



# Chris Libreri

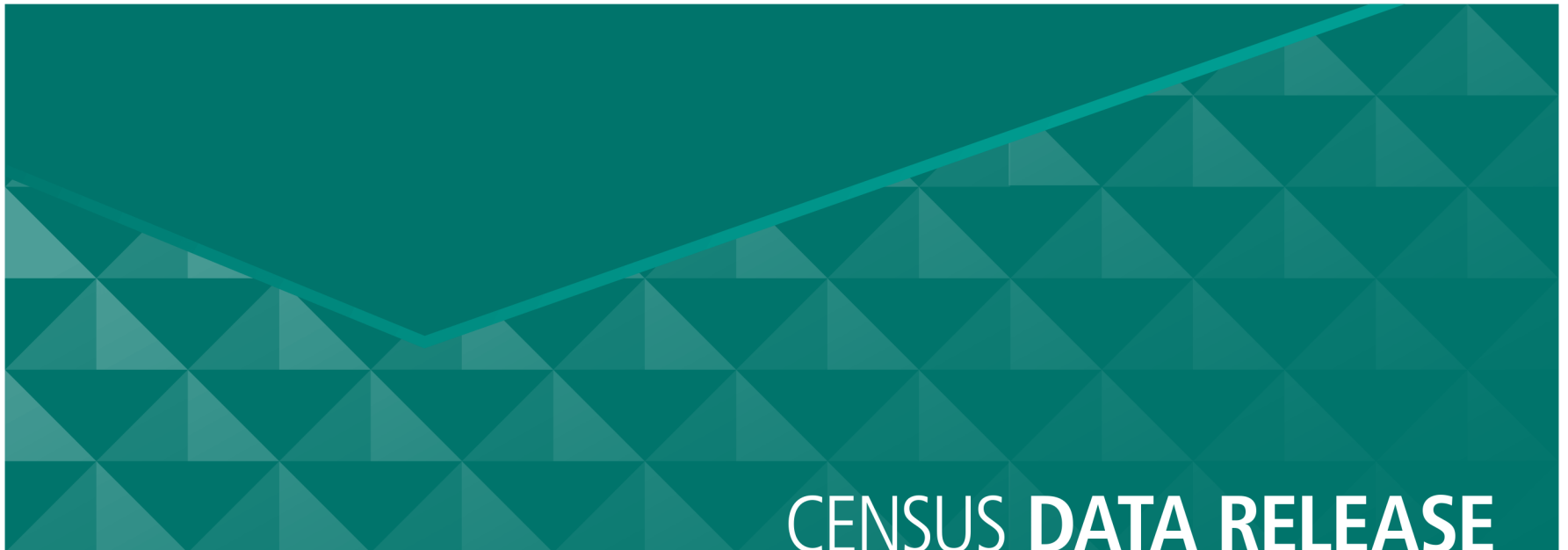
## General Manager

A large teal graphic with a geometric pattern of triangles. A white line graph is overlaid on the pattern, showing a downward trend followed by an upward trend.

**CENSUS DATA RELEASE**



# 2016 Census Data October Release





# Bindi Kindermann

## Census Branch, Program Manager

A large teal rectangular area with a geometric pattern of overlapping triangles. A white line graph is overlaid on the pattern, showing a downward trend followed by an upward trend.

**CENSUS DATA RELEASE**

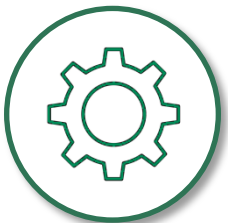
## Top line findings from the 2016 Census regarding:



Employment



Qualifications



Population mobility,  
including method of travel to work and internal  
migration

# Value of the Census

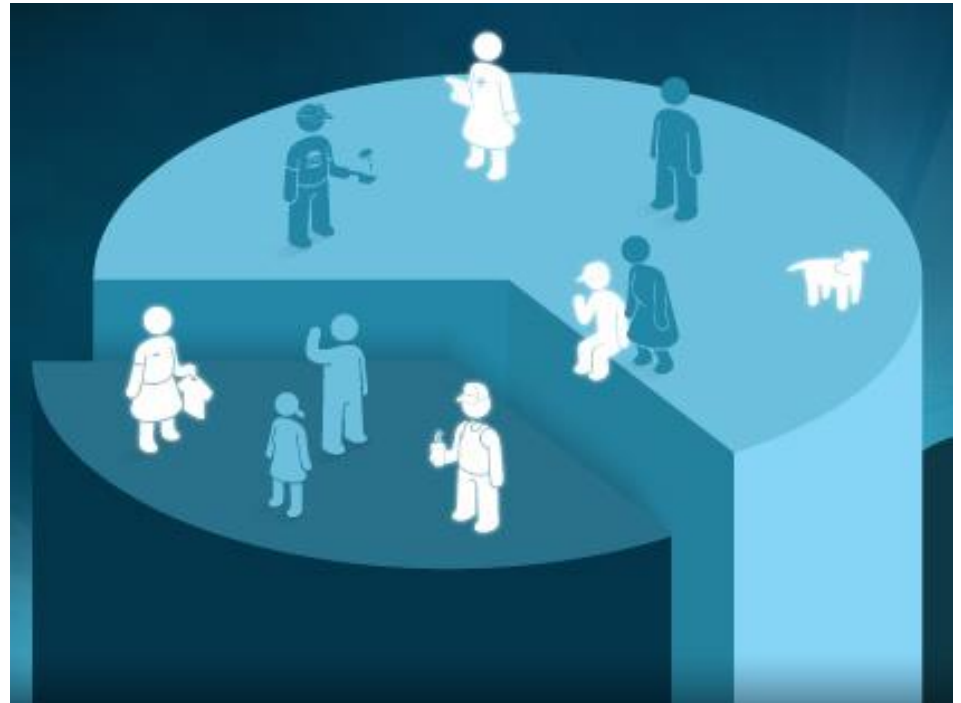


Allocation of government funds and support for elections

Government planning, administration and policy development

Use in other ABS statistics

Use by communities, businesses and researchers



*The most comprehensive and detailed picture of Australia's population and housing, and how Australia is changing.*

# High quality Census



95.1%

**Overall response rate**

63.3%

**Online response rate**

1.0%

**Net undercount**



# 2016 Census: Release dates



27 June 2017 –  
**Main data release**

Detailed data products  
available from July

**October 2017**

Additional releases 2018

July

October

2018



Person, family and household statistics

Age, sex, religion, language, income  
and many more topics

Community level data

Estimated Resident Population update

Post Enumeration Survey results

Independent Assurance Panel report

Employment, qualifications and  
population mobility topics available

- ▶ Internal migration
- ▶ Non-school qualification
- ▶ Labour force status
- ▶ Status in employment
- ▶ Occupation
- ▶ Journey to work
- ▶ Industry of employment
- ▶ Hours worked
- ▶ Method of travel to work

Australian Census Longitudinal  
Dataset

SEIFA

Census Microdata

# What we've been up to



**9.7 million**

responses coded to more than  
400 different fields of study

(as per the *Australian Standard Classification  
of Education, 2001 (ASCED)*)



**9.6 million**

responses coded  
to 21 different  
Levels of education from  
Certificate I to Doctoral degree



More than

**10.5 million**

responses coded to more than  
700 different Industries of work

(as per the *Australian and New Zealand  
Standard Industrial Classification (ANZSIC),  
2006 (Revision 2.0)* standard)



More than

**10.6 million**

responses coded to more than  
1300 different Occupations

(as per the *Australian and New Zealand  
Standard Classification of Occupations, 2013,  
Version 1.2 (ANZSCO)*)



More than

**10 million**

responses Hours Worked, which  
allows for categorisation into  
the major Labour Force Status groups

(Employed: Full-time/Part-time,  
Unemployed, Not in Labour force, etc)



In total second release  
amounts to more than

**80 million**

data points.

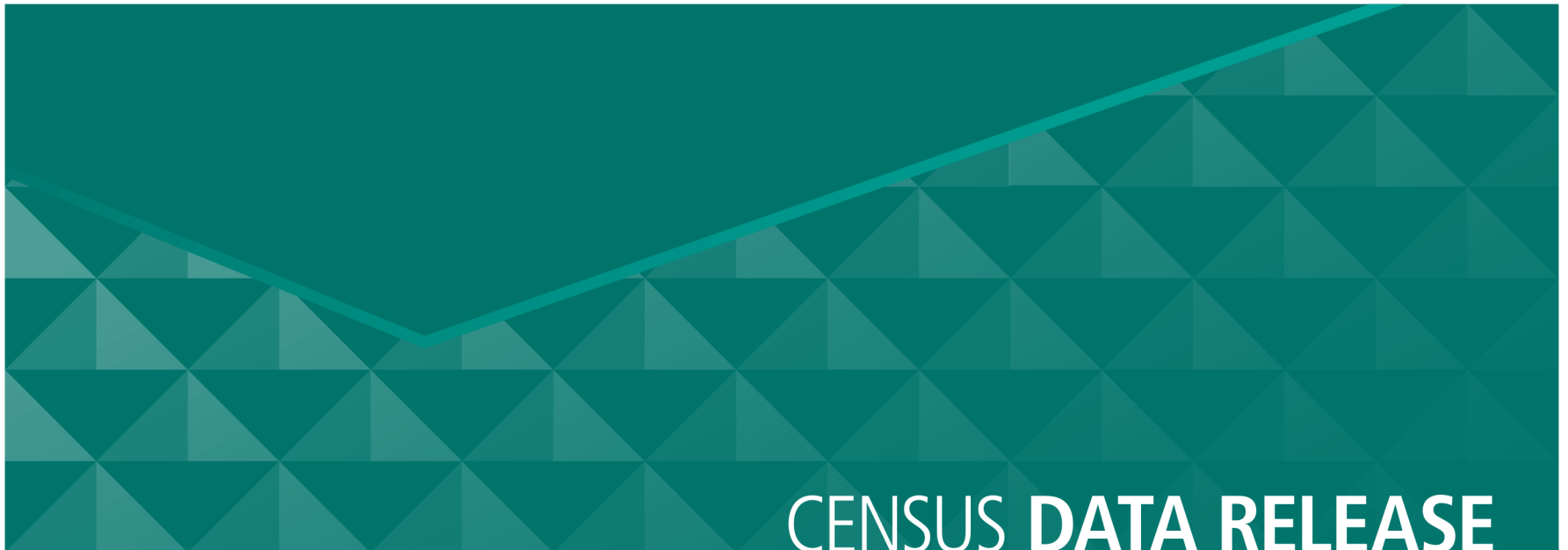




# Employment

**Bjorn Jarvis**

Labour and Income Branch, *Program Manager*



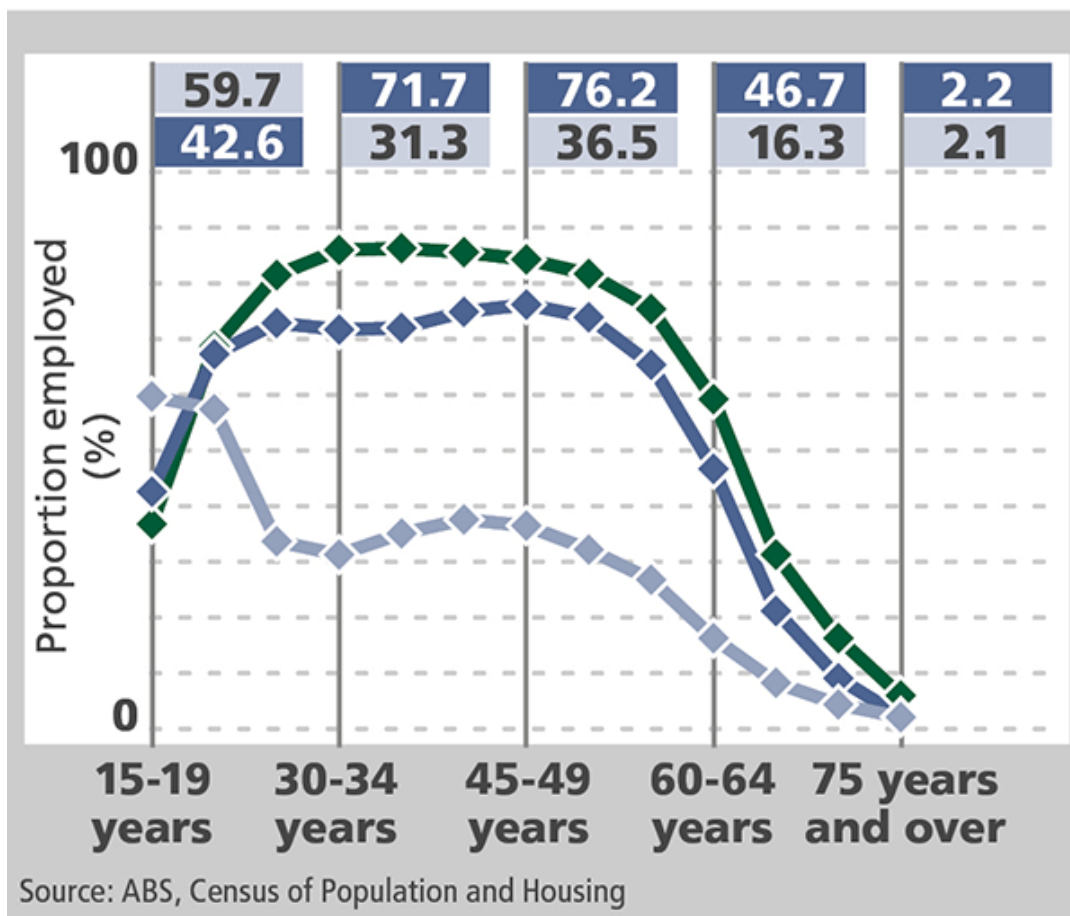
# Employment: What we collected



Employed people	Self employed people	Not employed people
<ul style="list-style-type: none"><li>• Occupation and job description</li><li>• Name of Business</li><li>• Industry of Business</li><li>• Goods/Services provided by business</li><li>• Hours worked</li><li>• Whether a respondent is an employee or self employed</li></ul>	<ul style="list-style-type: none"><li>• Number of employees</li><li>• Whether the business is Incorporated or Unincorporated</li></ul>	<ul style="list-style-type: none"><li>• Whether a respondent was actively looking for work, and</li><li>• Whether a respondent was available to start work</li></ul>

