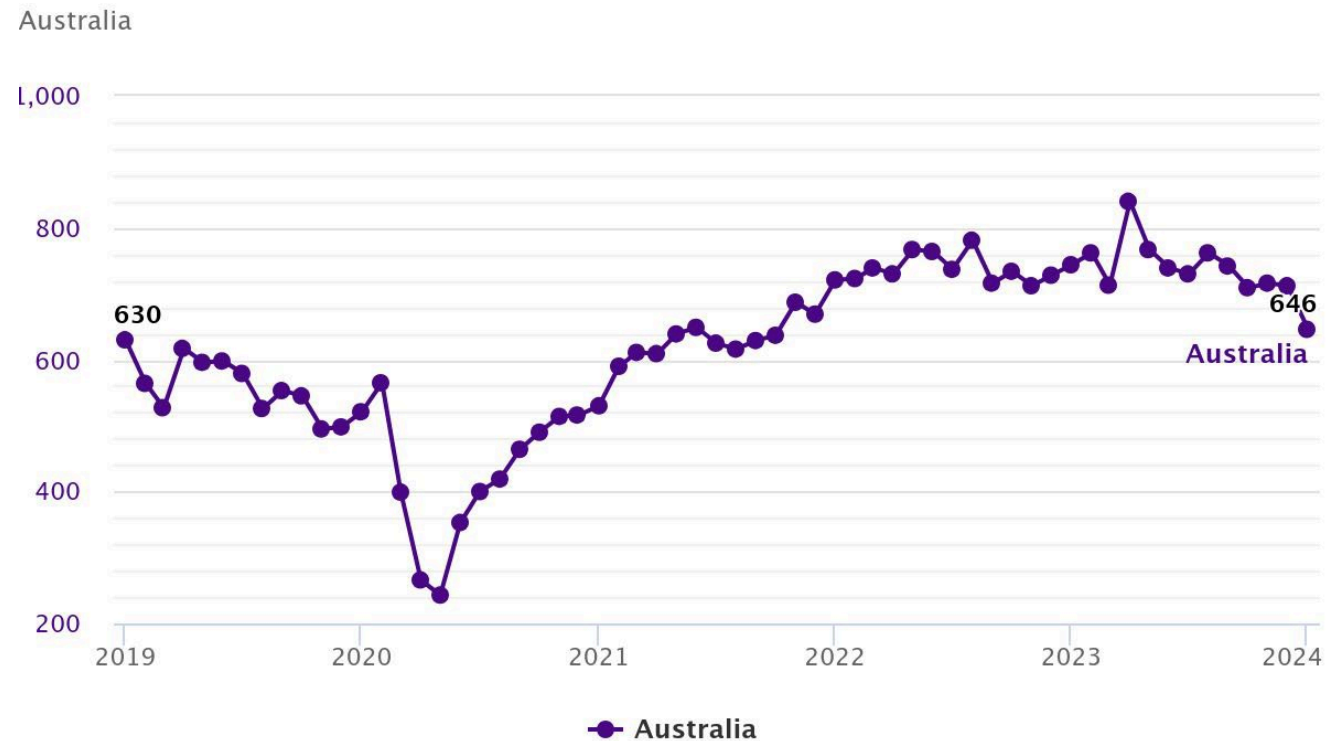
## APPRENTICESHIP AND TRAINEE TRENDS





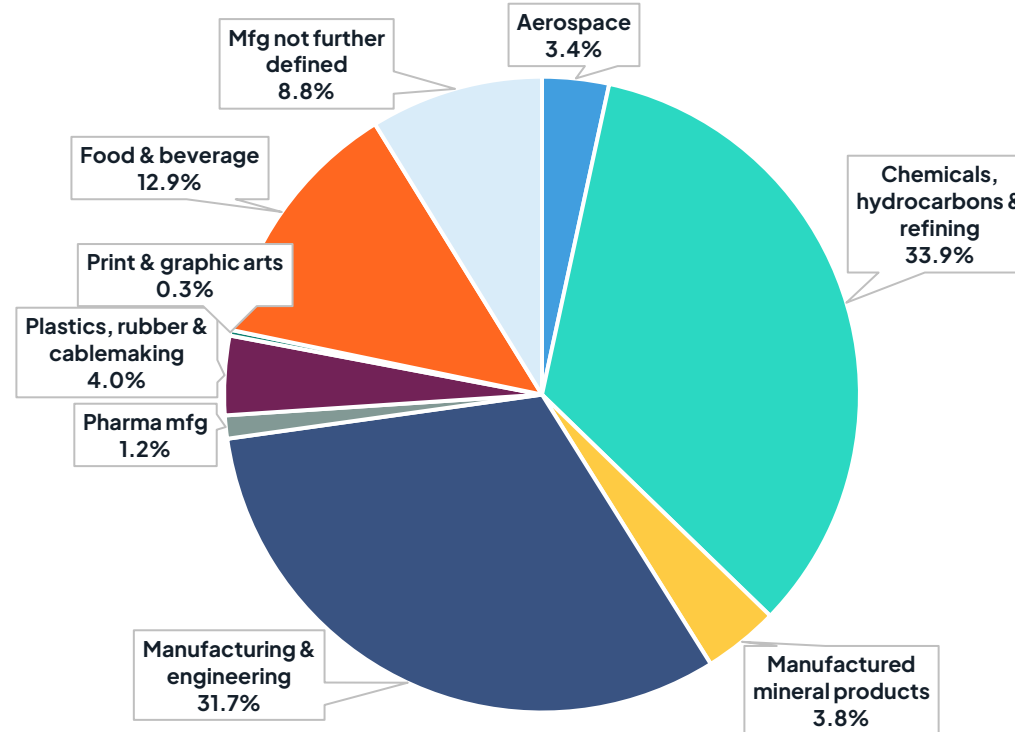
# 3129 Other Building and Engineering Technicians

### Estimated Vacancies – Australia



# Employment by subsector (2021)

## 3129 Other Building and Engineering Technicians



Preliminary estimated driver:  
LONG TRAINING GAP\*

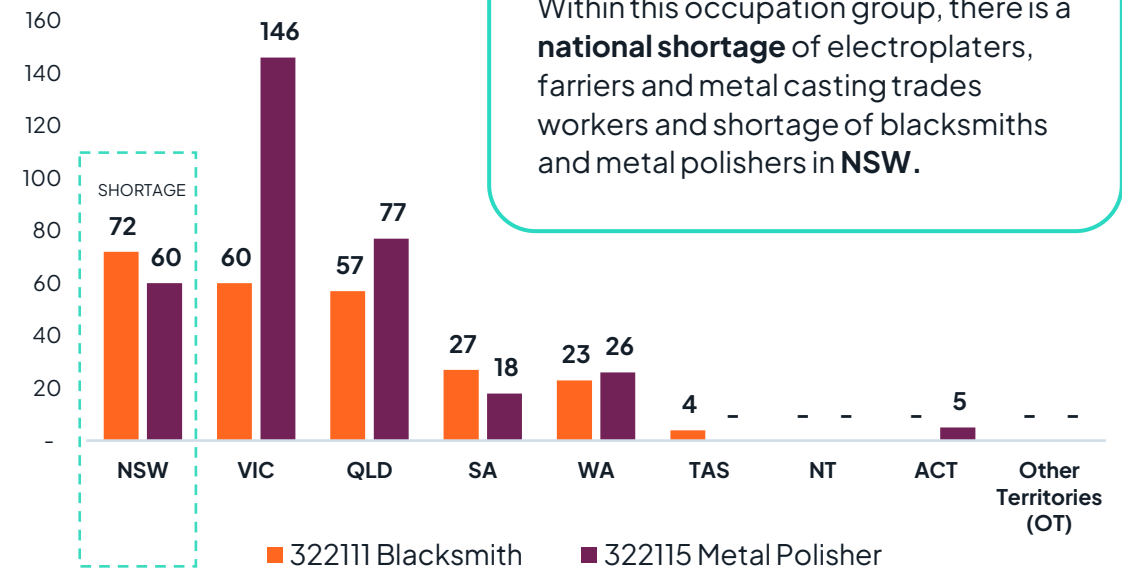
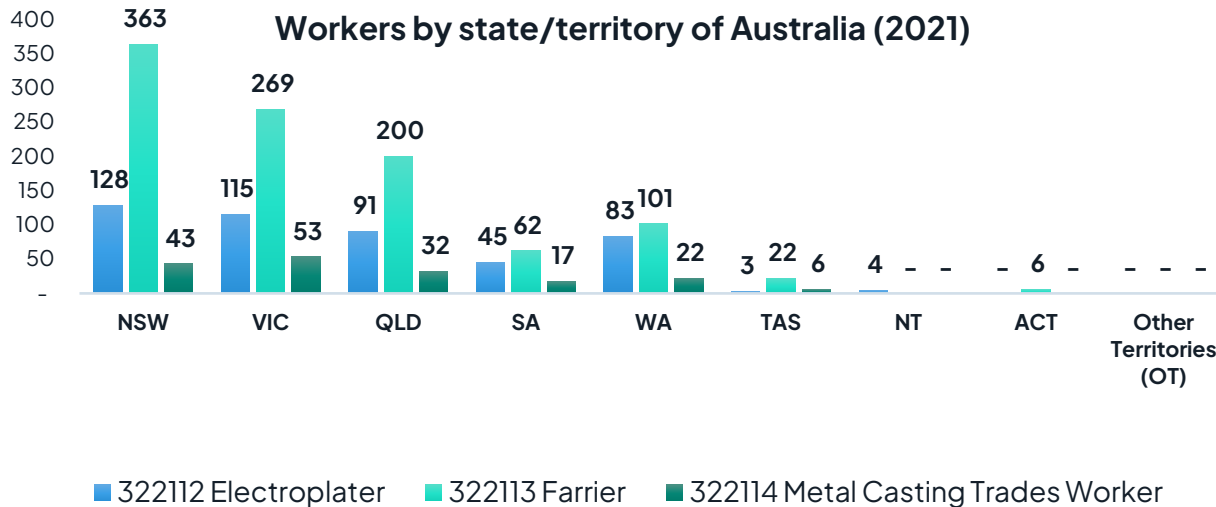
# 3221 Metal Casting, Forging and Finishing Trades Workers

JSA Occupation Profiles data – November 2023

The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

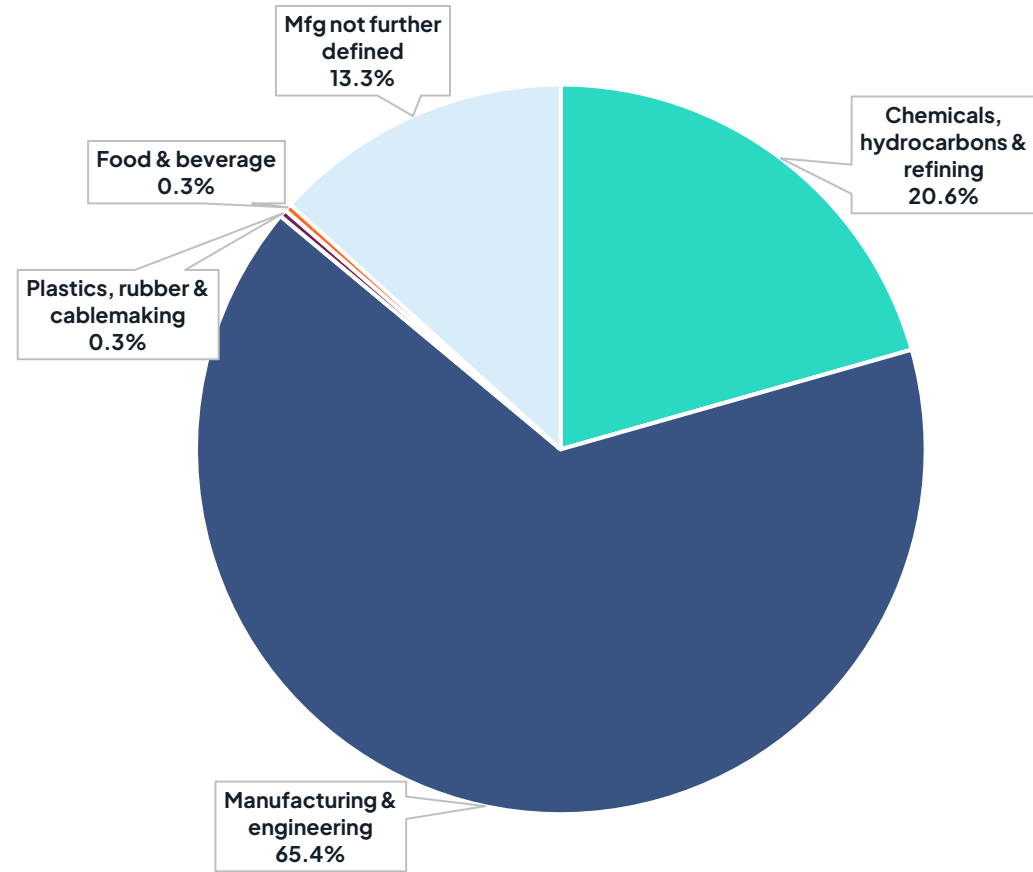
Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
32	18	N/A	38	2.83 <small>In 2021, 36% worked in MFG</small>	+12.3%



Sources: JSA Occupation Profiles Data – November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22.  
 \*Longer training gap shortages are defined by there being few qualified applicants per vacancy and a long training pathway – corresponding to a Certificate III or above.  
 This suggests that there is a need to increase the number of available skilled workers but with significant time lags involved in the training process.  
 Source: JSA Atlas Pro, accessed 22/2/24  
 Vacancy data not available.

### 3221 Metal Casting, Forging and Finishing Trades Workers

# Employment by subsector (2021)





Preliminary estimated driver:  
LONG TRAINING GAP\*

# 3222 Sheetmetal Trades Workers

National average of PT workers: 31%\*\*

Highly male-dominated occupation group

JSA Occupation Profiles data – November 2023

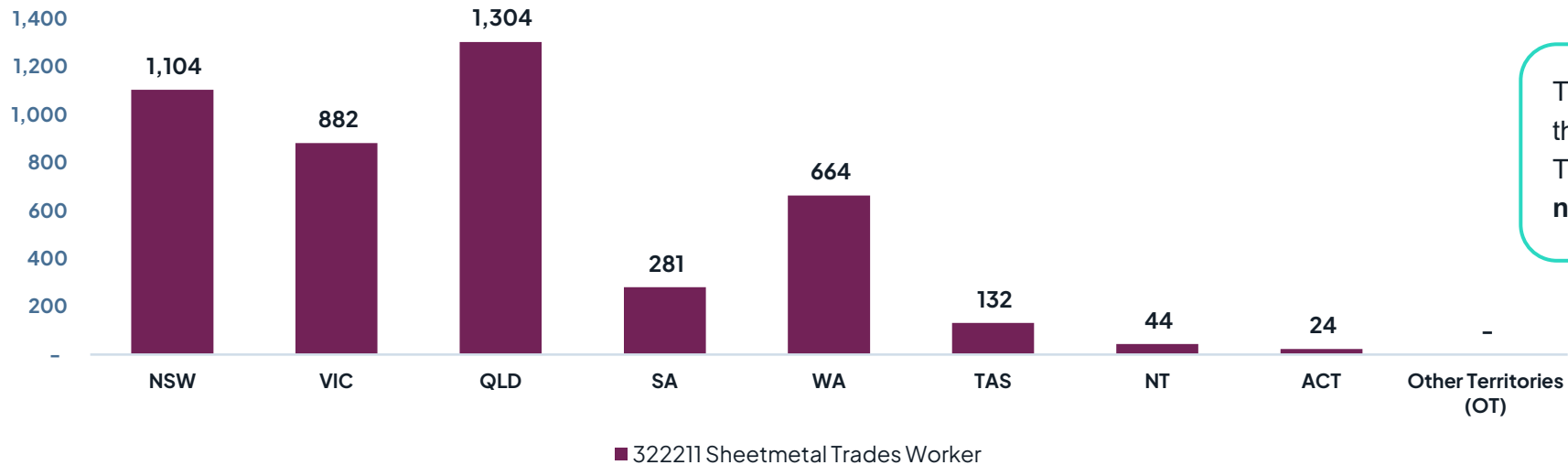
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
5	2	\$1,229	36	5.32	+13.9%

In 2021, 50% worked in MFG

Workers by state/territory of Australia (2021)



There is only 1 occupation in this group (322211 Sheetmetal Trades Worker), and it has a national shortage.

Sources: JSA Occupation Profiles Data – November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22.

\*Longer training gap shortages are defined by there being few qualified applicants per vacancy and a long training pathway – corresponding to a Certificate III or above.

This suggests that there is a need to increase the number of available skilled workers but with significant time lags involved in the training process. Source: JSA Atlas Pro, accessed 22/2/24

\*\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results – January 2024)



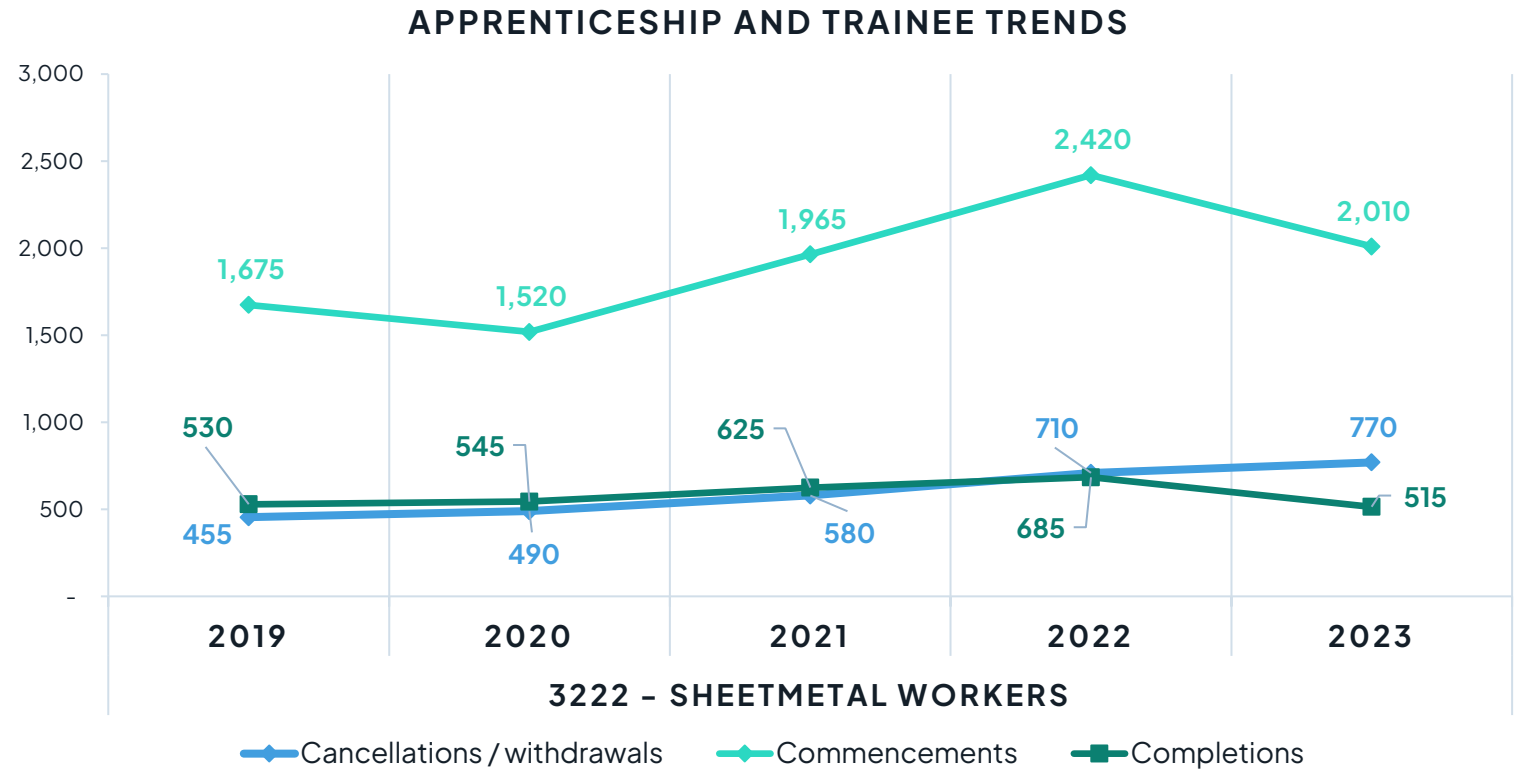
# 3222 Sheetmetal Trades Workers

Qualifications from the MEM Training Package provide training for this occupation. Enrolments are prominent in students aged 15-29 and have been increasing overall.

2018-2022 enrolment trend for related manufacturing training (national)

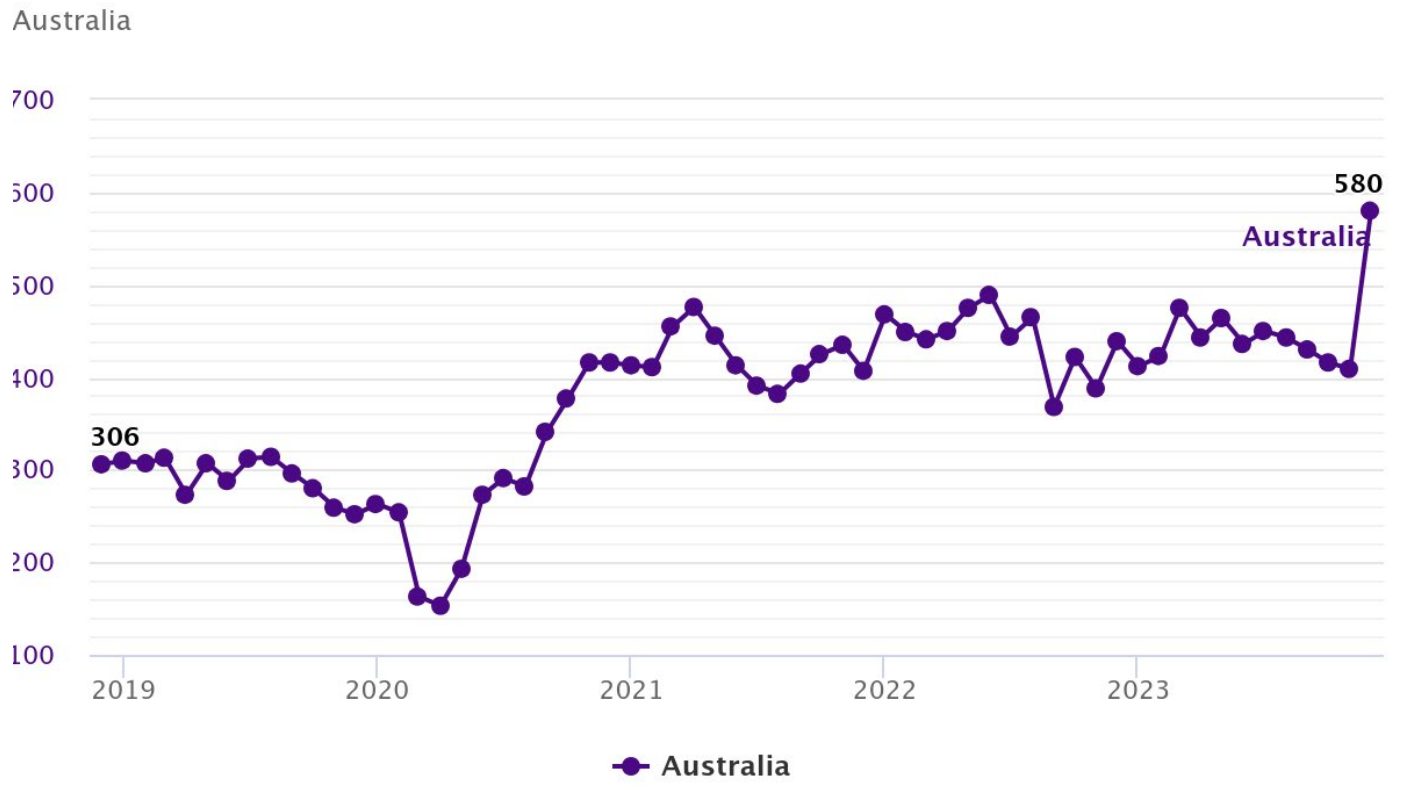


# 3222 Sheetmetal Trades Workers



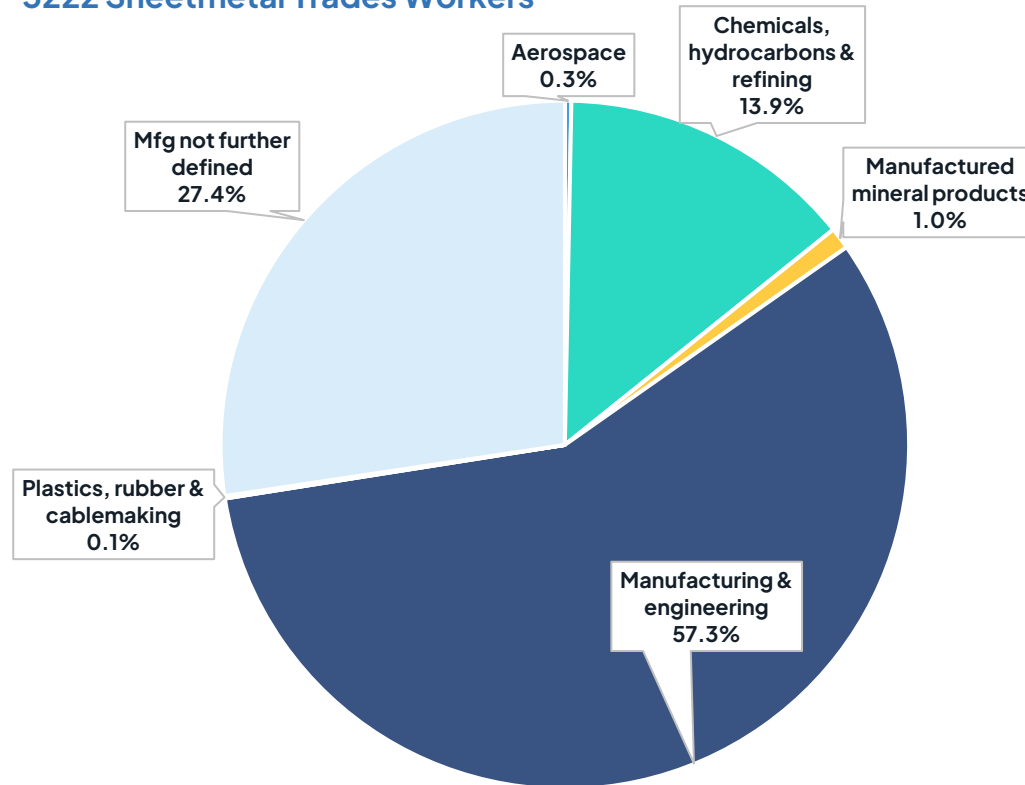
# 3222 Sheetmetal Trades Workers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

3222 Sheetmetal Trades Workers



# 3223 Structural Steel and Welding Trades Workers



Clean energy critical occupation

Preliminary estimated driver: **LONG TRAINING GAP\***

National average of PT workers: 31%\*\*

Highly male-dominated occupation group

JSA Occupation Profiles data – November 2023

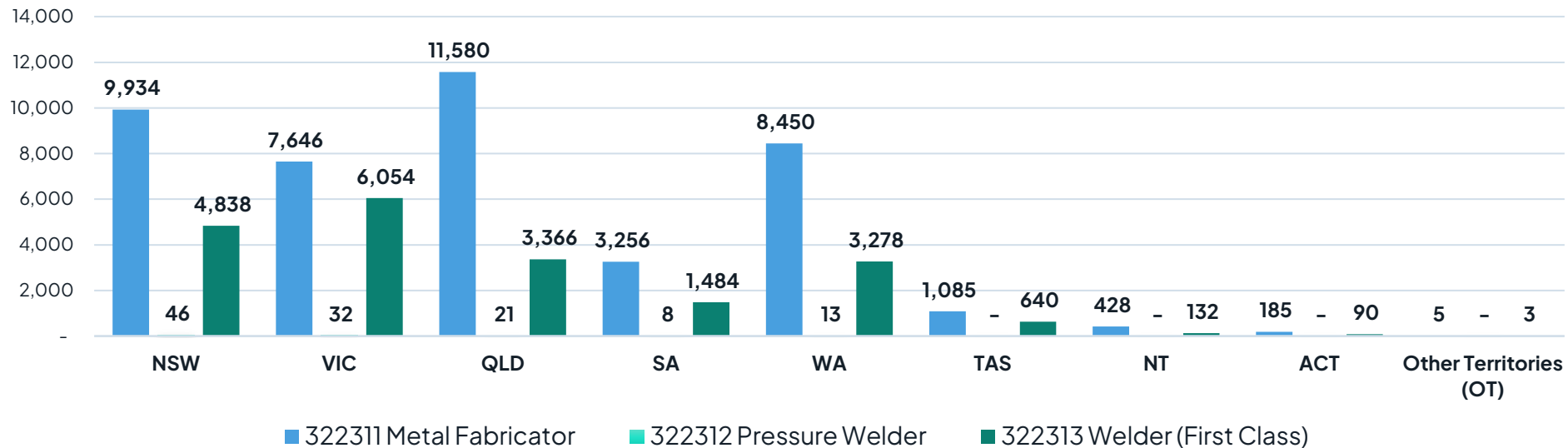
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023–2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
6	2	\$1,760	39	77.62	+12.8%

In 2021, 35% worked in MFG

Workers by state/territory of Australia (2021)



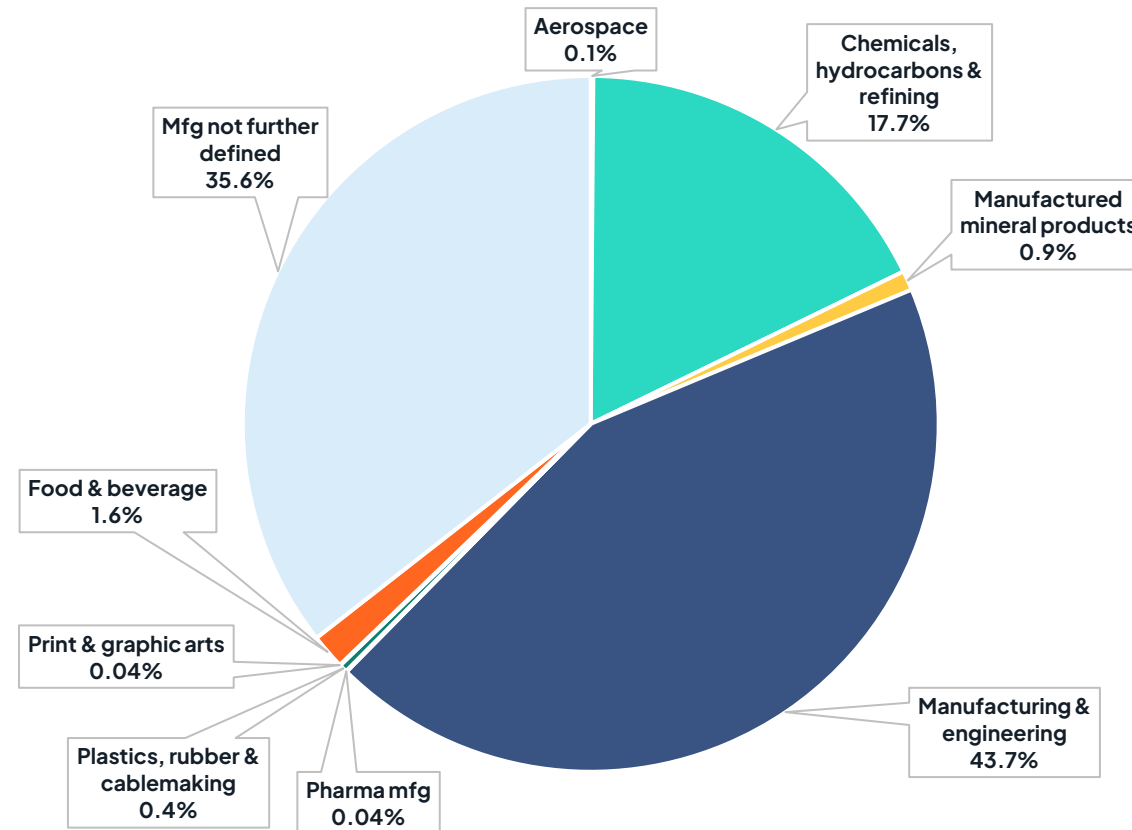
Within this occupation group, 322311 Metal Fabricator, 322312 Pressure Welder and 322313 Welder (First Class) have **national shortages**.



Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023–2033, ABS Census 2021 and NCVET qualification enrolments 2018–22.  
 \*Longer training gap shortages are defined by there being few qualified applicants per vacancy and a long training pathway – corresponding to a Certificate III or above. This suggests that there is a need to increase the number of available skilled workers but with significant time lags involved in the training process. Source: JSA Atlas Pro, accessed 22/2/24  
 \*\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results – January 2024)

# Employment by subsector (2021)

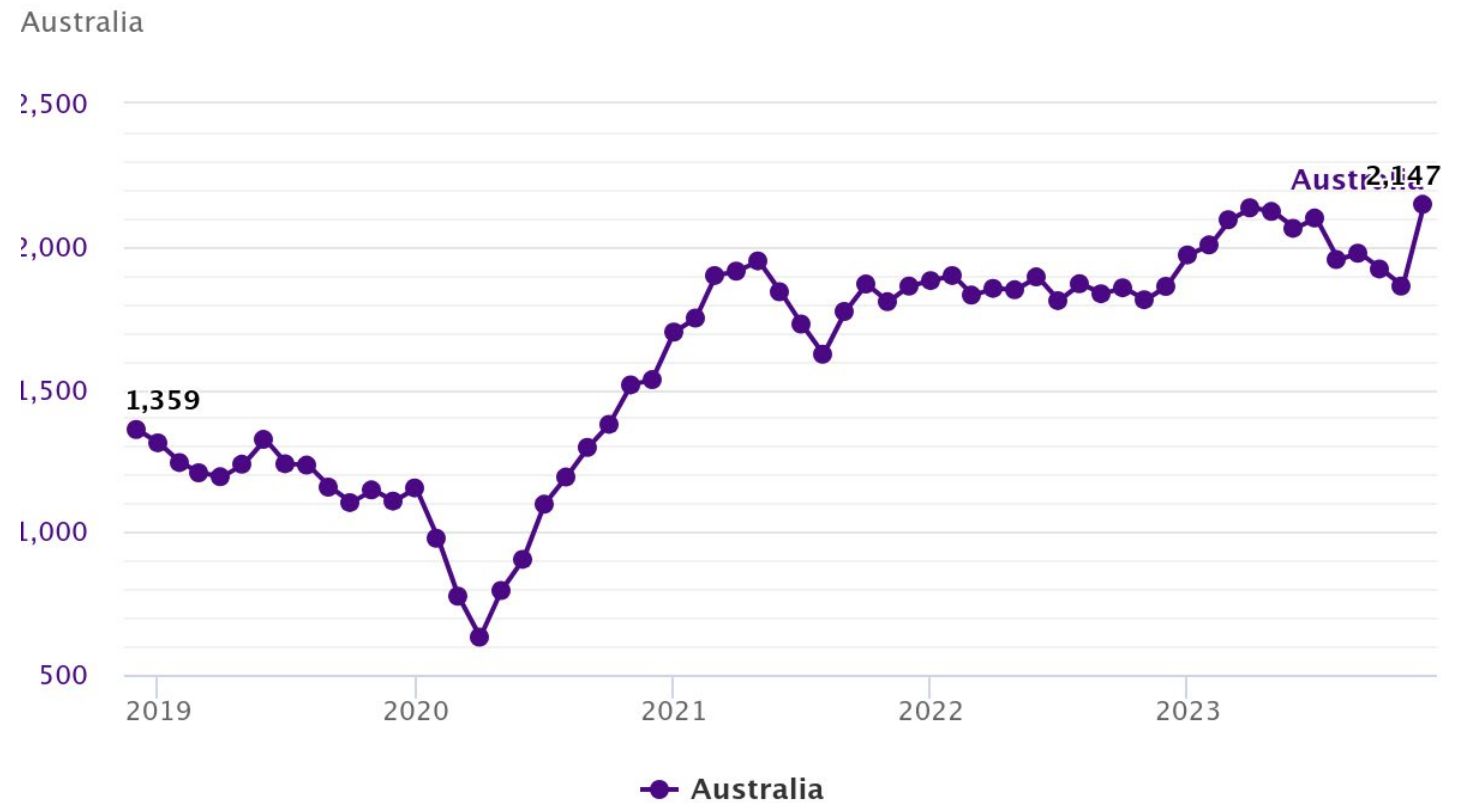
## 3223 Structural Steel and Welding Trades Workers





# 3223 Structural Steel and Welding Trades Workers

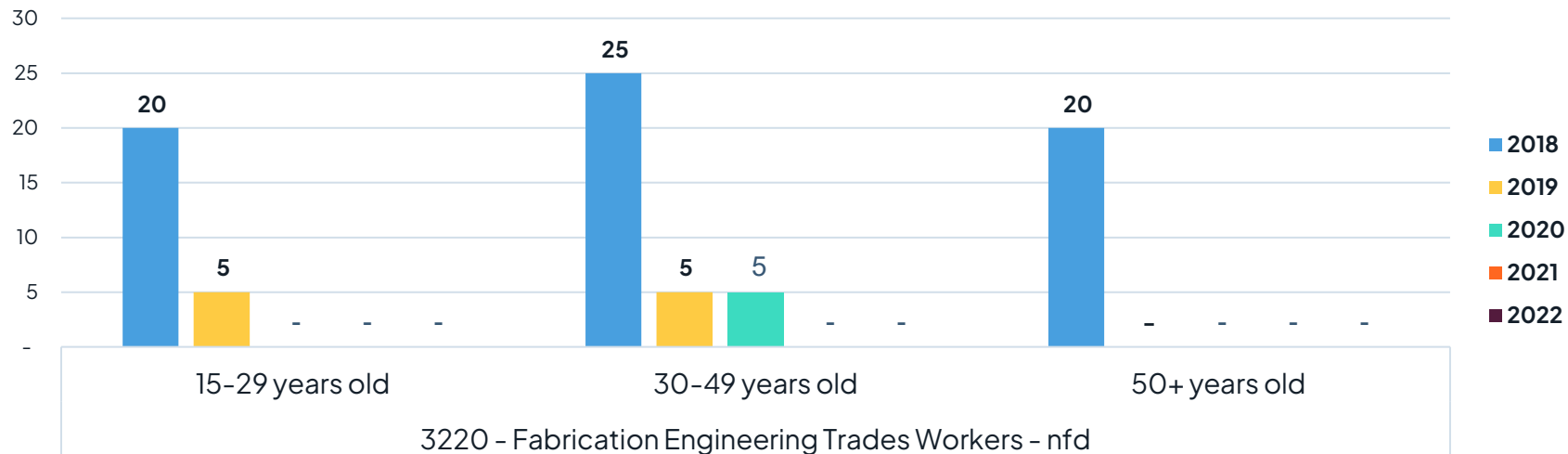
## Estimated Vacancies – Australia





Qualifications from the MEM Training Package provide training for the broader occupation group 322 Fabrication Engineering Trades Workers.

2018–2022 enrolment trend for related manufacturing training (national)





# 3231 Aircraft Maintenance Engineers

National average of PT workers: 31%\*

Highly male-dominated occupation group

JSA Occupation Profiles data - November 2023

The median age across all occupations is 42

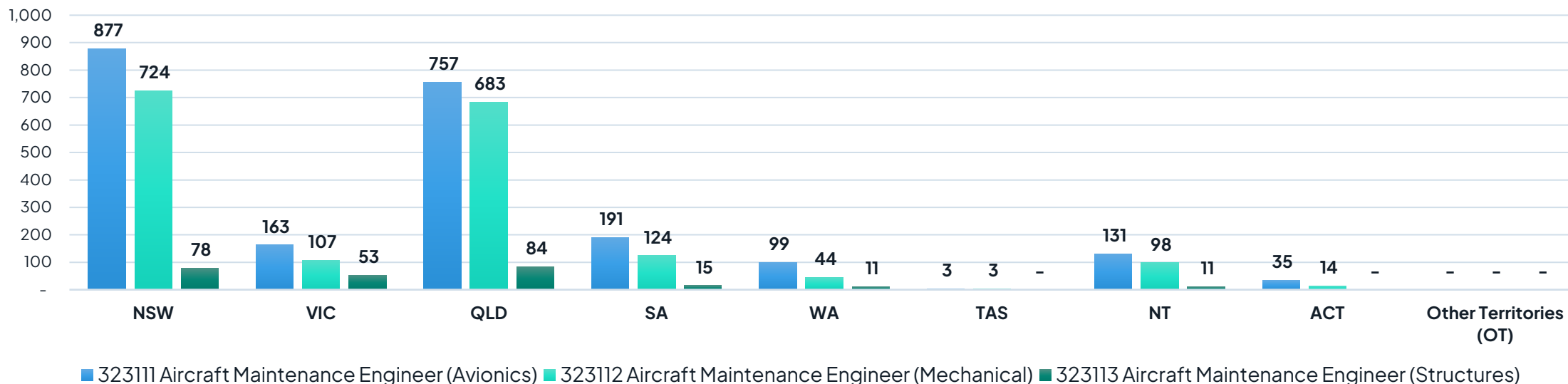
Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
7	4	\$2,694	42	10.97	+15.2%

In 2021, 29% worked in MFG

All occupations within this group have a national shortage.

Workers by state/territory of Australia (2021)

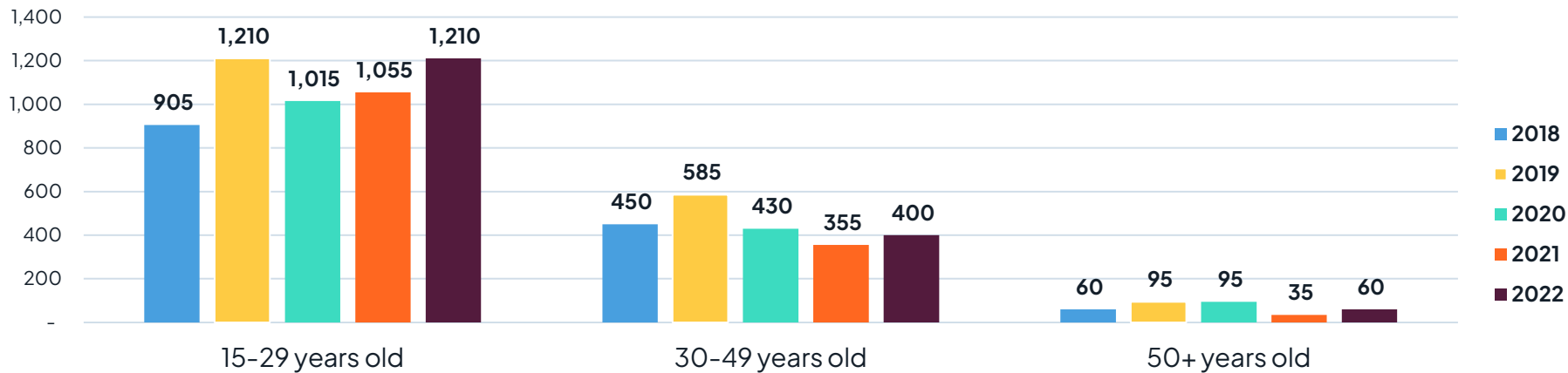


Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22.  
\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results - January 2024).

# 3231 Aircraft Maintenance Engineers

**Qualifications from the MEA Training Package provide training for these occupations.** Enrolments are prominent in students aged 15-29 and despite a decrease during the peak COVID-19 pandemic (2020-21), numbers appear to be recovering.

2018–2022 enrolment trend for related manufacturing training (national)

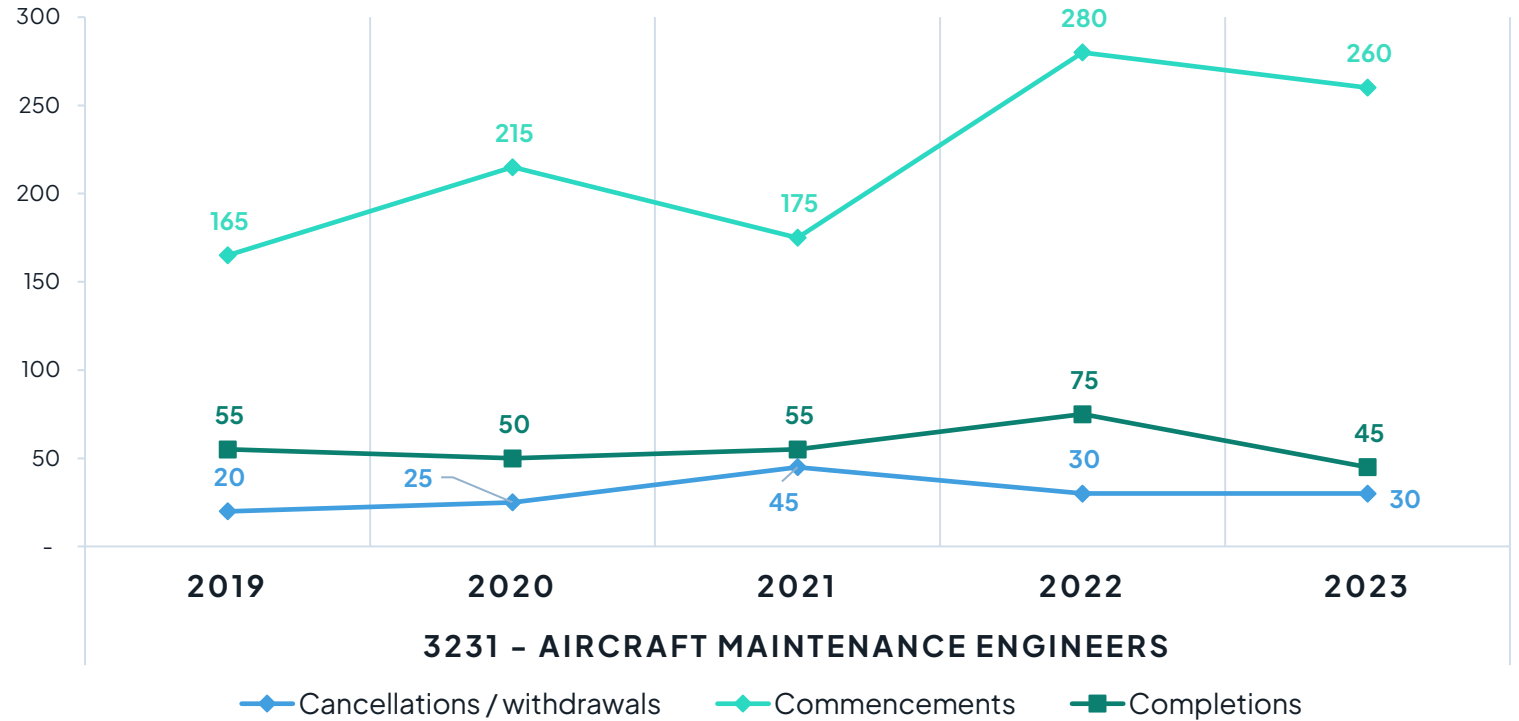


3231 - Aircraft Maintenance Engineers



# 3231 Aircraft Maintenance Engineers

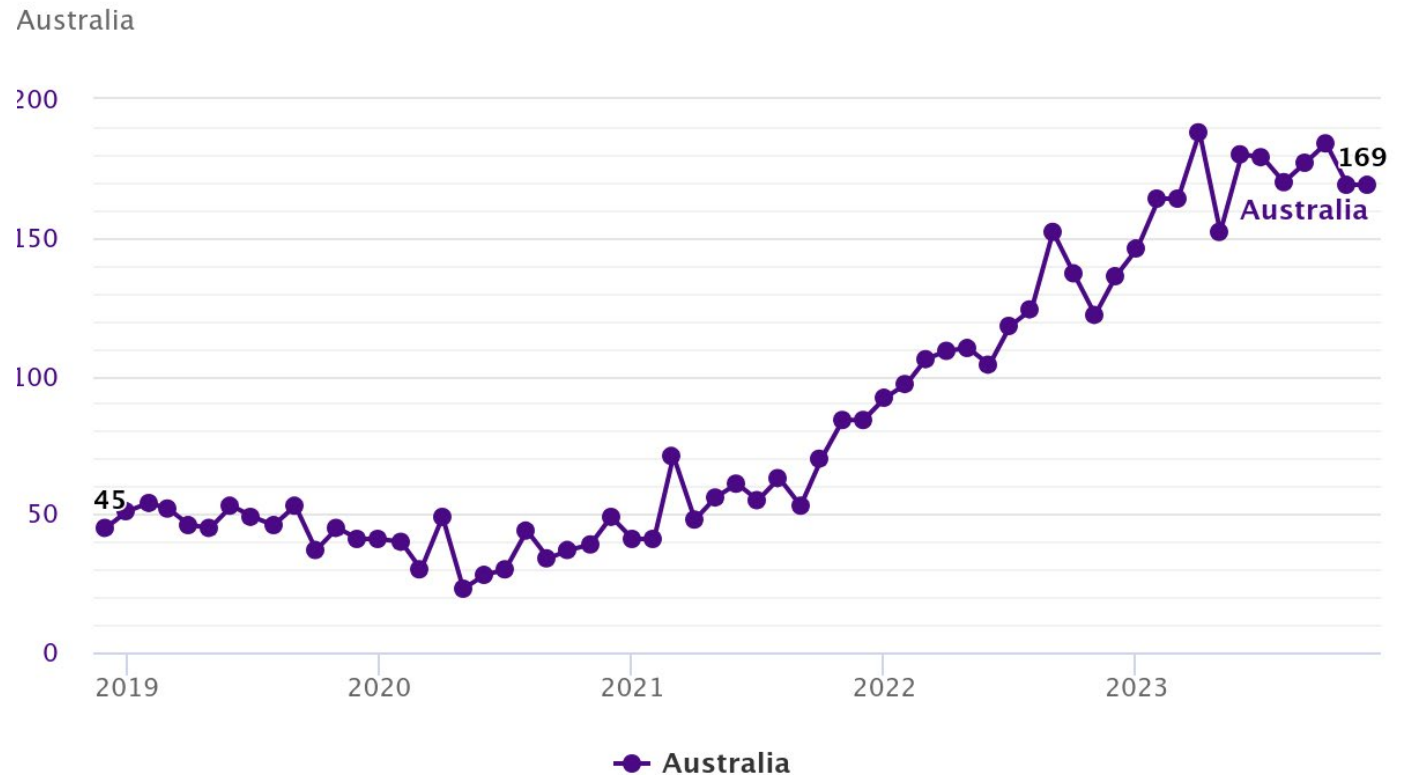
## APPRENTICESHIP AND TRAINEE TRENDS





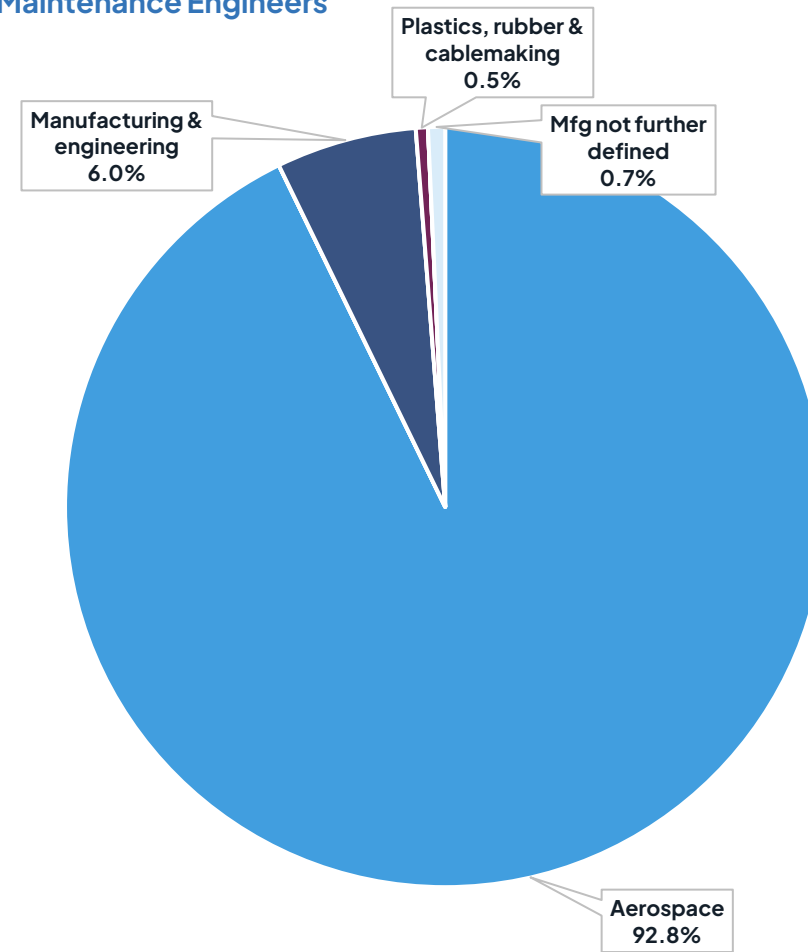
# 3231 Aircraft Maintenance Engineers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

3231 Aircraft Maintenance Engineers





Clean energy critical occupation

Preliminary estimated driver: LONG TRAINING GAP\*

# 3232 Metal Fitters and Machinists

National average of PT workers: 31%\*\*

Highly male-dominated occupation group

JSA Occupation Profiles data - November 2023

The median age across all occupations is 42

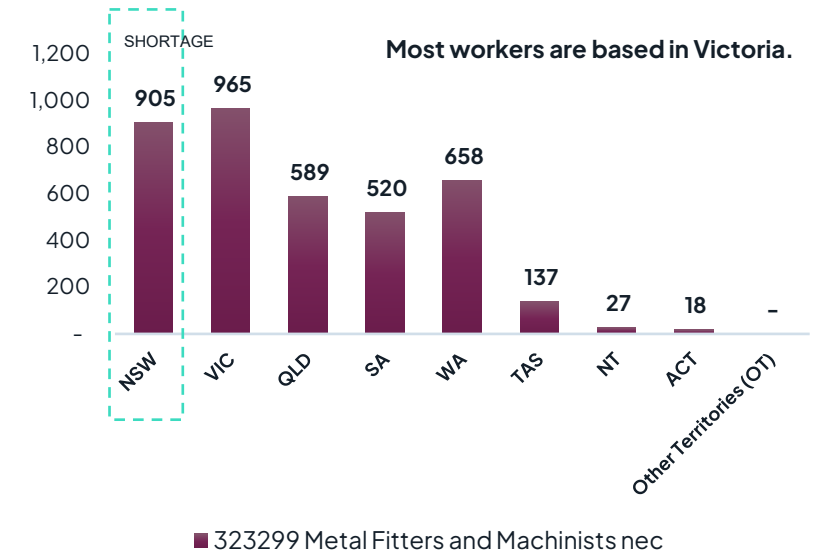
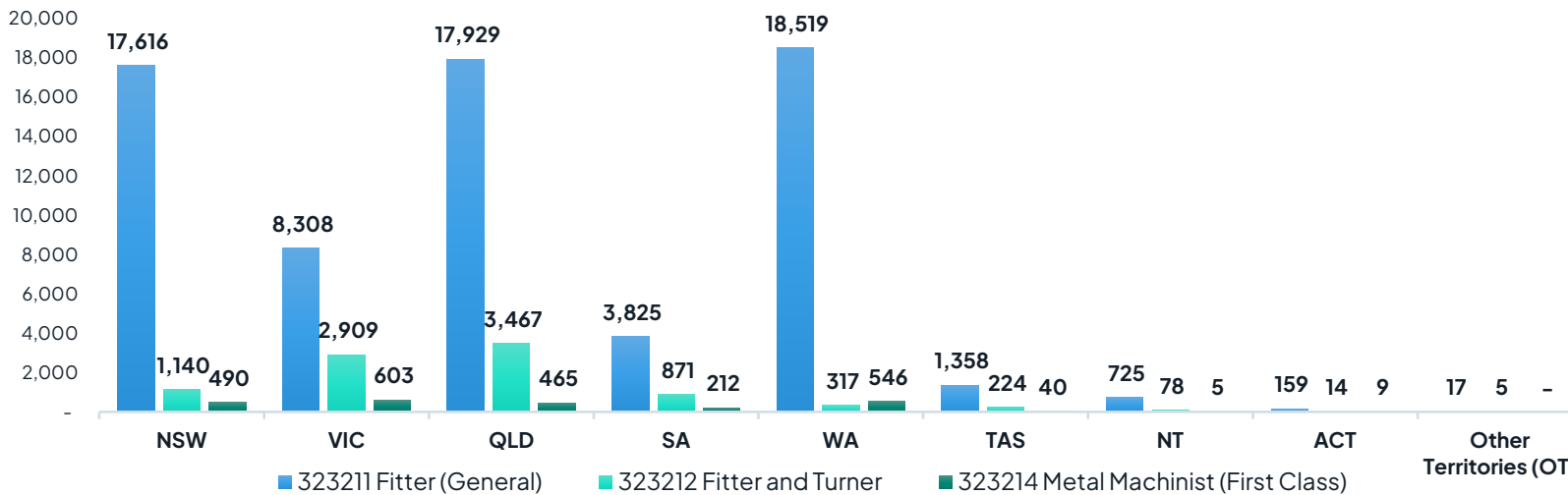
Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
4	2	\$2,117	38	120.40	+11.9%

In 2021, 24% worked in MFG

Within this occupation group, there is a **national shortage** of fitters, fitter and turners, fitter-welders and metal machinists and a shortage of metal fitters and machinists nec in **VIC**.

