



Bigger & Better Beyond the Boom

PERTH'S PATHWAY TO PROSPERITY

October 2018

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Bigger & Better Beyond the Boom is a project of the Committee for Perth. The project is supported by its membership base with the following organisations providing additional funding:



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Major Funders



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From the Steering Committee Chair



Bigger & Better Beyond the Boom (B4) presented PwC with a unique opportunity to be the core funding partner of a project that we could see had the potential to set Perth on a new pathway to achieve greater economic diversity and growth. At PwC, we seek to improve social outcomes by facilitating cross-sector collaboration between business, government, and the community in order to enhance opportunities for society. It is our belief that the B4 project has created the ability to further this goal.

In the face of new and growing challenges for the nation, the resulting *Bigger & Better Beyond the Boom: Perth's Pathway to Prosperity* report identifies 11 opportunities and seven recommendations to realise a bright future for the region. One which plays to the region's strengths and builds on those, provides space and encouragement to see new sectors and businesses grow, based on creating solid foundations built by government, the private sector, community groups and institutions.

In undertaking this two-year venture, PwC was joined by 17 like-minded organisations who contributed senior representatives to a gender balanced Steering Committee of 20. Combined, we have volunteered more than 250 hours over the life of the project. The Steering Committee has met regularly to receive briefings from the researchers and participated in future thinking and robust debate as we have sought to analyse what the data is telling us, beyond numbers trending up or down. In the last few months of the project we have been particularly busy considering the final drafts of the report and workshopping the recommendations. We were clear that we wanted to have an informative report with workable and implementable recommendations.

I pass on my appreciation to each of the Steering Committee members, who remained engaged throughout the process and were an invaluable asset to the project.

The 10 socialisation sessions, attended by more than 100 senior people in industry and government, were vital to gain feedback on the recommendations, in terms of their achievability and appropriateness based on the key findings arising from the research. This critical last step in the project has led us to identify a pathway for Perth that is ambitious, yet achievable.

An organisation like the Committee for Perth is the ideal vehicle to take leadership on an initiative such as B4, with their significant membership base made up of local, national and international organisations. Throughout the process, engagement with the Committee's members has provided much needed thought-leadership and collaboration on an issue that is central to all our futures. A Perth that is economically competitive and prosperous, highly liveable and globally connected.

It is now up to all of us to drive these opportunities forward through a call to action and by leading the charge. If implemented, the recommendations work to ensure Perth's economic future for decades to come.

Justin Carroll

Partner, PwC
Steering Committee Chair, *Bigger & Better Beyond the Boom*

From the Project Director



As an evidenced based organisation, the Committee and its allied researchers have worked over the past two years to produce an irrefutable knowledge base for B4. These facts have created a significant foundation on which to better understand Perth's economy.

A project of this size and scale requires commitment, not just to publish the facts but to also analyse what they are telling us. To go beyond what we think and move to what we know. One clear fact is that Perth, over the long-run, is not a boom and bust region. Its economy has a degree of diversity and resilience that is rarely acknowledged. When times are good, it is true that most of us benefit. However, when a downturn occurs people experience angst, some lose jobs and find it hard to regain full-time employment. This affects our community deeply and knocks our confidence.

It is this period in which we find ourselves today as we release *Bigger & Better Beyond the Boom: Perth's Pathway to Prosperity* as the final report for the B4 project. Using the data and analysis undertaken for B4, plus sector workshops and interviews, we have also importantly asked the community for its views. All of these are reflected in the *Pathway to Prosperity* report, in which the Committee for Perth has taken a strategic approach by mapping out a series of opportunities, with associated recommendations and actions, in order to protect Perth's much valued quality of life and deliver economic growth.

This future can only be realised if we leverage Perth's strengths, seize the opportunities and address impending risks and threats. Ultimately, we need do more than rely on the next boom time coming, we must shape the future together.