# Employment by age: Census

Proportion of people employed in each age group – 1966 and 2016



# Top industries of employment



## Health Care and Social Assistance

1.35 Million Australians  
13% of employed people



## Retail Trade

1.05 Million Australians  
10% of employed people



## Education and Training

920,000 Australians  
9% of employed people



## Construction

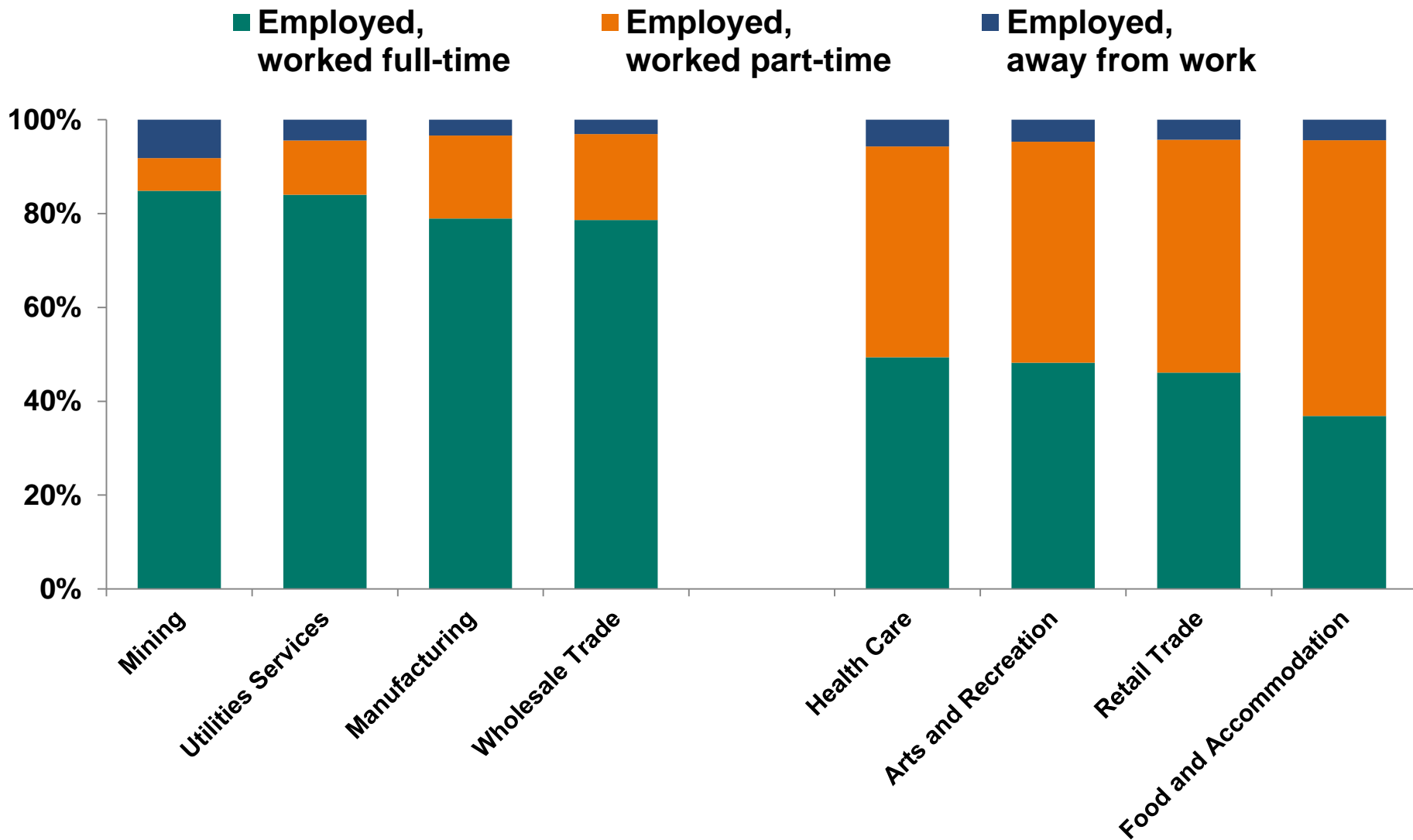
910,000 Australians  
9% of employed people



## Professional, Scientific and Technical Services

775,000 Australians  
8% of employed people

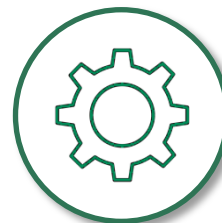
# Distribution of full-time employment by industry



# Changing picture of industries: 2011 - 2016



**Arts and Recreation Services**  
16.6% growth since 2011



**Manufacturing**  
24.3% decline since 2011



**Health Care and Social Assistance**  
15.7% growth since 2011



**Wholesale Trade**  
23.8% decline since 2011



**Education and Training**  
15.1% growth since 2011



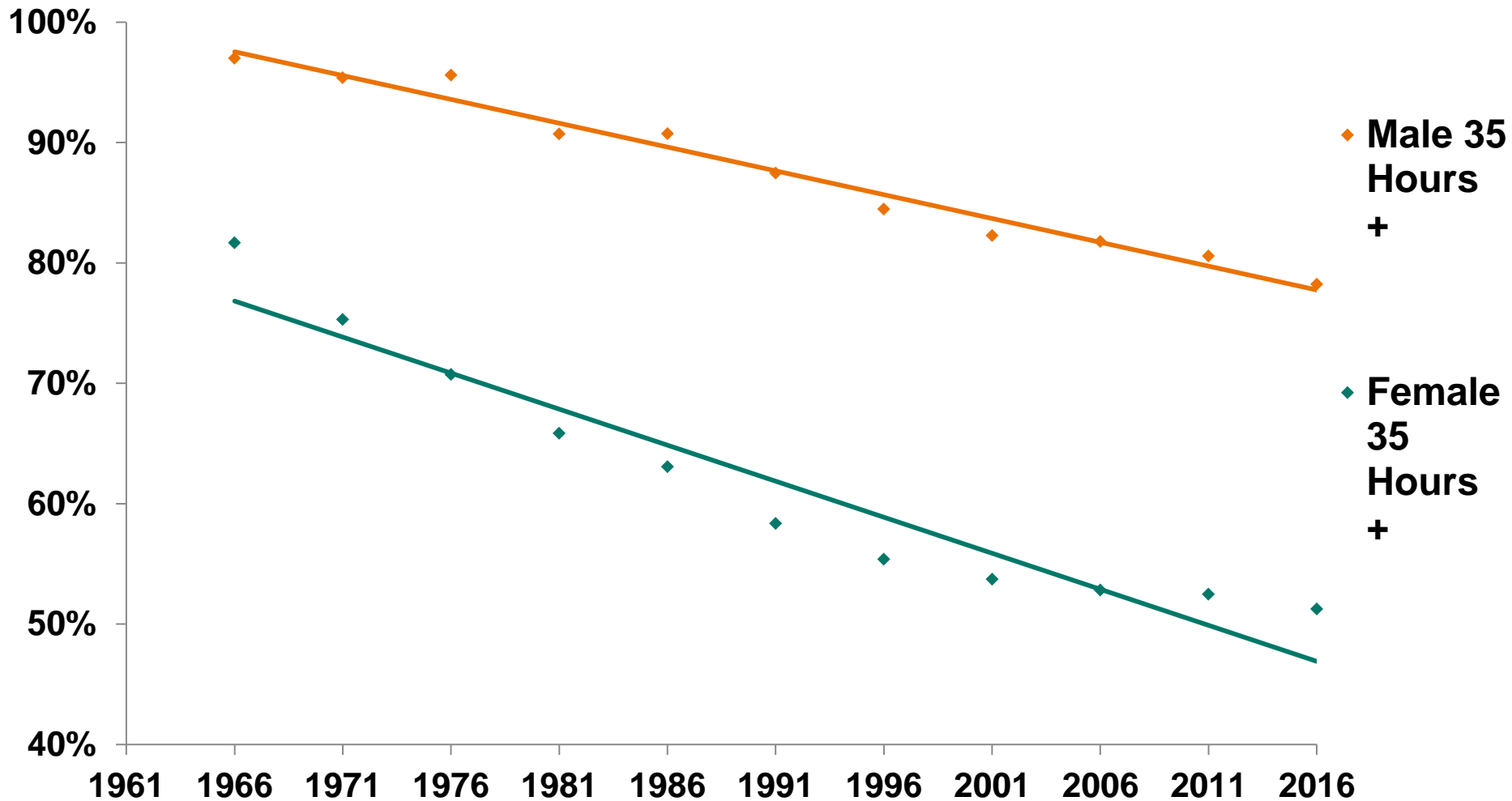
**Retail Trade**  
0.3% decline since 2011

# Changing picture of industries: 2011 - 2016



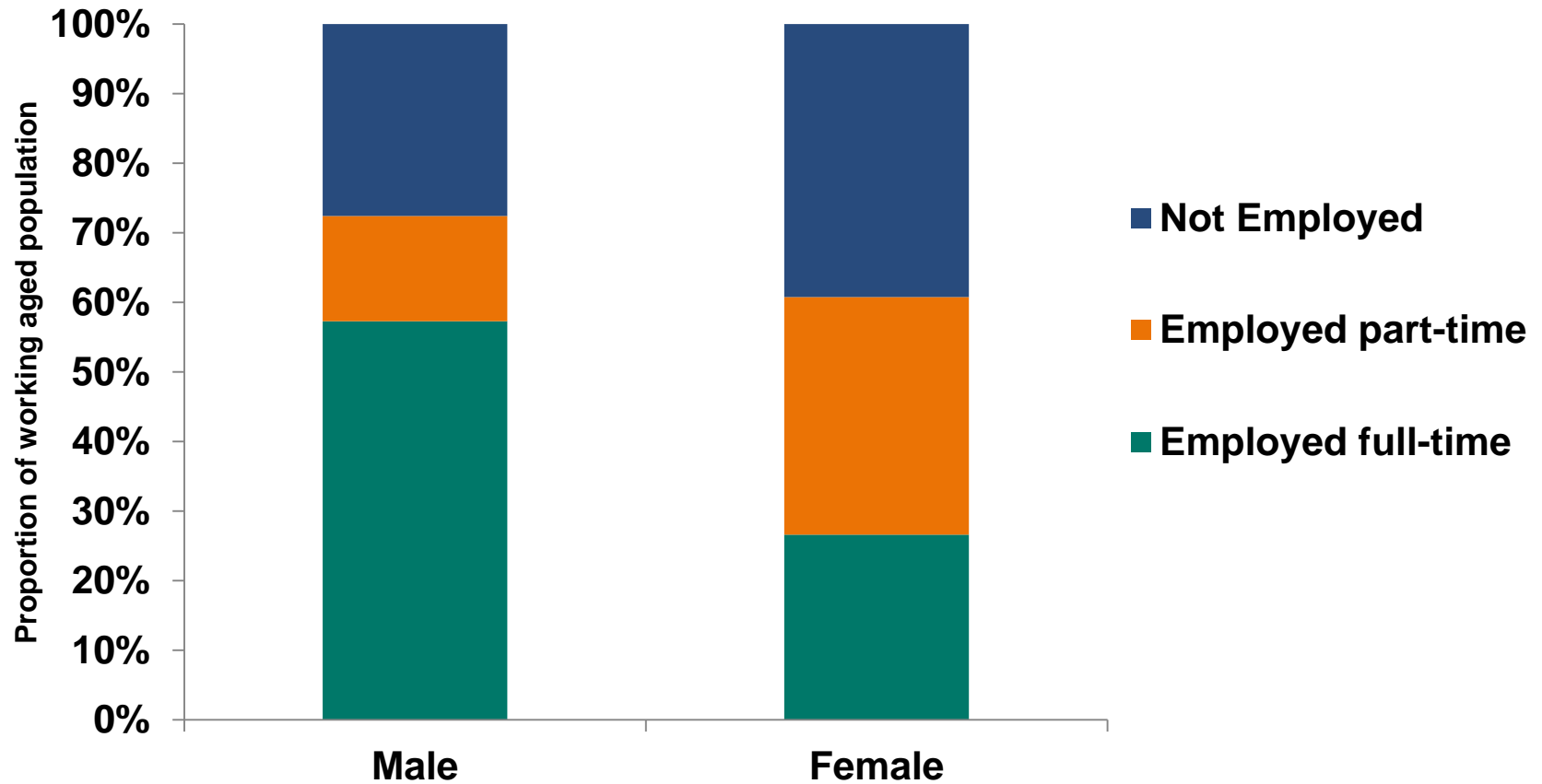
State	Industry	Growth (%)
NSW	Construction	1.3
	Manufacturing	- 2.5
VIC	Health Care and Social Assistance	1.3
	Manufacturing	- 2.8
QLD	Health Care and Social Assistance	1.4
	Manufacturing	- 2.3
SA	Health Care and Social Assistance	1.4
	Manufacturing	- 2.5
WA	Health Care and Social Assistance	1.7
	Manufacturing	- 2.6
TAS	Health Care and Social Assistance	2.4
	Manufacturing	- 1.8
NT	Construction	2.2
	Public Administration and Safety	- 2.3
ACT	Health Care and Social Assistance	1.3
	Public Administration and Safety	- 1.6