Workers by state/territory of Australia (2021)



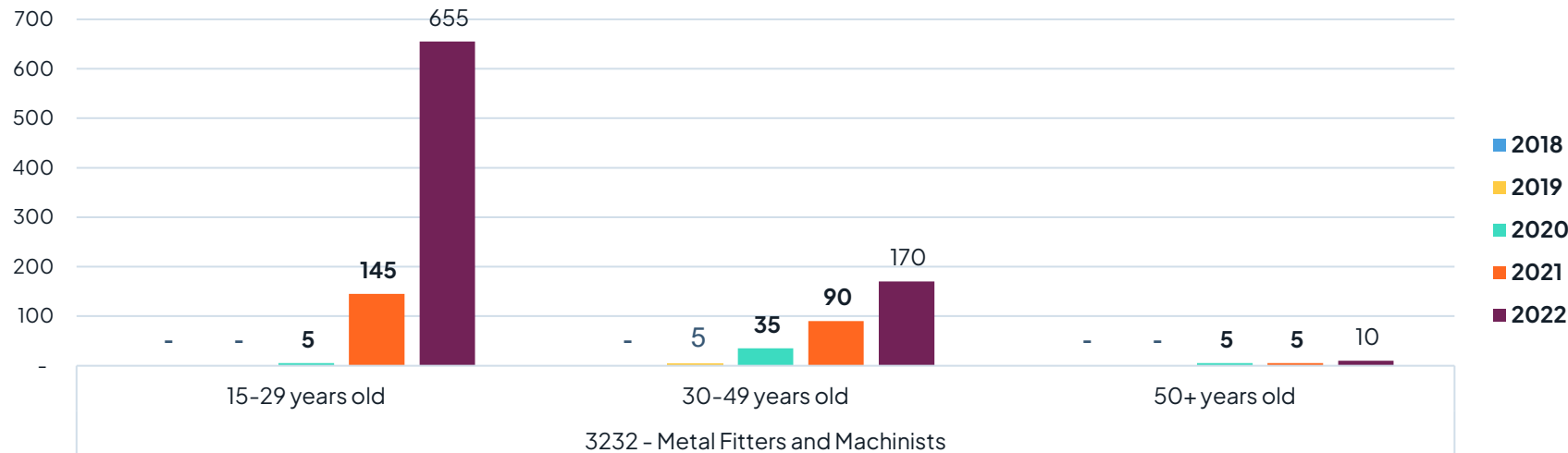
Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVET qualification enrolments 2018-22.  
 \*Longer training gap shortages are defined by there being few qualified applicants per vacancy and a long training pathway - corresponding to a Certificate III or above.  
 This suggests that there is a need to increase the number of available skilled workers but with significant time lags involved in the training process.  
 Source: JSA Atlas Pro, accessed 22/2/24  
 \*\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results - January 2024)



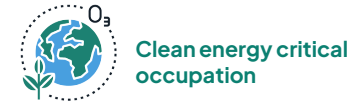
# 3232 Metal Fitters and Machinists

**Qualifications from the MEM Training Package provide training for these occupations.** Enrolments have been growing but most prominently in 2022 in the 15-29 age group.

2018–2022 enrolment trend for related manufacturing training (national)

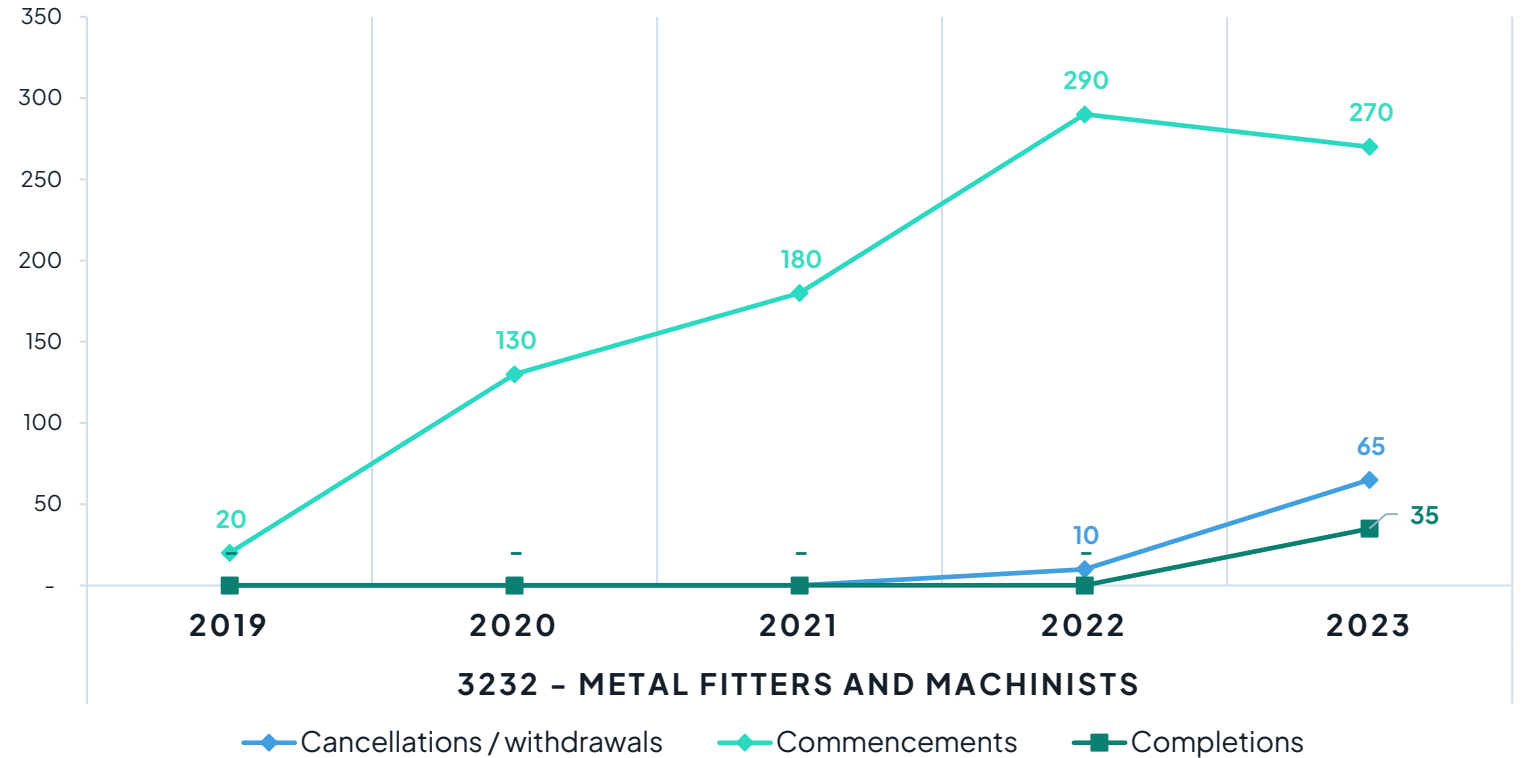


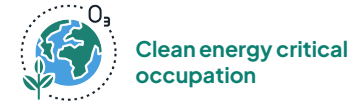




# 3232 Metal Fitters and Machinists

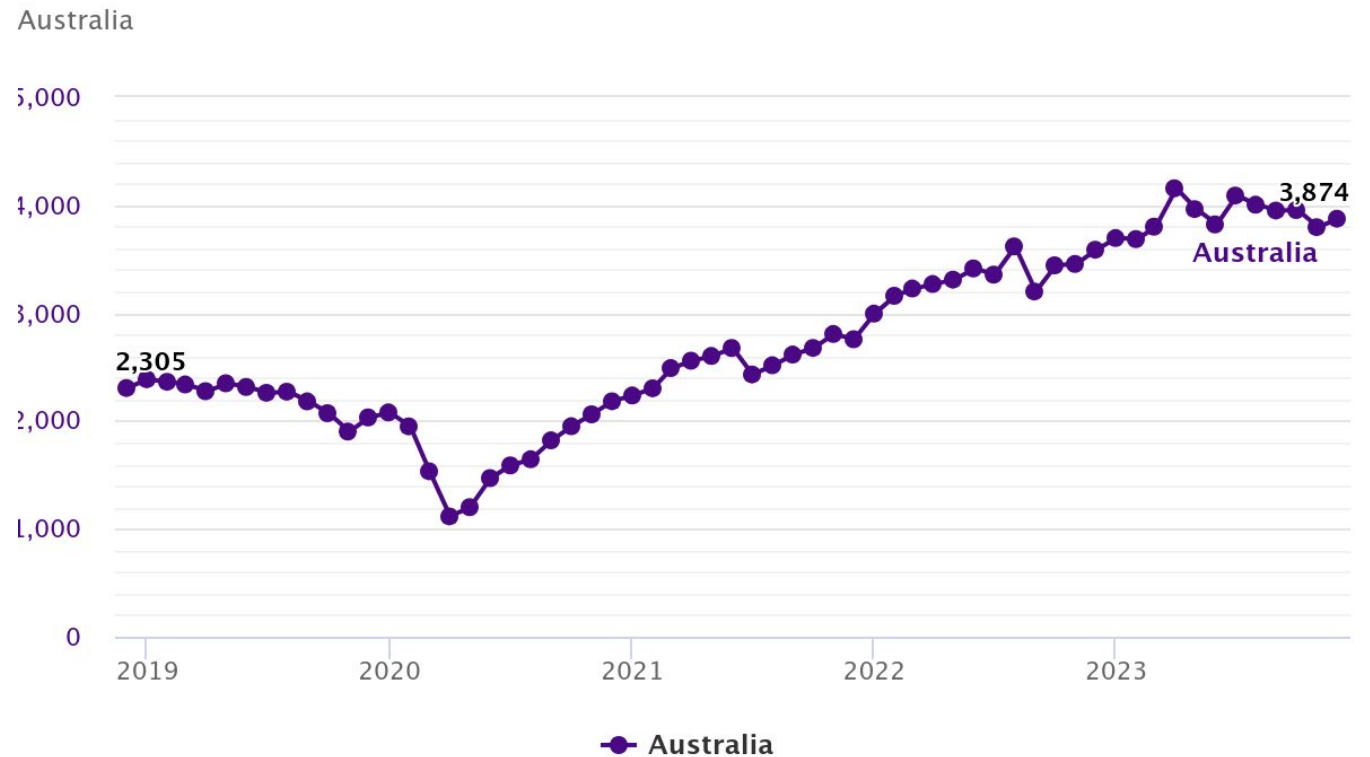
## APPRENTICESHIP AND TRAINEE TRENDS





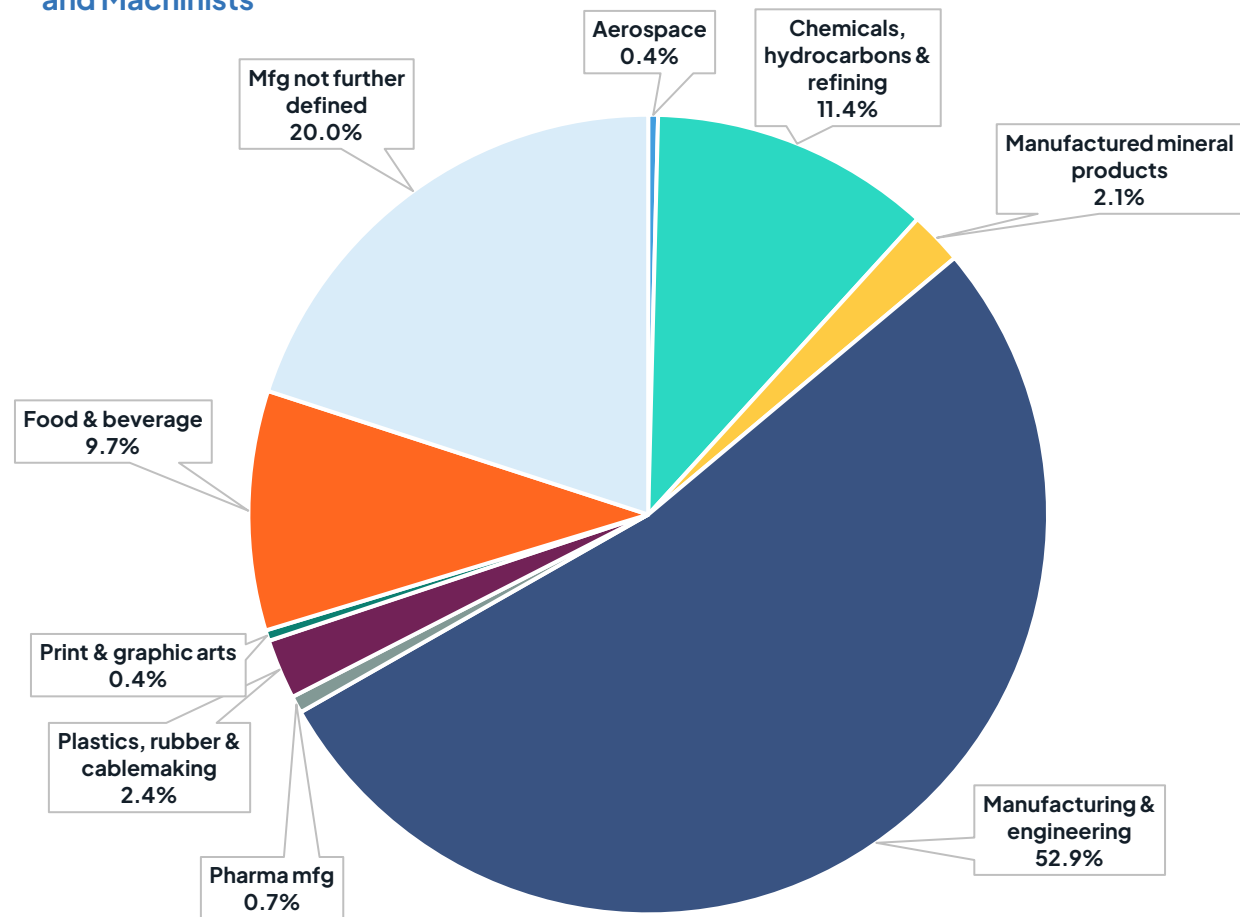
# 3232 Metal Fitters and Machinists

## Estimated Vacancies – Australia



# Employment by subsector (2021)

## 3232 Metal Fitters and Machinists



# 3233 Precision Metal Trades Workers

JSA Occupation Profiles data – November 2023

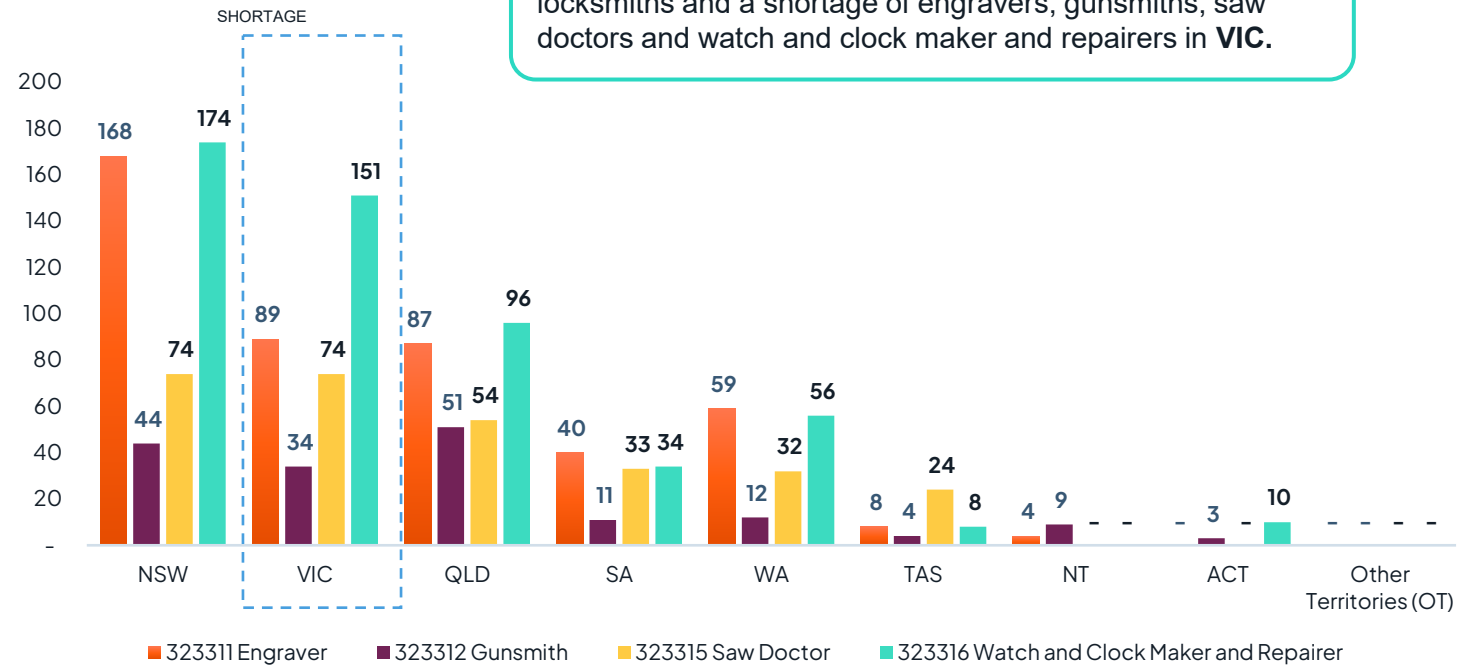
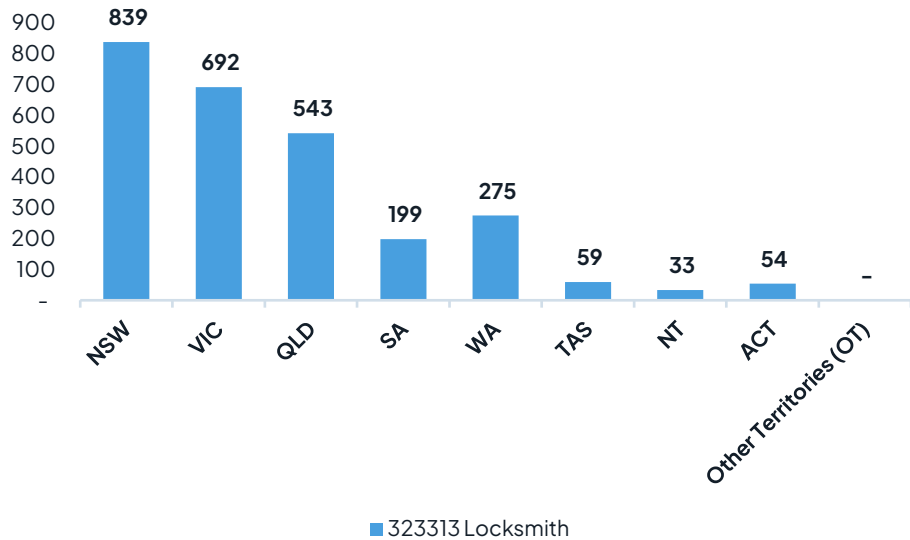
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023–2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
13	11	\$1,528	46	8.00	+9.4%

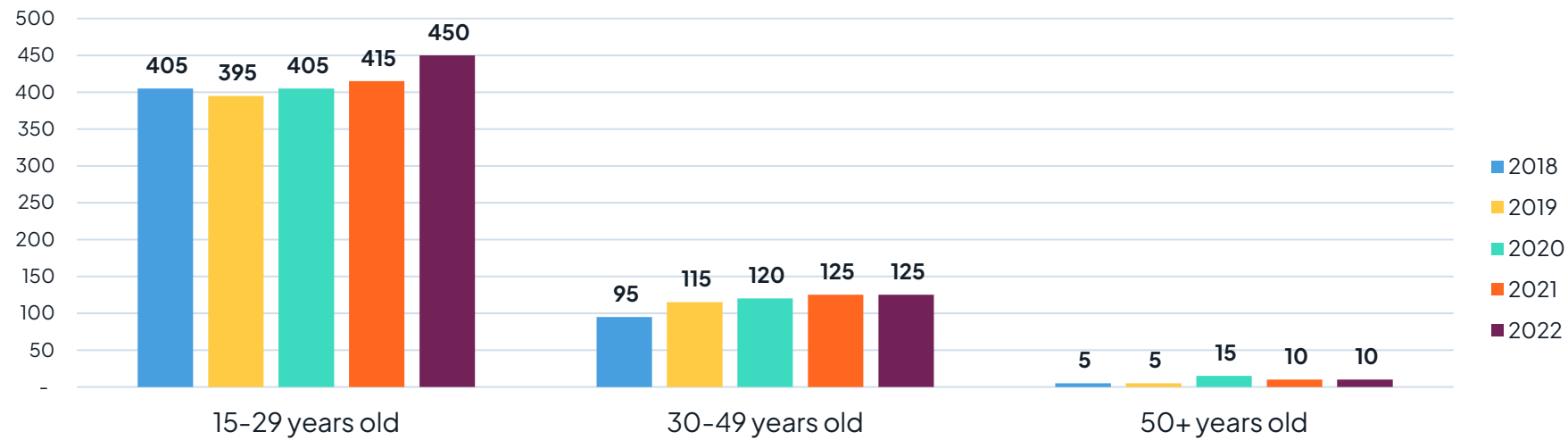
In 2021, 32% worked in MFG

Workers by state/territory of Australia (2021)



# 3233 Precision Metal Trades Workers

2018–2022 enrolment trend for related manufacturing training (national)

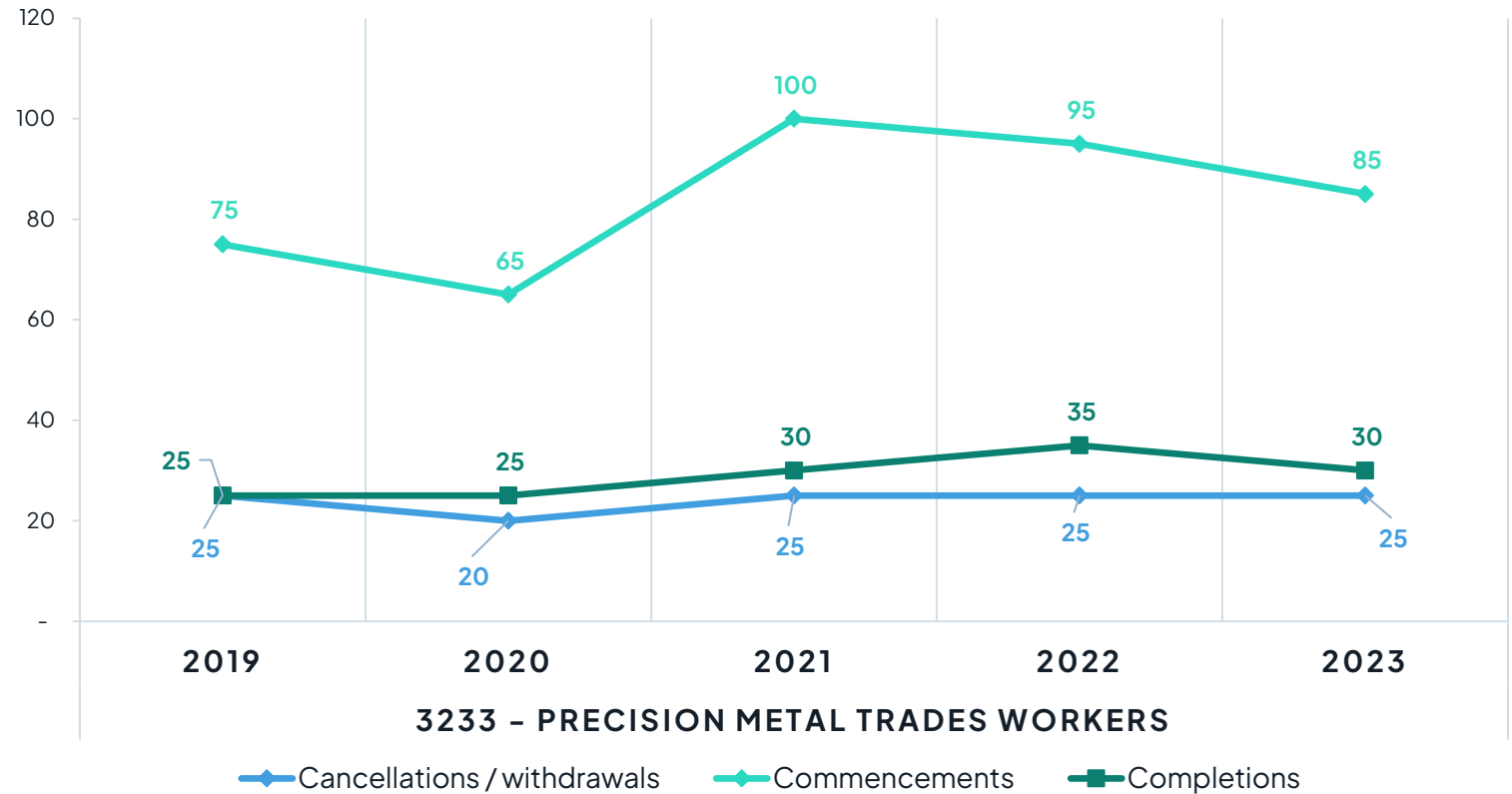


3233 - Precision Metal Trades Workers

Qualifications from the MEM Training Package provide training for these occupations. Enrolments are predominantly within the 15–29 age group.

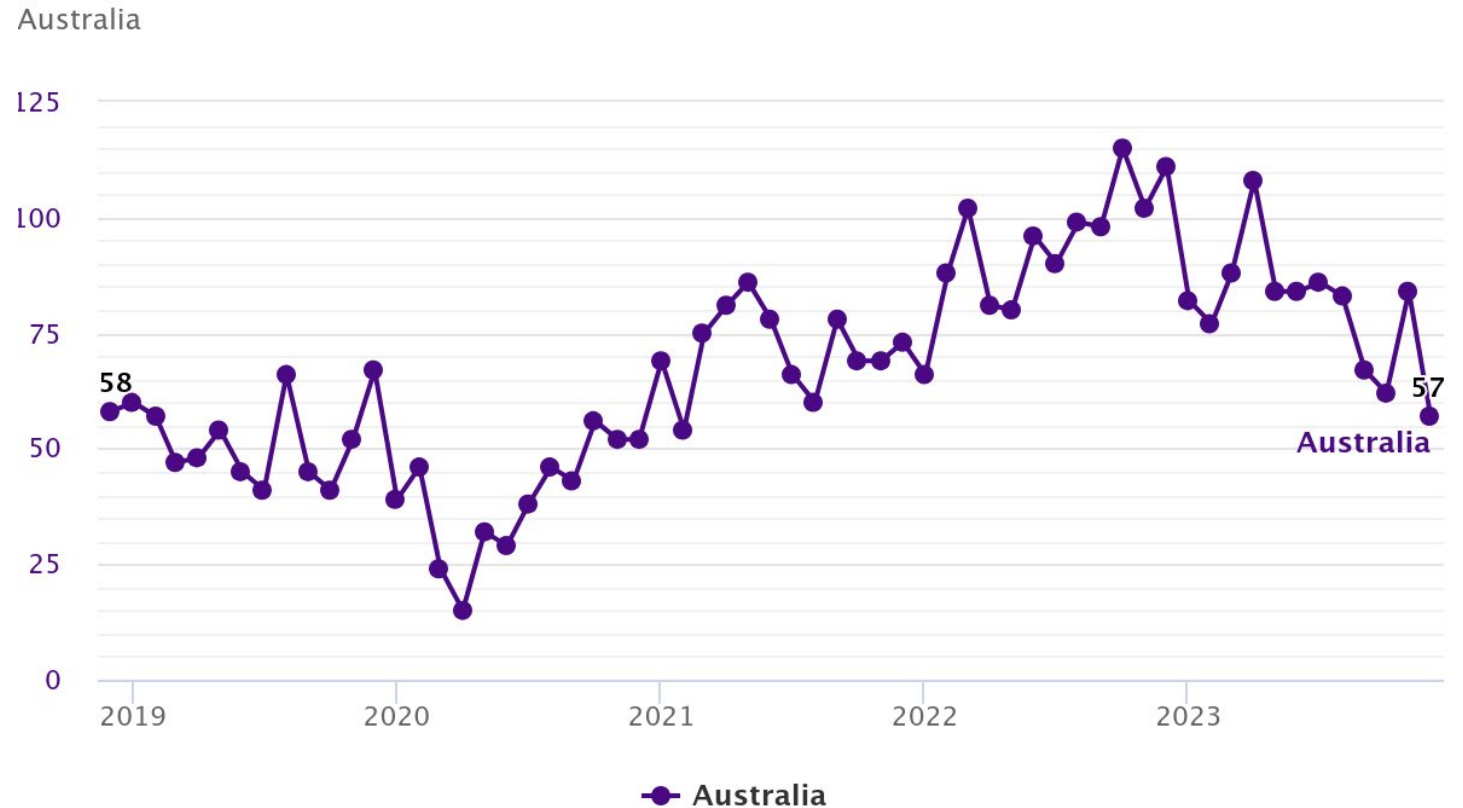
# 3233 Precision Metal Trades Workers

### APPRENTICESHIP AND TRAINEE TRENDS



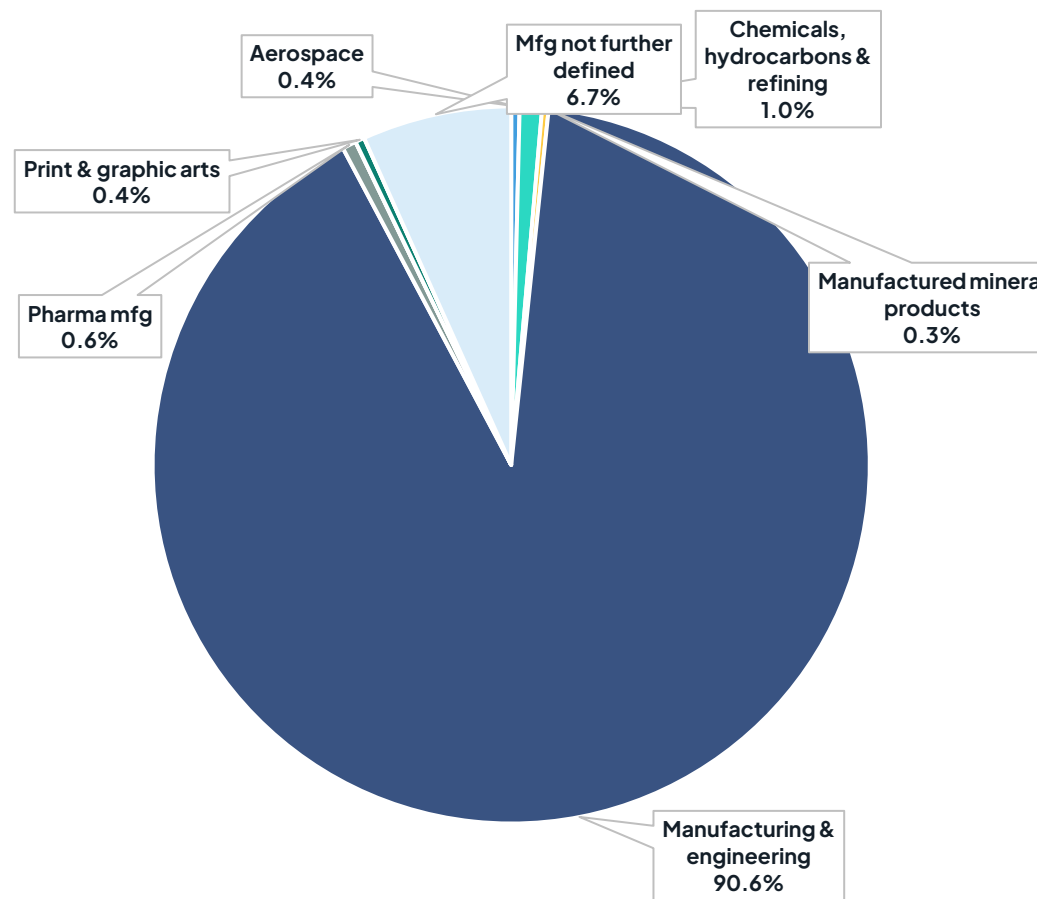
# 3233 Precision Metal Trades Workers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

