

CityPulse Perth

Reimagining our future



Making liveable, doable.

Perth is one of Australia's great cities and, in the near future, will be the country's third largest city. As Perth embarks on this next phase of growth, we need to ensure the liveability, work environment and cultural pursuits of the city mature at the same rate to give our communities the lifestyle they desire and deserve.

CityPulse Perth provides a fact base for the current state of our city, enabling us to understand the opportunities and challenges for Perth at the suburb level, using data from a range of third-party sources and PwC's own geospatial economic modelling, to provide an accurate picture of how we currently 'live', 'work' and 'play'. These measures go to the heart of how we live our lives, and are easily understood and tangible so that everyone can form their own view on what is working well in

our city, as well as what is not. Through this analysis, our communities can work through solutions to solve the challenges we face.

CityPulse Perth identifies which areas within Greater Perth provide most ready access to the things that contribute to make our lives easier and better – transport, housing, health services, employment, parks and recreation facilities, cultural facilities and entertainment.

In presenting the data through an easy-to-use interactive map, we can better understand where the opportunities exist for better planning and investment. We can also see where improvements need to be made in the areas of 'live', 'work' and 'play'.

Our citizen profiles provide an account for each area based on one of the three main community profiles: singles, families and retirees. Which one do you most align with?

At PwC, we thrive on reimagining the possible so we are continuously finding new and innovative ways to add value to our communities. CityPulse Perth is no different, it sets out a vision for our city and highlights what makes it a great place to live. We challenge you when reading through this to "imagine a future where..."



A vision for Perth

Imagine a future where ...



You can arrive at Perth Airport directly from London, for the first time or returning home, and step straight onto a train that takes you into the heart of the Perth CBD – where you will find a vibrant city that is culturally rich and buzzing with activity.



Tourists from across Australia and around the world are drawn to Perth's artistic and cultural festivals, the new WA Museum celebrating the state's unique heritage, and the city's internationally renowned urban beaches and national parks.



The Fremantle waterfront has been completely revitalised as a cultural hub that draws in tourists and residents alike, with the majority of freight and trade now moving through a redeveloped port at Kwinana.



A maritime and defence construction cluster has evolved at the Westport 'outer harbour' and the new Henderson Industry Incubator Zone, drawing on a skilled local workforce and injecting investment into the South Metropolitan Region.



Investment in public transport, including the full rollout of METRONET, has delivered to the city a world-class transport network which connects people across Perth's suburbs, and links the nodes of Perth's learning and innovation cluster of universities, the CBD, and the medical research precinct.



International students are drawn to study at our world-class, innovative universities while enjoying engagement with industry-leading firms alongside a unique lifestyle.



Perth's footprint is growing more slowly than its population, as a result of a clear integrated planning and infrastructure strategy, which has led to higher density living around Perth's transport and economic hubs, enabling residents, families and workers to commute more easily to local services, community infrastructure and jobs.

A vision for Perth

Making liveable, doable.



Live

The analysis of the 'live' component relies on data around key contributors with a significant impact on our everyday lives – amenities, health, housing and crime.

While all components of CityPulse contribute to the overall liveability of our cities, those contained with the 'live' score cover the basic needs of our society and are a strong indicator of our wellbeing and consideration towards social equity.

The CityPulse findings highlight sobering disparities but also underscore the common experiences of living in Perth.

Live - Top 10

1	Wembley-West Leederville-Glendalough
2	North Perth
3	Booragoon
4	South Perth - Kensington
5	Mount Hawthorn - Leederville
6	Bateman
7=	Bull Creek Leeming
	Mount Lawley - Inglewood
10	Wembley Downs-Churchlands- Woodlands



Mortgage stress is a unifying experience for Perth residents and should spur reform

Like many Australian cities, Perth's average property prices are highest in central beachside suburbs, and decline the further out you travel. However, our CityPulse Perth analysis of mortgage stress tells a story which unites homeowners across suburbs with some of the highest and lowest average prices. If we look at the western suburbs for example, we see the core suburbs are experiencing considerable pressure, surrounded by concentric belts of higher and lower levels of mortgage stress.