On our journey to a prosperous future, we may find ourselves in uncomfortable and unfamiliar territory. Perth is not in this alone, with cities across the globe seeking to adjust to a more disrupted and uncertain future. The smart ones however are leveraging their strengths and points of distinction.

I thank our researchers, Steering Committee participants, funding partners, members and stakeholders, and my team who have been actively involved in bringing this report to fruition. I also express my appreciation to the leaders of cities who openly shared their regional economic development strategies with me during the study tours I conducted for this project.

Our analysis of the reports on Perth's economy over the past 15 years demonstrate that there is appetite for change and a consensus on what needs to be done. The challenge now is to do more than talk in fierce agreement with each other, it is time to act.

Marion Fulker

CEO, Committee for Perth
Project Director, *Bigger & Better Beyond the Boom*

Contents

Project Introduction	8
Executive Summary	14
Opportunities	16
Recommendations	18
Chapter 1: The Race for Global Competitiveness	21
1.0 Introduction	21
1.1 Understanding Urban Competitiveness	22
1.2 Economically Competitive Perth – A Natural Advantage	23
1.3 Benchmarking Perth’s Global Urban Competitiveness	25
1.3.1 Liveability	27
1.3.2 Cost of Living	27
1.3.3 Innovation	27
1.3.4 Student Cities	27
1.3.5 Smart Cities	27
1.3.6 City Brand	27
1.4 Global Networks and Connectivity	28
1.4.1 Connectivity through Mining and Resources	29
1.5 Human Capital	30
Chapter 2: Globally Competitive Perth - A future of opportunity or challenges?	33
2.0 Introduction	33
2.1 Global Forces	34
Chapter 3: Failure to Act	39
3.0 Introduction	39
3.1 Mining and Resource Hubs	39
3.2 Under-Developed Diversity	40
3.3 Human Capital Divide	41
3.4 Twentieth Century Liveability and Connectivity	41
3.5 Politics as Usual	42
3.6 Failure to Act Scenario	42
3.6.1 Mining and Resource Hub	42
3.6.2 Under-Developed Diversity	43
3.6.3 Human Divide	43
3.6.4 Politics as Usual	43
3.6.5 Twentieth Century Liveability and Connectivity	43
Chapter 4: Perth’s Economy – Performance, diversity and competitive edge	45
4.0 Introduction	45
4.1 Long-term Stability, Short-term Shock	46
4.2 Investment and Economic Performance	47
4.3 Economic Performance and Investment in Other States	49
4.4 Mining Investment Outlook	50
4.5 Economic Diversity	50
4.6 Strengths, Weaknesses and Emerging Industries	53
Chapter 5: Perth’s People – Strengths and weaknesses from a resident perspective	57
5.0 Introduction	57
5.1 Growth Positivity	58
5.2 Downturn Division	58
5.3 Declining Opportunity	59
5.4 Governance Inefficiency	61
5.5 Priorities for the Future	61
Chapter 6: Perth’s Spatial Economy – Location, connectivity and competitive advantage	63
6.0 Introduction	63
6.1 Spatial Framework and Liveability in Perth	64
6.2 Economic Geography of Perth	64
6.3 Industry Dispersal and Locational Requirements	66
6.4 Industry Dispersal, Growth and Government Policy	70
6.5 Economic Downturn and Economic Geography of Perth	71
Chapter 7: Perth’s Economic Future – Action, ideas and analysis	73
7.0 Introduction	74
7.1 Economic Development Policy in Perth and Western Australia	74
7.2 Research and Policy Review 2008-2018	76
7.2.1 Ageing, Aged Care and Health Care	80
Chapter 8: From Analysis to Action – Learning from cities and countries around the globe	83
8.0 Introduction	84
8.1 Trends in Policy for Economic Development and Urban Competitiveness	84
8.2 Examples of Regional and National Strategies for Economic Development and Urban Competitiveness	86
8.3 Strategies and Initiatives for Economic Development	90
8.3.1 Human Capital, Knowledge, Skills, Innovation and Technology	90
8.3.2 Knowledge and Technology Clusters	92
8.3.3 Accelerating Innovation within Government	93
8.3.4 Global Networks and Connectivity	93
8.3.5 Enterprise Support and Funding	94
8.3.6 Infrastructure and Investment	96
8.3.7 Private Infrastructure Investment	96
8.3.8 Smart City Initiatives	97
Chapter 9: Opportunities, Recommendations and Actions	99
Opportunities	99
Recommendations	106
Project Team	110
Project Steering Committee	111
Acknowledgements	117
Project Funding Partners	117
References	118
Committee for Perth Members	126