# Hours worked (full-time): 1966 – 2016



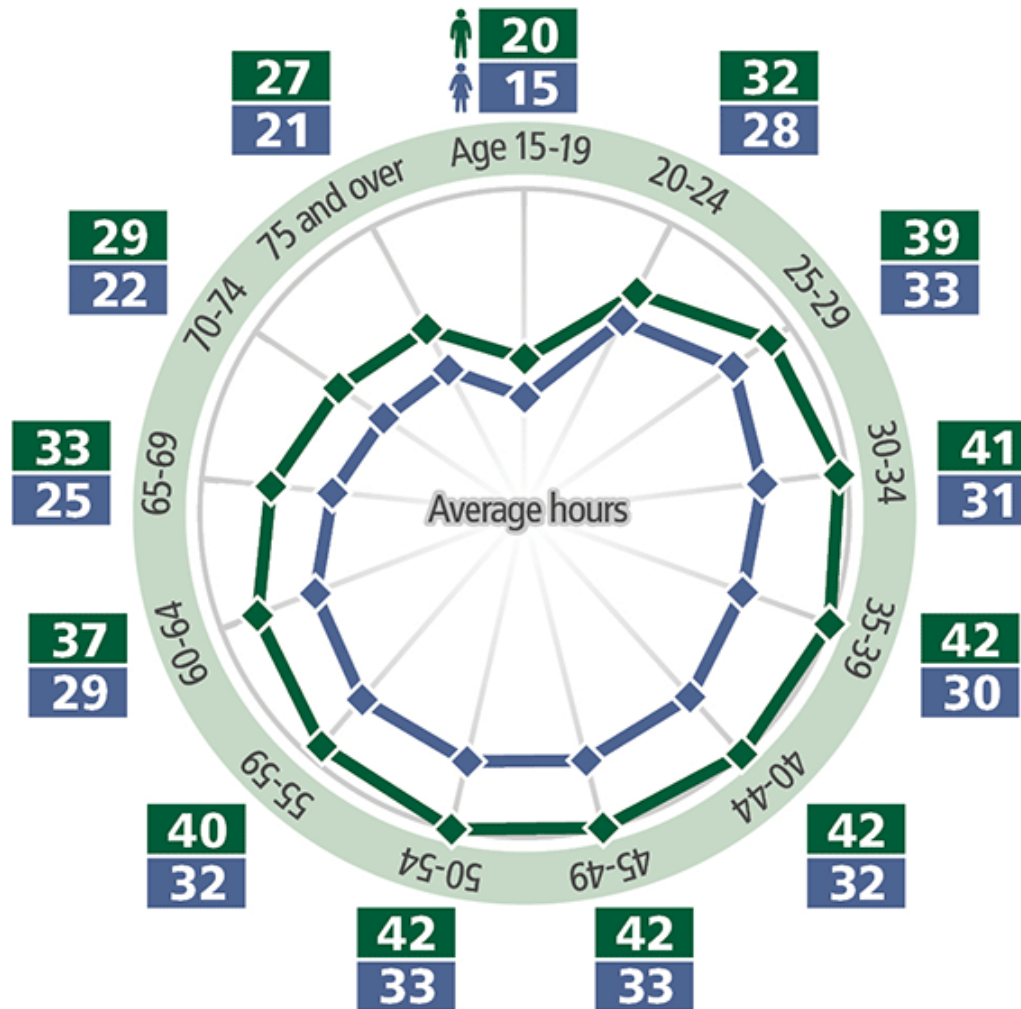


# Working parents



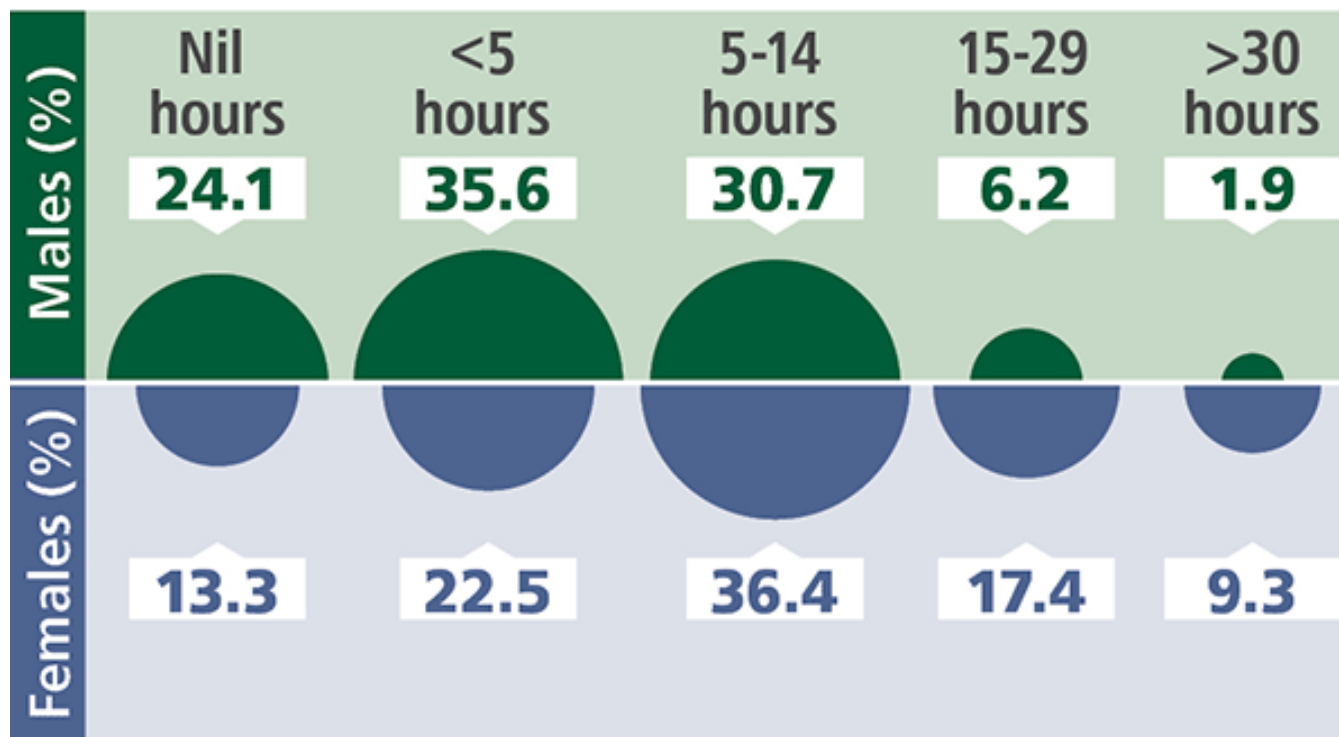
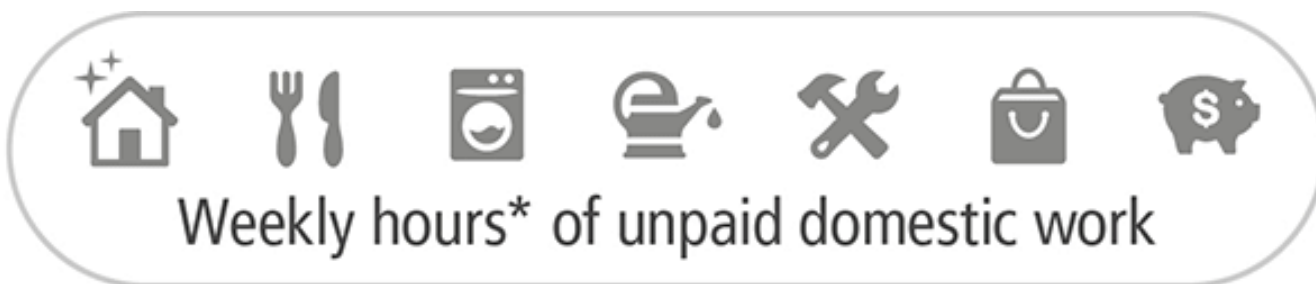
# Working hours as we get older

Average hours worked in week prior to Census



Source: ABS, 2016 Census of Population and Housing

# Domestic work



\*Hours in the week prior to Census for employed people.