The extent and common nature of the problem suggests an urgent need for reform that promotes affordable housing alternatives across the city. This will benefit the young families who want to remain close to their support networks, and the older citizens looking to downsize without being forced to leave their beloved neighbourhood. The data on building approvals seems to indicate there has been a market response to the problem in some outer suburbs, but this is yet to be replicated in the western suburbs.



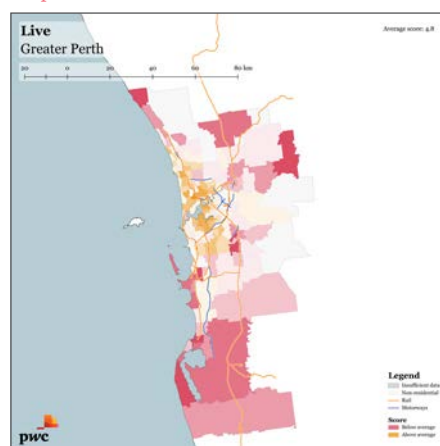
Still a motor city – but public transport investment is making amenities more accessible

Our analysis shows that residents of most Perth suburbs require a car if they are to have ready access to the amenities that underpin the quality of urban life. Across most of the metropolitan area, a car will put you within easy reach of schools, childcare, higher education, health centres and hospitals.

But as Perth's population expands towards a projected 3.5 million people by 2050, this will no longer hold, and Perth will need to see major investments in public connective infrastructure to avoid a dramatic increase in traffic congestion.

The good news is that CityPulse Perth shows clearly the improvement resulting from previous investment in the Joondalup and Mandurah train lines. Their capacity can be further increased to accommodate population growth. The METRONET public transport development program (phase 1 and 2) will open up new corridors where users can move quickly from point to point.

Map 1: Live





A city for its people to live in.

Citizen profile: 'Singles'

The liveability of a city is of great importance to all of its people. The ability to grow, learn and develop is as important as to be safe, healthy and connected.

The young singles of our city are sometimes attracted to explore living elsewhere after having access to top-class education, health care and amenities. The appeal of living in a big city like Melbourne and Sydney, or even London, can often draw our younger singles away.

However, as these young people find partners and start their pursuit of defining their careers and starting a family, the desires and attractiveness of Perth pulls these people back as they move into their 30's.

The need for safe neighbourhoods, access to education and housing choice (both cost and housing type) means that our singles are choosing Perth over other competitive cities.

Our challenge moving forward will be to keep control of housing prices, so we avoid the bubbles of Sydney and Melbourne, and ensure housing types continue to change.

The recent trial by the WA Government for 'micro-lots' are an example of this.

The introduction of Community Title through the Strata Titles Act reform will also contribute to this ever increasing housing choice.



Realising the vision

- Reform of the land tenure and planning system to promote more affordable housing alternatives across the city is needed urgently. To head-off the congestion and housing affordability problems experienced by larger Australian cities like Melbourne and Sydney, Perth should take active steps to put a brake on urban sprawl, promote infill and smart density, and a broader range of housing products and amenities to suit people at different stages of life.
- Deliver a light rail route as part of METRONET Phase 2, which will provide a high-frequency, reliable transit option connecting key centres of economic activity and innovation, and contributing to a true public transport network for Perth's residents.



Work

Access to jobs is crucial for our economy – for our city, state and country. Greater Perth generates 8.9 per cent of Australia’s GDP, a vital contributor to our economy and ongoing global competitiveness. CityPulse Perth scores the ‘work’ index by focusing on economic performance, job accessibility and the welfare dependency of each suburb.