In the face of new and growing challenges for the nation, the resulting *Bigger & Better Beyond the Boom: Perth's Pathway to Prosperity* report identifies 11 opportunities and seven recommendations to realise a bright future for the region.

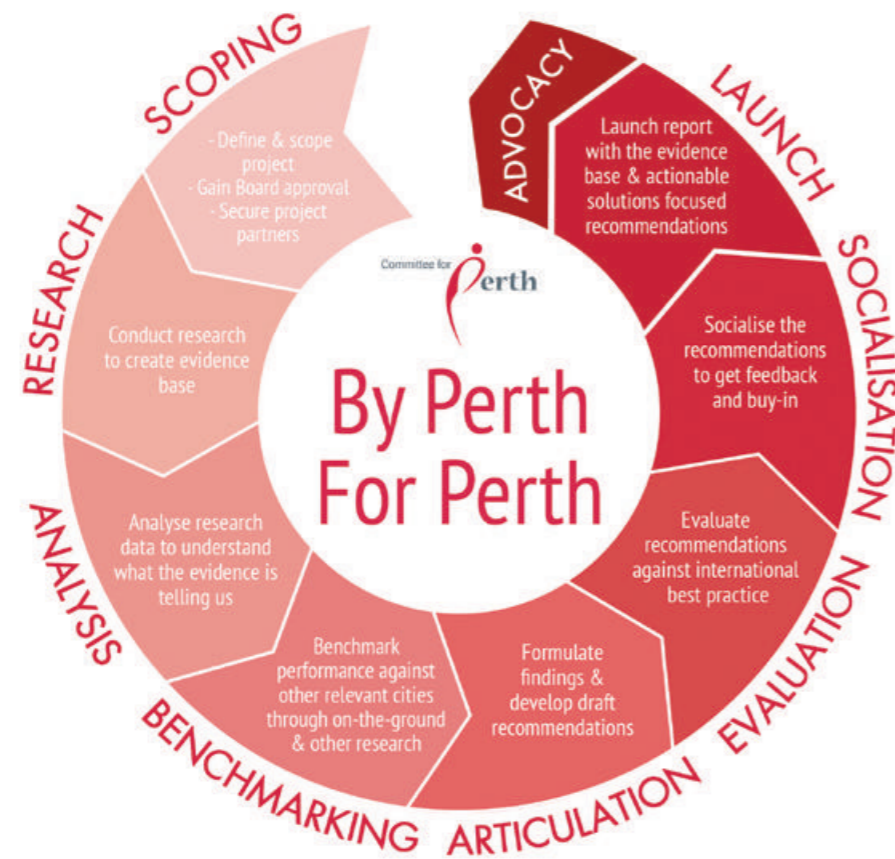
Project Introduction

The impetus for the *Bigger & Better Beyond the Boom* project (B4) was generated by the Committee for Perth's *Get a Move On!* report, which recommended the preparation of a cohesive economic development strategy for Perth and Peel. This need was heightened by the results of the 2015 Perth Perception Survey, which identified growing community concern about the economic future of the region.

As the leading think tank focused on Perth and the region's future, it was clear that the Committee needed to lead the discussion and debate. The aim of the project was to examine the size, industry composition and spatial structure of the economy in the Perth and Peel region and identify industry sectors that are growing; industries in decline; and emerging economic threats and opportunities for the future.

