Australian Government
Department of Infrastructure, Transport, Regional Development, Communications and the Arts

Bureau of Communications, Arts and Regional Research

Bureau of Communications Arts and Regional Research (BCARR)

Ring classification for 5 largest capital cities in 2021

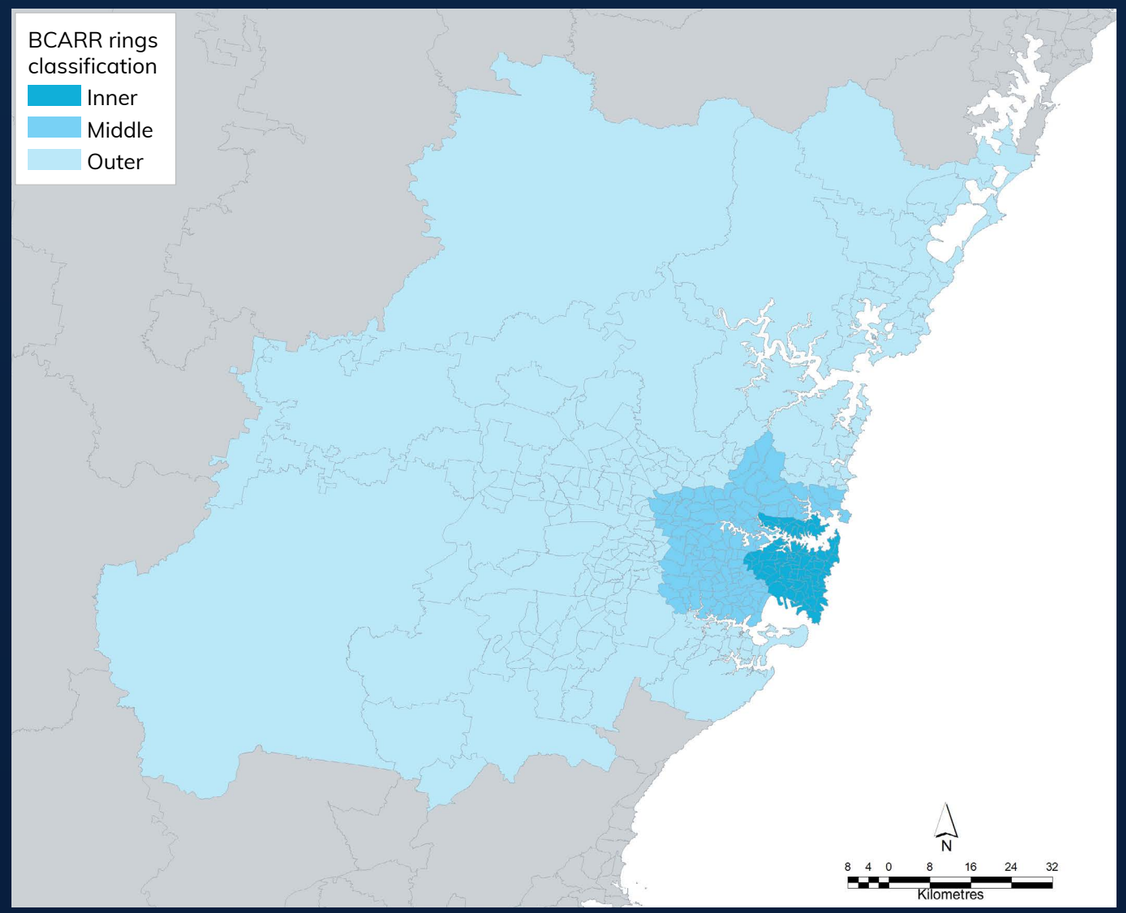
The ring classification is updated every 5 years to reflect the latest Australian Statistical Geography Standard (ASGS) Statistical Area Level 2 (SA2) boundaries.

City ring classifications have been used by BCARR and the Bureau of Infrastructure Transport and Research Economics (BITRE) for 10 years and have a history of use by state governments and the ABS prior to that. They divide Australian cities into three sectors around the CBD.