Work - Top 10

1	Perth City
2	Subiaco-Shenton Park
3	Nedlands-Dalkeith-Crawley
4=	South Perth - Kensington Wembley-West Leederville Glendalough
6	Madeley-Darch-Lansdale
7	Forrestdale-Harrisdale-Piara Waters
8=	Applecross-Ardsross Victoria Park-Lathlain-Burswood
10	Mount Hawthorn-Leederville



Getting to the jobs

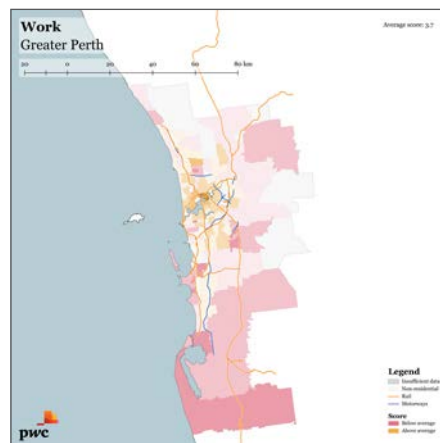
Jobs in Perth are highly concentrated around the CBD, a fact which comes through clearly in our CityPulse analysis. While many of these jobs are accessible by car, getting to work using public transport is a very different story.

Job accessibility by public transport declines rapidly once you move beyond this central region.

This trend is most pronounced in Perth’s southern suburbs, with the exception of a narrow corridor along the Mandurah train line. Even when considering job accessibility by car, the suburbs around the Kwinana industrial area have access to less jobs and higher levels of unemployment, despite this being a hub for economic output.

Planning for investment in the Westport ‘outer harbour’ project should focus on rebalancing economic development across the metro area, with the goal of initiating a virtuous circle of investment and job growth in Perth’s southern suburbs.

Map 2: Work



Perth’s innovation precinct

CityPulse Perth reveals that the majority of business are located within the CBD, which is the centre of gravity for the city’s gross regional product. This region is also forms a key component of Perth’s innovation cluster, being home to the city’s university precincts, Northern corridor innovation hubs and the Subiaco– Shenton Park medical hub. Together, these facilities harness WA’s strengths in mining, oil and gas, as well as advanced healthcare and agricultural technology.

We need to foster collaboration between industry and our research institutions by encouraging further growth of innovation precincts around and within our research and educational institutions, creating an environment that draws in international students, investors and innovators.

There is an opportunity to recreate the excellent collaboration which exists so that business is attracted to locating in these regional centres as opposed to the existing centrally located hubs.

With the right incubator assistance and local environmental factors, these businesses will thrive and promote the establishment of new clusters, attracting a sophisticated employment profile to the regional areas of Perth.



Right job in the right location.

Citizen Profile: Families

Job stability is one of the most important factors when considering what City to live in. Perth experienced a considerable swelling of employment during the recent resources boom, but equally felt the impact of the contraction of net interstate migration when the boom slowed into 2016.

Although the family make-up hasn't changed since the last census at 2.6 people per household, the overall number of households in Perth have increased by some 60,000 over the past 5 years.

As our city moves towards a polycentric structure whereby urban consolidation shifts to additional infill dwellings and apartment/town house typologies,

we need to ensure those families who live on the fringe of Perth have access to appropriate travel, knowledge jobs and education.

It is important that industry and Government alike work together to ensure the employment profile in the outer sub regions are sophisticated and stable enough to build hubs of economic activity.

Our challenge is to ensure we diversified jobs in economic centres such as Joondalup, Murdoch and Armadale, so that the growth rate of congestion on our roads is slowed relative to population growth by a changing employment distribution and increased usage on public transport.

Getting the working life of our city right means our families can stop spending excessive time in traffic to work and school, and instead can spend quality time together living and playing in our great City.



Realising the vision

- The Westport 'outer harbour' project can potentially transform Perth's southern suburbs, rebalancing economic activity and bringing jobs to areas where they are most needed. The project can also unlock Fremantle's potential to play to its strengths as a cultural, lifestyle and entertainment centre.
- Building on the Forrestfield Link which will create a rapid transit link between the CBD and Perth Airport, investment is needed to join up Perth's knowledge and innovation cluster with better transport links. These investments should connect the centres of innovation identified by CityPulse Perth - the CBD, our universities, and the Subiaco-Shenton Park medical research hub, to draw in the best researchers and international students to join our local talent.