Source: ABS, 2016 Census of Population and Housing

# Top occupations & industries

## Top four occupations

### Males

Sales assistants  
(general)  
**170 168**



**1**

Truck drivers  
**143 710**



**2**

Electricians  
**113 458**



**3**

Carpenters  
and joiners  
**101 134**



**4**

### Females

Sales assistants  
(general)  
**355 843**



Registered nurses  
**197 124**



General clerks  
**186 529**

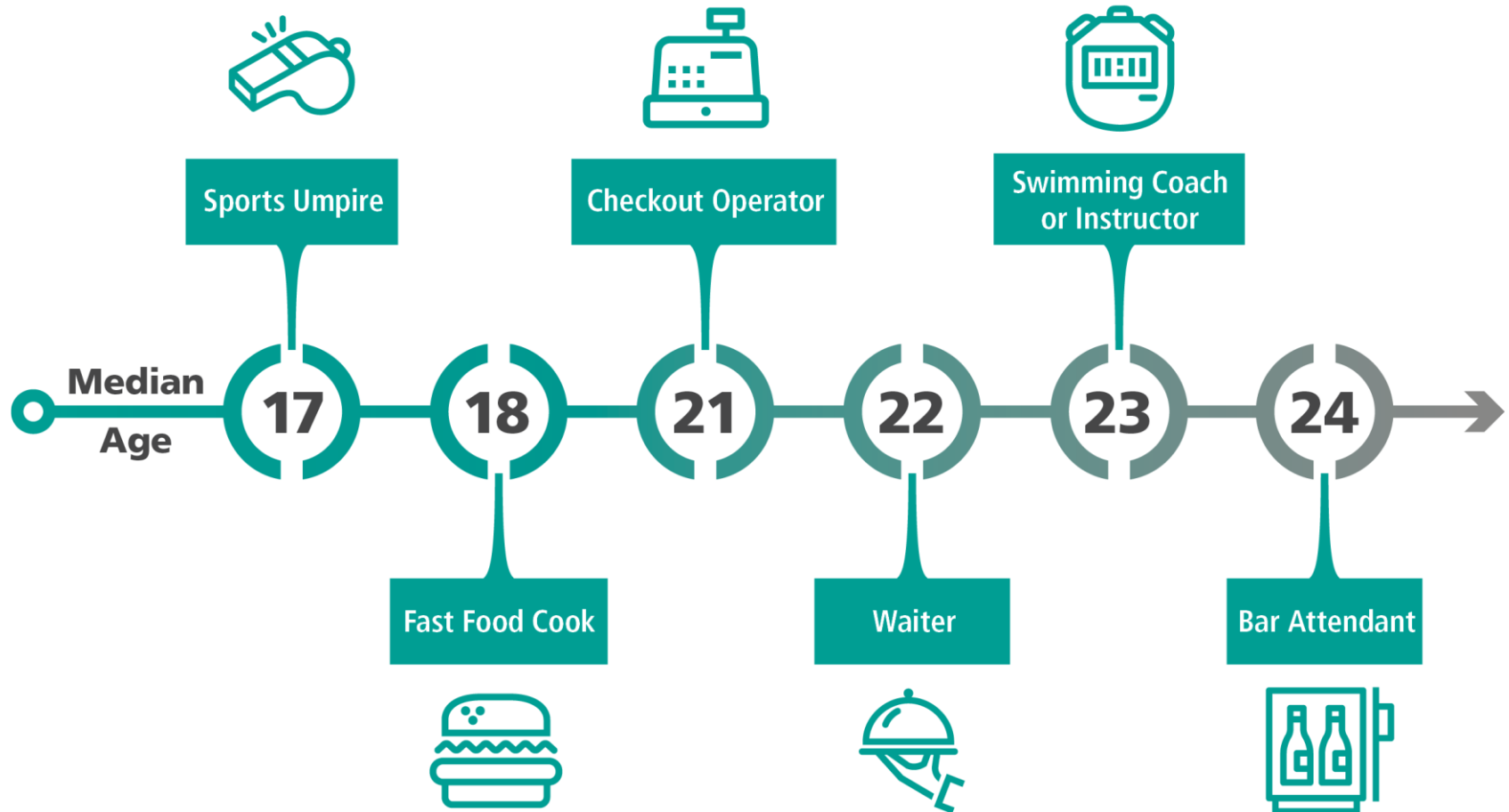


Receptionists  
**146 698**

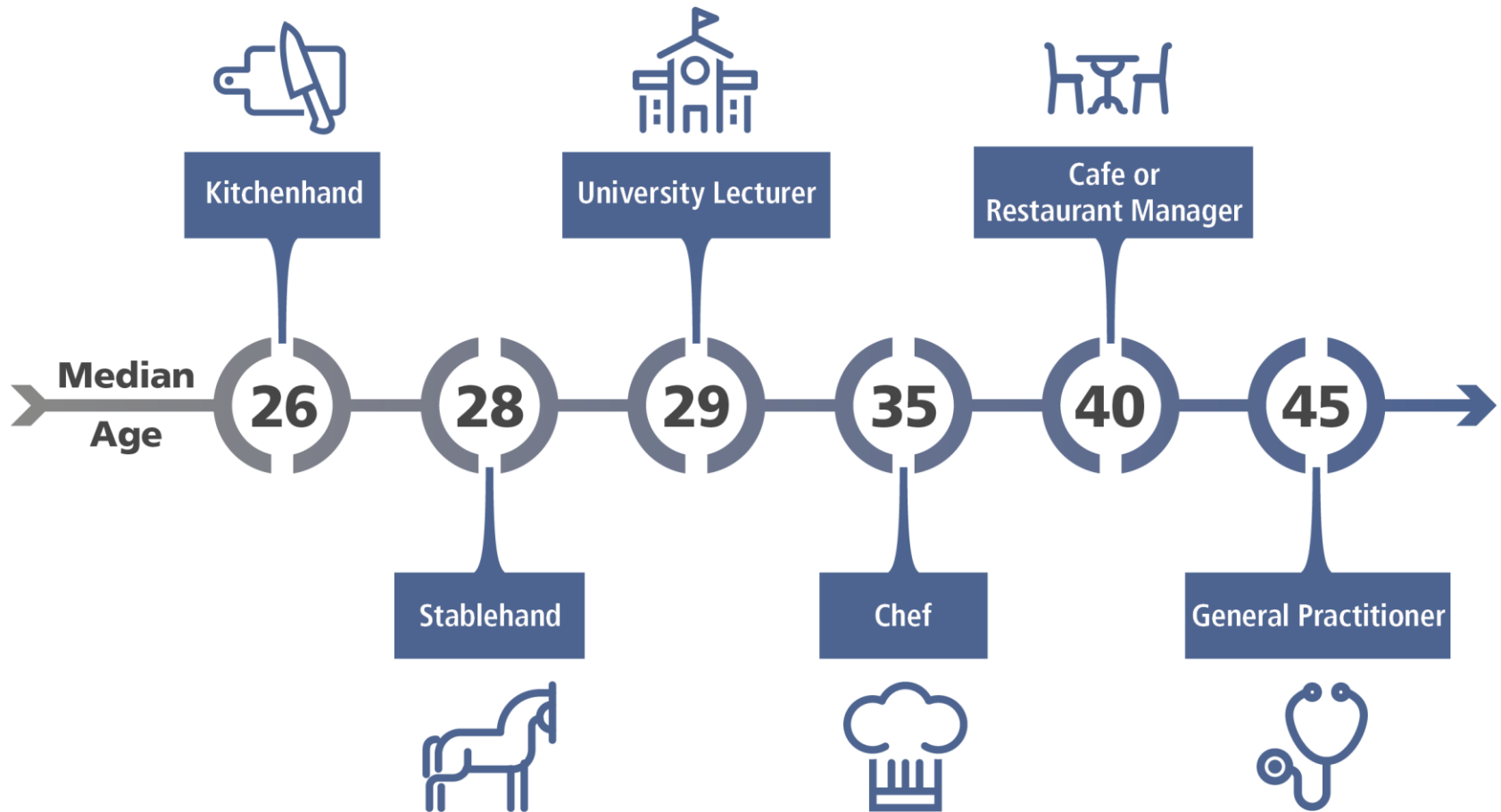


Source: ABS, 2016 Census of Population and Housing

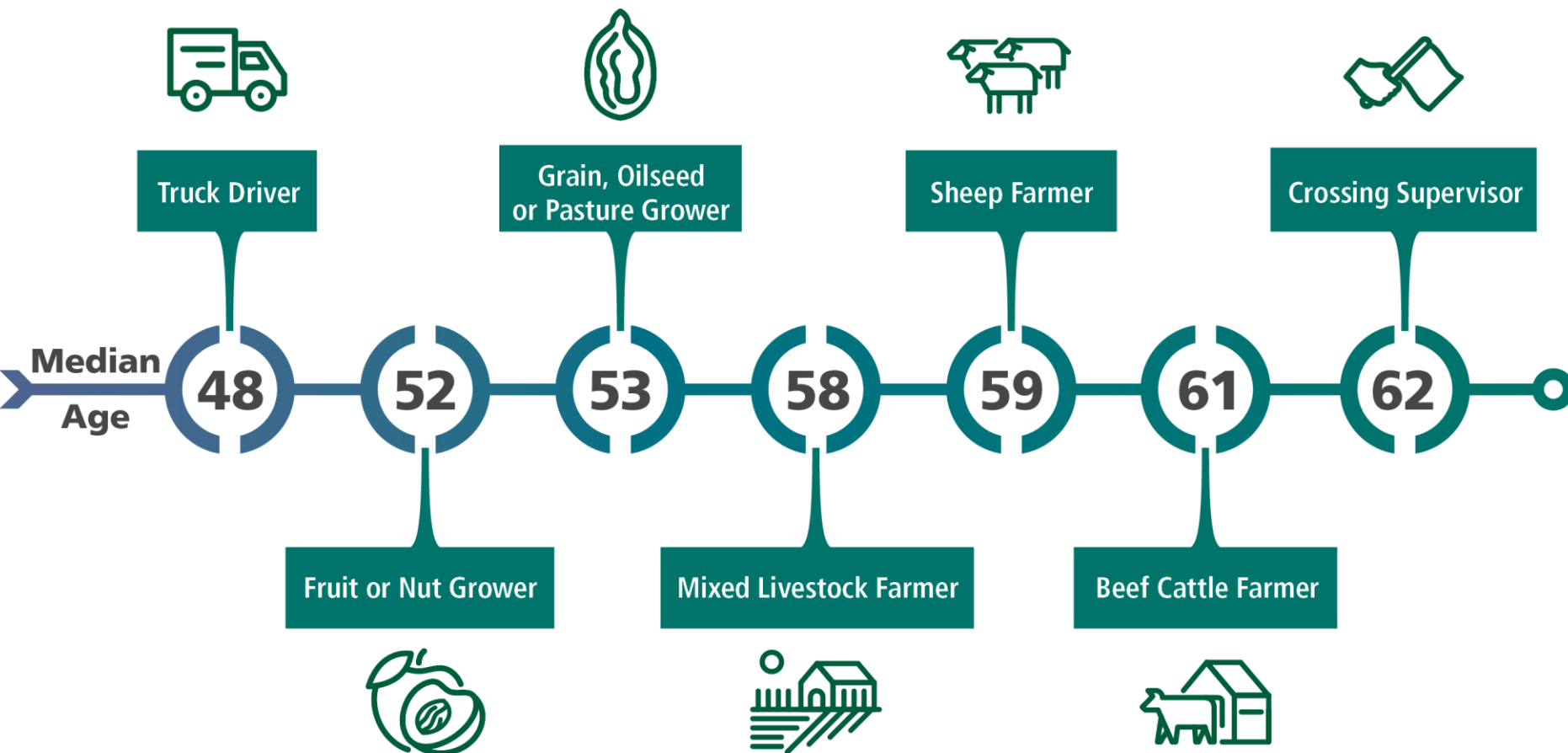
# Median age for selected occupations



# Median age for selected occupations



# Median age for selected occupations



# How we work: older Australians



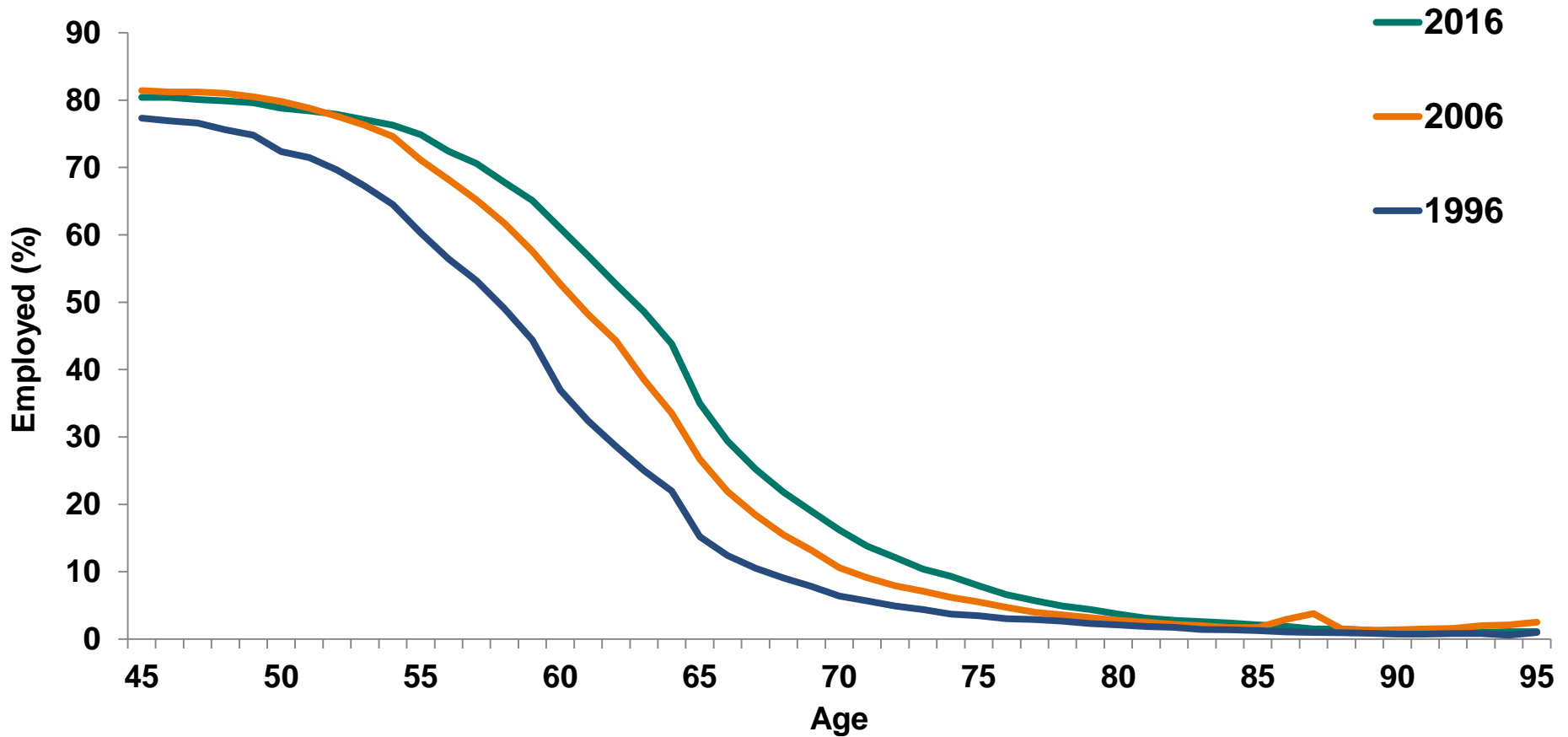
	Age Range				
	60-64 years	65-69 years	70-74 years	75-79 years	80-84 years
Average Hours Worked	33	30	26	25	25
Employed (%)	52.8	26.1	12.6	6.0	3.0
Median Income	626	468	435	422	421
Top Occupation	Sales Assistant (General)	Sales Assistant (General)	Beef Cattle Farmer	Beef Cattle Farmer	Beef Cattle Farmer



# How we work: older Australians



## % Employed: 1996-2016 Aged 45-95 years





# Qualifications

**Phillip Wise**

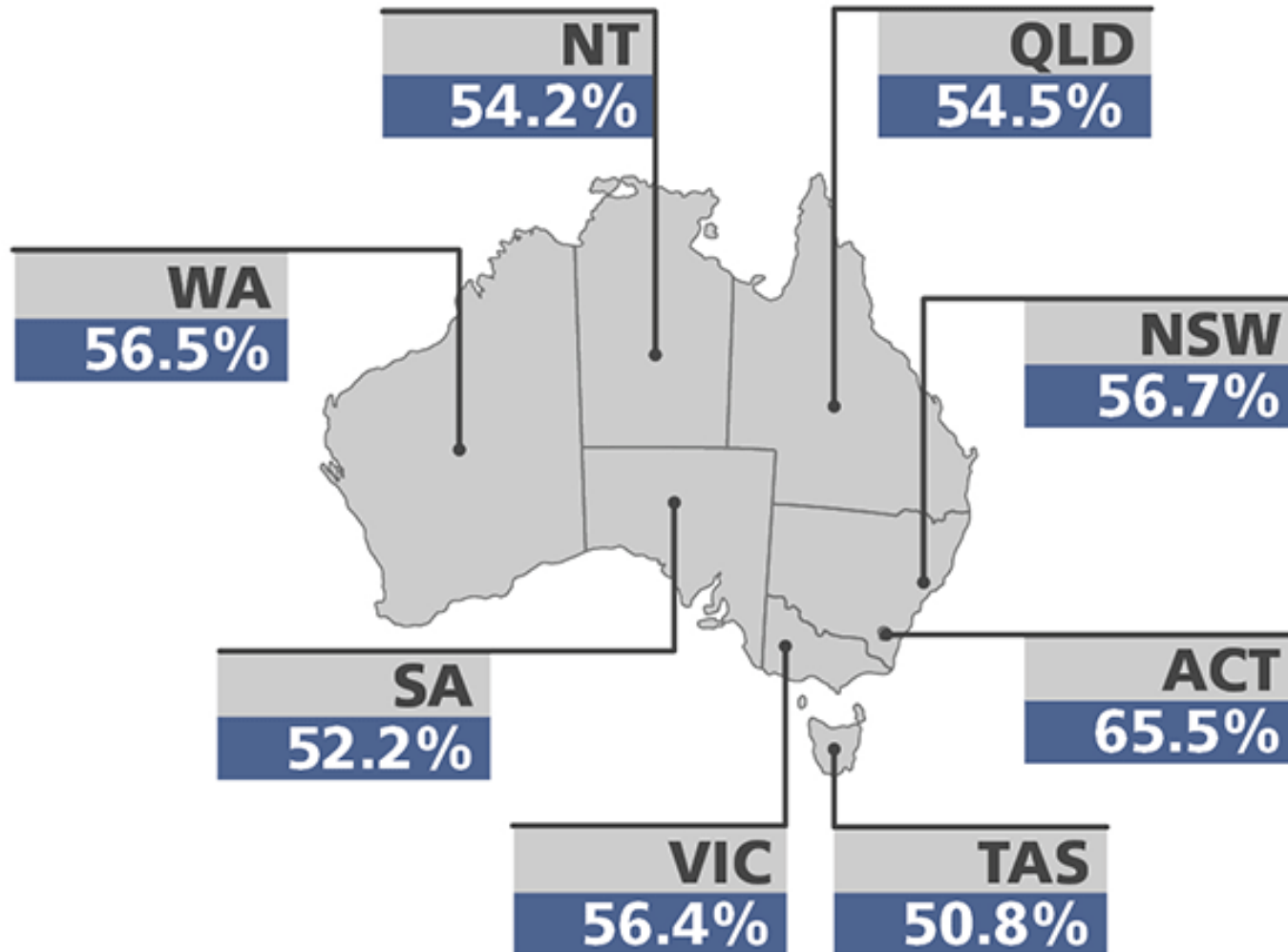
*Director (A/g), Census Dissemination*

**CENSUS DATA RELEASE**

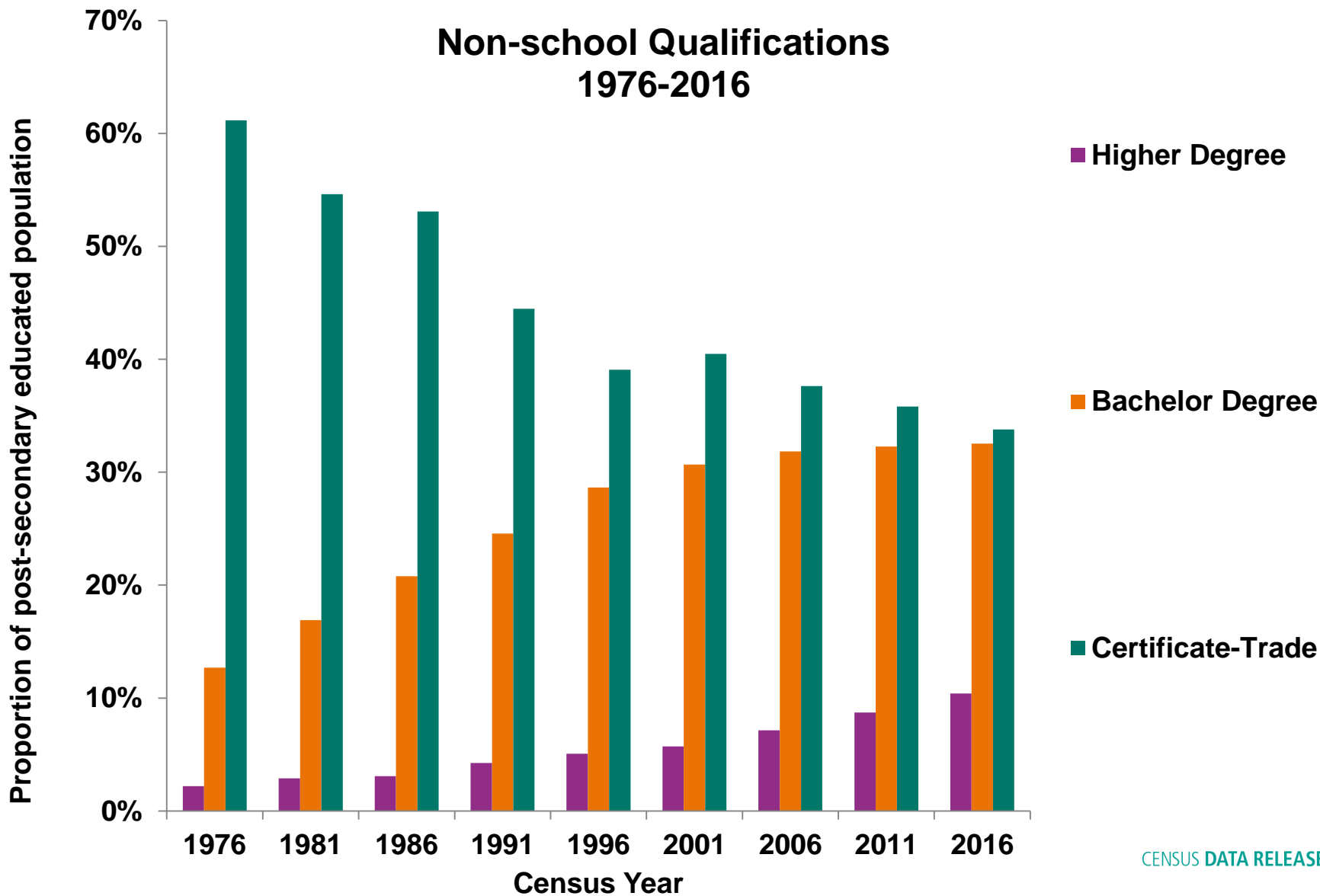
What we collected	What we output
<ul style="list-style-type: none"><li>• <b>Current attending status (full time/ part time/ not attending)</b></li><li>• <b>Type of educational institution attending</b></li><li>• <b>Field of study</b></li><li>• <b>Level of study</b></li><li>• <b>Highest level of education attained</b></li><li>• <b>Field of qualification attained</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Current education and attained qualifications coded to the Australian Standard Classification of Education, 2001 (ASCED, cat no. 1272.0)</b></li><li>• <b>School and non-school qualifications combined to derive the Highest level of Educational Attainment as a single variable (HEAP)</b></li></ul>