The BCARR classifications were developed for use in research reports, informed by state classifications and ABS statistical subdivisions. Originally, the boundaries were LGA based but SA2s have been used since the ABS implemented their ASGS geographies.

The classification includes Australia's five largest capital cities. Sydney, Melbourne, Perth and Adelaide rings are constructed from SA2s within their GCCSA boundaries. However, a narrower definition is used for Brisbane (including 3% less population than the GCCSA). See Figures 1–5 for 2021 boundaries.

Figure 1: Ring classification for Sydney, 2021



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Concept of BCARR city rings

Due to differences between cities, ring characteristics are not uniform, but they are often associated with the following:

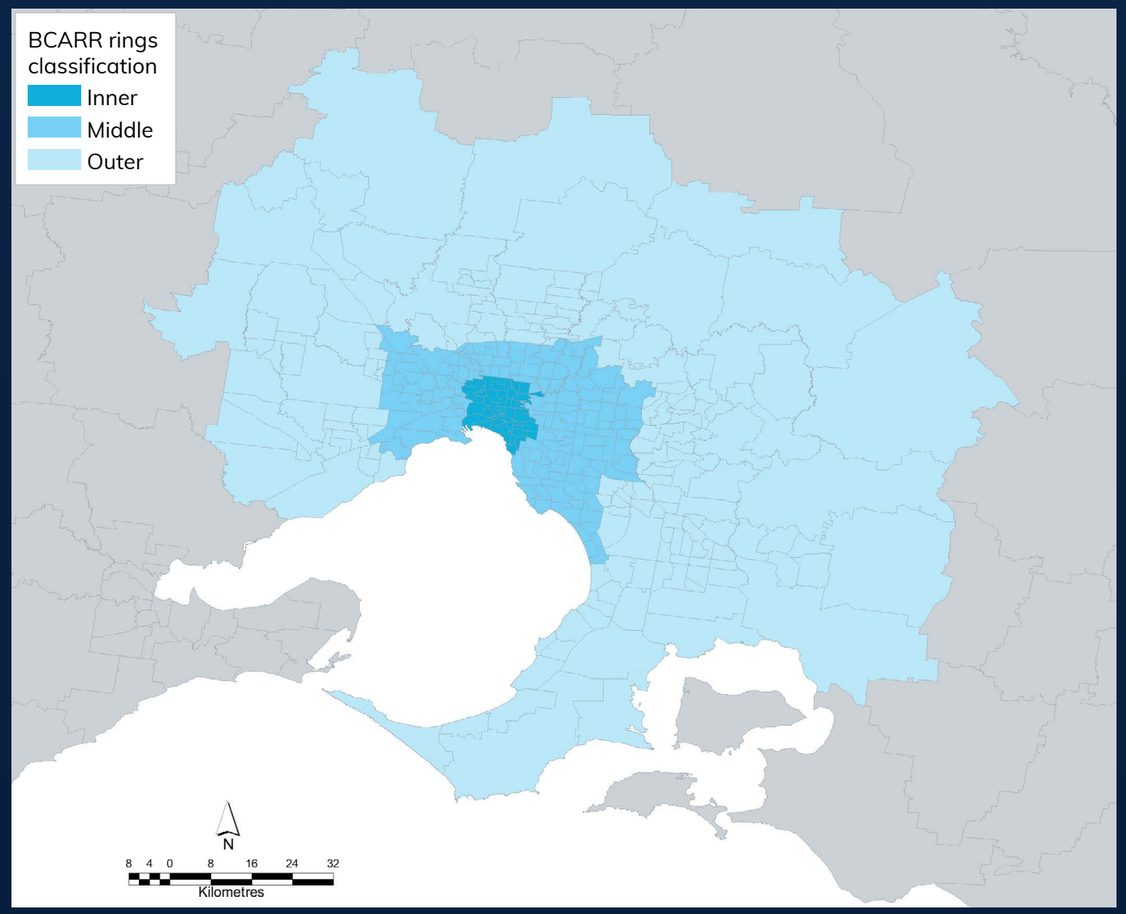
Inner rings: include central business districts and neighbouring suburbs. They are typically characterised by higher population density and high access to employment, services, infrastructure, public transport and amenity. Inner city areas also have a large daily flow of commuters from middle-ring and outer-urban suburbs.