3233 Precision Metal Trades Workers





# 3234 Toolmakers and Engineering Patternmakers

National average of PT workers: 31%\*

Highly male-dominated occupation group

JSA Occupation Profiles data – November 2023

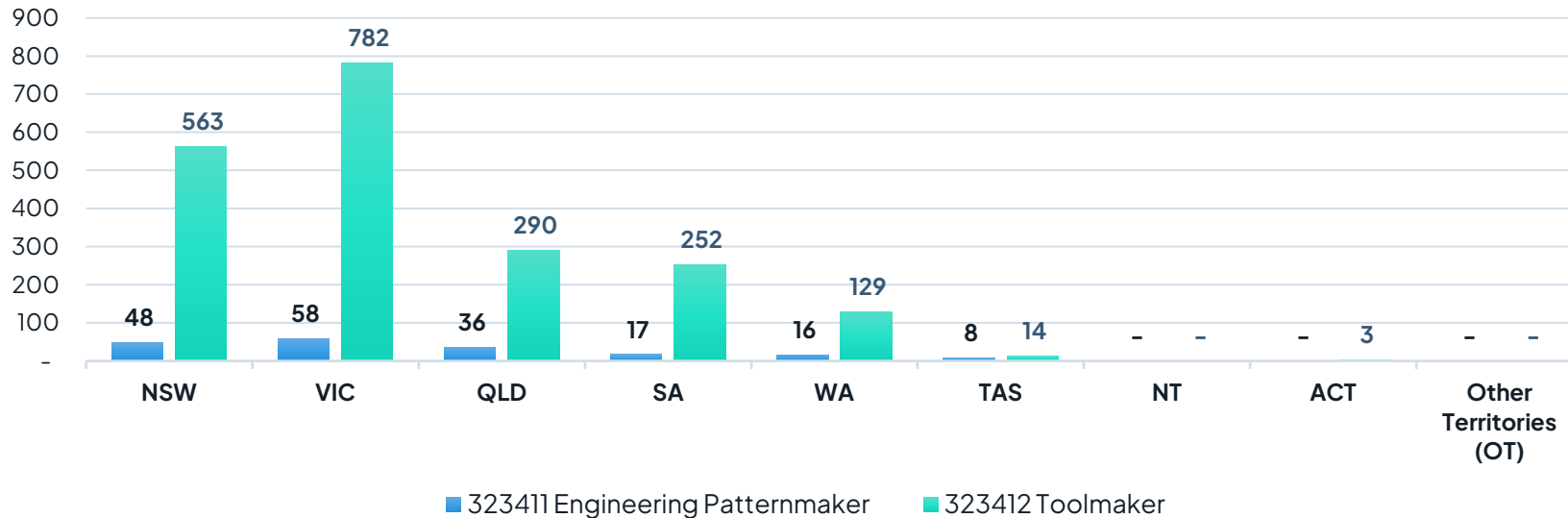
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
6	0	N/A	55	4.08	+15.5%

In 2021, 45% worked in MFG

Workers by state/territory of Australia (2021)

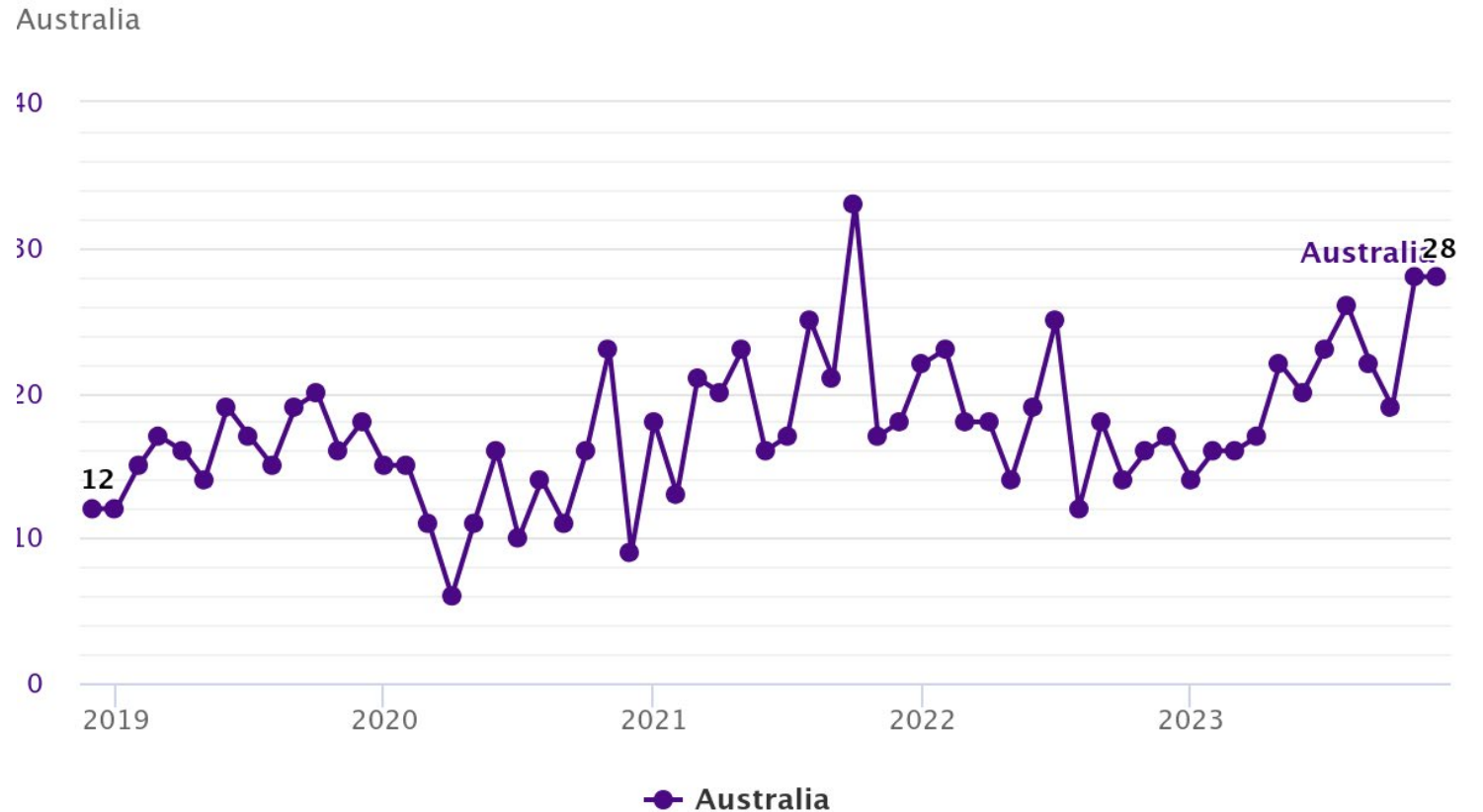


Within this occupation group, 323411 Engineering Patternmaker and 323412 Toolmaker have **national shortages**.

**Qualifications from the MEM Training Package provide training for these occupations.** There have only been 5 enrolments from 2018-2022.

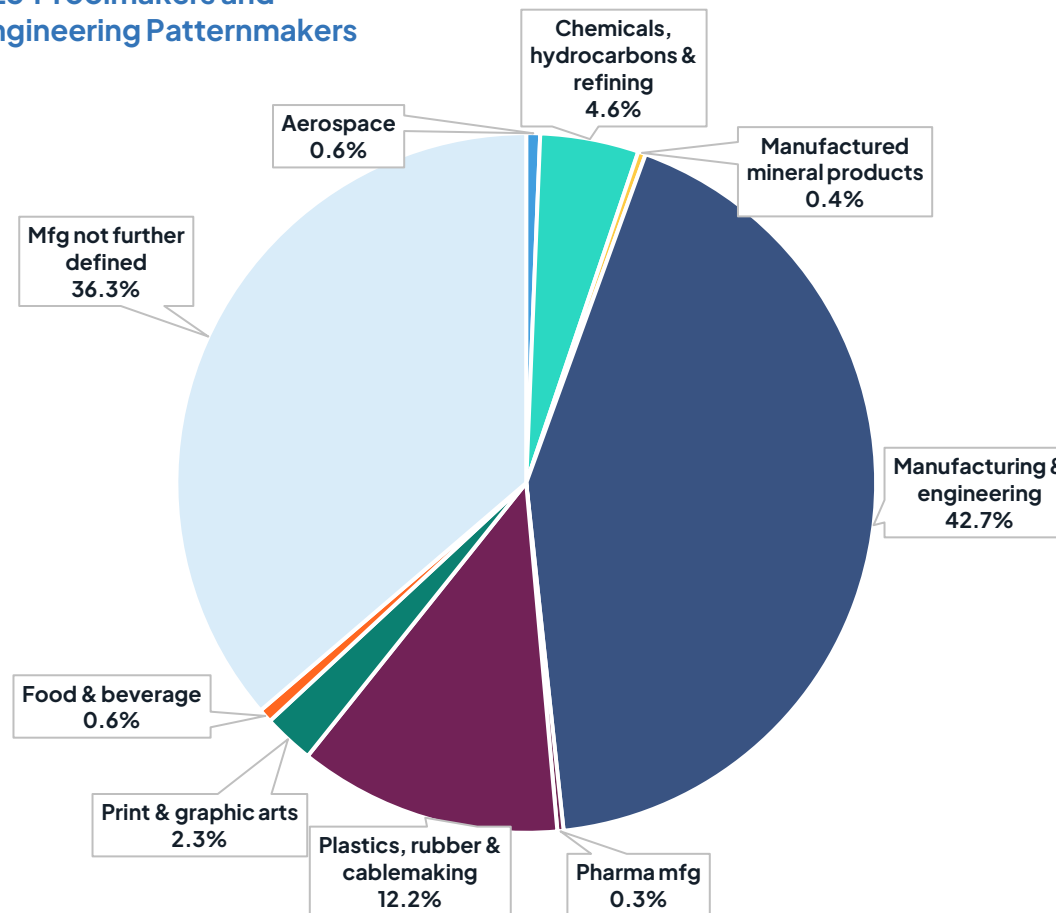
# 3234 Toolmakers and Engineering Patternmakers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

## 3234 Toolmakers and Engineering Patternmakers



Preliminary estimated driver:  
LONG TRAINING GAP\*

# 3242 Vehicle Body Builders and Trimmers

JSA Occupation Profiles data – November 2023

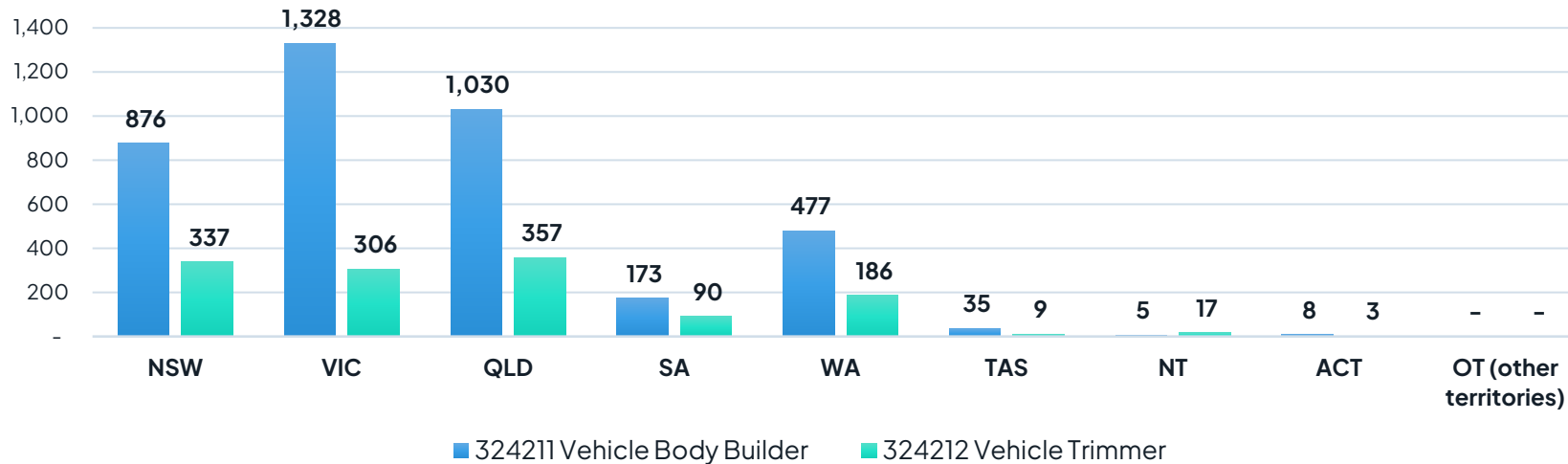
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
20	7	\$1,352	46	6.5	+6.9%

In 2021, 5% worked in MFG

Workers by state/territory of Australia (2021)



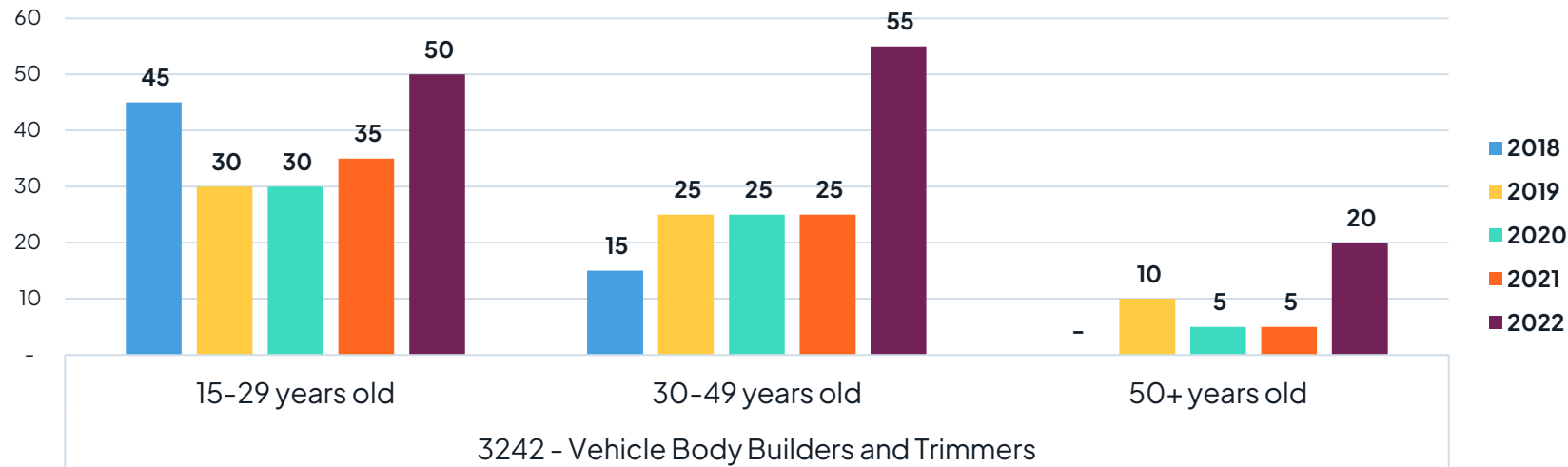
All occupations in this group have a **national shortage**.



Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVET qualification enrolments 2018-22.

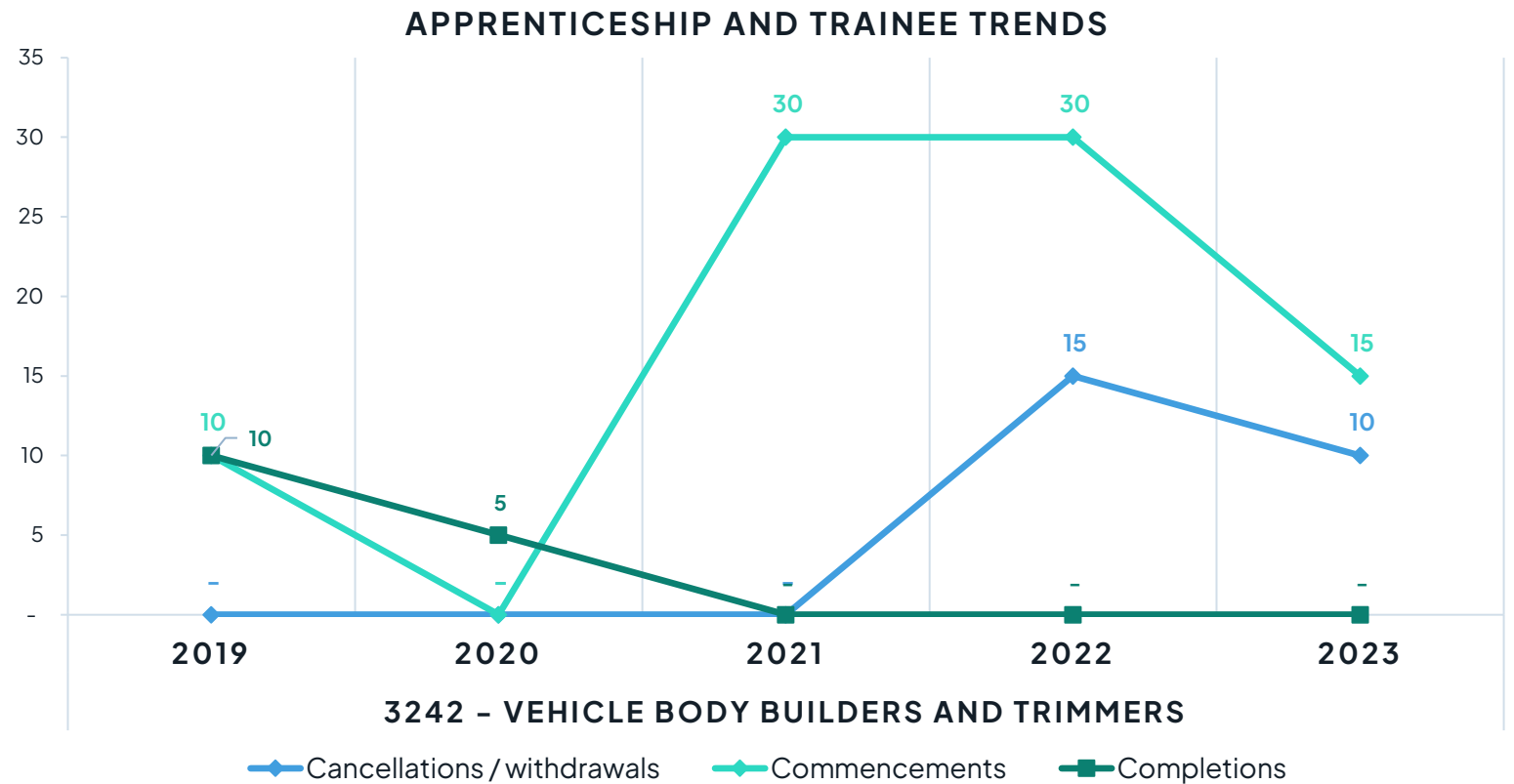
# 3242 Vehicle Body Builders and Trimmers

2018-2022 enrolment trend for related manufacturing training (national)



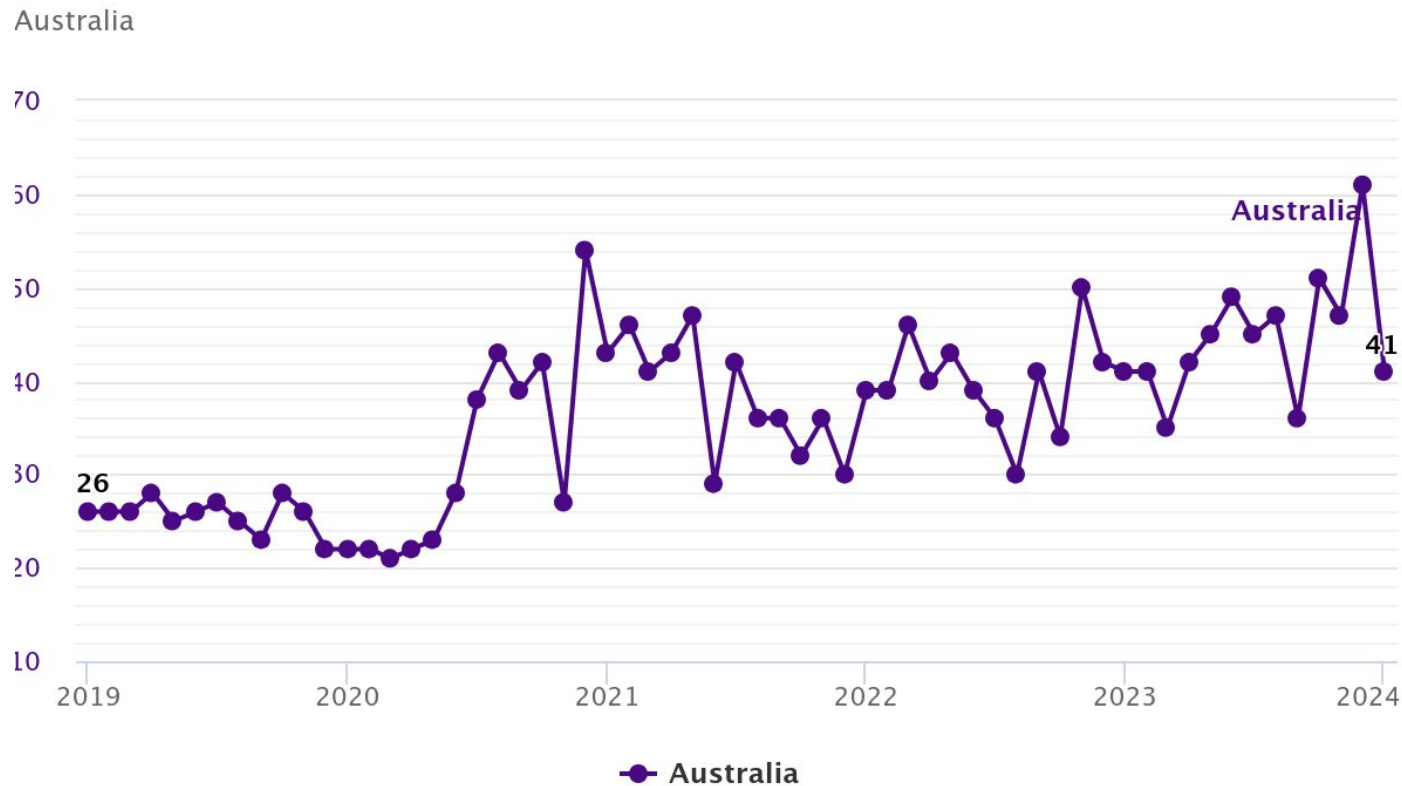
Recreational vehicle qualifications from the MSM Training Package provide training for this occupation.

# 3242 Vehicle Body Builders and Trimmers



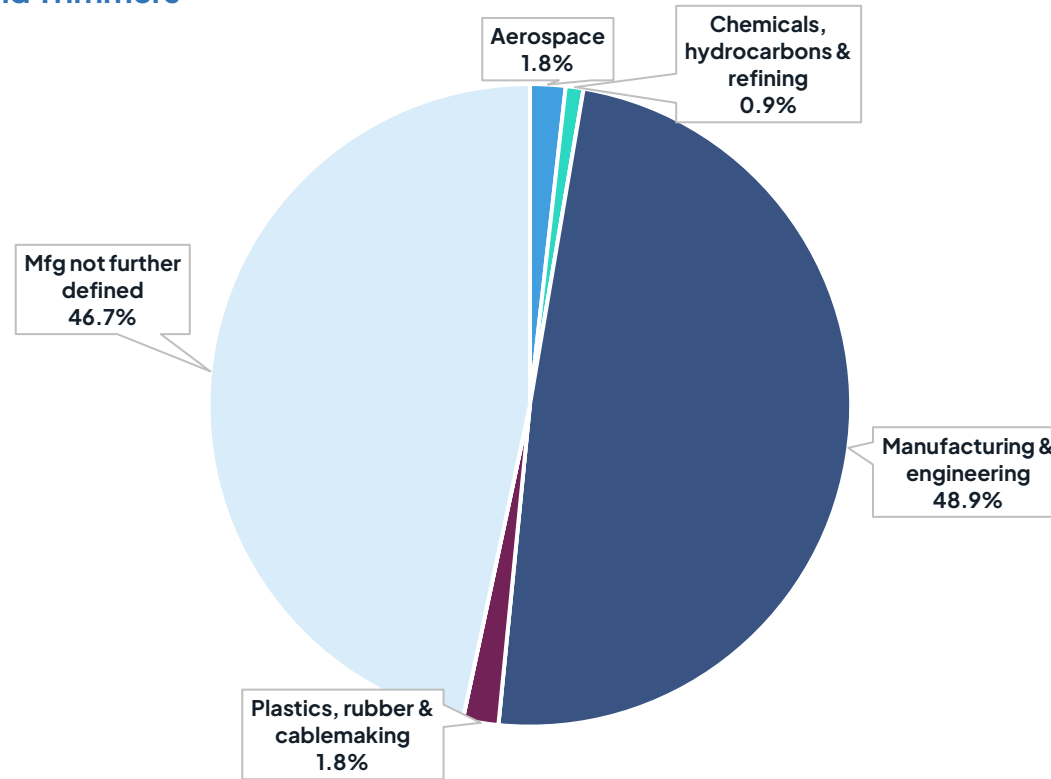
# 3242 Vehicle Body Builders and Trimmers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

3242 Vehicle Body Builders and Trimmers







Clean energy critical occupation

Preliminary estimated driver: LONG TRAINING GAP\*

# 3411 Electricians

National average of PT workers: 31%\*\*

JSA Occupation Profiles data – November 2023

The median age across all occupations is 42

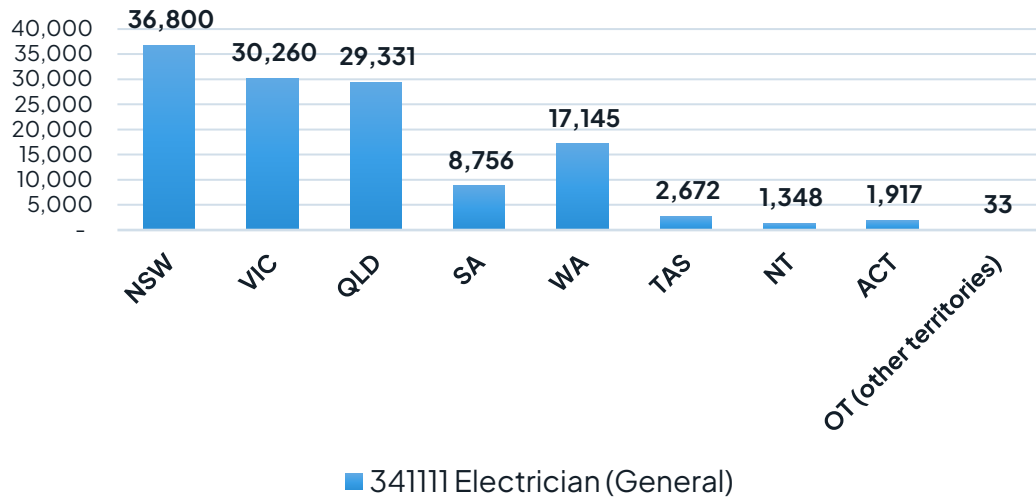
Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
6	2	\$2,120	34	177.3	+11.9%

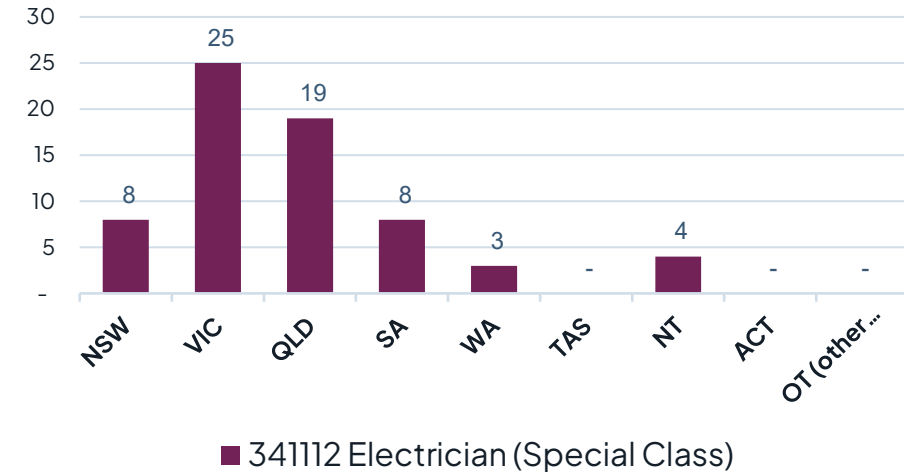
In 2021, 8% worked in MFG

Within this occupation group, 341111 Electrician (General) and 341112 Electrician (Special Class) have **national shortages**.