# Qualifications across Australia

Proportion of people with a non-school qualification

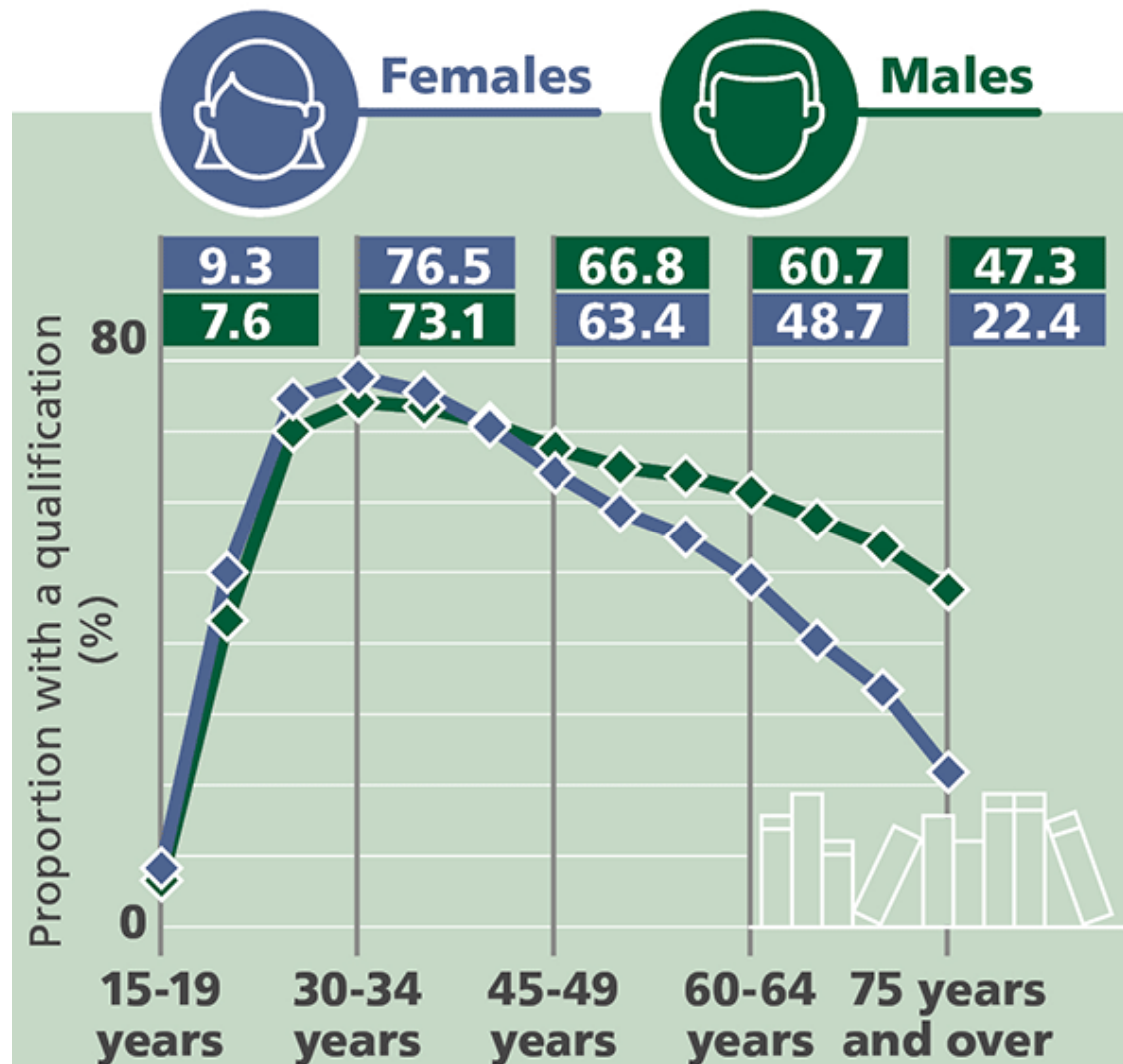


# Attainment of non-school qualifications: 1976 - 2016



# Qualifications by sex by age

Males and females with non-school qualifications



Source: ABS, 2016 Census of Population and Housing

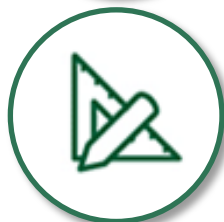
# Top fields of study



## Management and Commerce

2.1 Million Australians

22% of people with non-school qualifications



## Engineering and Related Technologies

1.7 Million Australians

17% of people with non-school qualifications



## Society and Culture

1.3 Million Australians

13% of people with non-school qualifications



## Health

1 Million Australians

11% of people with non-school qualifications

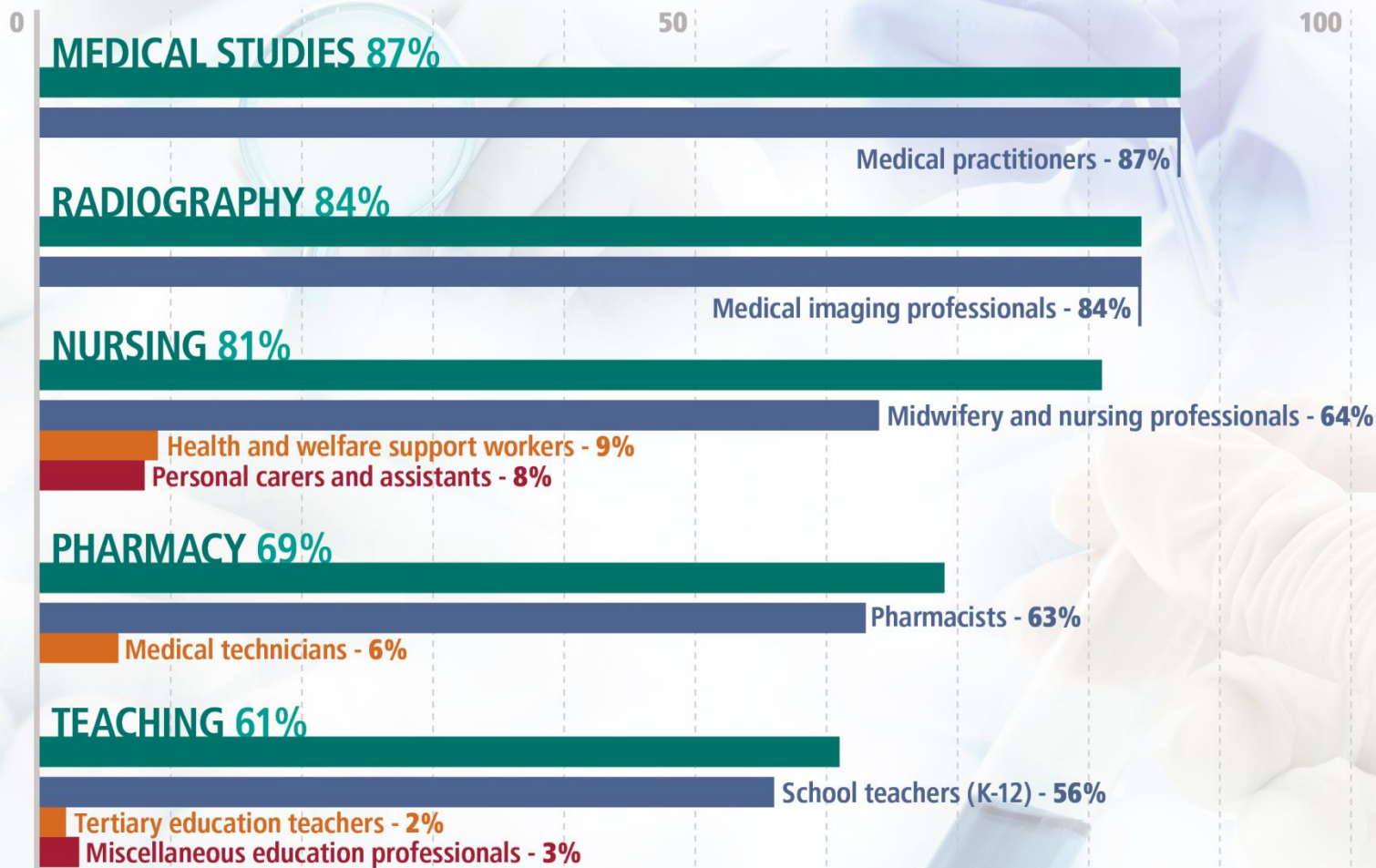


## Education

845,000 Australians

9% of people with non-school qualifications

# Turning qualifications into jobs
















# Qualifications with a diverse jobs outlook



# Level of education, employment and income

Employment and income by qualification level –  
people aged 20-64 years

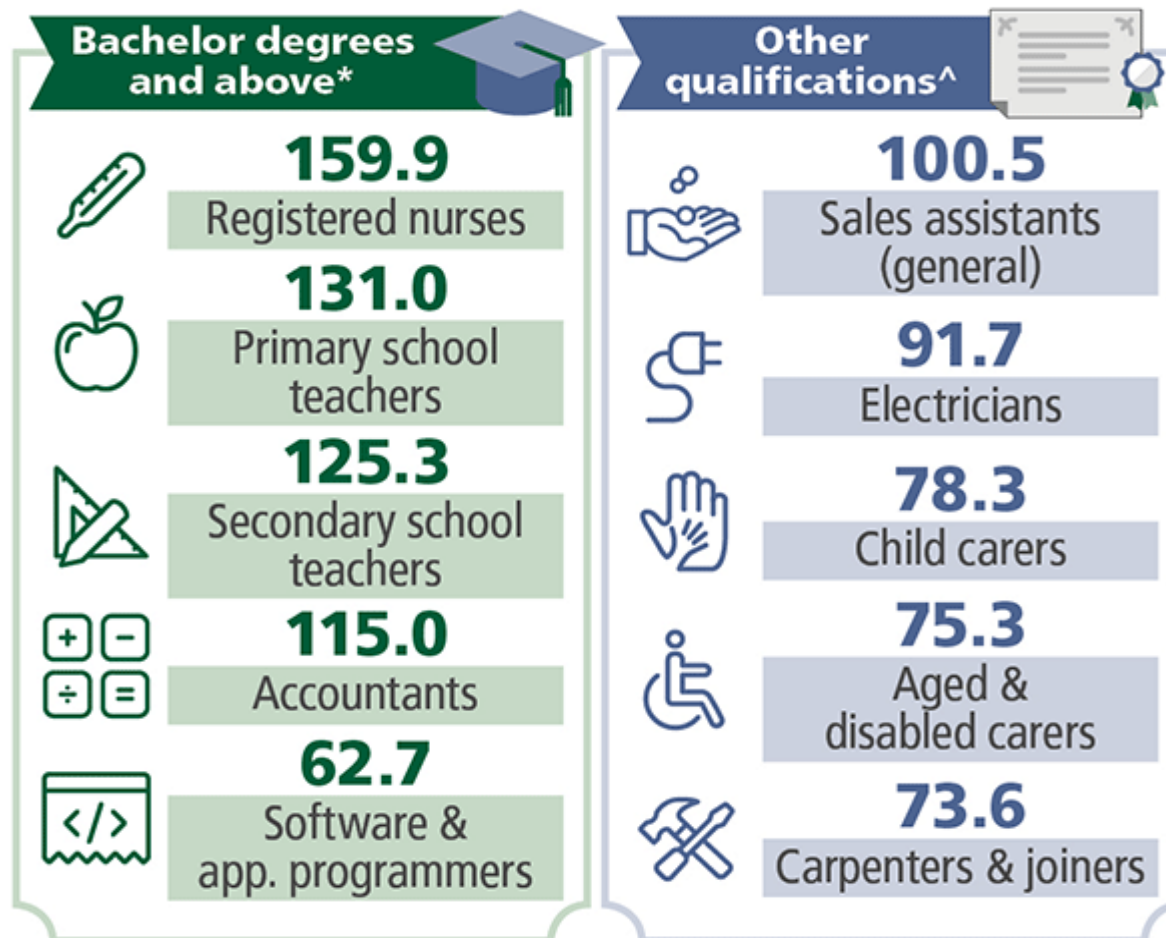
Level of qualification 	Employed (%) 	Personal income (median weekly) 
<b>Bachelor degree and above*</b>	<b>83.4</b> 	<b>\$1,436</b> 
<b>Advanced diploma and diploma level</b>	<b>79.6</b> 	<b>\$1,083</b> 
<b>Certificate level</b>	<b>79.9</b> 	<b>\$1,017</b> 
<b>No non-school qualifications</b>	<b>63.0</b> 	<b>\$836</b> 

\*Includes bachelor degrees, graduate certificates and graduate diplomas and postgraduate degrees.

Source: ABS, 2016 Census of Population and Housing

# Top occupations by level of qualification

Top 5 Occupations (aged 20-64, count '000)



\*Includes bachelor degrees, graduate certificates and graduate diplomas and postgraduate degrees.

^Includes advanced diplomas, diplomas and certificate-level qualifications.

Source: ABS, 2016 Census of Population and Housing

# What should you study if you want to earn BIG \$\$?



## Highest earning fields of study\*

	Earning >\$3,000/wk %	Employed %
Anaesthesiology	60	76
Surgery	58	74
General Practice	56	89
Obstetrics and Gynaecology	51	69
Psychiatry	52	83

## Highest earning industries\*

	Median Weekly Income
Oil and Gas Extraction	2,929
Petroleum Exploration	2,875
Iron Ore Mining	2,454
Petroleum Refining and Petroleum Fuel Manufacturing	2,277
Copper Ore Mining	2,268






\* with >500 respondents

# Top countries of birth for non-school qualifications

## Proportion of people born in Australia and overseas with non-school qualifications

Australian born	Overseas born
 <b>54.2%</b>	 <b>59.8%</b>

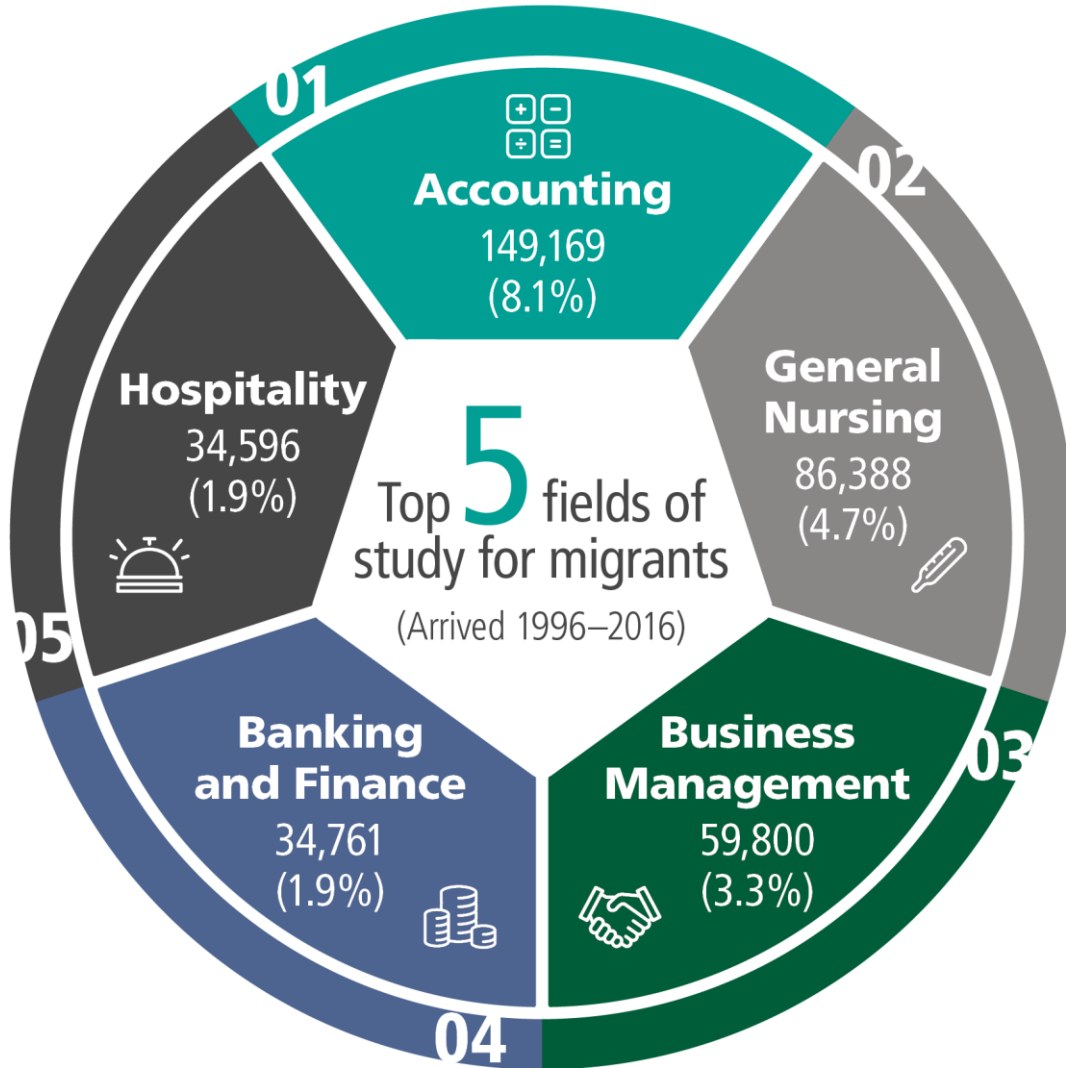
## Countries of birth\* with highest proportion of people with qualifications

Top Five	With non-school qualifications (%)
<b>1</b>  <b>India</b>	<b>79.3%</b>
<b>2</b>  <b>Bangladesh</b>	<b>78.7%</b>
<b>3</b>  <b>Brazil</b>	<b>77.5%</b>
<b>4</b>  <b>Zimbabwe</b>	<b>77.2%</b>
<b>5</b>  <b>Canada</b>	<b>76.3%</b>

\* Countries are the 50 most common responses reported in the 2016 Census.