Middle rings: typically exhibit lower density than inner city areas but often have high density precincts around public transport hubs. Access to employment, services, infrastructure, public transport and amenity is often more limited than in inner city areas. Many people from outer-urban suburbs commute to middle ring suburbs or transit through them to inner city areas for work and to access services.

Outer rings: are the outermost areas of a city, typically including both established urban suburbs, newly developing greenfield suburbs and surrounding rural areas.

They are often characterised by less access to infrastructure, public transport and services, and high dependency on other regions for jobs. Historically in Australia we have seen the urban edge of the city expand further out from the centre.

Figure 2: Ring classification for Melbourne, 2021



Ring classification maps

Figure 3: Ring classification for Brisbane, 2021

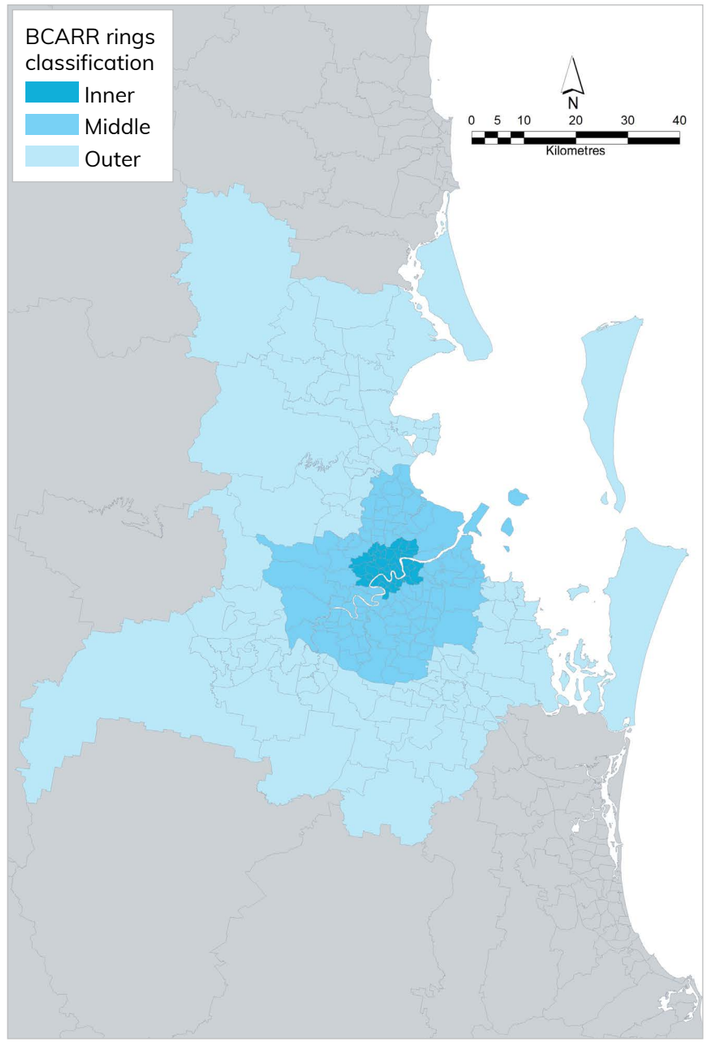


Figure 4: Ring classification for Perth, 2021

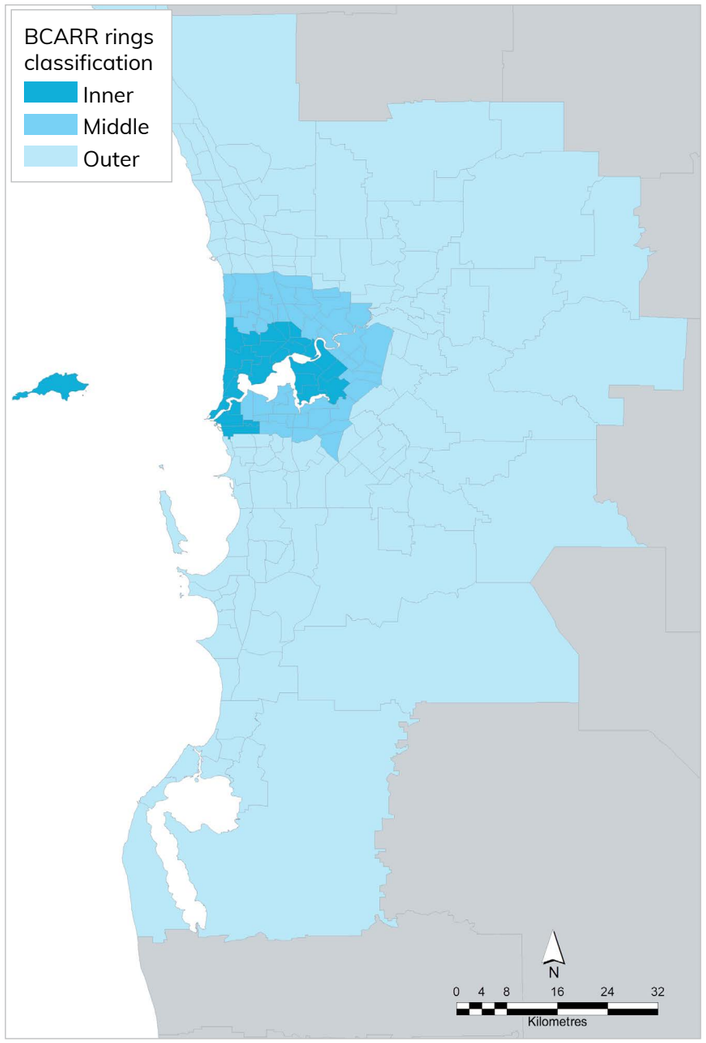
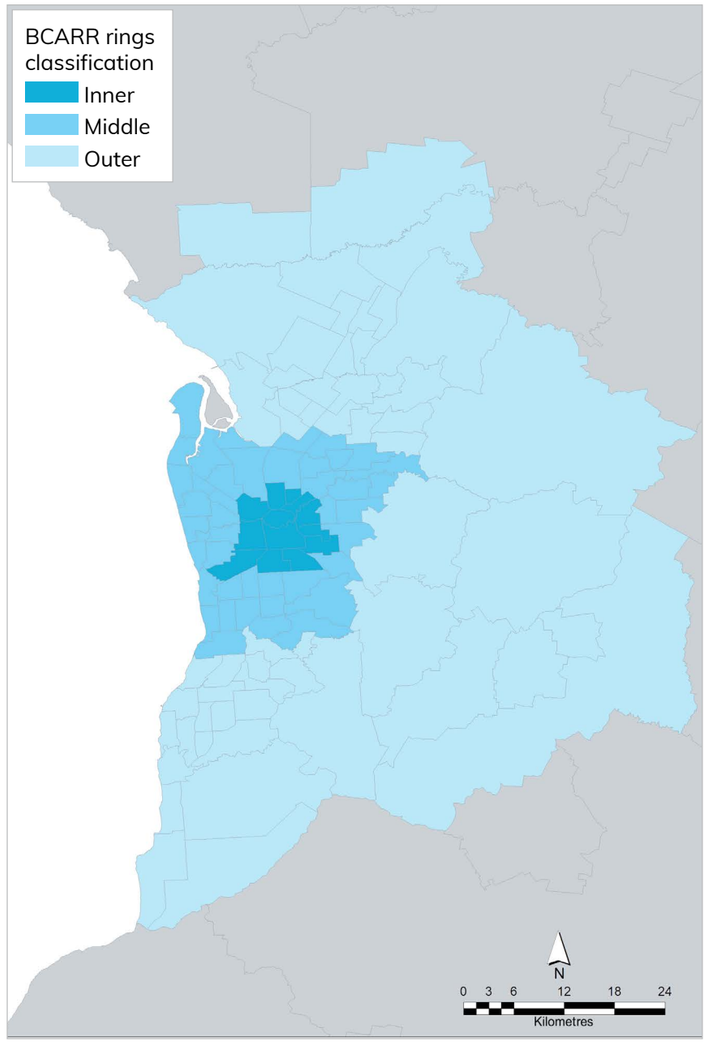


Figure 5: Ring classification for Adelaide, 2021



Example – Population growth

Figure 6 shows the ring breakdown of the average population growth rate between 2012 and 2022.