Workers by state/territory of Australia (2021)



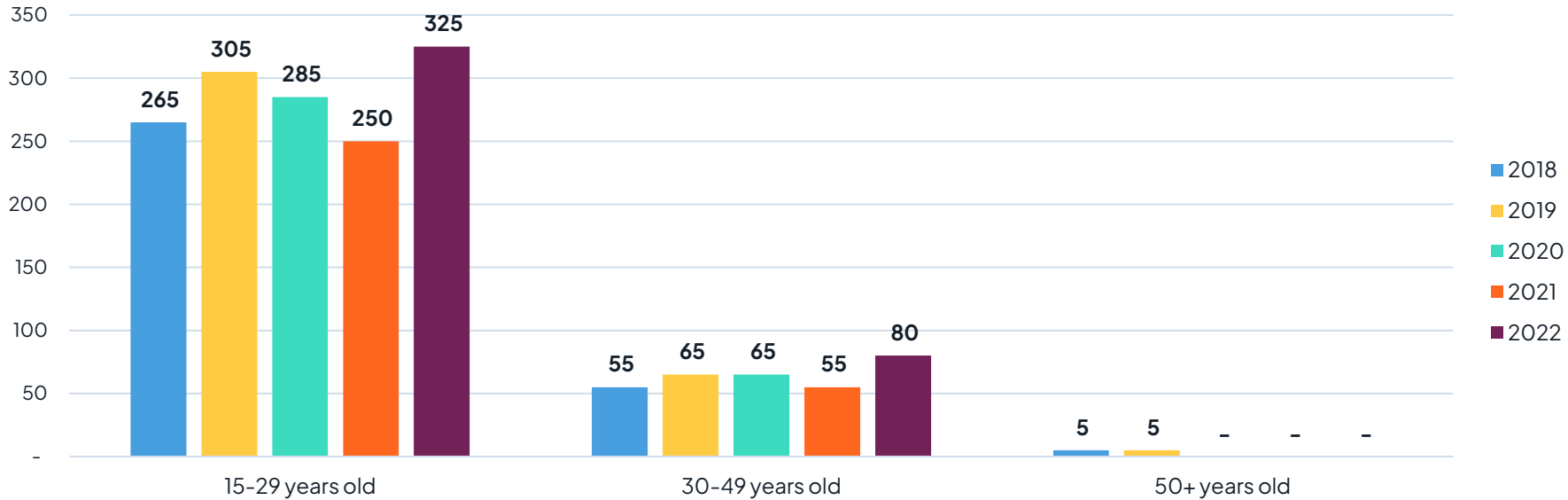
Workers by state/territory of Australia (2021)



# 3411 Electricians

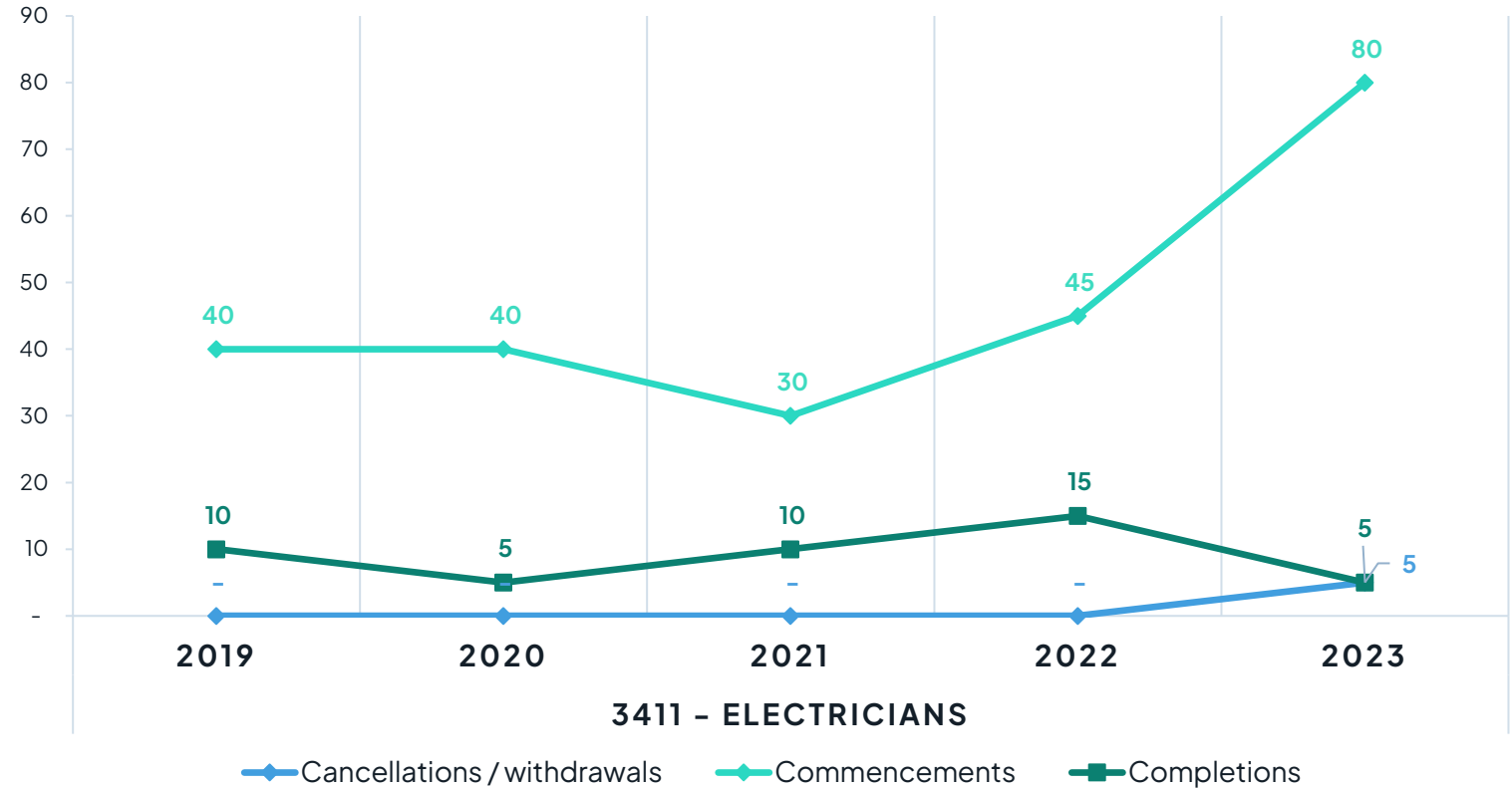
**Qualifications from the MEM Training Package provide training for this occupation.** Enrolments are predominantly within the 15-29 age group.

2018-2022 enrolment trend for related manufacturing training (national)



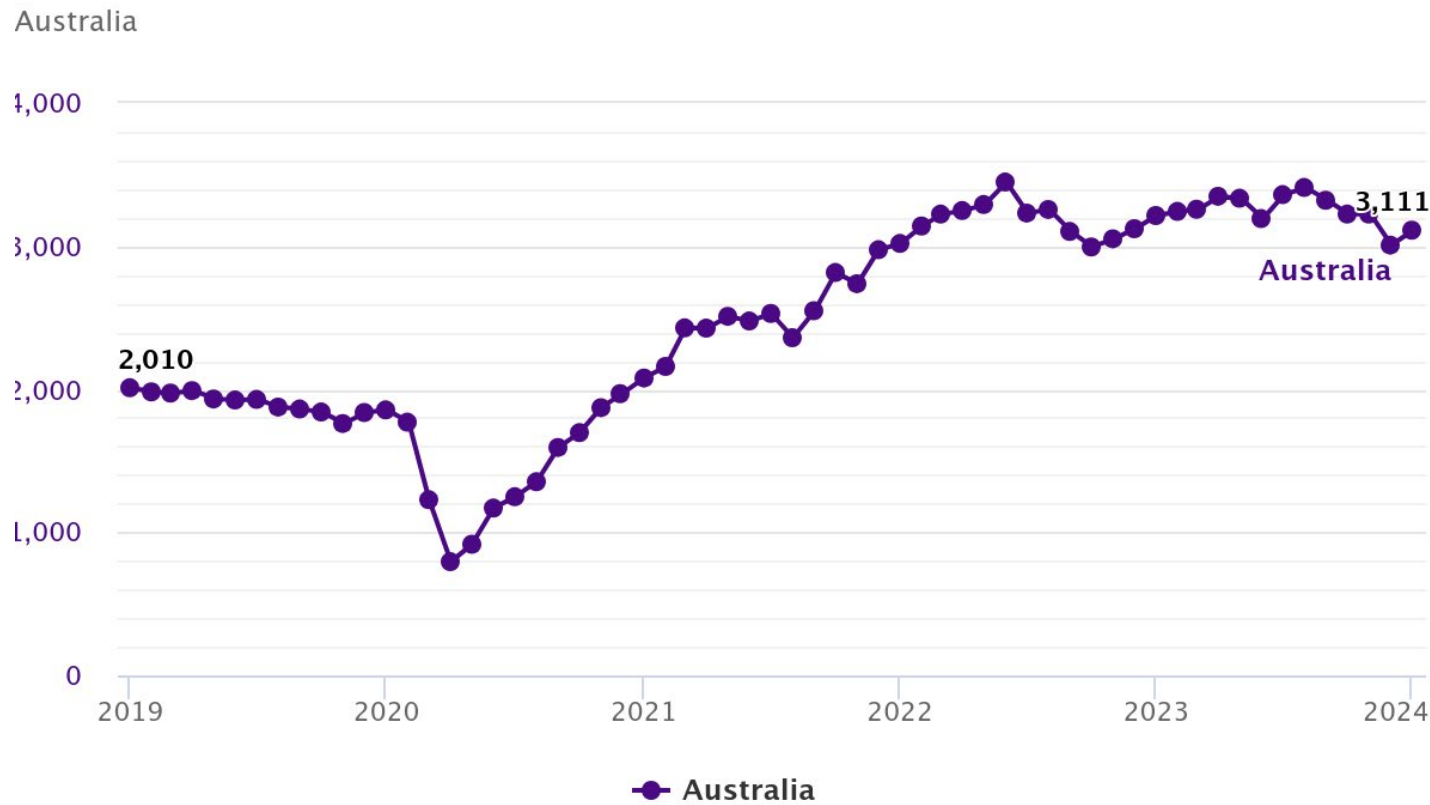
# 3411 Electricians

APPRENTICESHIP AND TRAINEE TRENDS

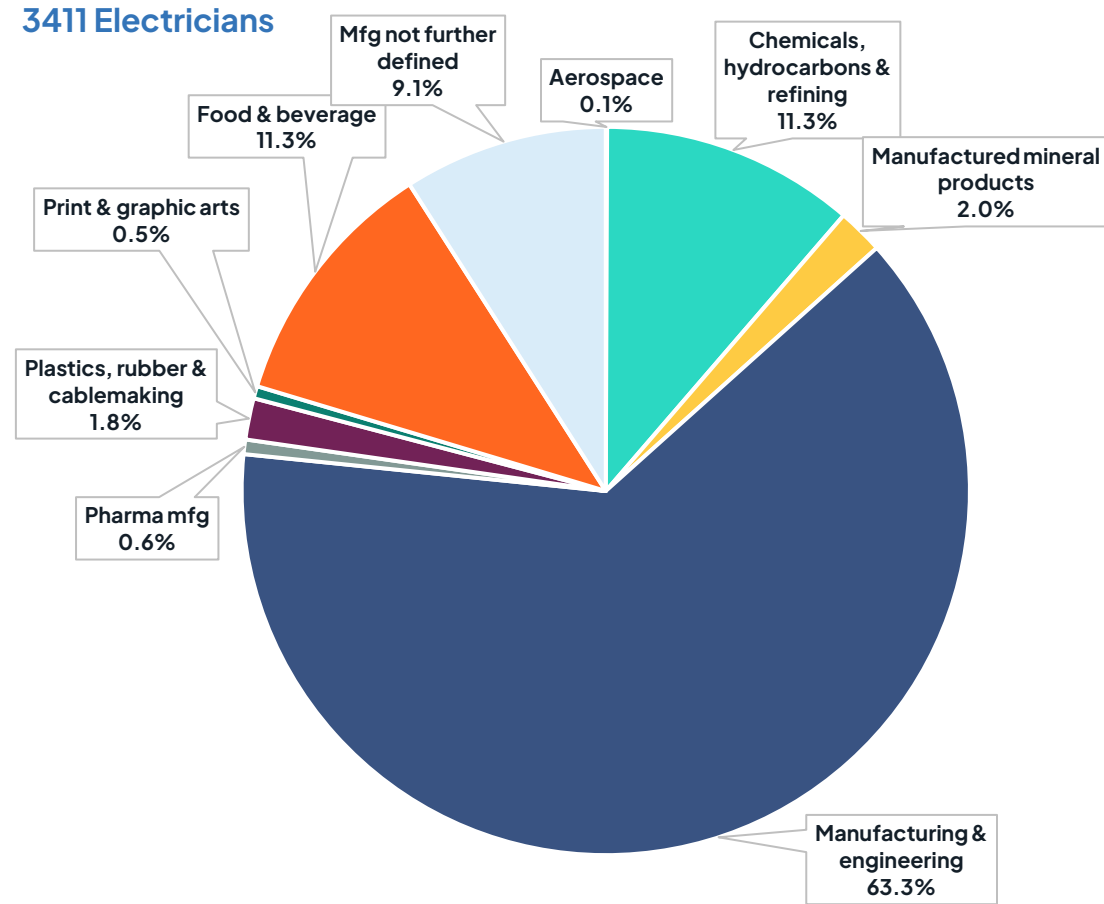


# 3411 Electricians

## Estimated Vacancies – Australia



# Employment by subsector (2021)





# 3421 Airconditioning and Refrigeration Mechanics

National average of PT workers: 31%\*\*

JSA Occupation Profiles data – November 2023

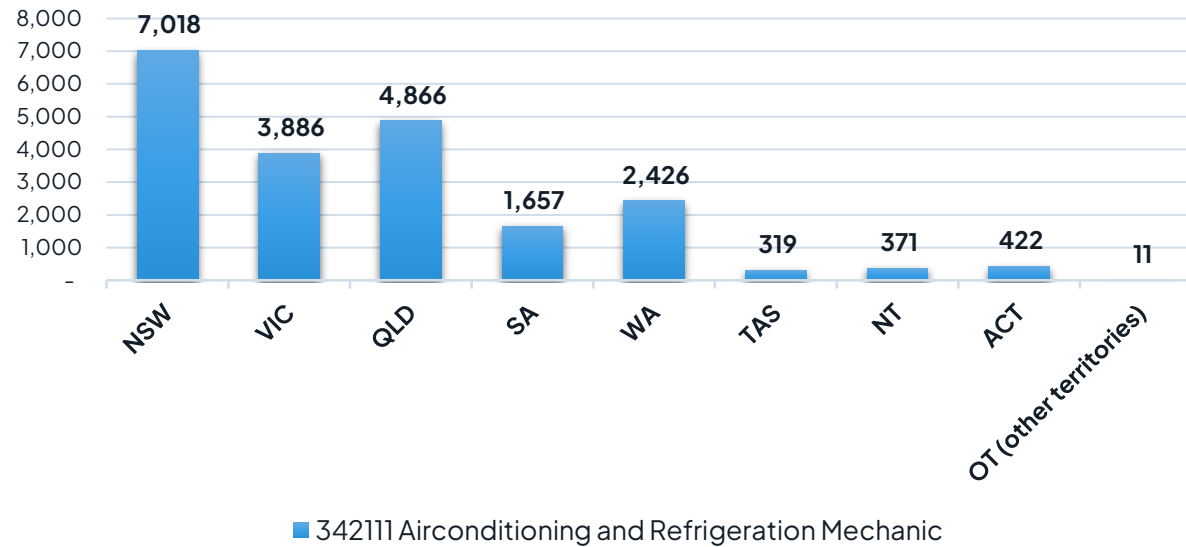
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
7	2	N/A	33	26.4	+6.8%

*In 2021, 32% worked in MFG*

Workers by state/territory of Australia (2021)



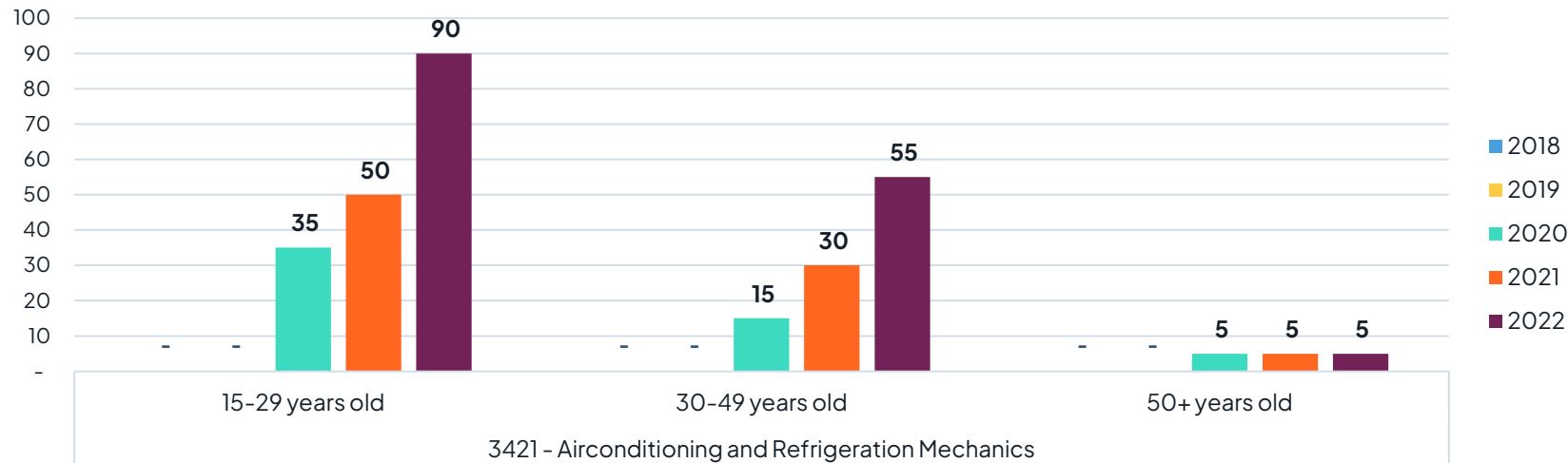
There is only 1 occupation in this group (342111 Airconditioning and Refrigeration Mechanic), and it has a **national shortage**.



Sources: JSA Occupation Profiles Data – November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22.  
 \*\* In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results – January 2024)

# 3421 Airconditioning and Refrigeration Mechanics

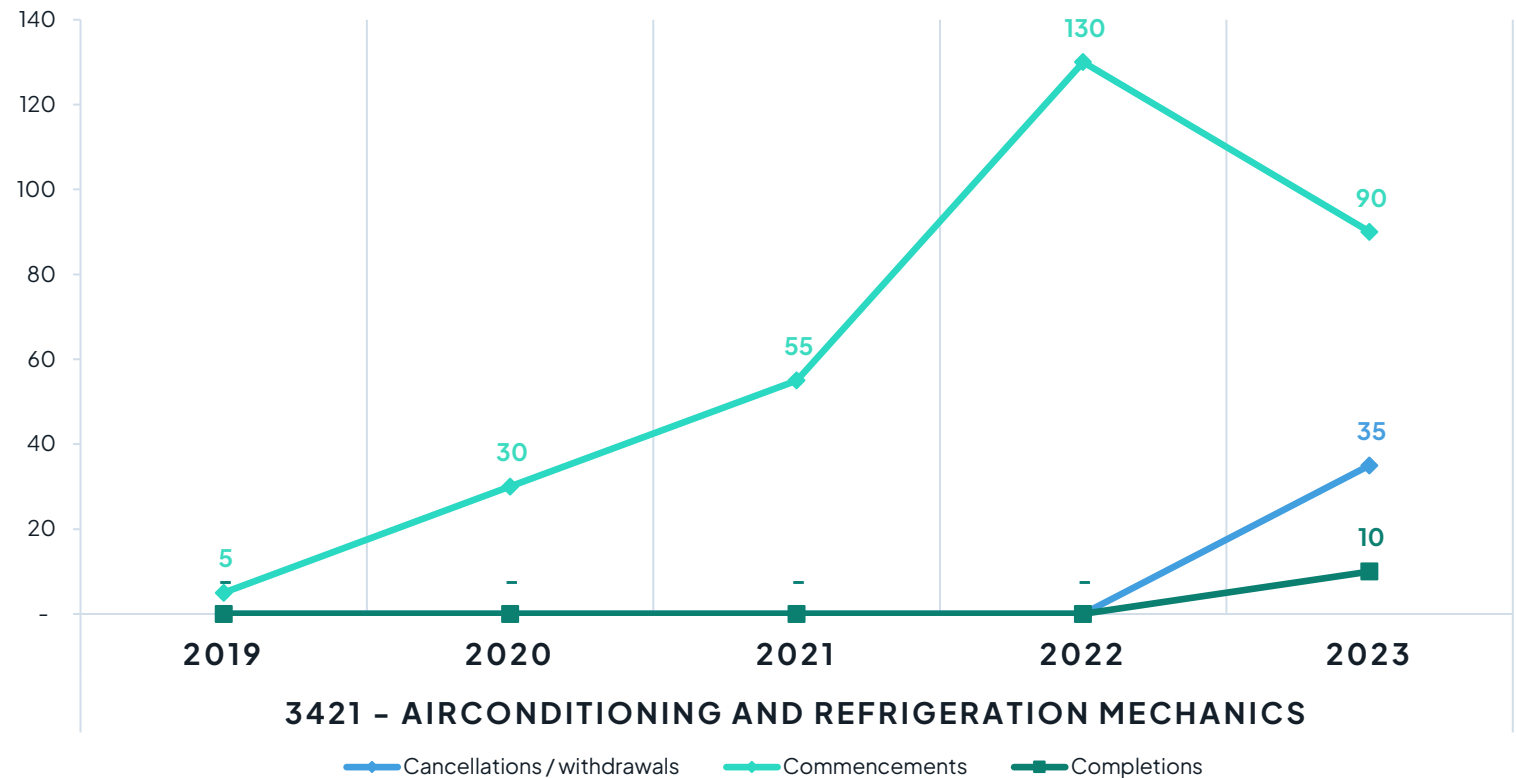
2018–2022 enrolment trend for related manufacturing training (national)



**Qualifications from the MEM Training Package provide training for this occupation.**

# 3421 Airconditioning and Refrigeration Mechanics

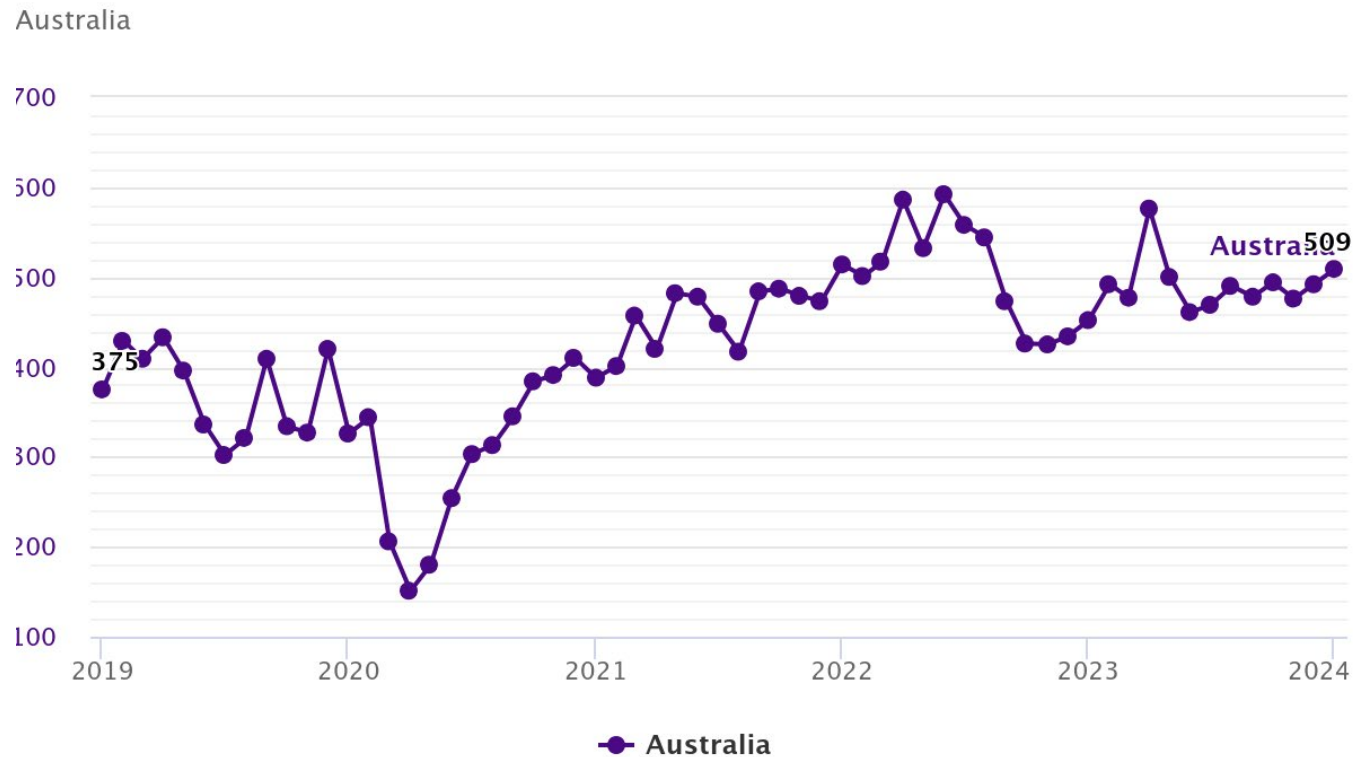
## APPRENTICESHIP AND TRAINEE TRENDS





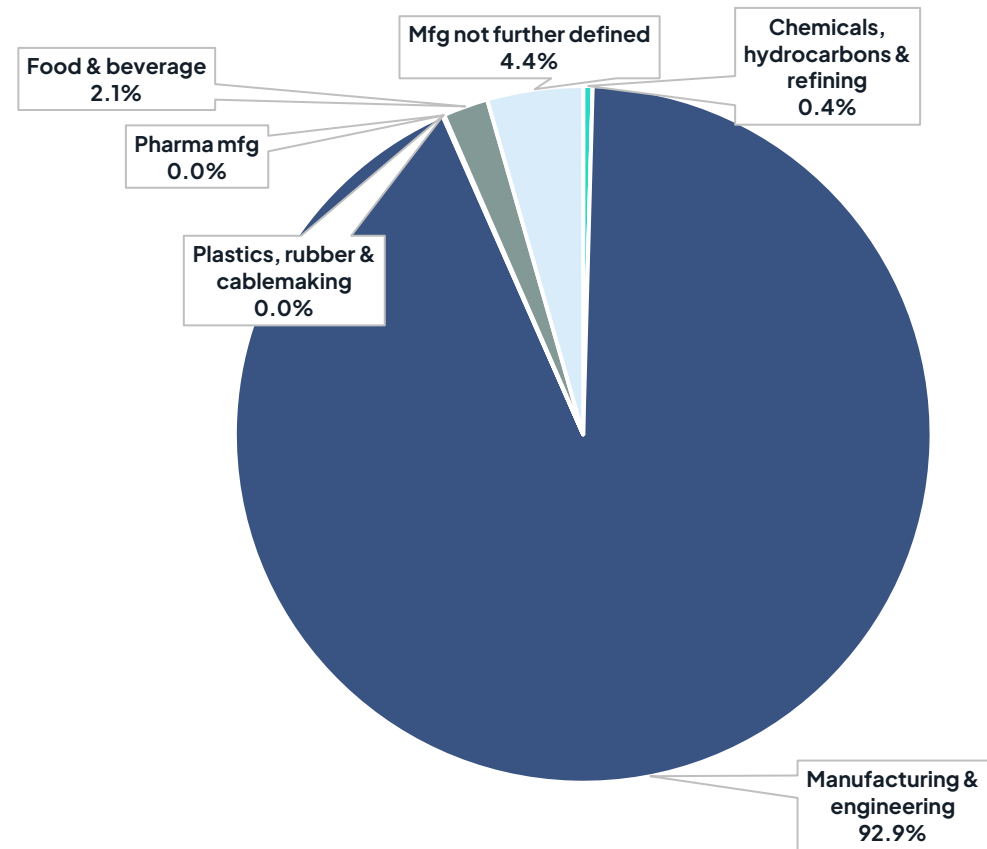
# 3421 Airconditioning and Refrigeration Mechanics

## Estimated Vacancies – Australia



# Employment by subsector (2021)

## 3421 Airconditioning and Refrigeration Mechanics



Preliminary estimated driver:  
**RETENTION GAP\***

# 3511 Bakers and Pastrycooks

JSA Occupation Profiles data - November 2023

The median age across all occupations is 42

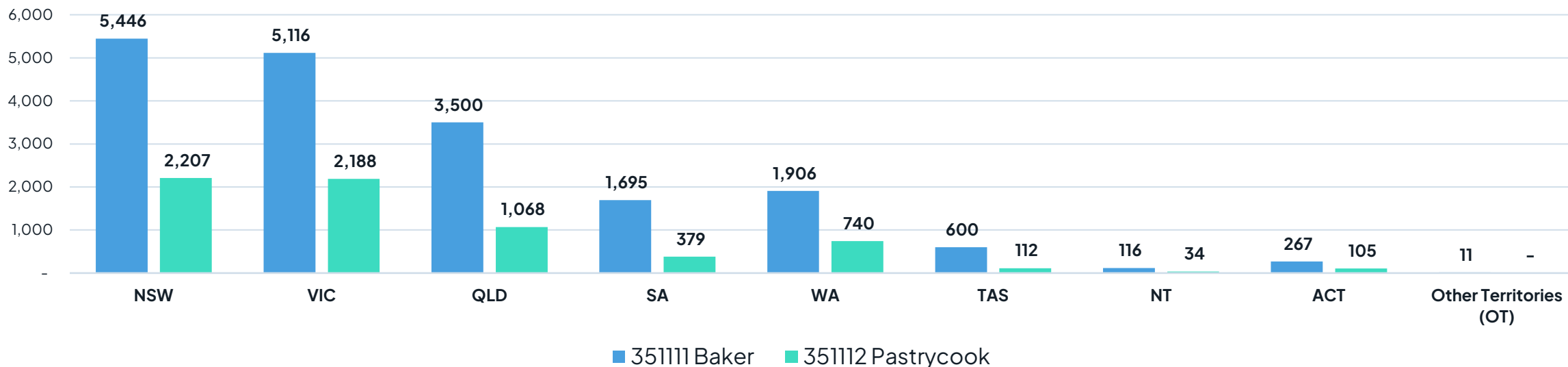
Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
32	42	\$1,196	36	29.03	+9.3%

In 2021, 55% worked in MFG

All occupations within this group have a **national shortage**.