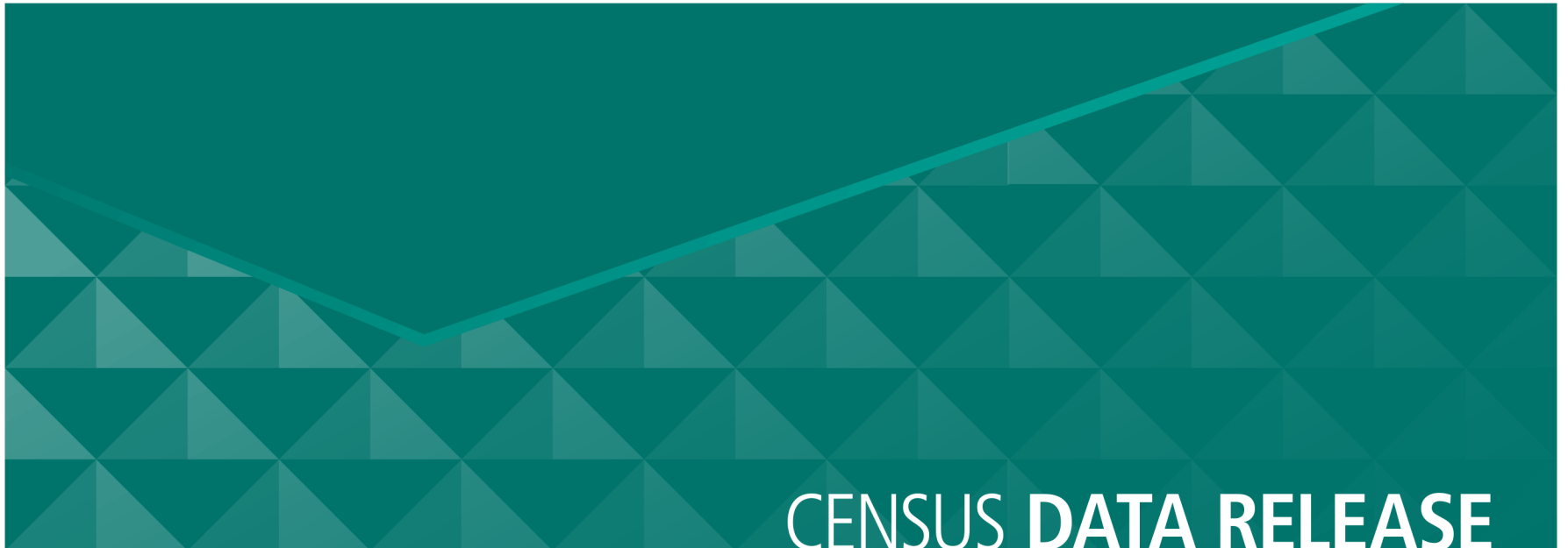
Source: ABS, 2016 Census of Population and Housing

# Top fields of study for migrants 1996-2016





# Population mobility



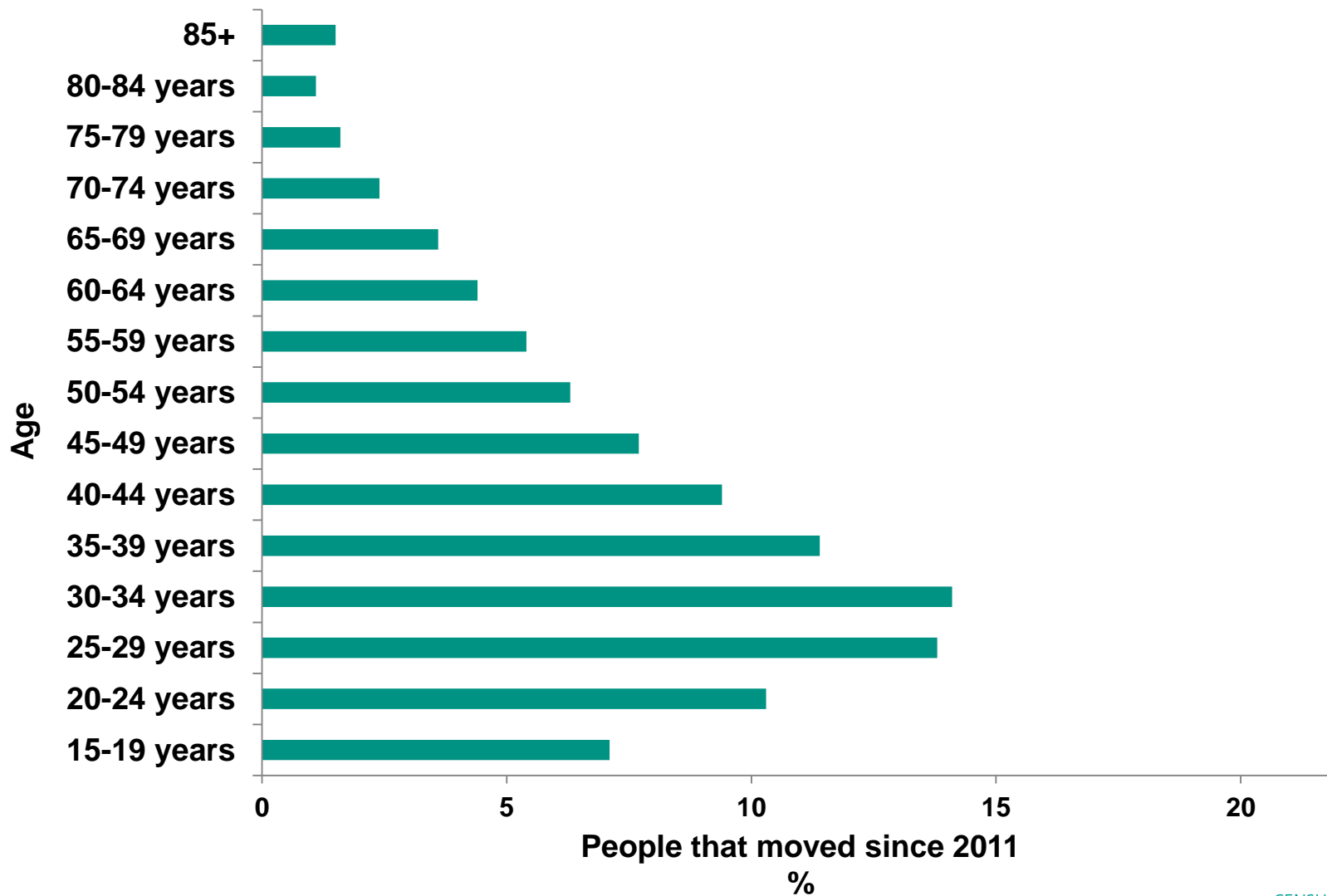
# Mobility: internal migration



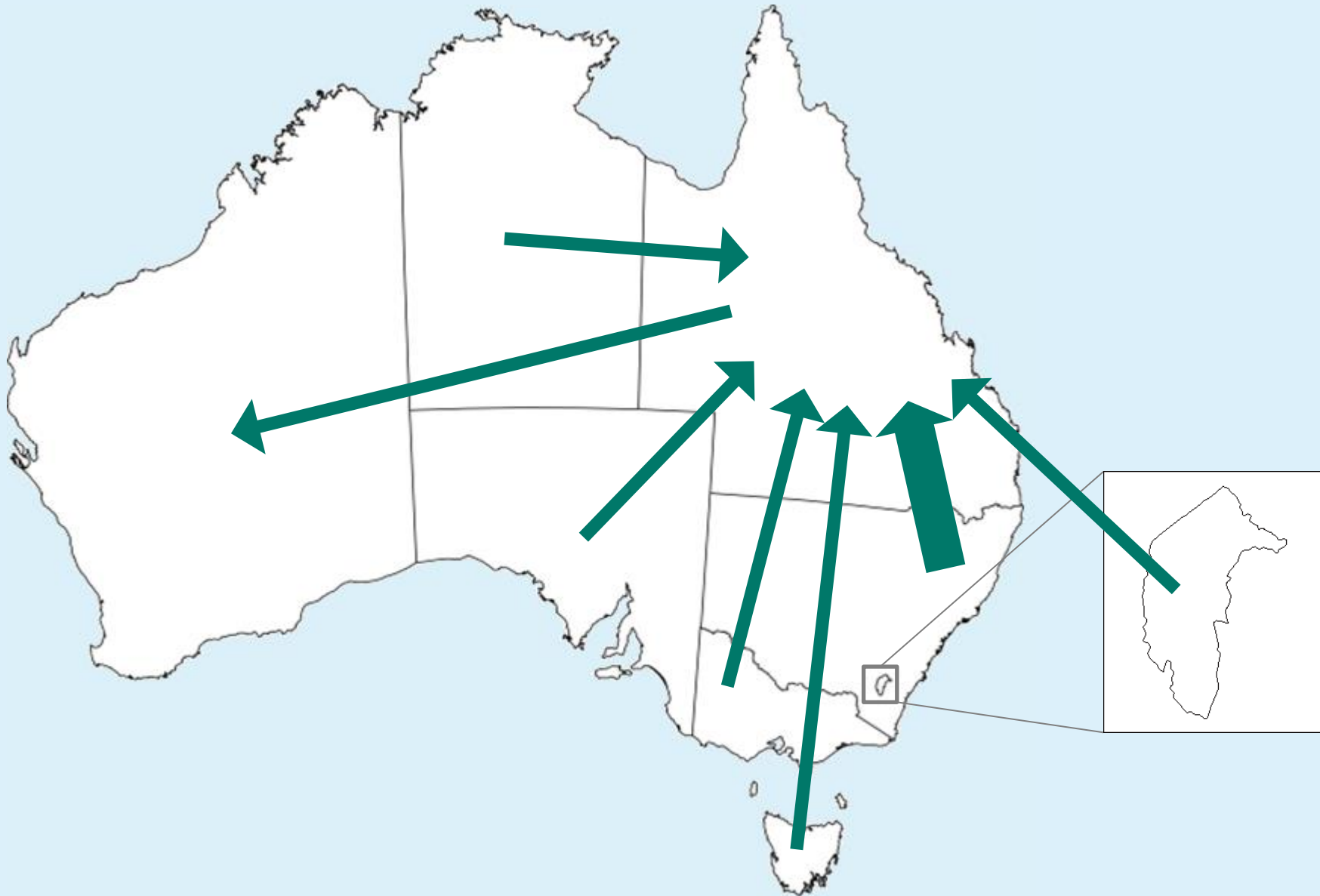
What we collected	What we output
<ul style="list-style-type: none"><li>• Whether a respondent was at home on Census night</li><li>• If not:<ul style="list-style-type: none"><li>– Usual address, on Census night</li></ul></li><li>• Usual address, one year ago</li><li>• Usual address, five years ago</li></ul>	<ul style="list-style-type: none"><li>• Whether a respondent moved within the last year</li><li>• Whether a respondent moved within the last five years</li><li>• Geographic classification based on place of usual residence one year ago</li><li>• Geographic classification based on place of usual residence five years ago</li></ul>



# Mobility: who's moving?



# Net internal migration since 2011: Qld



# Occupation mobility



<b>Most likely to move</b>	<b>% Moved since 2011</b>
<b>Various Defence Force Positions</b>	<b>73.7 - 83.2</b>
<b>Software Tester</b>	<b>68.7</b>
<b>Web Developer</b>	<b>68.4</b>
<b>Advertising Specialist</b>	<b>68.4</b>

<b>Least likely to move</b>	<b>% Moved since 2011</b>
<b>Selected Farmers and Growers</b>	<b>14.2 – 17.1</b>
<b>Crossing Supervisor</b>	<b>22.1</b>
<b>Sports Umpire</b>	<b>27.3</b>
<b>Librarian</b>	<b>32.3</b>

# Mobility: Travel to work



## What we collected

- Address of workplace
- Mode of transport to work
  - up to 3 methods of travel used

## What we output

### 2nd Release

- Method of travel to work is output as a combination of between one and three modes of Transport
- Working population Community Profile
- Method of travel to work data will be available in TableBuilder in November

### Coming 2018

- Location of Workplace/s coded to Geographical classification of 'Destination Zones' (DZN's)
- 'Journey to Work'
  - Analytical articles
  - Interactive maps
  - TableBuilder

# Method of travel to work

## SINGLE MODES

**Car**  
(as a driver or passenger)  **81.5%**

**Train or Tram**  
(rail)  **6.3%**

**Walking**  **4.3%**

**Bus**  **3.7%**

**Bike**  **1.2%**

## MULTI-MODES

 +  **27.6%**

 +  **26.8%**

 +  **7.9%**

 +  **1.6%**

 +  **1.4%**



# Accessing Census Data

# Accessing Census data



**QuickStats**



**Community Profiles**



**DataPacks**



**TableBuilder Basic & Pro**



**Australian Census Longitudinal Dataset**



**Analytical Products**





Statistics

**Census**

Complete your survey

About us



Population clock  
**24,585,340**



Consumer price index  
**2.1%**  
March quarter 2017



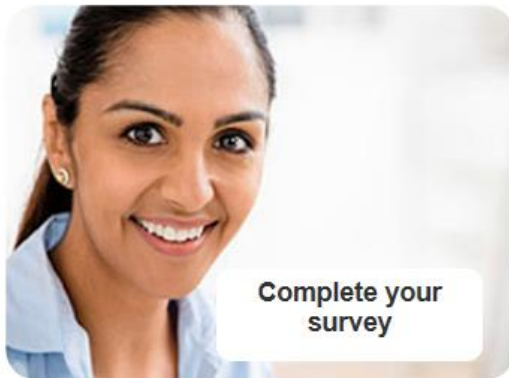
Gross domestic product  
**0.3%**  
Quarterly change Mar 2017



Average weekly earnings  
**\$1,533.10**  
November 2016



Unemployment rate  
**5.7%**  
May 2017






# Accessing Census data



## Census

### DATA BY GEOGRAPHY

QuickStats Search

2016 

GO

[Advanced Search by Geography](#)

State Suburbs, Postal Areas, Electoral Divisions, Indigenous Geographies etc

[Census Geography Basics](#)

Steps on how to use statistical geography for Census output

### CENSUS STORIES

[Stories from the 2016 Census](#)

Insight into the 2016 Census

[Census Data in Use](#)

How others use Census data

### DATA BY PRODUCTS

[Which Census Product is Best for You?](#)

Comparison table of a selection of available products

[QuickStats](#)

Three search options providing summary Census data for a selected area

[Community Profiles](#)

Provides an Excel spread sheet of detailed Census data for a selected area

[GeoPackages & DataPacks](#)

Combines DataPacks with boundary data from the 2016 Australian Statistical Geography Standard

[TableBuilder](#)

Enables you to create tables, graphs and maps of Census data

[More Census Products](#)

GeoPackages, DataPacks, Socio-Economic Indexes for Areas, Census Sample Files, Longitudinal Dataset, Mesh Block Counts

### UNDERSTANDING THE CENSUS

[Understanding Census Data](#)

How we collect, store and quality assure your data

[2016 Census Overview](#)

What happened, What's next

[Privacy, Confidentiality & Security](#)

How we uphold our legal obligations

[2016 Census Dictionary](#)

Glossary terms, Classifications

[Historical Census Data](#)

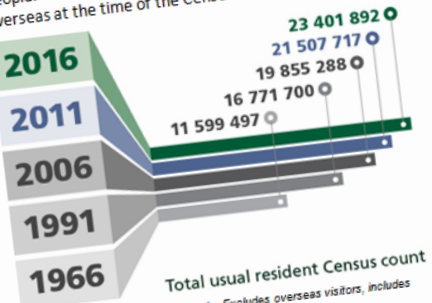
2011, 2006, 2001, 1996, 1991 and beyond

# Analytical products

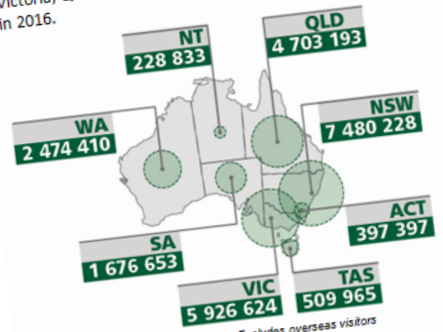


## Where Australians live

The 2016 Census counted 23.4 million people living in Australia, an increase of 8.8% since the 2011 Census. Australia's population has more than doubled in the 50 years since the 1966 Census, which counted 11.6 million people. The Census does not count Australians who were overseas at the time of the Census.



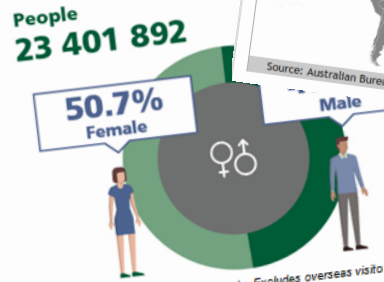
The majority of Australians continue to live in the eastern mainland states. Almost 80% lived in New South Wales, Victoria, Queensland and the Australian Capital Territory in 2016.



In 2016, more than two-thirds of all Australians live in the capital city. The number of people living in the capital city increased by more than one million people between 2011 and 2016.

## Age and Sex

The 1981 Census was the first to count more women than men in Australia. Women have outnumbered men since, making up 50.7% of the population in 2016.