Over the last decade, population growth rates in the 5 largest capital cities have been highest in outer rings. Melbourne's outer ring had the highest growth rate at 2.6% per annum, highlighting greenfield development on the urban fringe.

There was one exception to this trend seen in Brisbane's inner ring, with a growth rate of 2.4% per annum, higher than its outer ring. This points to progress being made with infill developments in Brisbane over the last decade.

Total population growth remained highest in outer rings for all cities (see Figure 7).

Figure 6: Average annual population growth rate by ring across 5 largest capital cities, 2012–2022

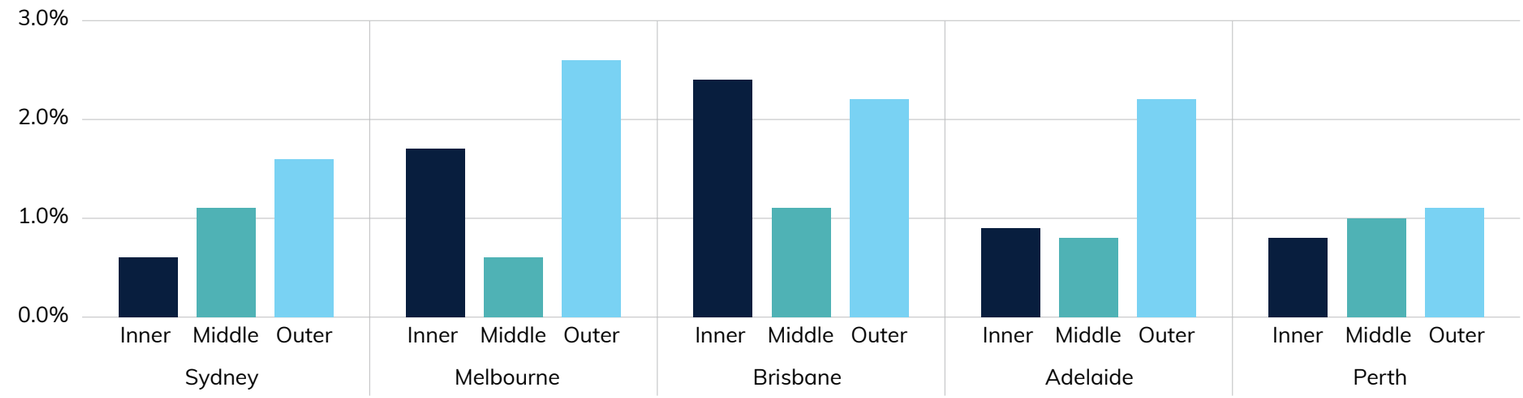
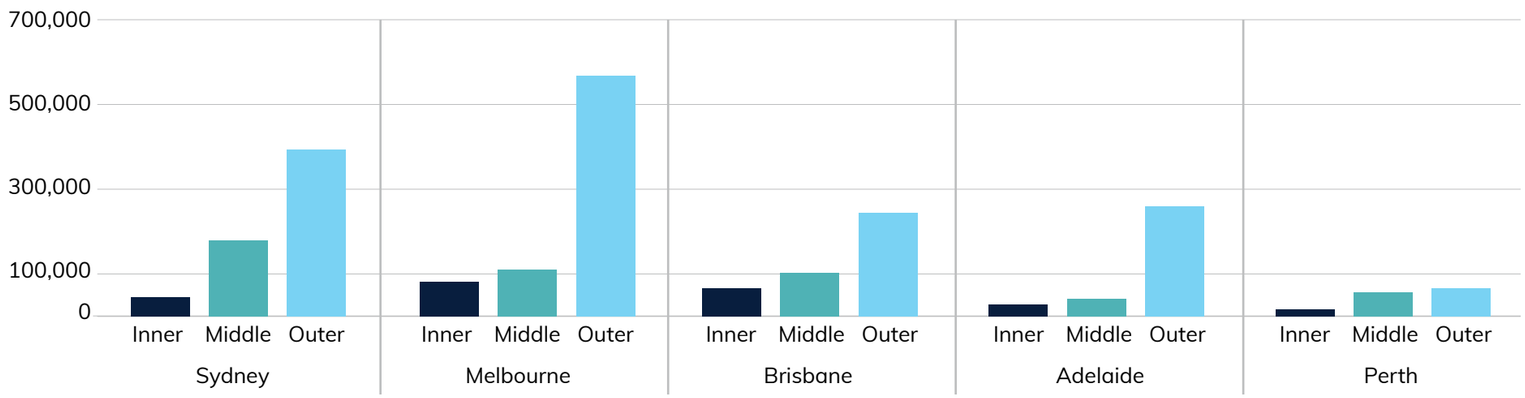