Workers by state/territory of Australia (2021)

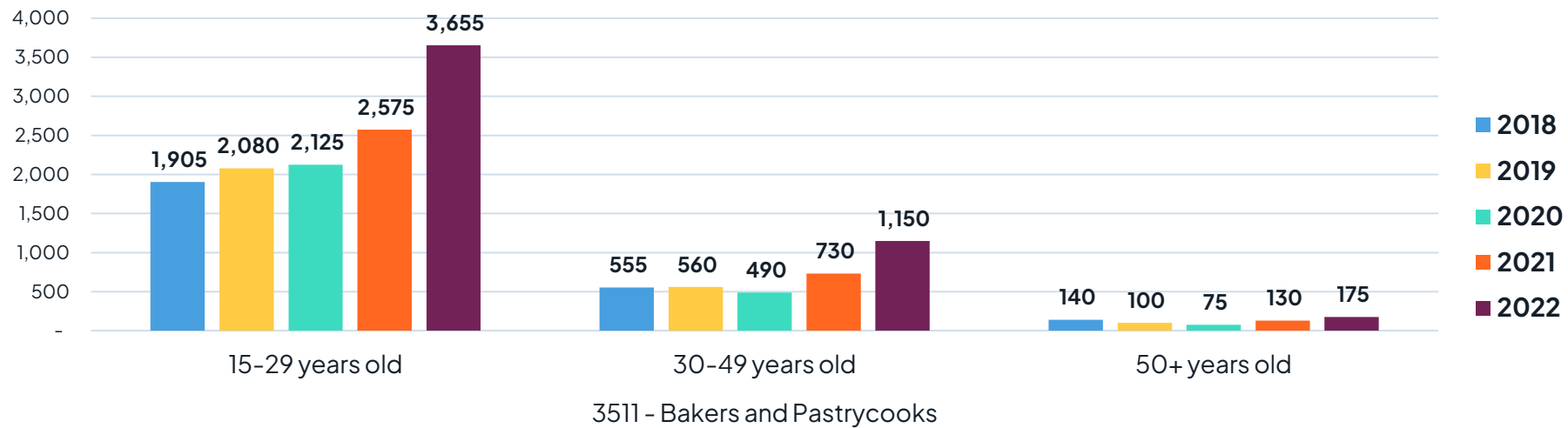


Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVET qualification enrolments 2018-22.

\*Retention gap shortages are where there are below average rates of retention, potentially reinforced by low numbers of new applicants per vacancy. This is a category where increasing the throughput of qualified applicants is unlikely to solve the problem because of the low likelihood of retaining them. Ways to enhance the attractiveness of the occupation through improved remuneration and/or working conditions, professional development and clearer career pathways would be potential solutions to alleviate this kind of shortage. Source: JSA Atlas Pro, accessed 22/2/24

# 3511 Bakers and Pastrycooks

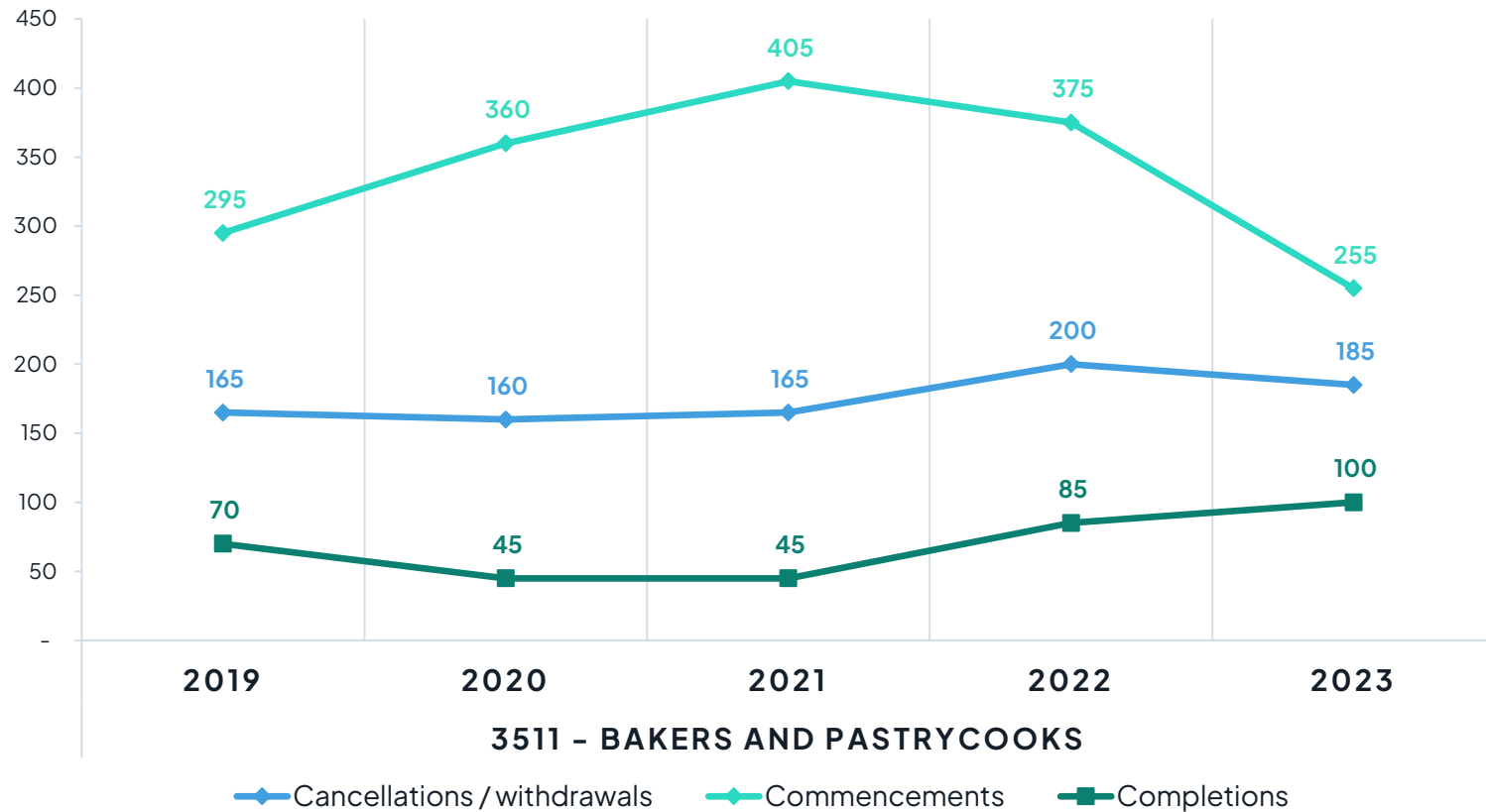
2018-2022 enrolment trend for related manufacturing training (national)



Qualifications from the FBP Training Package provide training for these occupations. Enrolments are predominantly within the 15-29 age group.

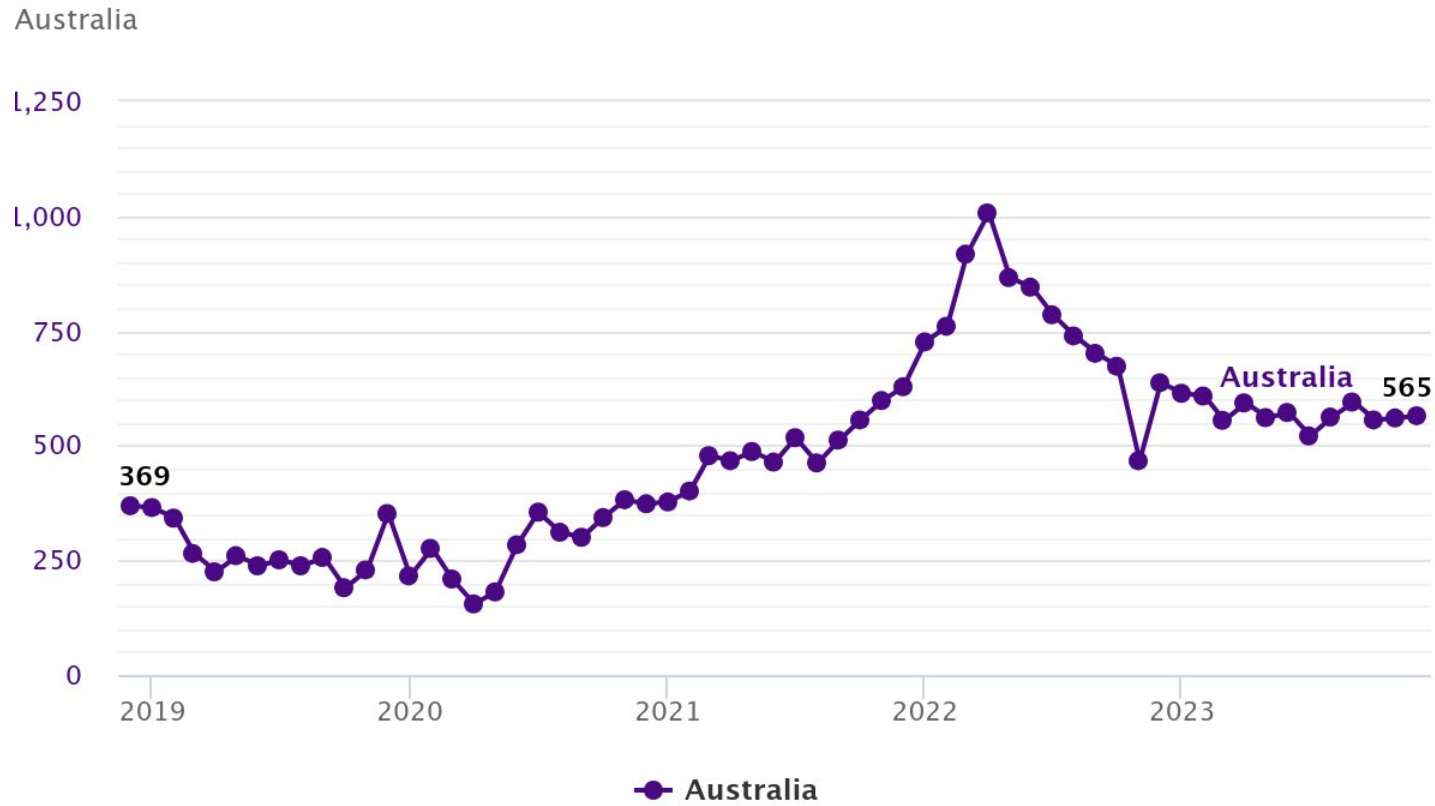
# 3511 Bakers and Pastrycooks

### APPRENTICESHIP AND TRAINEE TRENDS



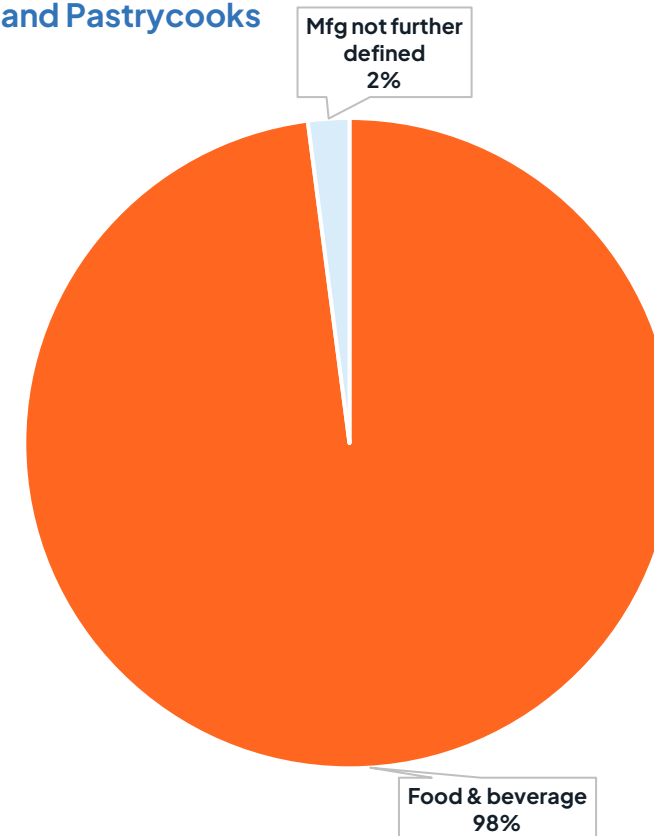
# 3511 Bakers and Pastrycooks

## Estimated Vacancies – Australia



# Employment by subsector (2021)

3511 Bakers and Pastrycooks



# 3921 Print Finishers and Screen Printers

JSA Occupation Profiles data – November 2023

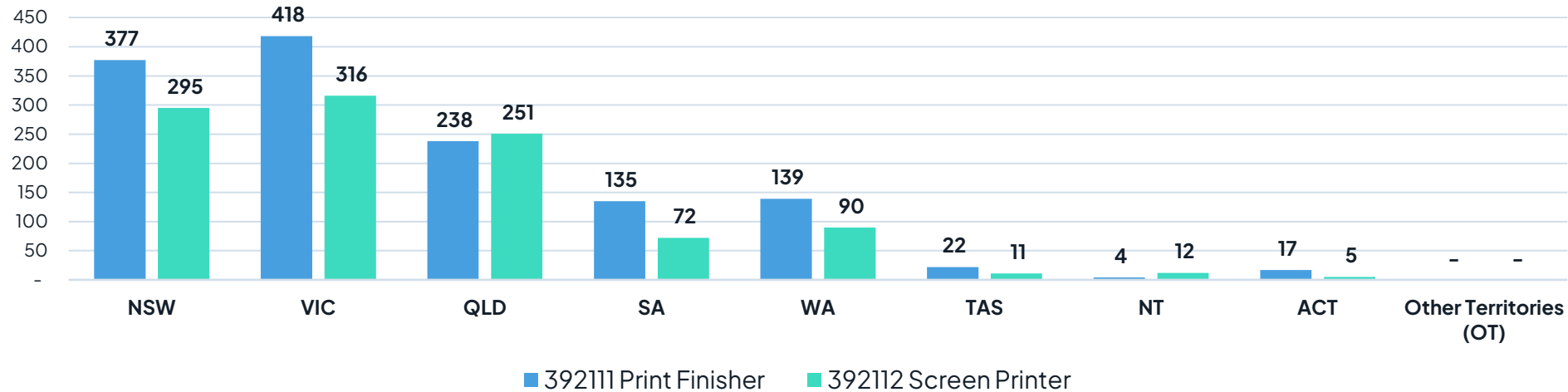
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023–2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
17	24	\$954	48	3.69	+7.9%

In 2021, 70% worked in MFG

Workers by state/territory of Australia (2021)

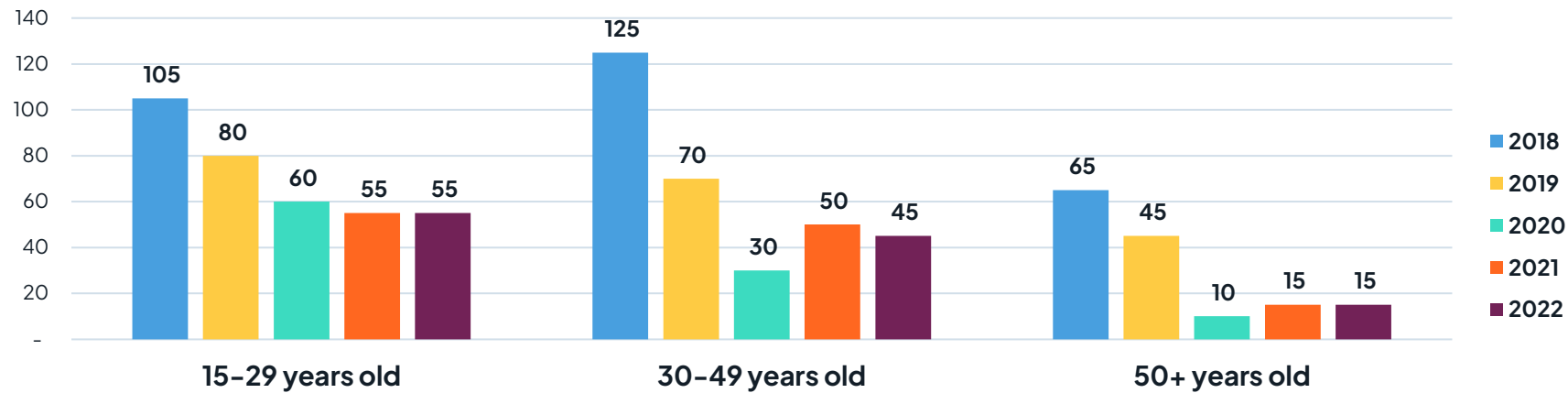


All occupations within this group have a **national shortage**.



# 3921 Print Finishers and Screen Printers

2018-2022 enrolment trend for related manufacturing training (national)

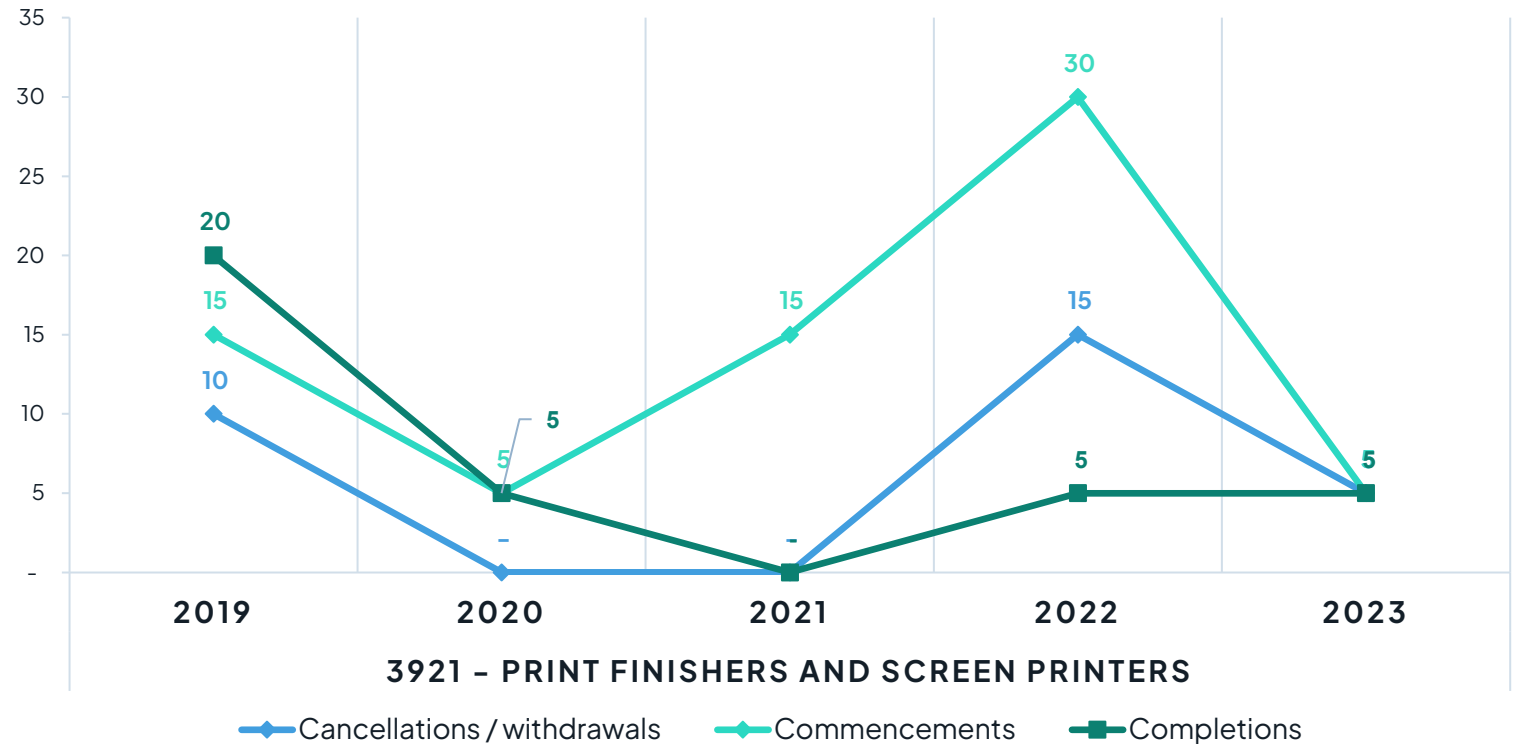


3921 - Print Finishers and Screen Printers

Qualifications from the ICP Training Package provide training for 392111 Printer Finishers but not for screen printers.

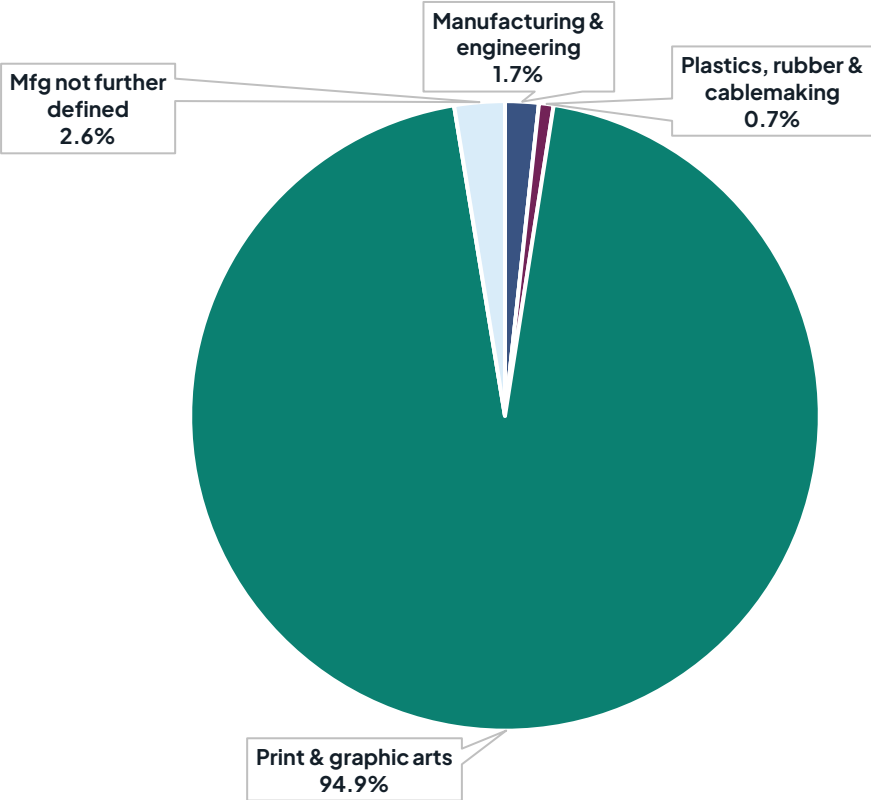
## 3921 Print Finishers and Screen Printers

### APPRENTICESHIP AND TRAINEE TRENDS



# Employment by subsector (2021)

3921 Print Finishers and Screen Printers



# 3922 Graphic Pre-press Trades Workers

No people were employed part-time

Highly male-dominated occupation group

JSA Occupation Profiles data - November 2023

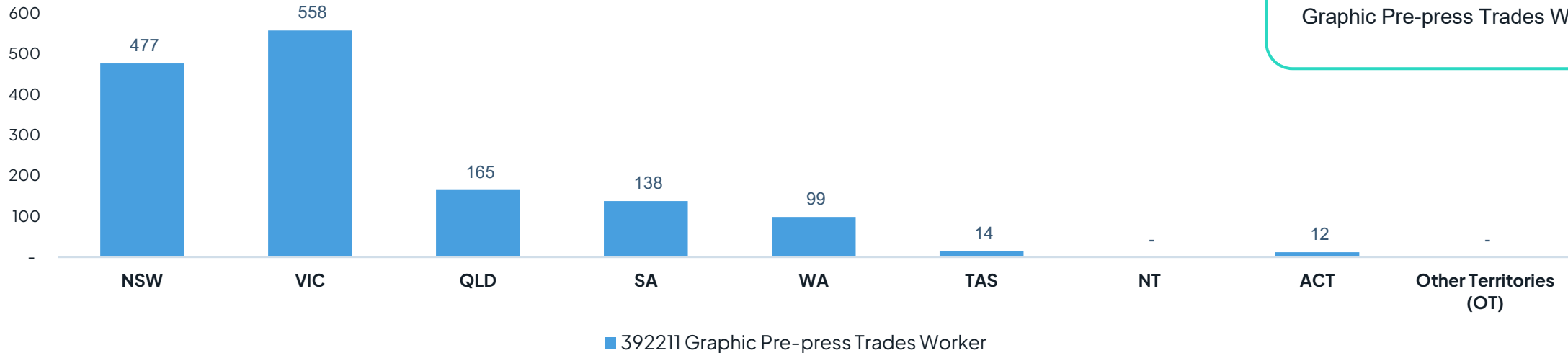
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
0	0	\$1,626	63	1.50	+9.5%

In 2021, 42% worked in MFG

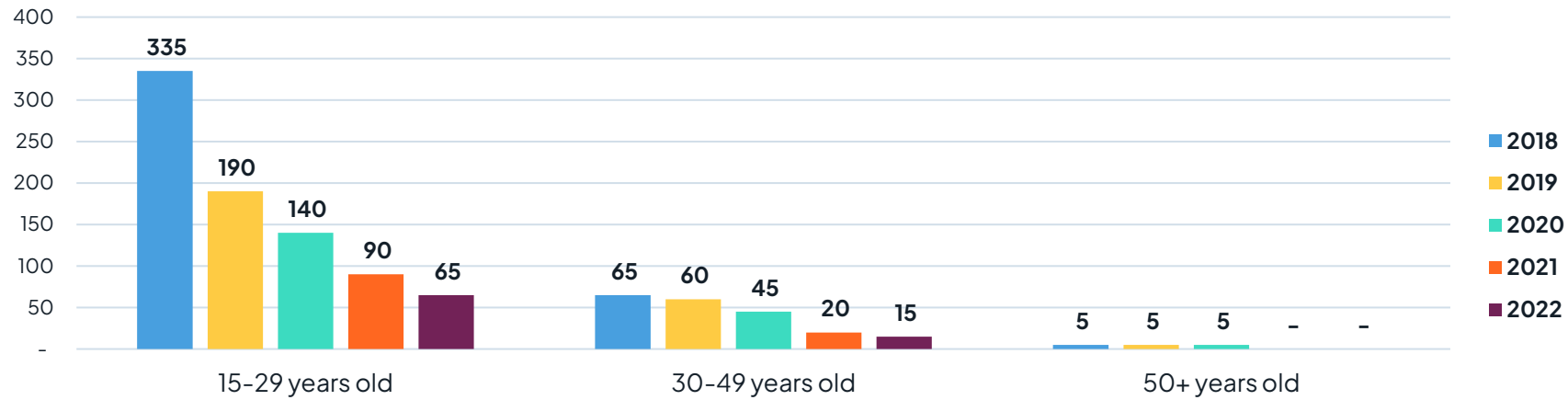
Workers by state/territory of Australia (2021)



Within this occupation group, there is a **national shortage** of 392211 Graphic Pre-press Trades Worker

# 3922 Graphic Pre-press Trades Workers

2018–2022 enrolment trend for related manufacturing training (national)

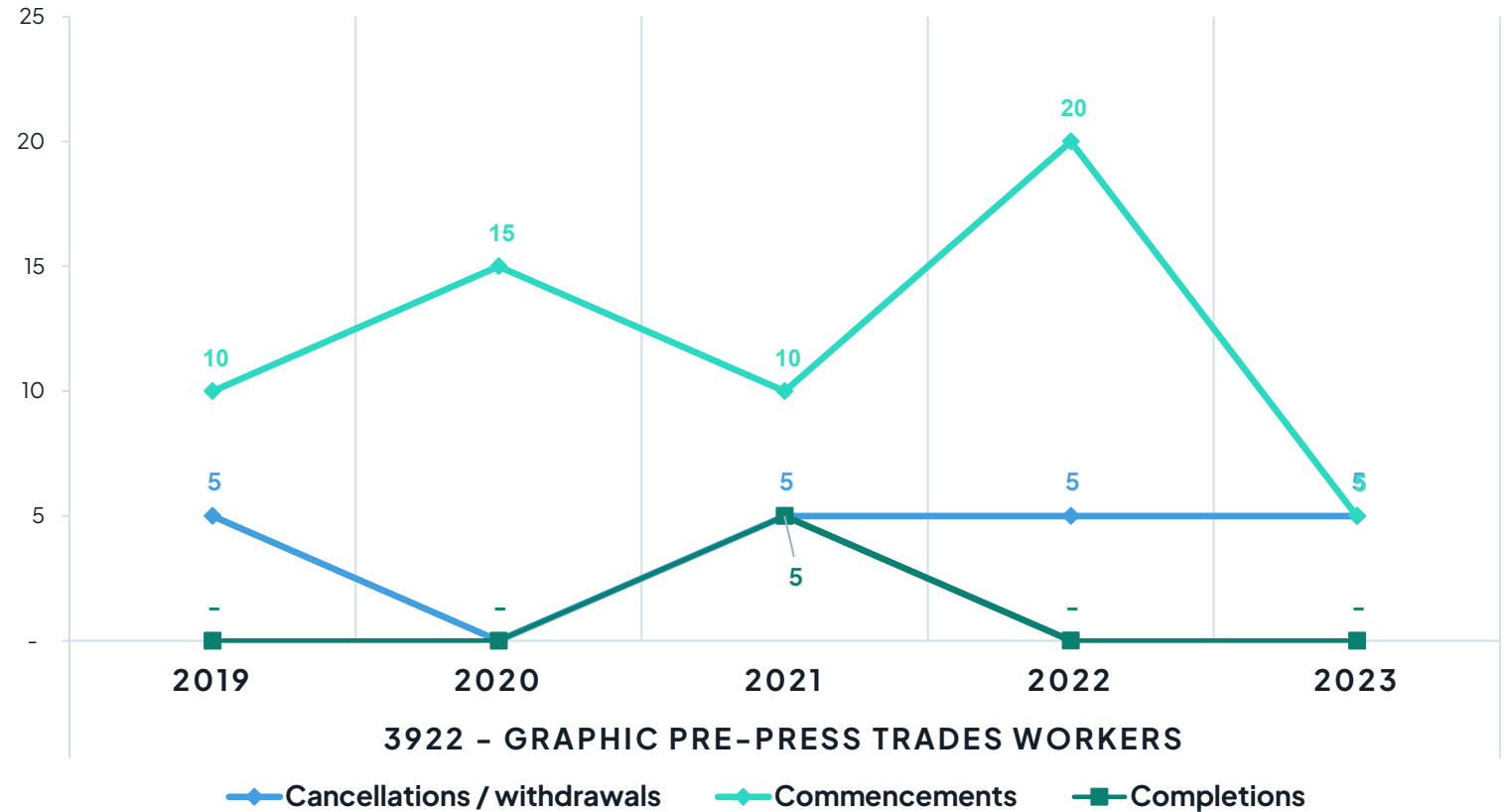


3922 - Graphic Pre-press Trades Workers

**Qualifications from the ICP Training Package provide training for these occupations.**  
Enrolments have declined over recent years.