Play

How we spend our time outside of work, school and other commitments is an important contributor to our overall well being. As a society, we need to nurture the time we spend in leisure within our community and with our friends and families.

Investing in facilities for active sport, entertainment, cultural exchange and community engagement is as much a part of a vibrant city as having places to live and to work.

We now spend more time commuting and in traffic congestion, so access to places of entertainment, culture and recreation will give us back more time to do the things we love.

Play - Top 10

1	Perth City
2	Swanbourne-Mount Claremont
3	Fremantle
4	City Beach
5	Bayswater-Embleton-Bedford
6=	Belmont-Ascot-Redcliffe
	East Victoria Park-Carlisle
	Victoria Park-Latlain-Burswood
	Wembley-West Leederville-Glendalough
10	Mount Hawthorn-Leederville



What next?

The last ten years has seen policy reforms and transformation in the cultural and entertainment options available within the Perth CBD. The Perth City Link and more recently, the Yagan Square redevelopment, is providing a mix of housing, services, shops, bars, restaurants and entertainment facilities, while major architectural projects including Perth Arena, the new Optus Stadium, Elizabeth Quay and the Treasury Buildings are contributing to a new level of cultural and entertainment options.

The impact of this investment leaps out from the CityPulse Perth data, with a high concentration of entertainment and cultural attractions clustered within the CBD. Future investment in the Perth Concert Hall, Perth Cultural Centre common areas and the Art Gallery/State Library would ensure even better integration of these new 'play' assets that have been created. Government's leadership in cultivating an attractive place has helped accelerate economic investment in the regions, which will ensure a payback on the initial investment sooner rather than later.

There is also an opportunity to look beyond the CBD in order to open up new areas for locals and visitors to easily access cultural, dining, entertainment and recreational facilities.

Fremantle, where there has been no significant investment other than the WA Maritime Museum since the America's Cup over 30 years ago, represents a largely untapped opportunity to establish a redeveloped Victoria Quay entertainment hub with the transition of the majority of freight and trade to Kwinana as part of the new Westport 'outer harbour' project.

A similar opportunity exists north of the river to compliment the tourism investment in places such as Scarborough and Hillarys. The establishment of a new Marina at Ocean Reef provides an opportunity for much needed recreational facilities and also attract new hospitality and cultural investment in a fast-growing region of the City.



Open for all

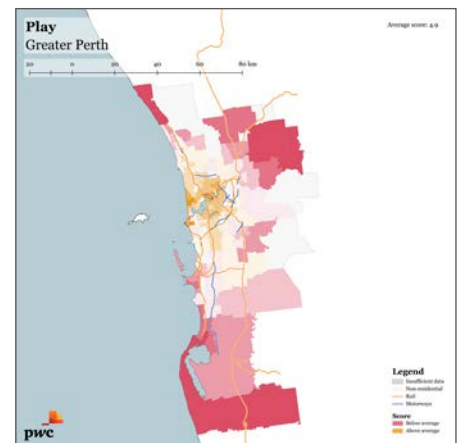
Whether it's access to fitness centres, sports facilities, recreational waters, beaches, national parkland or public parks and gardens, there are a range of options within easy reach for the vast majority of Perth's more than 2 million residents.

While population projections suggest this level of accessibility may be challenged in future, at present the diversity and accessibility of open space and active living options is undoubtedly one of Perth's great strengths.

That said, CityPulse reveals that geography plays a large part in what options are available. Fitness and sports facilities are more easily accessible in the northern suburbs, while boat facilities are highly concentrated in the southern metropolitan area. Beaches are most accessible from the central and western suburbs, but the residents of the Perth Hills can step out into national parks.

As Perth grows to over 3.5 million people, with commensurate congestion, the city will require a public transport network capable of bringing these assets within reach of residents everywhere.