Figure 7: Total population growth in GCCSA rings across 5 largest capital cities, 2012–2022



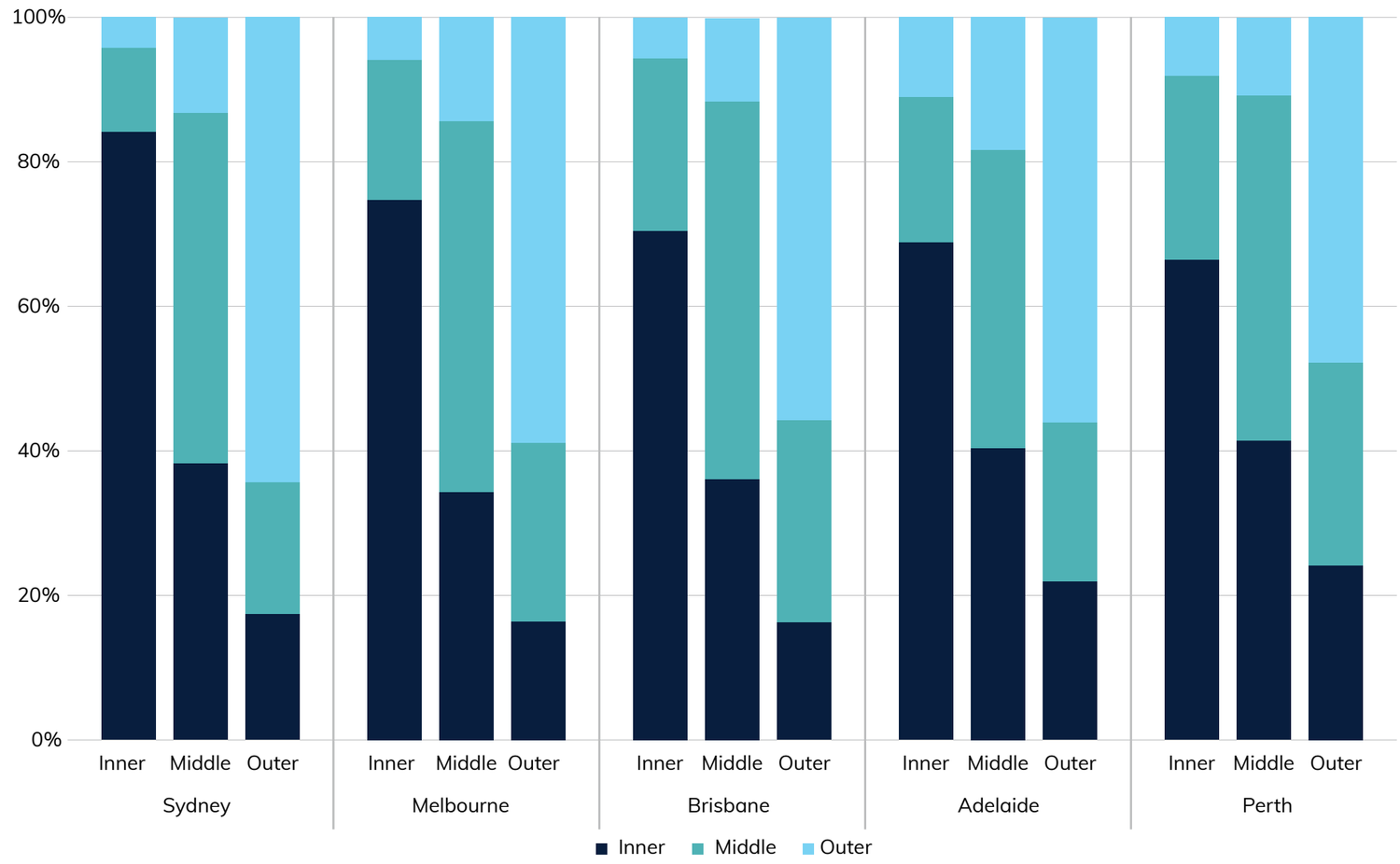
Example – Place of residence and place of work comparison