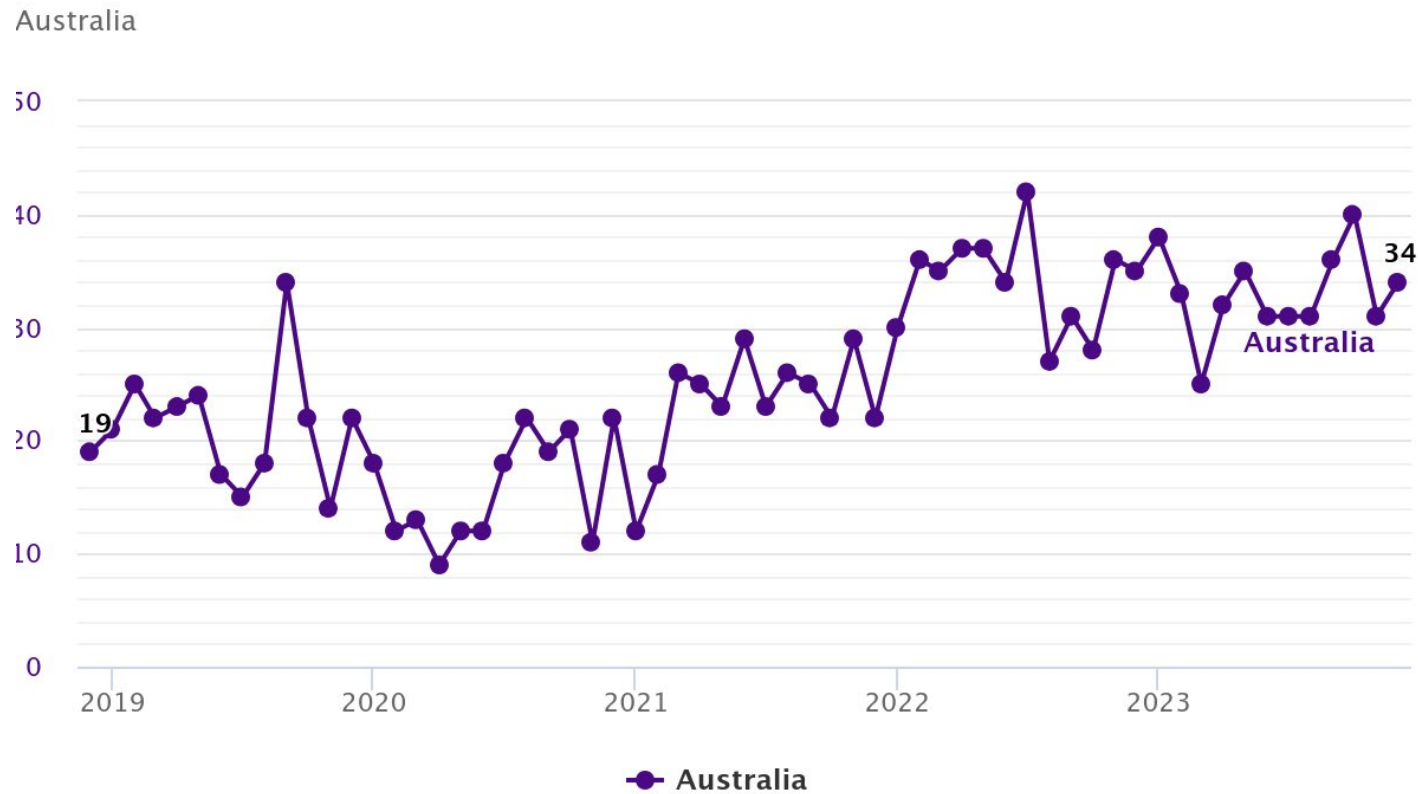
# 3922 Graphic Pre-press Trades Workers

APPRENTICESHIP AND TRAINEE TRENDS



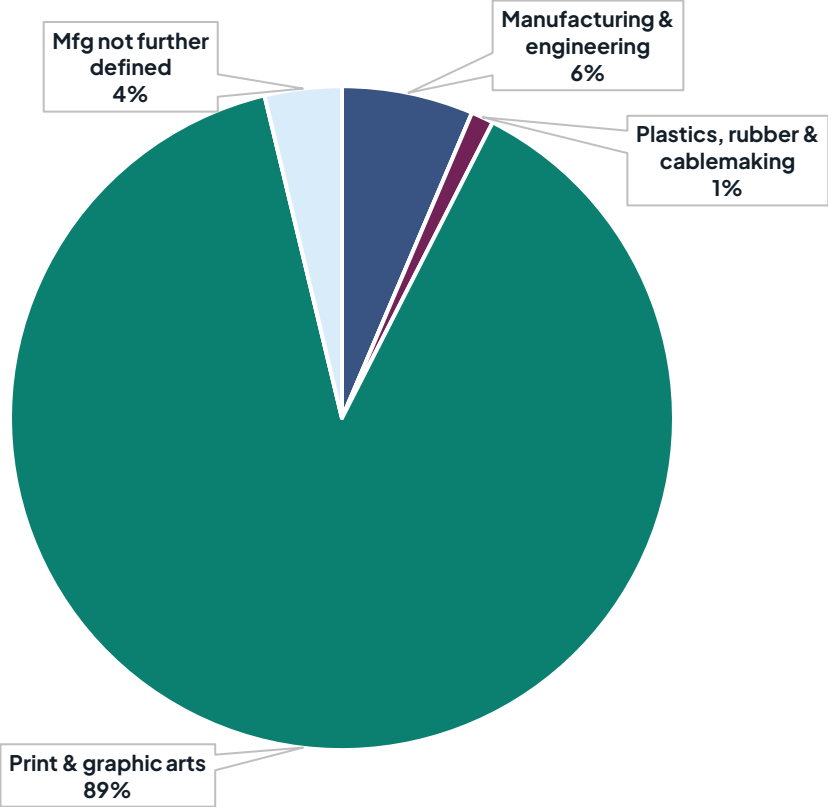
# 3922 Graphic Pre-press Trades Workers

## Estimated Vacancies – Australia



# Employment by subsector (2021)

3922 Graphic Pre-press Trades Workers





# 3923 Printers

JSA Occupation Profiles data – November 2023

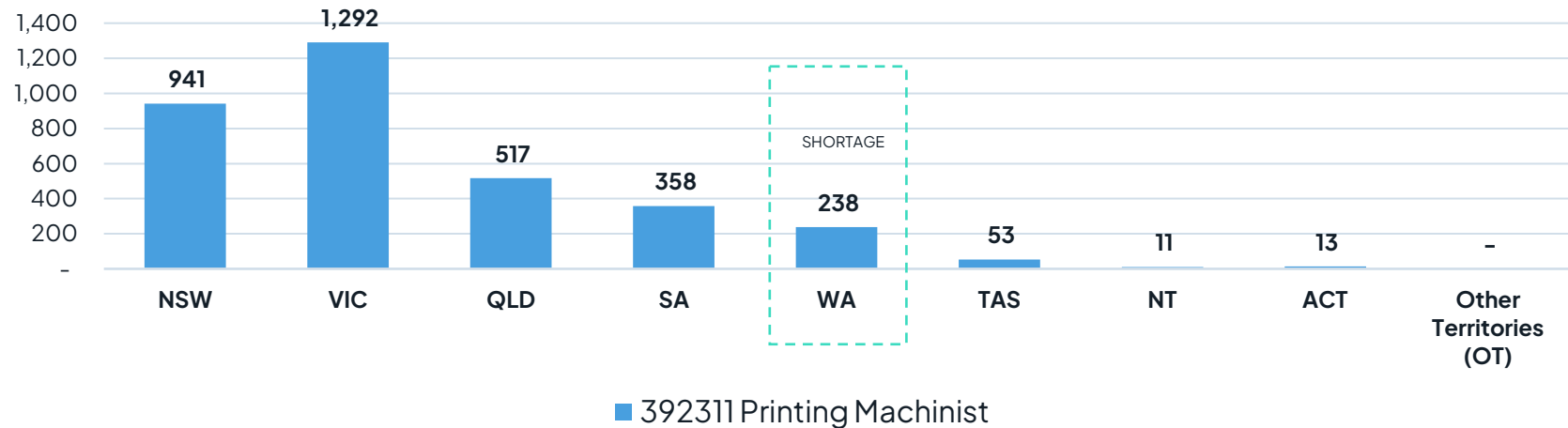
The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
10	15	\$1,732	46	11.56	+8.4%

In 2021, 64% worked in MFG

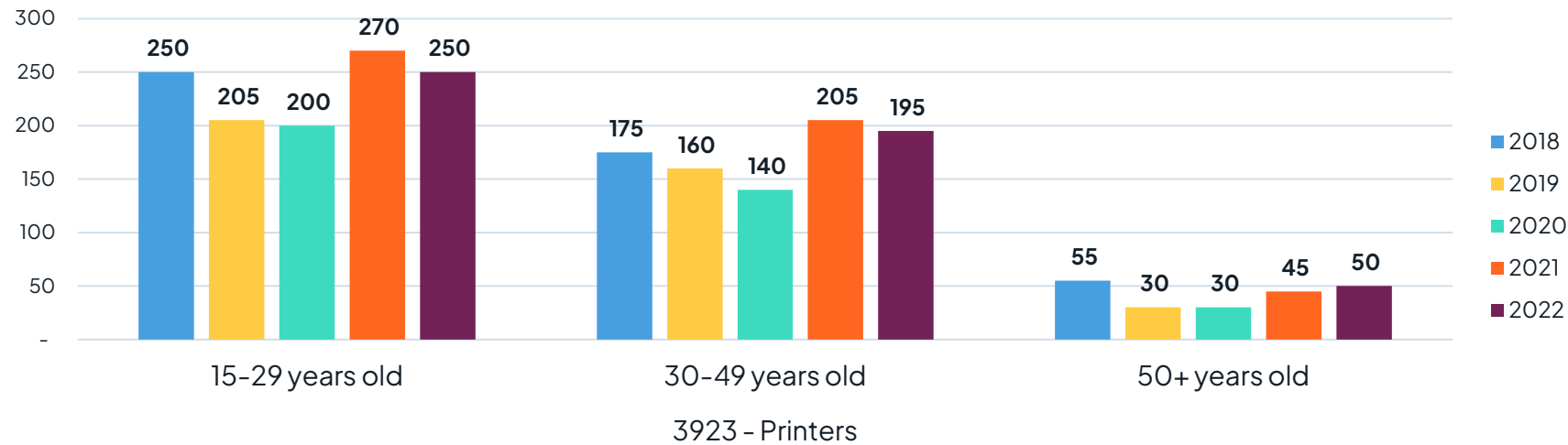
Workers by state/territory of Australia (2021)



Within this occupation group there is a shortage of 392311 Printing Machinist in **WA**.

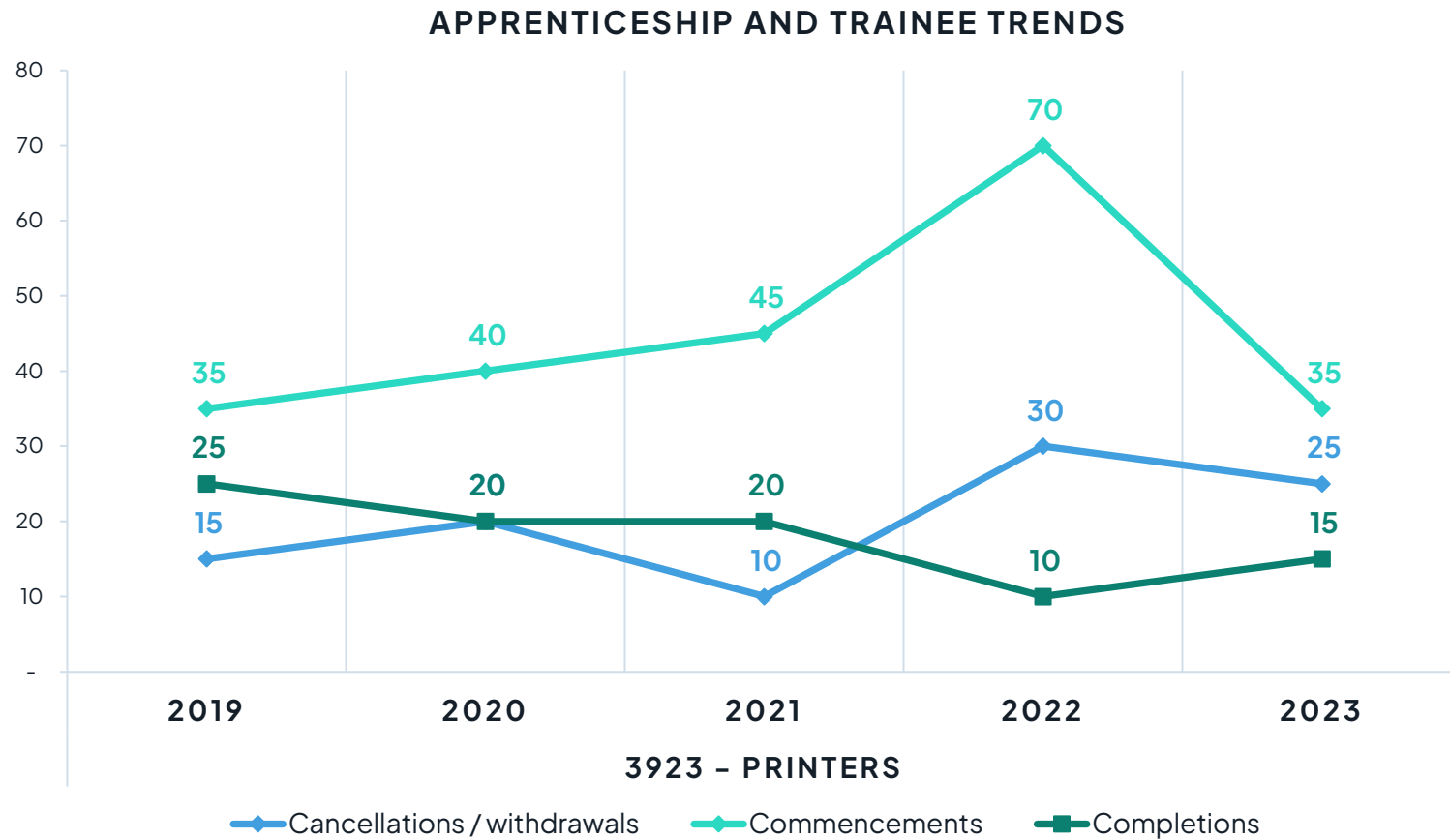
# 3923 Printers

2018-2022 enrolment trend for related manufacturing training (national)



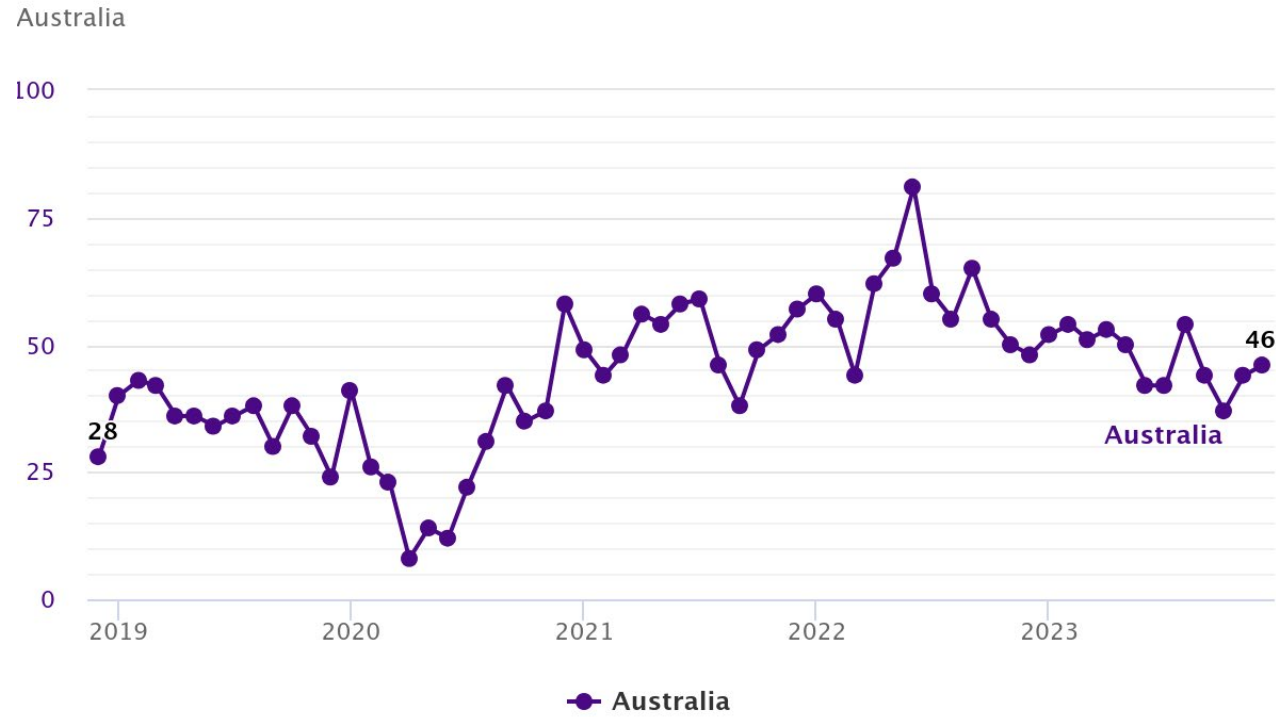
Qualifications from the ICP Training Package provide training for these occupations.

3923  
Printers

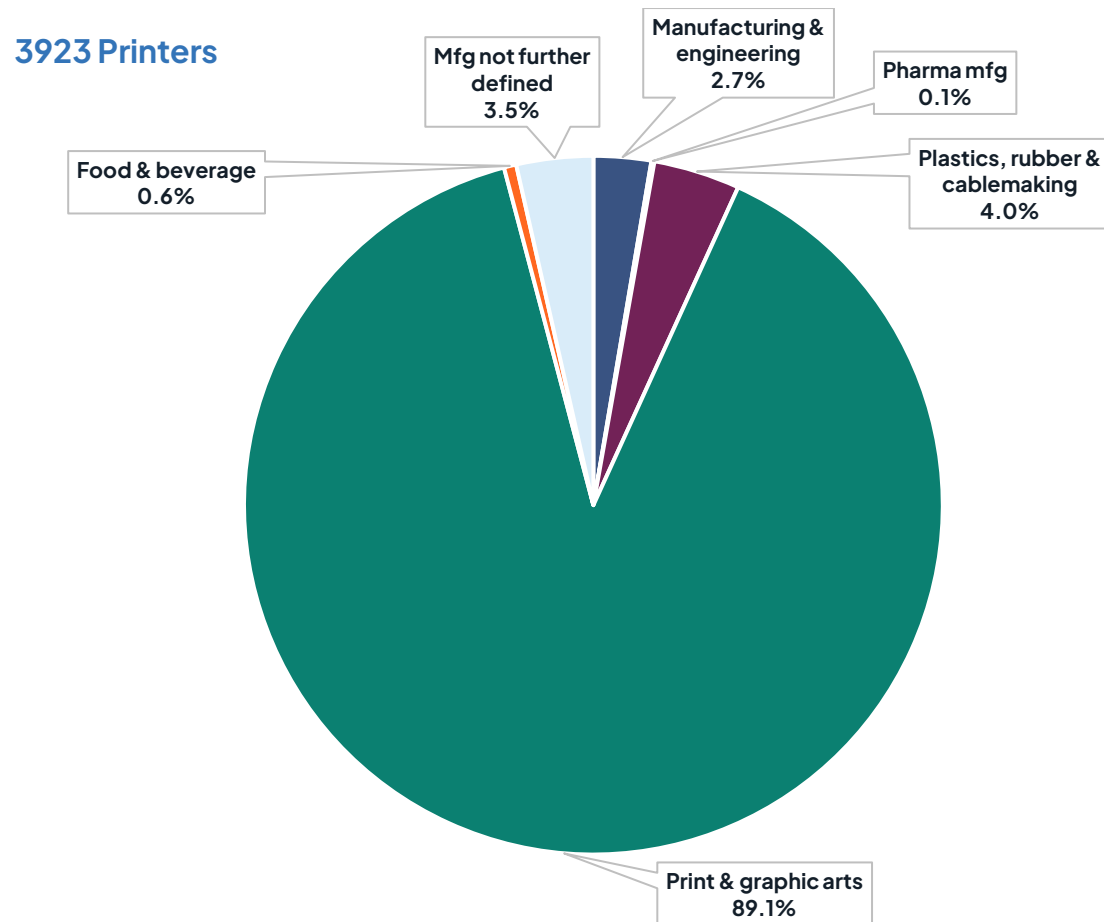


# 3923 Printers

## Estimated Vacancies – Australia



# Employment by subsector (2021)



Preliminary estimated driver:  
RETENTION GAP\*

# 3991 Boat Builders and Shipwrights

Highly male-dominated occupation group

JSA Occupation Profiles data - November 2023

The median age across all occupations is 42

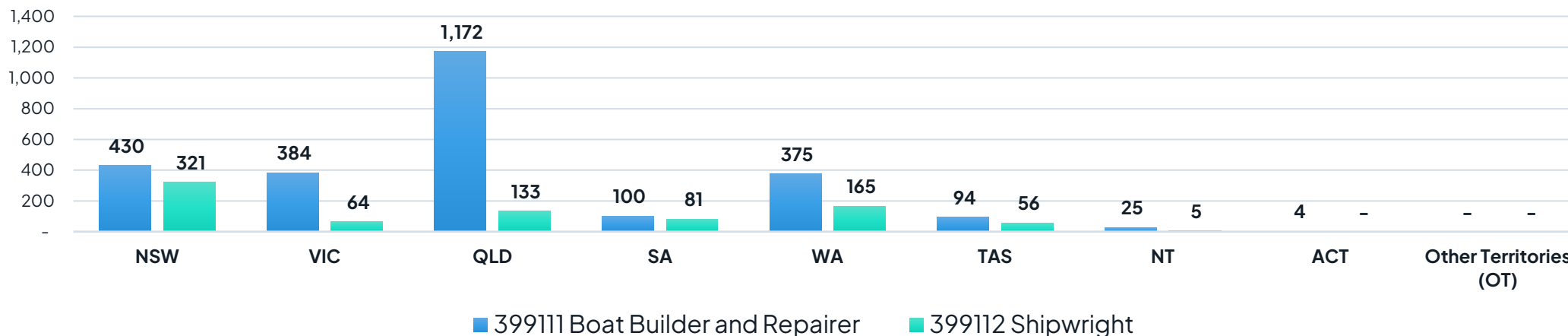
Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
12	2	\$1,685	42	5.90	+9.9%

In 2021, 76% worked in MFG

All occupations within this group have a **national shortage**.

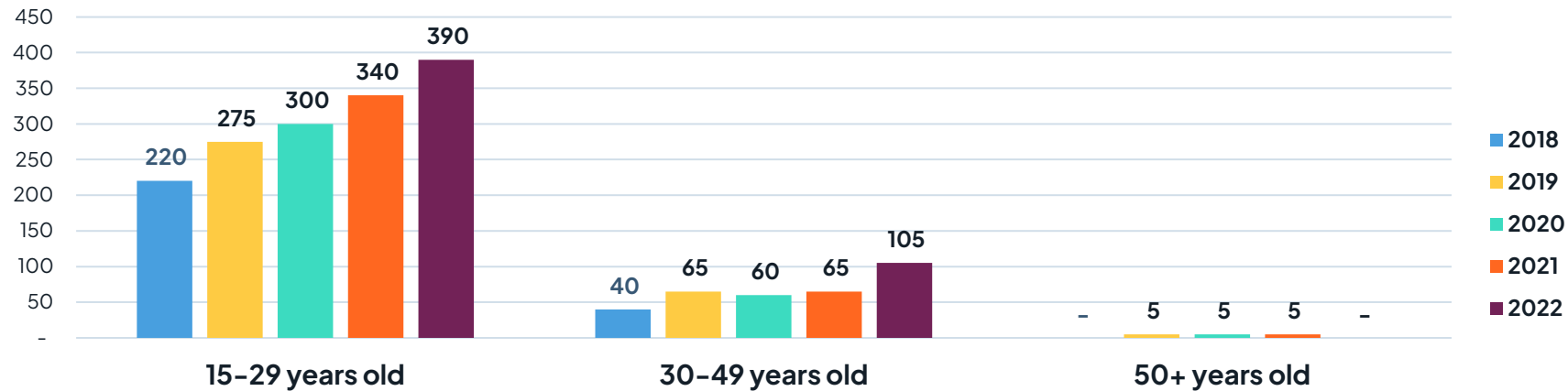
Workers by state/territory of Australia (2021)



Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVER qualification enrolments 2018-22.  
\*Retention gap shortages are where there are below average rates of retention, potentially reinforced by low numbers of new applicants per vacancy. This is a category where increasing the throughput of qualified applicants is unlikely to solve the problem because of the low likelihood of retaining them. Ways to enhance the attractiveness of the occupation through improved remuneration and/or working conditions, professional development and clearer career pathways would be potential solutions to alleviate this kind of shortage. Source: JSA Atlas Pro, accessed 22/2/24

# 3991 Boat Builders and Shipwrights

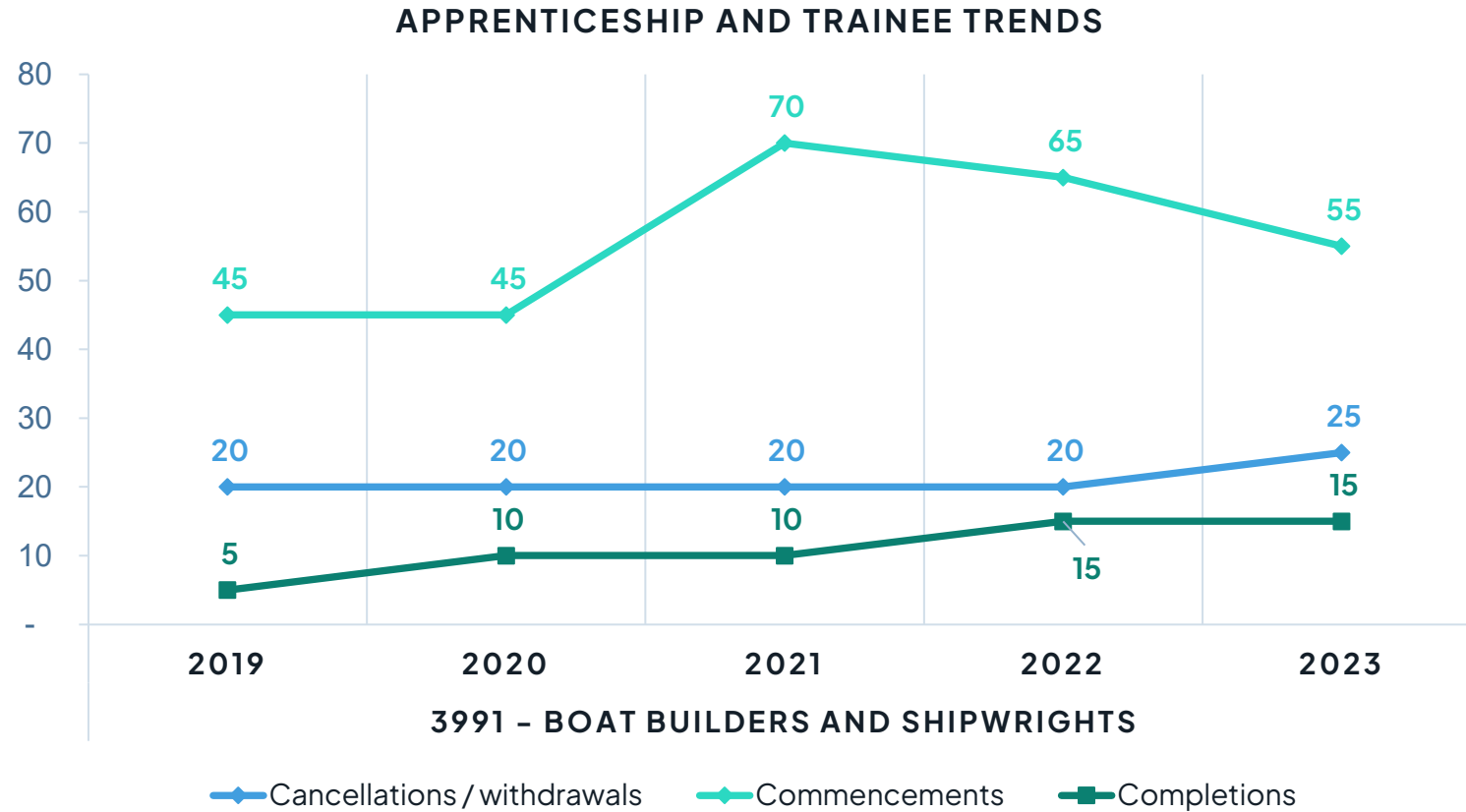
2018–2022 enrolment trend for related manufacturing training (national)



3991 – Boat Builders and Shipwrights

Qualifications from the MEM Training Package provide training for these occupations. Enrolments have grown over recent years, particularly within the 15-29 age group.