Map 3: Work





A playground for all ages: *Citizen Profile: Retirees*

Having finished a career working hard, retirees have the right to enjoy their city and spend quality time recreating and enjoying cultural pursuits with friends and family.

Ensuring retirees have the ability to 'age in place' means that they can enjoy the restaurants, cafes, bars, parks and facilities of their locality while having choice of housing to suit their changing needs. This also allows the ageing generation to stay close to families and give back to the community through activities such as mentoring/teaching, volunteering and child care.

Perth is not exempt from the Australia-wide phenomenon of the 'grey tsunami,' which is heading our way. As the baby boomer generation shifts into retirement, the amount of people to demand different housing types in order to age in place will grow considerably.

Based on previous trends, the localities of growth will focus around beach-side suburbs such as Mandurah and Dawesville, tree-based suburbs on the scarp such as Darlington and Mt Helena and inner city suburbs around entertainment and cultural hubs such as Subiaco and Mt Lawley.

Access to cultural pursuits is of great importance for these members of our community, as recently outlined by Fringe World (2017), almost a third of all of their attendees are over 55 years old.

Events such as Fringe and Perth International Arts Festival are a great opportunity for our city to capitalize on this educated, time-rich and relatively well-resourced generation.

Together, we can diversify our city's recreation profile meaning Perth can be renowned as a tourism and entertainment destination.



Realising the vision

- The potential redevelopment of Fremantle as part of the Westport 'outer harbour' project is the single largest opportunity to transform Perth as a place to play for citizens and visitors. A sensitively developed historic waterfront would enhance Fremantle's established arts and cultural scene, in a similar manner to that seen in international cities such as Liverpool, Copenhagen, and New York.
- Sports facilities are concentrated in Perth's inner suburbs despite the abundance of open space the further out you travel. Sport is a key feature of West Australian life, and we should make sure everyone has the same access to spaces for a pick-up match.

Catching up Connecting Perth's suburbs



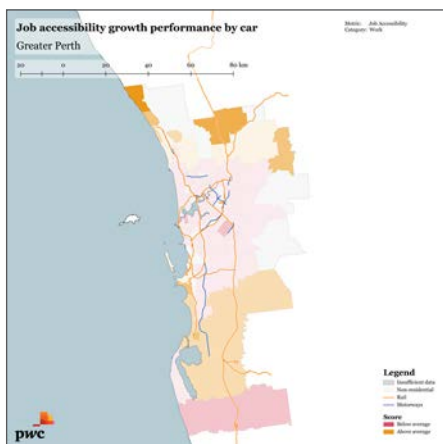
Making liveable, doable.

In the last decade Perth's population has grown rapidly, with our city now home to over 2 million people. At the same time, the urban footprint has been expanding to accommodate these new citizens. Consequently, Perth is one of the lowest density cities in the world – to get from the centre of Mandurah to Two Rocks is a two-hour drive covering 135 kilometres.

The major infrastructure investments planned under the ambitious METRONET public transport program will go a long way to connecting residents of Perth's outer suburbs to services, cultural facilities and economic opportunities.

But more work is needed to make it easier for people to access the city's existing economic and cultural centres, as well as to develop new hubs of activity beyond the CBD where people can work and play within the area where they live. Planning reform that promotes infill and transit-orientated development while limiting urban sprawl, together with congestion-busting connective infrastructure, is vital to maintaining housing affordability as the population continues to grow.