As of 2021, inner city residents are most likely to work in their ring of residence. Middle ring residents are least likely to work in their ring of residence. Adelaide is an exception with middle and outer ring residents working in their ring of residence at similar rates.

In Sydney, where this effect is most pronounced, 84.1% of inner city residents work in the inner ring. In contrast, 48.5% of middle ring residents work in the middle ring and 64.3% of outer ring residents work in the outer ring.

Of those who commute outside of their ring of residence, inner city dwellers are most likely to commute to the middle ring and middle ring dwellers are most likely to commute to the inner ring. Outer ring dwellers commute to both the middle and inner ring with slightly higher middle ring commuting rates (see Figure 8).

Figure 8: Proportion of persons who work in each city ring by ring of residence, 2021



Example – Access to services

Figure 9 and Figure 10 show the ring break down of two types of services using 2021 data from the Australian Urban Observatory. Both services are concentrated in inner rings.

Dwellings in inner rings have the highest access to regular public transport services (see notes on slide 7 for definition). People in outer rings have the lowest access.

Across inner rings, 80% or more of dwellings have access to a regular public transport service. Access for outer rings ranges from 21% in Brisbane to 64% in Sydney.

Inner city dwellings have access to the largest variety of culture and leisure infrastructure (see notes on slide 7 for definition).

Inner city dwellings have access to at least two types of culture or leisure infrastructure, while outer rings have access to less than one on average.

Figure 9: Proportion of dwellings within 400m of a regular public transport service, 2021