B4 was a two-year research project to challenge conventional wisdoms and identify strategies for a more economically diverse and robust future for the region. It has been undertaken with a number of funding and research partners including core funder – PwC.

Applying a four-pronged approach that incorporates academic research, in-house expertise, consultative findings and on-the-ground study tours, the Committee for Perth has undertaken an extensive research program in order to complete the B4 project. It has also deployed its unique, 'by Perth, for Perth' methodology, outlined below, so as to truly reflect local conditions and propose pragmatic solutions.



Over the past two years, the Committee has built a substantial evidence base that has informed strategies for the future. Key inputs include:



1. Community Survey

In March 2017, the Committee asked 2,000 working age residents of Perth and Peel for an economic perspective of their home and work life. This critical first step in the project put people at its heart to ensure strategies for the future capture our most valuable asset.



2. FACTBase Bulletin 52 – Sizing and Mapping Higher Education and Vocational Education and Training in Perth and Peel

Higher education and vocational education and training play a pivotal role in developing a more diverse and resilient economy. This research examined the educational contribution to the regional economy and identified opportunities for economic growth.



3. FACTBase Bulletin 55 – Sizing Tourism in Western Australia

Tourism has been identified as a key growth sector, with capacity to create new jobs and assist in driving economic expansion in coming decades. This research examined the tourism sector in Perth and Western Australia to quantify its economic contribution, compare this to other states and territories and identify key opportunities.



4. FACTBase Bulletin 56 – Sizing Ageing in Western Australia

This research articulates the broad, predicted impacts of ageing on the economy, including the workforce, public spending and society. It also provides an overview of strategies to take advantage of opportunities associated with longer life expectancy.



5. FACTBase Special Report – Perth as a resilient economy

This report examined Perth’s history of economic development since World War II. It provided a detailed look at Perth’s industries, in order to identify those with the potential for steering our future.



6. FACTBase Bulletin 57 – Spatial Distribution and Employment Trends in Perth and Peel since the 2011 Census

Spatial distribution and employment trends across Perth and Peel are explored to determine geographic and demographic differences across the region.



7. FACTBase Special Report – Kwinana as a catalyst for economic development

The Kwinana Industrial Area has been one of the most significant drivers of economic activity in Western Australia, not only as a key centre for employment, but as a major contributor to innovation, export earnings and economic growth. This Report examined its development, including early origins, industry ecosystem and economic contribution.



8. FACTBase Bulletin 59 – Greater Perth’s Economic Base: A Comparative Assessment

An analysis of Perth’s economic base identified industries that are driving economic growth and potential industries of diversification for future focus.



9. FACTBase Bulletin 60 – Perth’s Global Connectivity

Australia’s economy has, much more than many other developed countries, been historically oriented toward international trade. This research identifies the global connections of Australian firms across the major Australian cities.