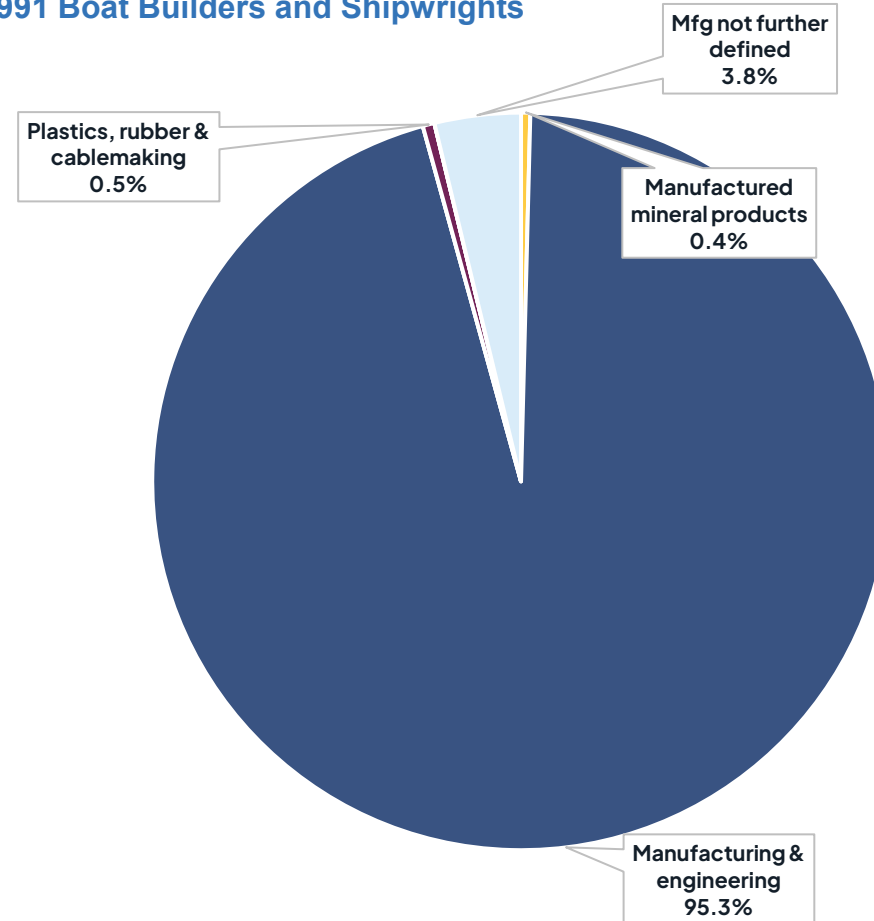
# 3991 Boat Builders and Shipwrights





# Employment by subsector (2021)

3991 Boat Builders and Shipwrights



Preliminary estimated driver:  
RETENTION GAP\*

# 7115 Plastics and Rubber Production Machine Operators

National average of PT workers: 31%\*\*

JSA Occupation Profiles data - November 2023

The median age across all occupations is 42

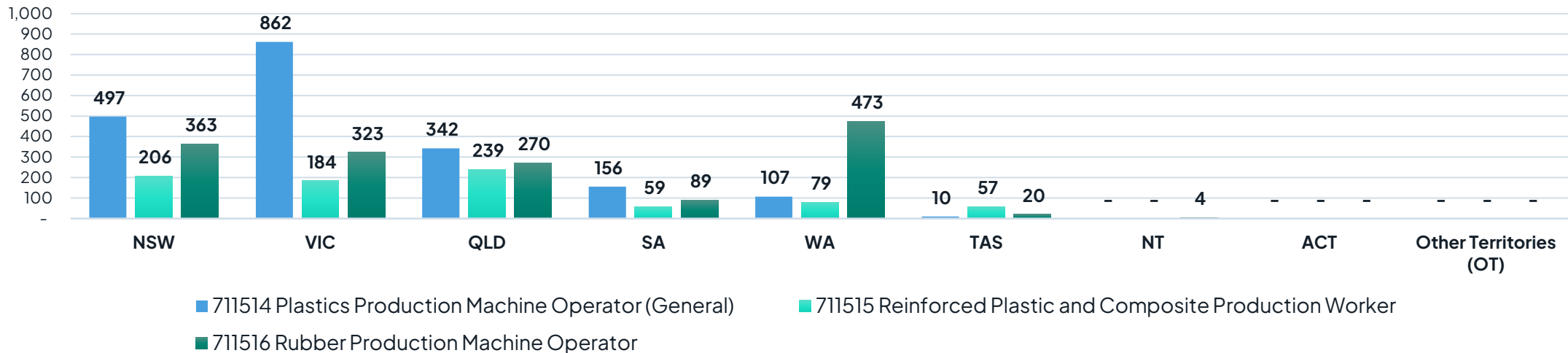
Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
5	15	\$1,294	44	6.68	+11.0%

In 2021, 51% worked in MFG

Within this occupation group, 711514 Plastics Production Machine Operator (General), 711515 Reinforced Plastic and Composite Production Worker and 711516 Rubber Production Machine Operator have **national shortages**

Workers by state/territory of Australia (2021)

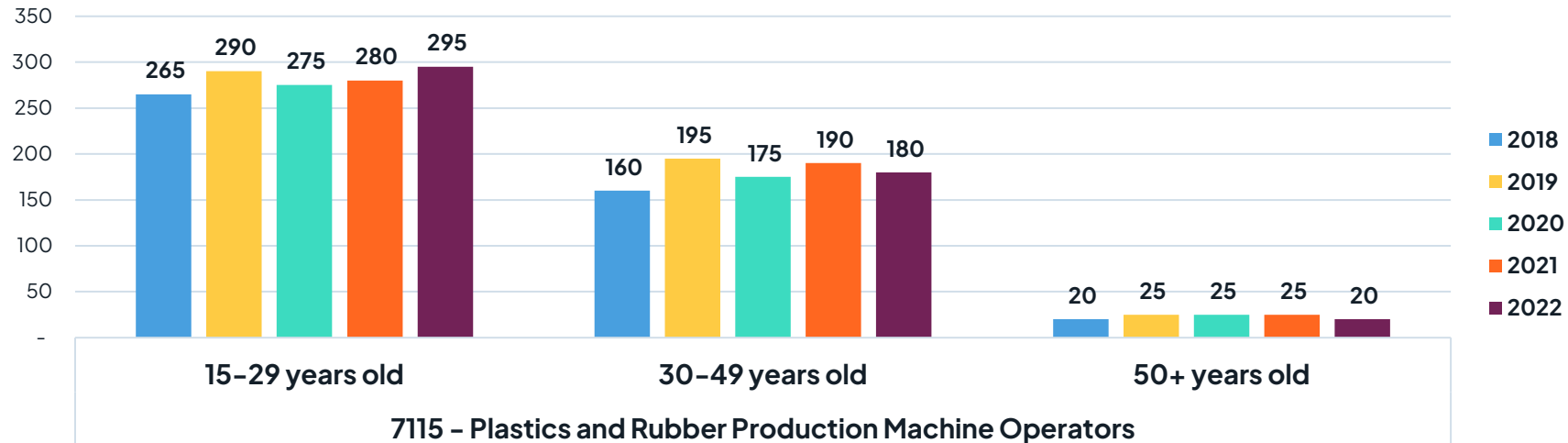


Sources: JSA Occupation Profiles Data - November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVET qualification enrolments 2018-22.

\*Retention gap shortages are where there are below average rates of retention, potentially reinforced by low numbers of new applicants per vacancy. This is a category where increasing the throughput of qualified applicants is unlikely to solve the problem because of the low likelihood of retaining them. Ways to enhance the attractiveness of the occupation through improved remuneration and/or working conditions, professional development and clearer career pathways would be potential solutions to alleviate this kind of shortage. Source: JSA Atlas Pro, accessed 22/2/24 \*\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results - January 2024)

# 7115 Plastics and Rubber Production Machine Operators

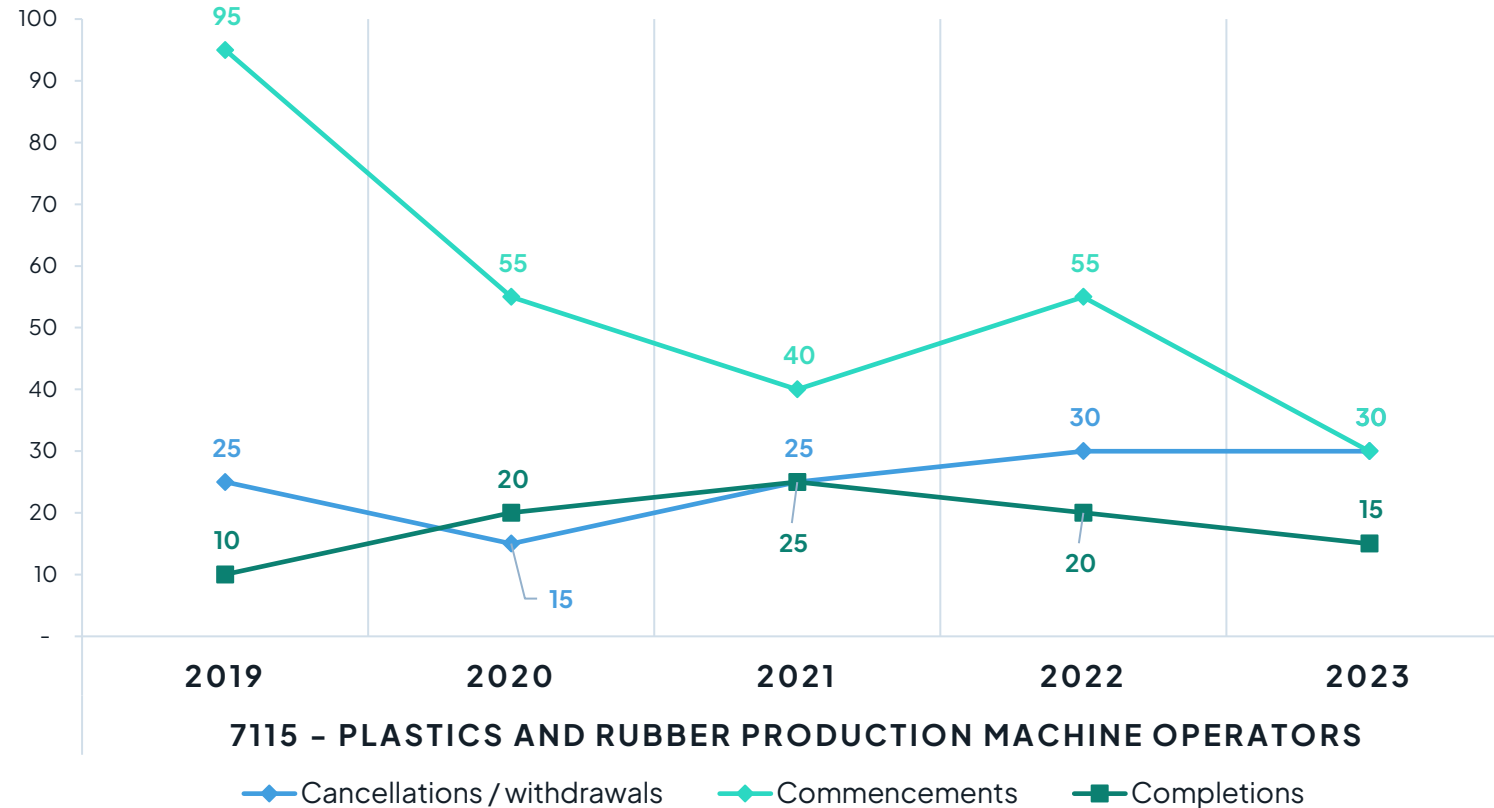
2018–2022 enrolment trend for related manufacturing training (national)



Qualifications from the PMB Training Package provide training for these occupations. Enrolments have remained relatively stable over recent years.

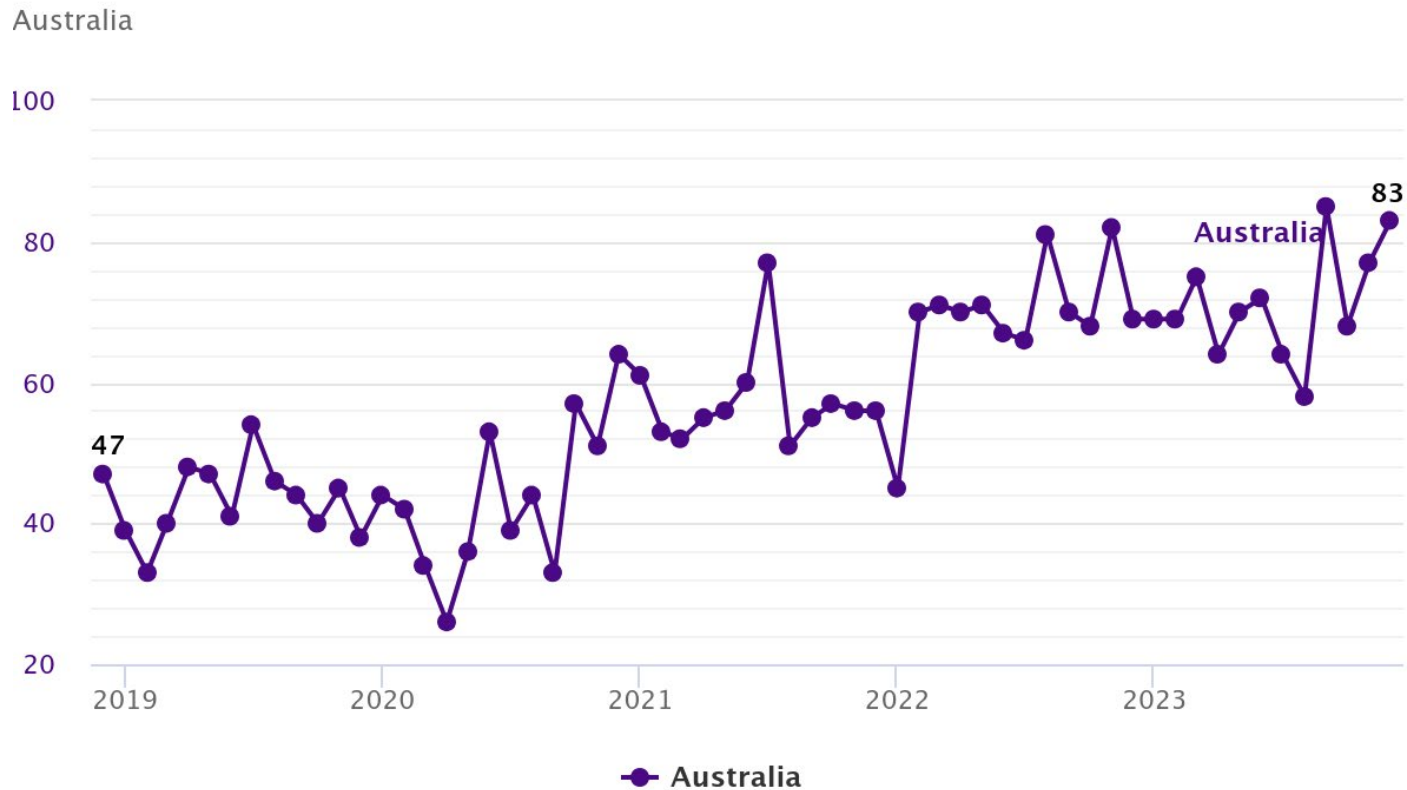
# 7115 Plastics and Rubber Production Machine Operators

APPRENTICESHIP AND TRAINEE TRENDS



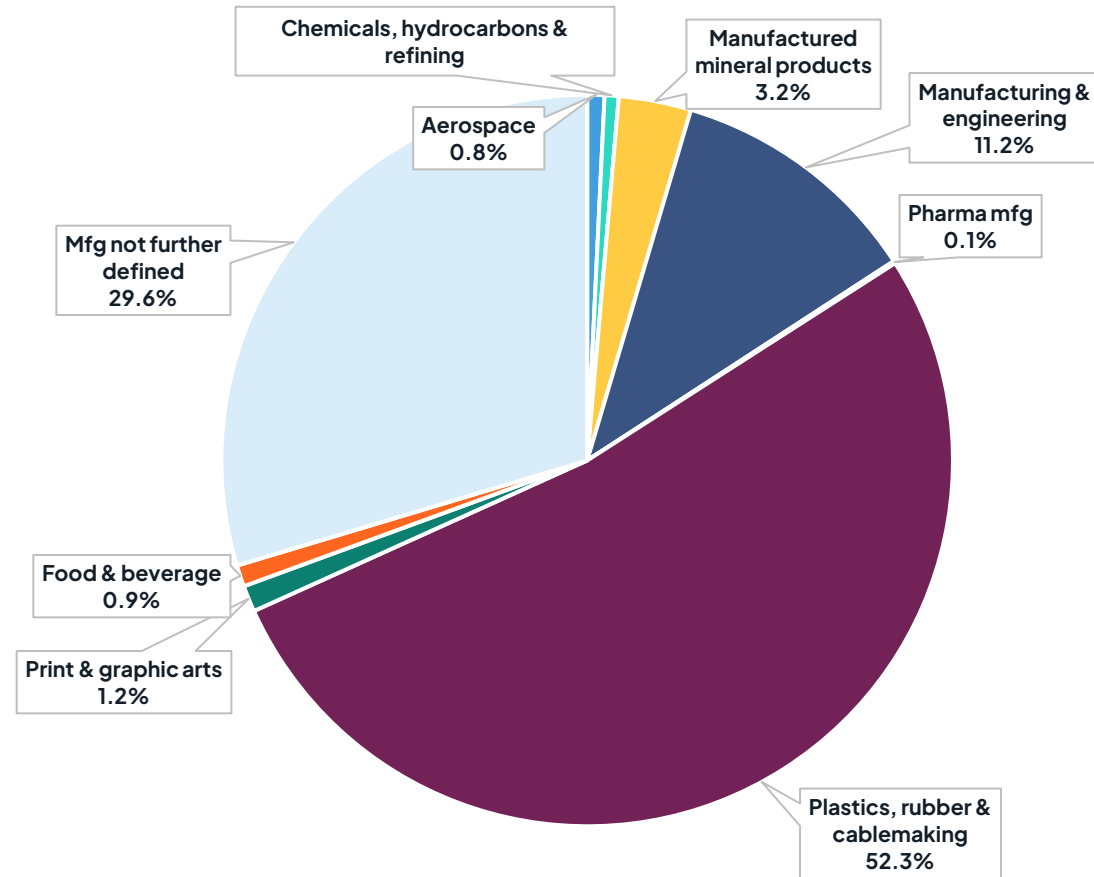
# 7115 Plastics and Rubber Production Machine Operators

## Estimated Vacancies – Australia



# Employment by subsector (2021)

## 7115 Plastics and Rubber Production Machine Operators



# 7119 Other Machine Operators

JSA Occupation Profiles data – November 2023

The median age across all occupations is 42

Projections produced by Victoria University for Jobs and Skills Australia 2023-2033

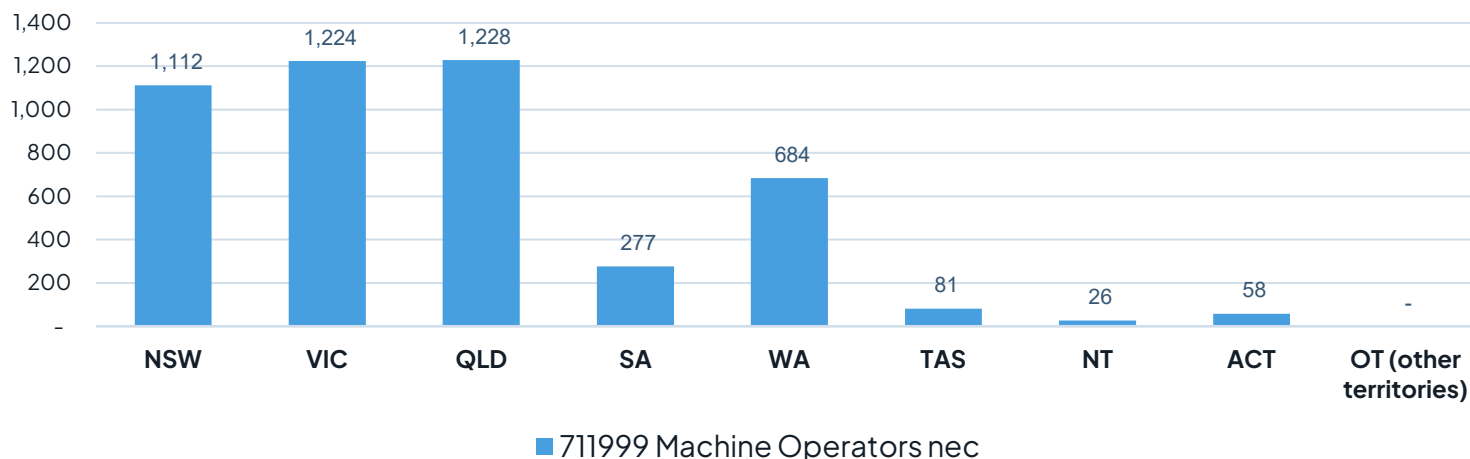
National average of PT workers: 31%\*\*

Part-time share (%)	Female share (%)	Median weekly earnings	Median age	Employed ('000) May 2023	Projected 10-year employment growth (%) to 2033
36	42	\$1,227	43	14.9	+11.7%

In 2021, 25% worked in MFG

Sources: JSA Occupation Profiles Data – November 2023, JSA Employment projections May 2023-2033, ABS Census 2021 and NCVET qualification enrolments 2018-22.

Workers by state/territory of Australia (2021)



Within this occupation group, there is a shortage of 711999 Machine Operators nec in SA.

No manufacturing VET qualifications currently provide training for the priority occupation 711999 Machine Operators nec, however, training is available under the AVI training package.

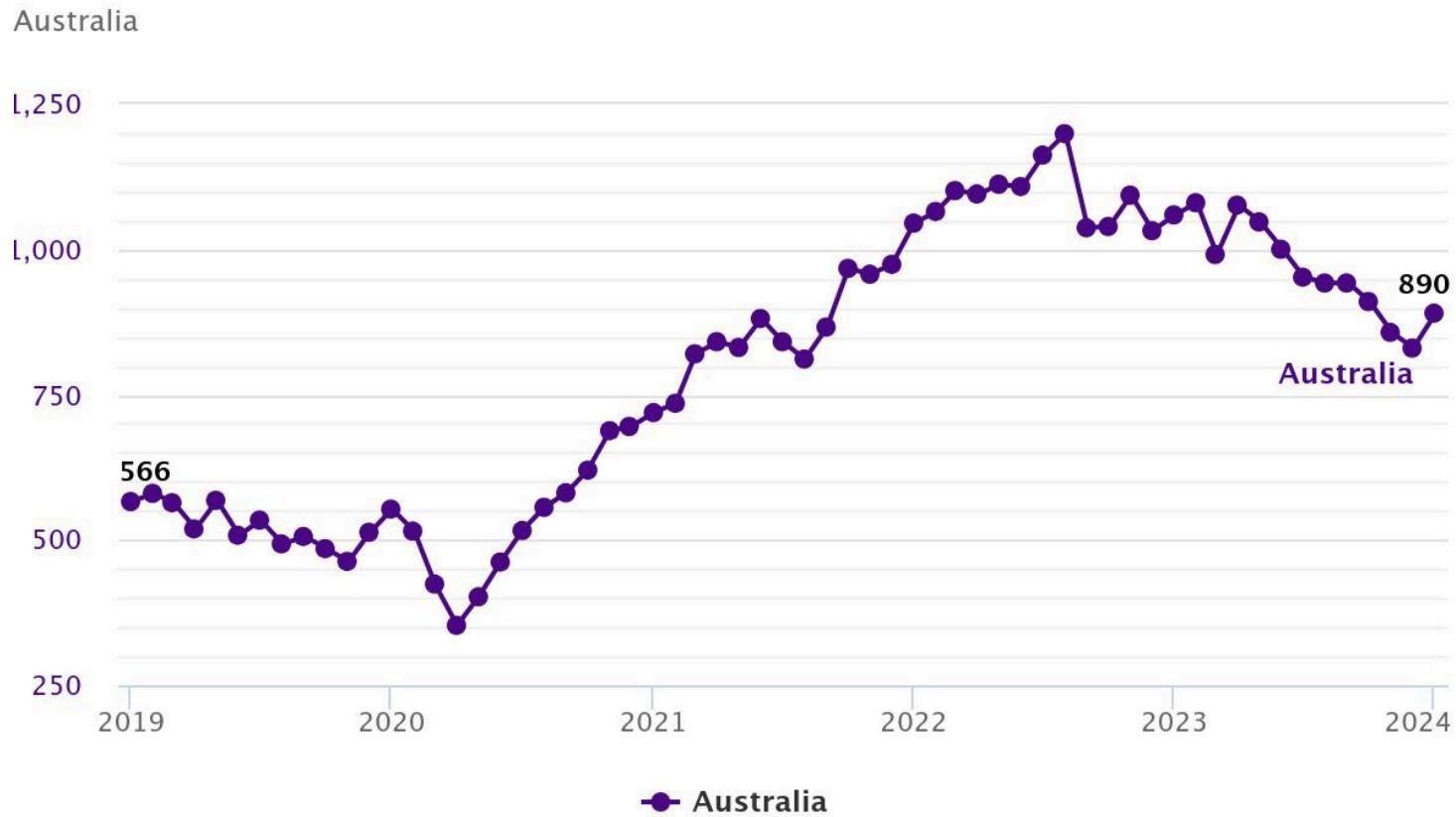
Sources: JSA Occupation Profiles Data – November 2023, Projections produced by Victoria University for Jobs and Skills Australia 2023-2033, ABS Census 2021 and NCVET qualification enrolments 2018-22. \*Retention gap shortages are where there are below average rates of retention, potentially reinforced by low numbers of new applicants per vacancy.

This is a category where increasing the throughput of qualified applicants is unlikely to solve the problem because of the low likelihood of retaining them. Ways to enhance the attractiveness of the occupation through improved remuneration and/or working conditions, professional development and clearer career pathways would be potential solutions to alleviate this kind of shortage. Source: JSA Atlas Pro, accessed 22/2/24.

\*\*In 2024, 31% of all workers were employed on a part-time basis and 69% full-time employed (source: ABS Labour Force Results – January 2024)

# 7119 Other Machine Operators

## Estimated Vacancies – Australia





# Employment by subsector (2021)

## 7119 Other Machine Operators