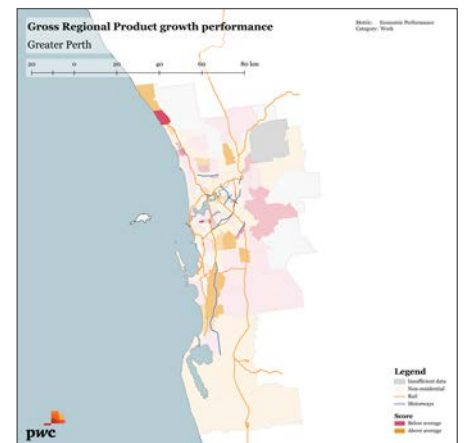
Map 4: Job accessibility growth performance by car



Job accessibility drops off rapidly south of the CBD, particularly beyond Rockingham. However, while gross regional product (GRP) growth rates were generally slow or negative across Greater Perth, several areas in the South Metropolitan region made strong contributions to economic growth, led by areas such as Baldivis Forrestdale, Byford and Wellard. This contribution was significant despite the low GRP bases in these areas.

Planned infrastructure investments like the Westport 'outer harbour' project and a Henderson Special Economic Area (SEA) have the potential to deliver more jobs to outer southern suburbs, while also eliminating freight bottlenecks and enabling Fremantle to be further redeveloped as a hub for living and playing.

Map 5: Gross Regional Product growth performance



Open for innovation

New skills for a new generation

Making liveable, doable.

After what has been a difficult economic period for Western Australia, Perth is now leading the state's economic recovery. As one of the most economically diversified and innovative locations in the state, Perth has made a strong contribution to WA's resilience during the slowdown. Perth's southern corridor has been a strong contributor to this recovery, with areas like Baldivis, Forrestdale and Wellard recording high rates of business growth. These areas are poised to grow even more rapidly with the stimulus and trade opportunities that would be created by the planned major investment in a Kwinana-based port facility.

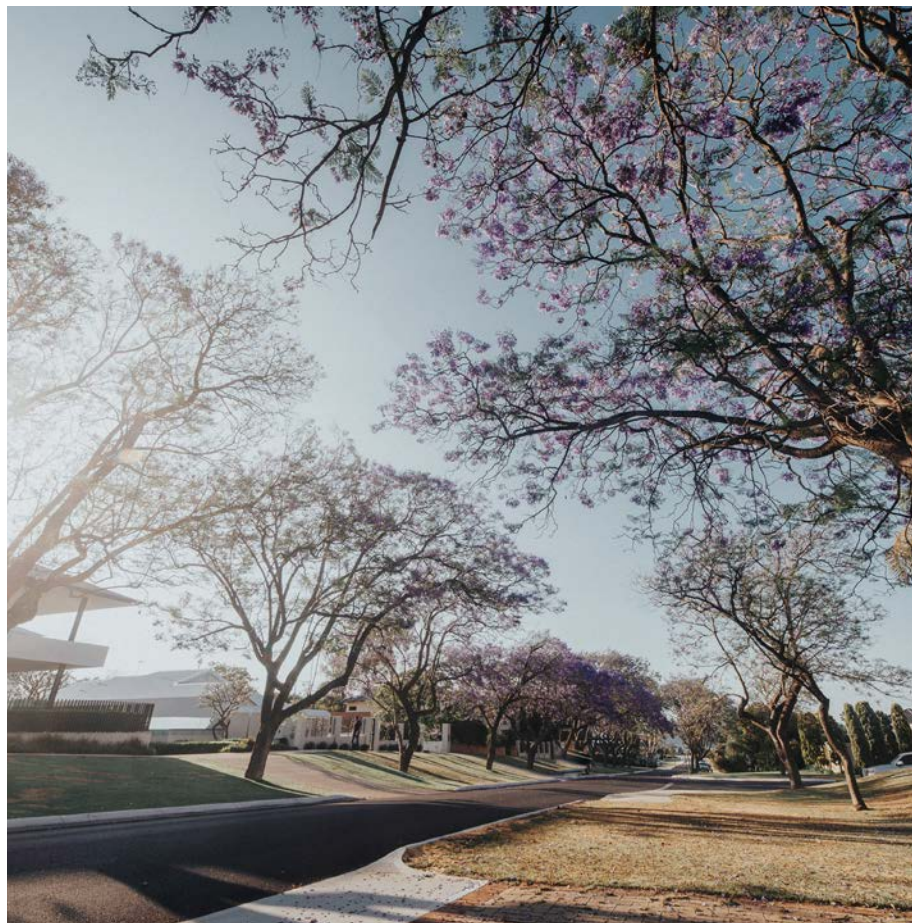
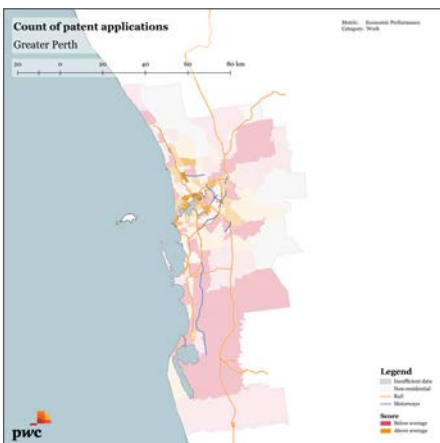
Perth's multiple university precincts are strung along the Swan River, along with the medical hub in Subiaco–Shenton Park, and the resource and services centres in the CBD. Together these form Perth's innovation cluster, which CityPulse Perth scores on an indicator measuring patent registrations by statistical area.