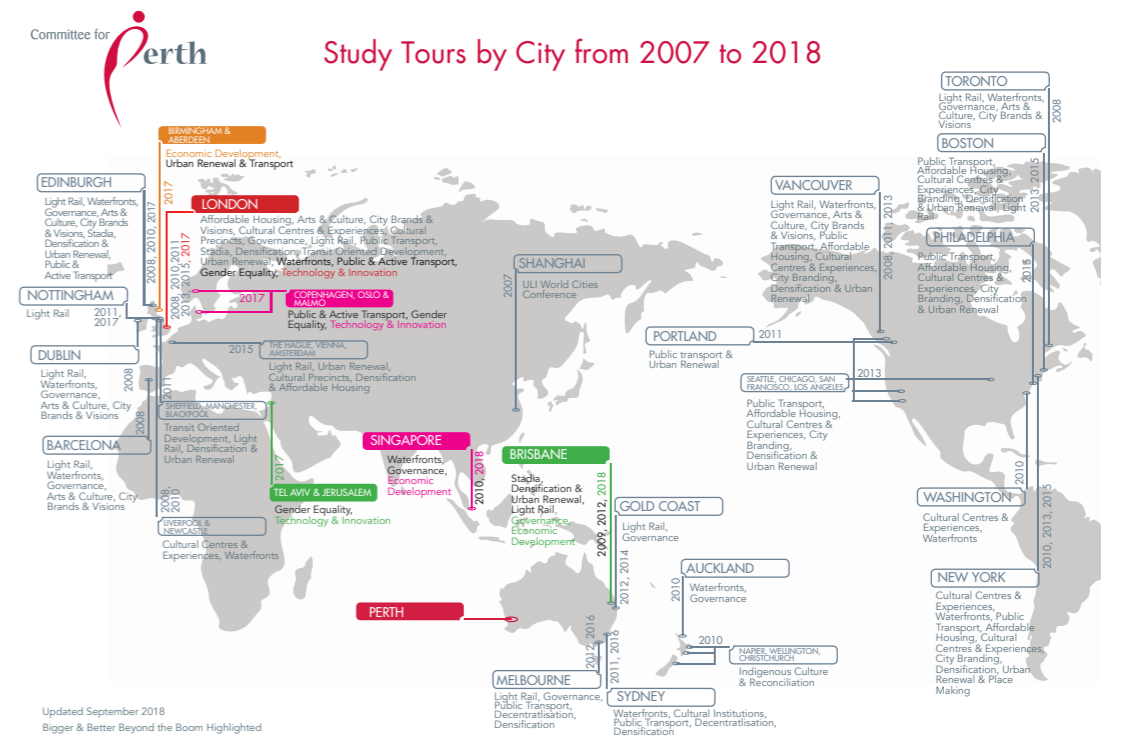


10. FACTBase Bulletin 61 – Local Economic Competitiveness in Greater Perth

Local competitiveness factors such as human capital, innovation, technology, entrepreneurship, agglomeration, infrastructure and accessibility can contribute to the expansion of local economies above the expected average. This research examined local competitiveness across Australia and the Perth region.

11. Study Tours

Study tours undertaken to cities in the United Kingdom, Scandinavia, Australia and Asia to conduct on-the-ground research into economic development planning with a focus on innovation, technology and infrastructure as catalysts for growth.