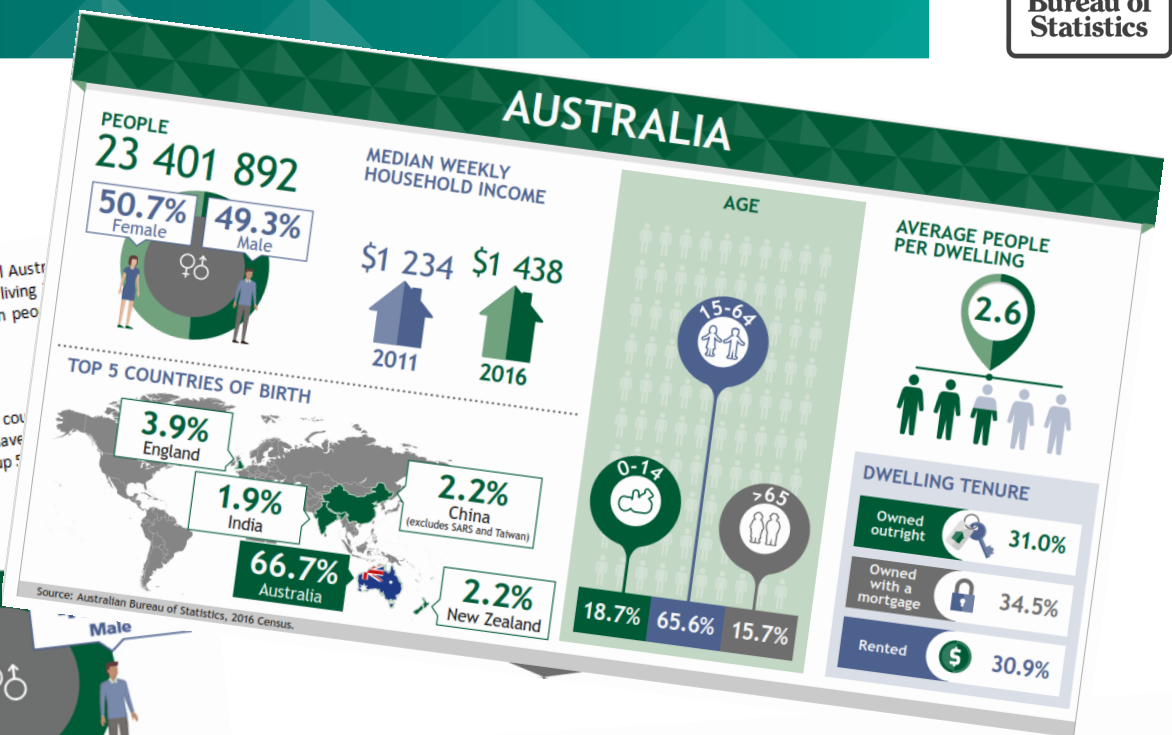


(a) Usual Residence Census counts. Excludes overseas visitors and Other Territories.

The gap in median age between men and women has lessened slightly in 2016. The median age of men remained 38 years, while the median age of women increased from 36 years in 2011 to 37 years in 2016.

The increase of median age reflects Australia's ageing population. Median age of all Australians increased 1 year, after remaining 37 years since the 2006 Census. This is also highlighted by the increase in the proportion of the population aged 65 years and over, from 15.7% in 2011 to 16% in 2016. Of those aged 65 years and over, 54% were female.

The proportion of the population that was female increased in higher age ranges. Of those aged 65 years and over, 63% were female.



Source: Australian Bureau of Statistics, 2016 Census.

## Emerging religions

There has been a downward trend in the proportion of people identifying with Christianity in the last 10 years. There also does not seem to be an emergence in any particular Christian denomination in that time. However the case is different for the major non-Christian religions. The proportion of people reporting a religion other than Christianity in the Census increased from 1.9% in 2006 to 8.2% in 2016. Although the increase spreads across most non-Christian religions, it was mainly driven by Hinduism (0.7% to 1.9% in 2016). Islam (1.7% to 2.6%) and Sikhism (0.1% to 0.5%). The increase in the proportion of Hinduism and Sikhism is as a result of an increase in the number of migrants born in India.

Islam, Buddhism, Hinduism & Sikhism as a proportion of the total population, 2006 to 2016





# Questions?



1300 135 070



@ABSCensus

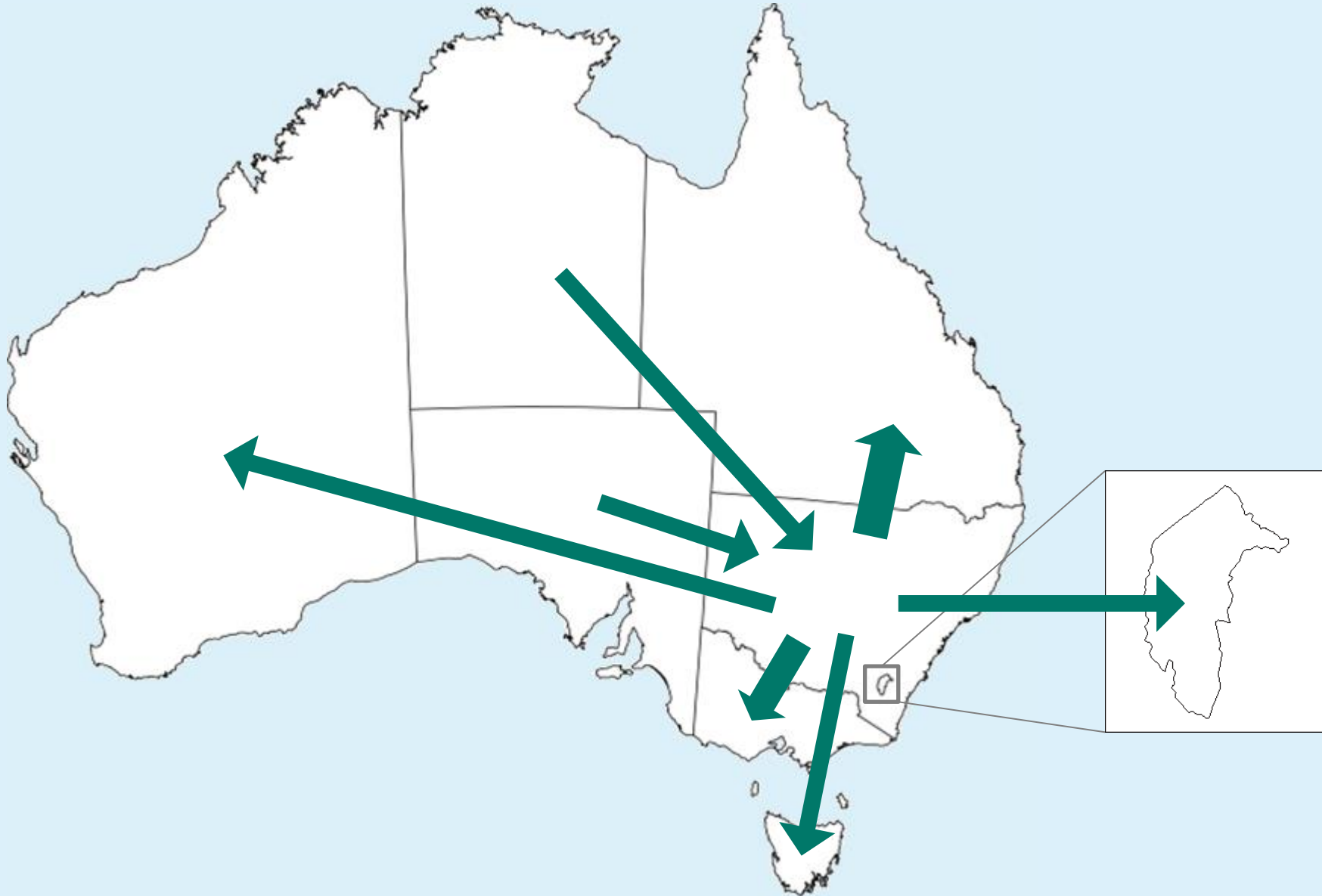


Census Australia

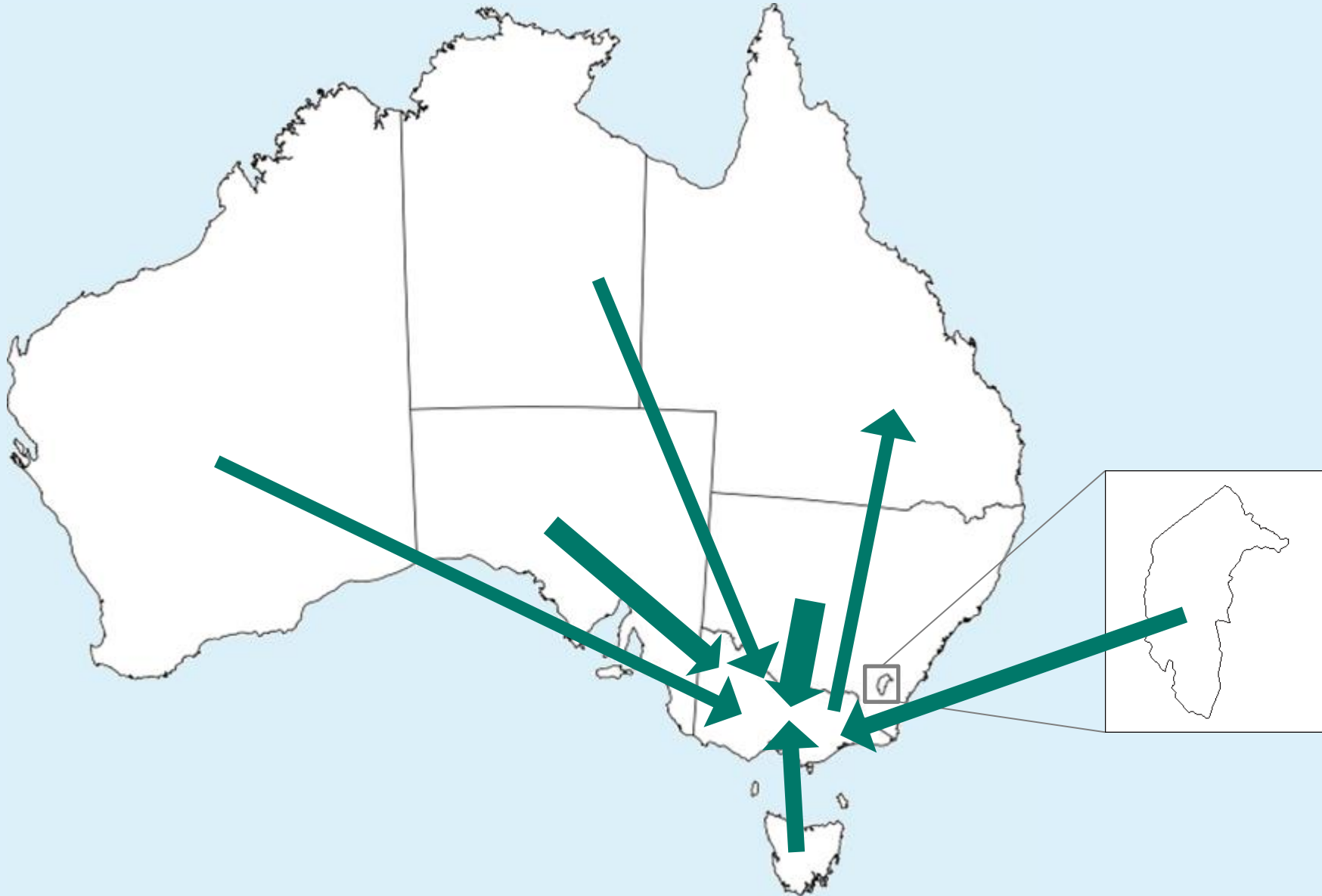


ABStatistics

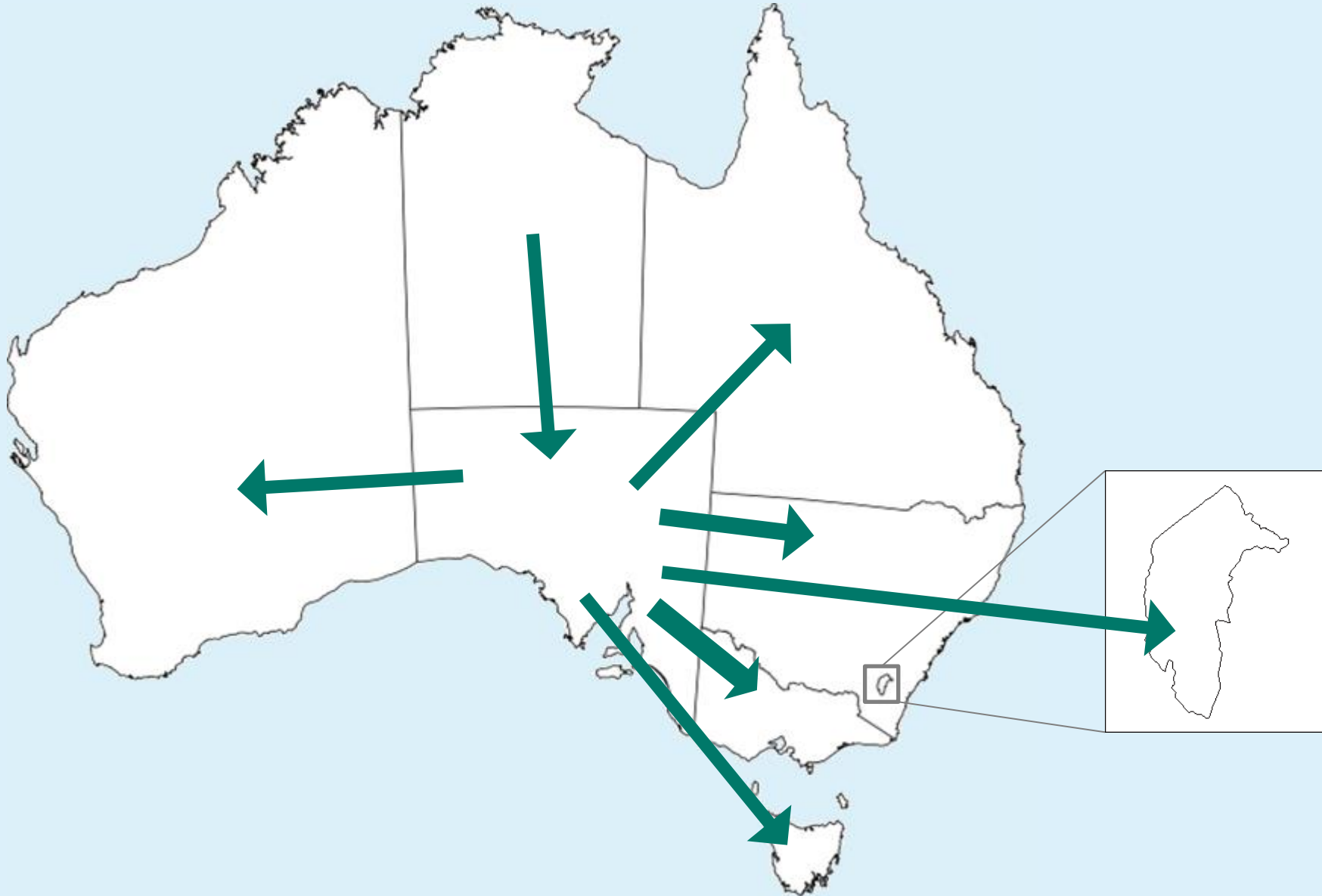
# Net internal migration since 2011: NSW