As WA looks to build its economic resilience and reduce its dependence on mineral resource investment and production cycles, it will be critical to harness the innovation and expertise contained in this cluster – for example, WA's world leading applications of autonomous vehicle technology.

In addition to the research and innovation already taking place in these knowledge clusters, there are also opportunities to build WA's links with the regions, through inter-university research partnerships and education exports – a pillar of the metropolitan economy.

CityPulse Perth reveals an opportunity to improve the transit options between educational institutions – as well as with the other facilities in the innovation cluster and the CBD – something that is vital to maintaining competitiveness in the international education market.

Map 6: Count of patent applications



Liveability

From great to one-of-a-kind



Making liveable, doable.

CityPulse makes it clear why Perth is such a great place to live. The data reveals that the city has an abundance of open space and national parks, a world-class new sports stadium and some of the country's best urban beaches, which are easily accessible from most parts of the metropolitan area. Access to recreational waters, especially in the city's southern suburbs, is also a major lifestyle attraction. In recent years, these traditional elements of the quintessential Perth lifestyle have been complemented by new cultural attractions. The Perth Fringe Festival has shot to prominence as the world's

third-largest fringe festival, while the Perth Festival (formerly the Perth International Arts Festival) continues to go from strength to strength. When you factor in the new WA Museum and recent reforms to support microbars and inner-city activation, it's no surprise that Perth is emerging as one of Australia's premier cultural destinations.

CityPulse Perth shows that accessible cultural attractions, entertainment venues, bars, restaurants and cafes are concentrated around Perth and the historic centre of Fremantle.

They are not necessarily easily accessed via the public transport network, however, especially from outer suburban areas.

The future of Fremantle will play a big part in helping Perth to become a truly unique place to live and play. While CityPulse shows us that Fremantle's strength lies in its cultural attractions, it remains behind Perth City in terms of accessible bars, entertainment and dining venues. A future Fremantle could be shaped around waterfront redevelopment and business investment which enhances these features.

Map 6: Bar and entertainment venues accessible by transit



A future city for our children

As Perth matures and becomes Australia's third largest city, the challenge will be to ensure we don't fall into similar traps to the growing pains of our east-coast counterparts. As Sydney and Melbourne turn to the polycentric urban planning model, we have the ability to adopt the urban consolidation model earlier rather than later.

Our liveability index is continuing to grow stronger in comparison to other cities as a reflection of the sustainable lifestyle Perth promotes. Access to stronger and more diverse jobs and housing types will mean that people can spend their valuable time and money on the things they enjoy – fun, recreational pursuits to keep them healthy, connected and balanced.

We have a great opportunity to use investment in key infrastructure to establish the right structural framework for the city. Our collective challenge is to continually ask ourselves whether there are better and more innovative ways to achieve our goal of a "Future-Perth" fit for our children and generations to come.



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