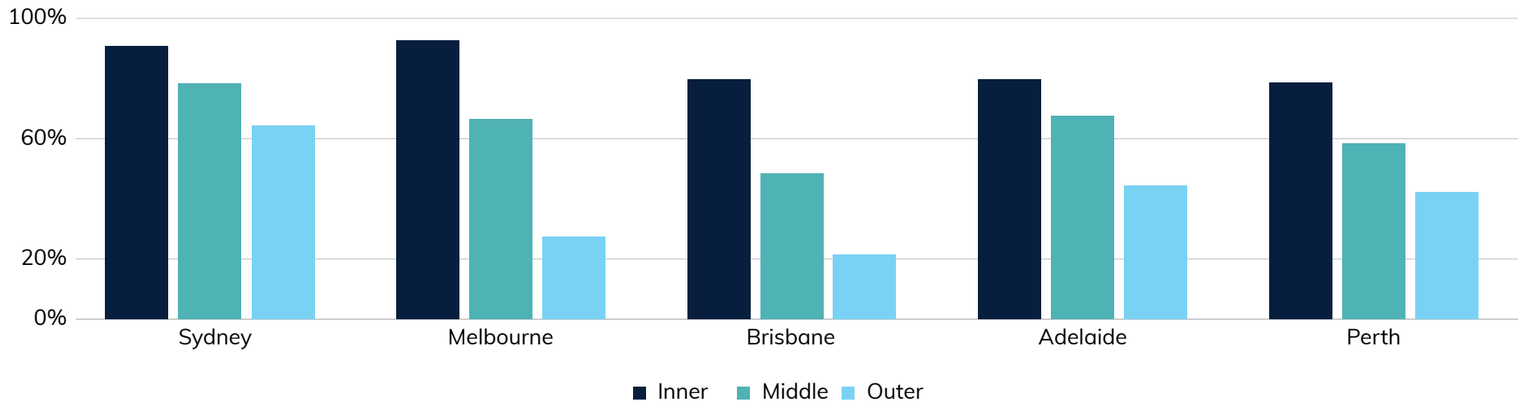
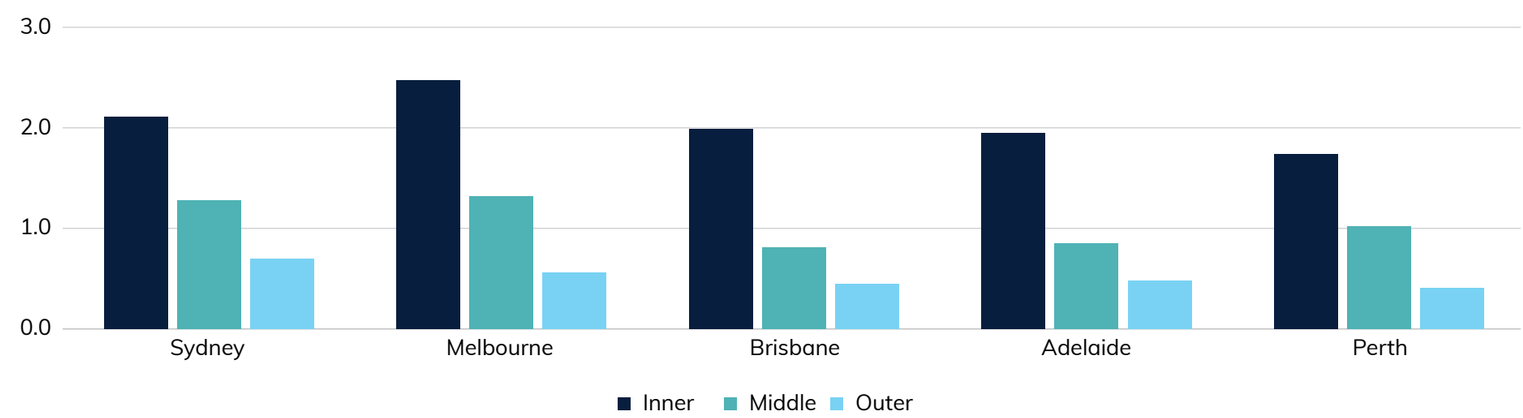


Figure 10: Access to social infrastructure – culture and leisure index, 2021



Data Source

Australian Bureau of Statistics (ABS) 2021, Australian Statistical Geography Standard (ASGS) Edition 3, July 2021 – June 2026 | Australian Bureau of Statistics (abs.gov.au)

Australian Bureau of Statistics (ABS) 2023, Regional population, 2021-22 financial year | Australian Bureau of Statistics (abs.gov.au)

Australian Bureau of Statistics (ABS) 2022, 2021 Census – counting persons 15 years and over, Geographical Areas (Usual Residence) and Geographical Areas (Place of Work), accessed through TableBuilder

Australian Urban Observatory (AUO), RMIT University, 2023, 2021 Liveability Indicators

Notes

Place of work place of residence comparison – this analysis included only persons who both live and work in the big 5 capital cities. The following persons were excluded from the analysis:

- Persons who live in capital cities but work outside of them.
- Persons who work in capital cities but live outside of them.
- Persons who live in capital cities but do not work.

AUO index definitions:

- Access to public transport – dwelling is located within 400m of a regular public transport stop with at least one scheduled service every 30 minutes between 7:00am and 7:00pm on a normal weekday.
- Access to cultural and leisure infrastructure – a score out of 3 based on how many of the following 3 infrastructure types are in range: a museum or art gallery (3.2km), a cinema or theatre (3.2km), and a library (1km).