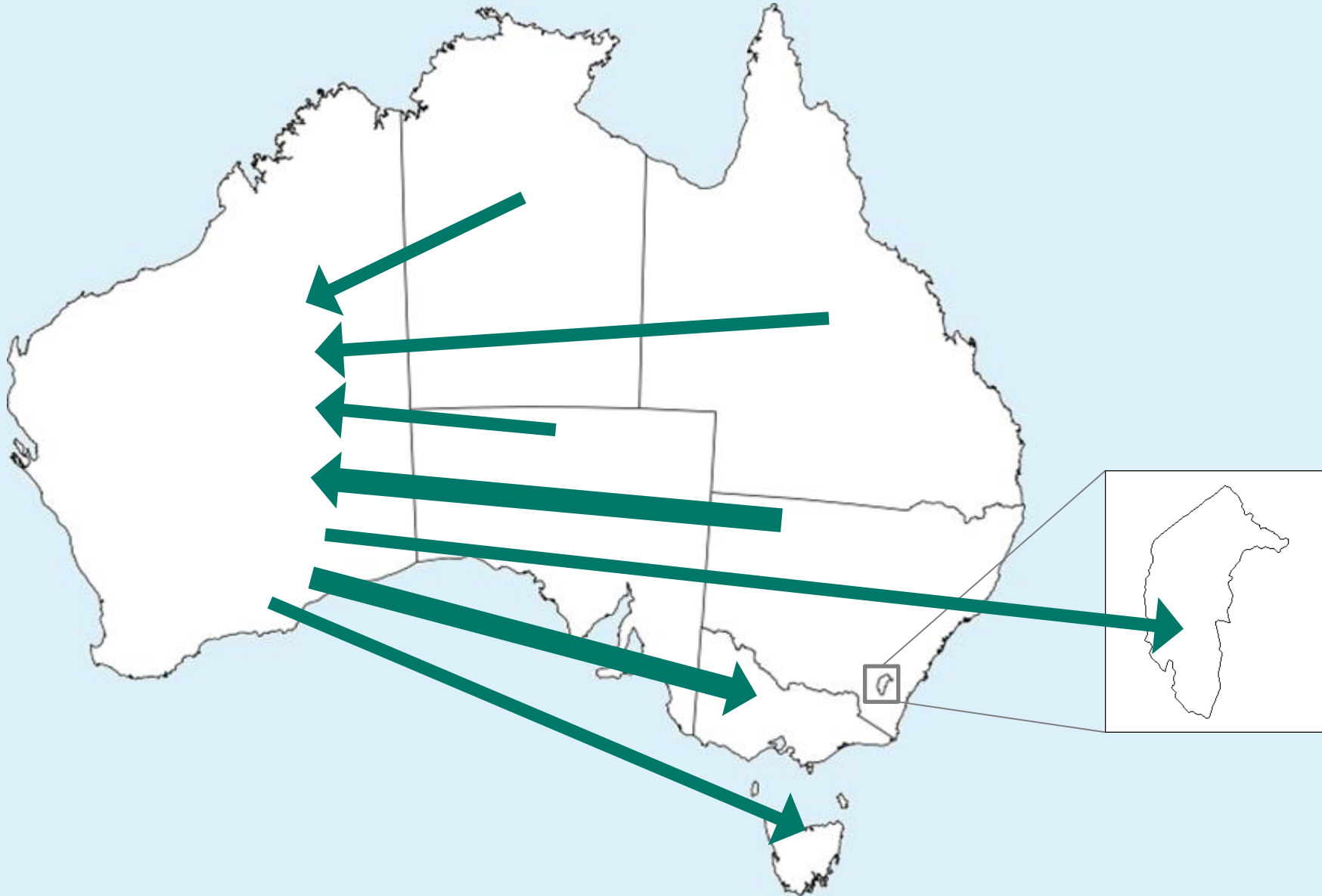
# Net internal migration since 2011: Vic



# Net internal migration since 2011: SA

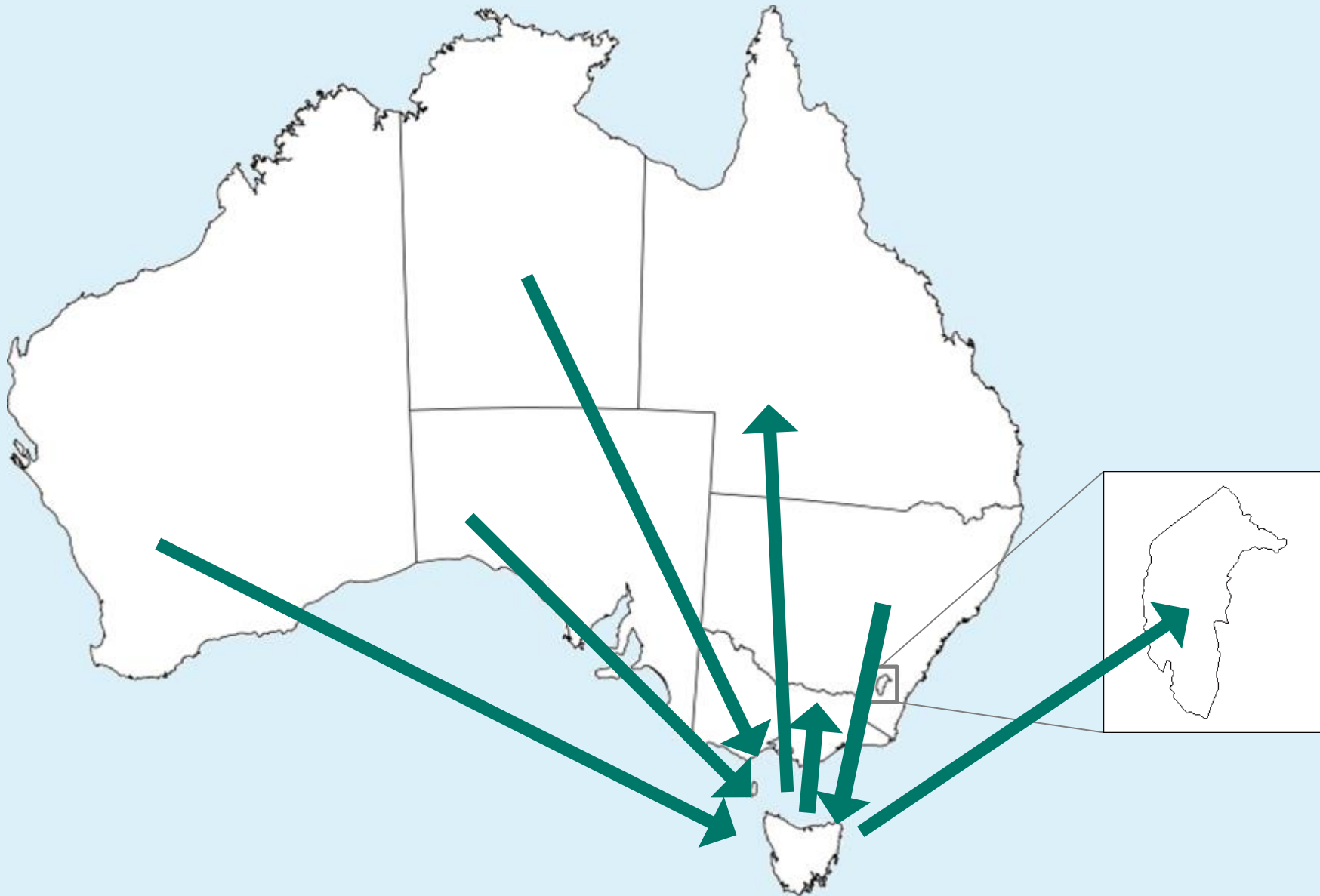


# Net internal migration since 2011: WA



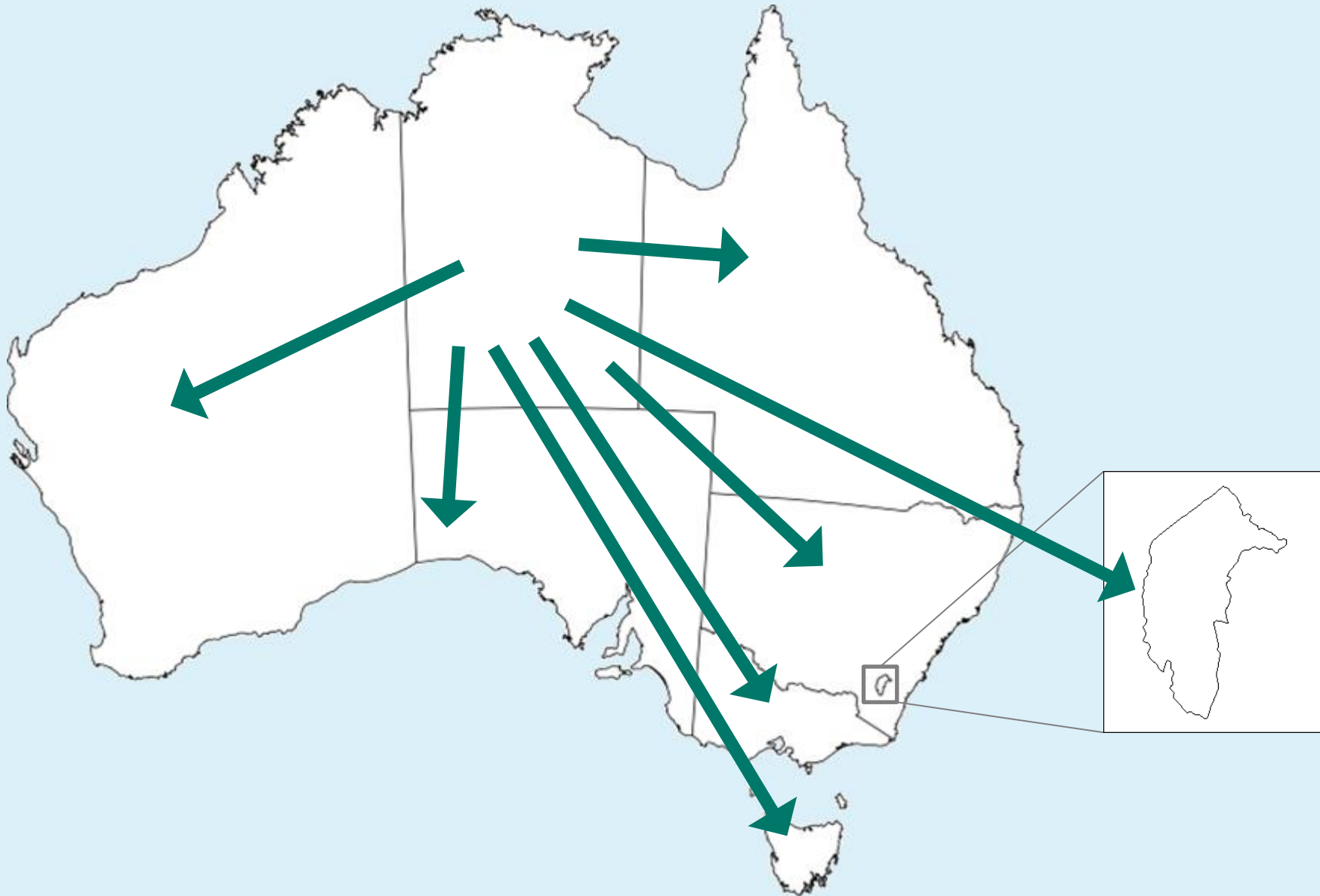


# Net internal migration since 2011: Tas

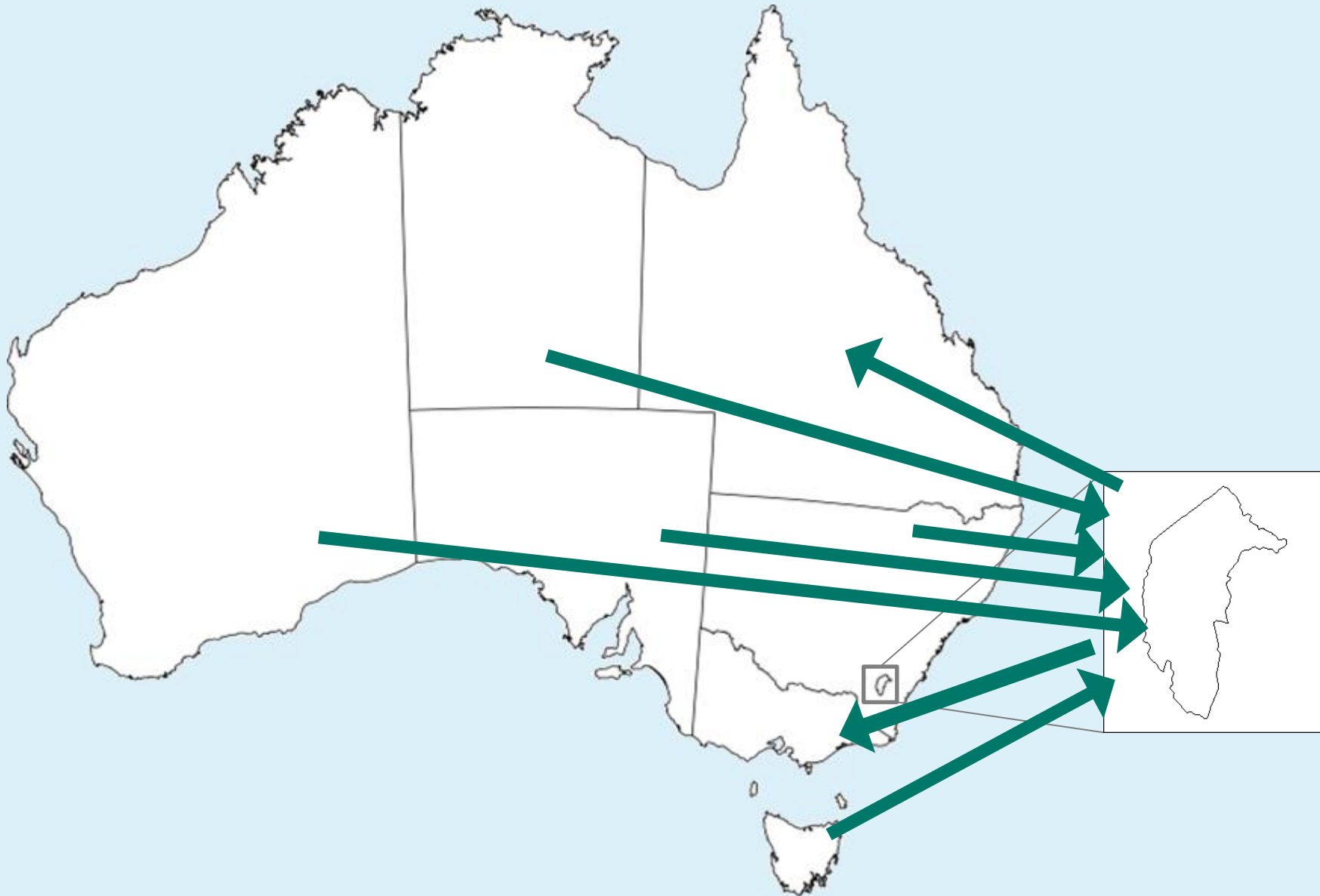




# Net internal migration since 2011: NT



# Net internal migration since 2011: ACT



# Appendix (a): Question changes 2016 vs 2011 Census

## 2016 Census

### 34 Last week, did the person have a job of any kind?

• Mark one box only.

• A 'job' means any type of work including casual, temporary, part-time or full-time work, if it was for one hour or more.

• Remember to mark the box like this:

**i** Go to [census.abs.gov.au](http://census.abs.gov.au) for more information.

- Yes, worked for payment or profit
- Yes, but absent on holidays, on paid leave, on strike, or temporarily stood down
- Yes, unpaid work in a family business ► Go to 38
- Yes, other unpaid work ► Go to 46
- No, did not have a job ► Go to 46

## 2011 Census

### 34 Last week, did the person have a full-time or part-time job of any kind?

• Mark one box only.

• A 'job' means any type of work including casual, temporary, or part-time work, if it was for one hour or more.

• Remember to mark box like this:

**i** Visit [www.abs.gov.au/censushelp](http://www.abs.gov.au/censushelp) for more information.

- Yes, worked for payment or profit
- Yes, but absent on holidays, on paid leave, on strike, or temporarily stood down
- Yes, unpaid work in a family business ► Go to 38
- Yes, other unpaid work ► Go to 46
- No, did not have a job ► Go to 46

# Appendix (b): Question changes 2016 vs 2011 Census

## 46 Did the person *actively* look for work at any time in the *last four weeks*?

- Full-time work means 35 hours or more per week.
- Examples of *actively* looking for work include:
  - writing, telephoning or applying to an employer for work;
  - having a job interview;
  - checking or registering with an employment agency;
  - taking steps to purchase or start own business;
  - advertising or tendering for work;
  - contacting friends or relatives in order to obtain work.

- No, did not look for work  
▶ Go to 48
- Yes, looked for full-time work
- Yes, looked for part-time work

## 46 Did the person actively look for work at any time in the *last four weeks*?

- Examples of actively looking for work include: being registered with Centrelink as a job seeker; checking or registering with any other employment agency; writing, telephoning or applying in person to an employer for work; or advertising for work.

- No, did not look for work  
▶ Go to 48
- Yes, looked for full-time work
- Yes, looked for part-time work

# Appendix (c): Question differences 2016 paper vs eform

44 Last week, how many hours did the person work in all jobs?

- Add any overtime or extra time worked and subtract any time off.

Hours worked

 None

42. Last week, how many hours did Person work in all jobs?

- Add any overtime or extra time worked and subtract any time off.

 More Information

Hours worked