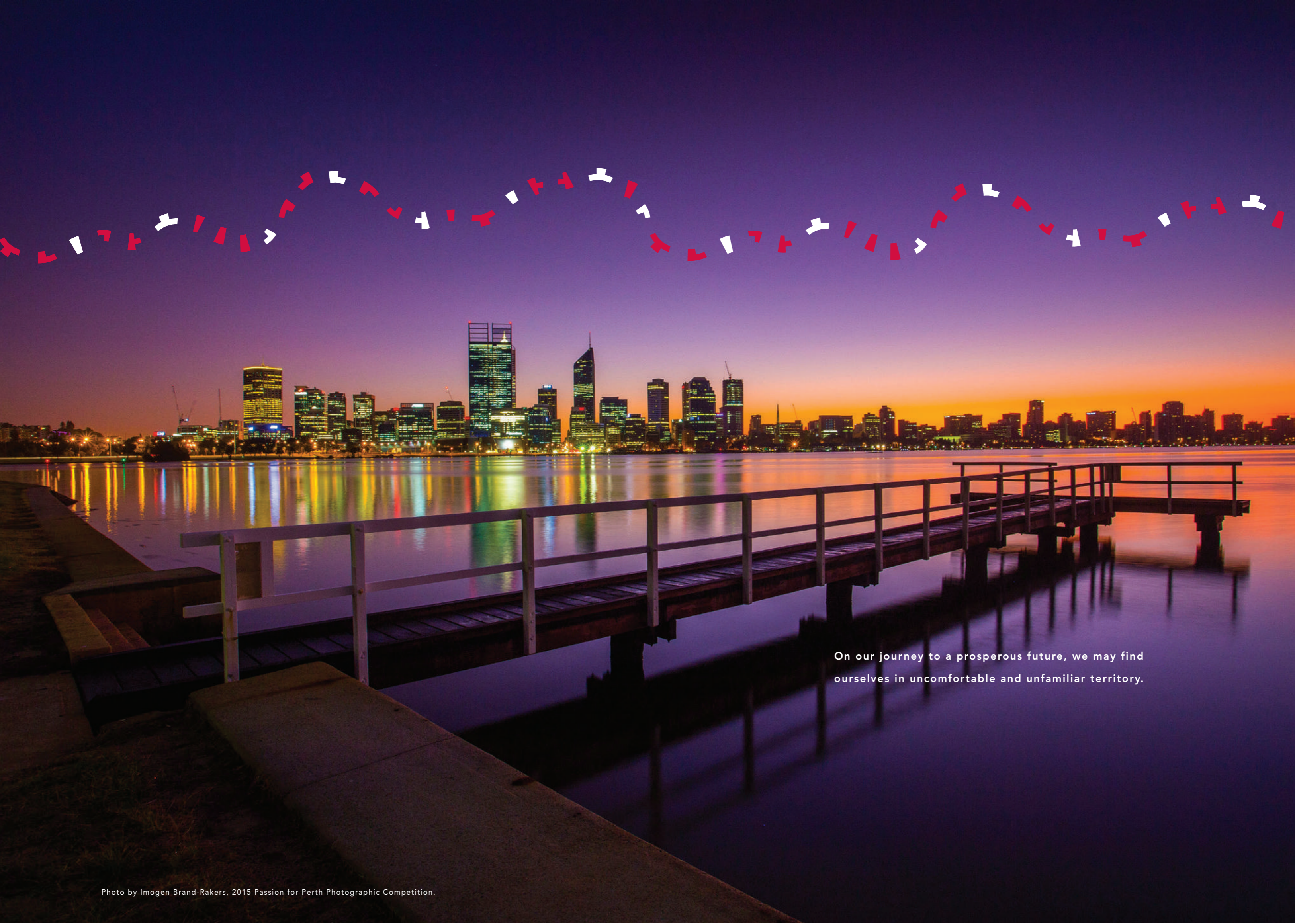
12. Internal Report

An environmental scan of Perth-based reports over the past decade, an analysis of strategies other cities have implemented to grow and diversify their economies.



13. 2018 Perth Perception Survey

Since 2012, the Committee has commissioned market research firm Ipsos to take the pulse of the community on a range of issues. More than 600 residents were asked to rank aspects of their life and identify areas of high value and those that need improvement.



On our journey to a prosperous future, we may find ourselves in uncomfortable and unfamiliar territory.

Executive Summary

The economic downturn impacting the Perth and Peel region (Perth) today is an opportunity to catalyse a new economic future. A future defined by collective planning and action to position Perth at the forefront of the technologically savvy, innovative, connected and collaborative cities that are generating a new wave of global disruption and prosperity.

The Bigger & Better Beyond the Boom: Perth's Pathway to Prosperity report documents the evidence, outlines the case for change, provides the opportunities, and details the recommendations and actions to move Perth from complacency to prosperity.

The competition for talent, investment and visitors was once a contest between countries or states and now it is at the city scale. For more than two decades, cities in Australia, Asia and around the globe have been strategically and co-operatively transforming their urban, business and government systems to capture economic opportunities and respond to challenges presented by global forces, including breakthrough technologies.

Yet Perth has not moved far beyond the starting line. Perth does not have a vision or strategy for its economic future and because of this, action to capitalise on the city's competitive advantages, stimulate innovation and investment, and respond to new, global challenges has been limited and ad-hoc.

This lack of collective action does not come from a shortage of information, analysis or know-how. Rather, it reflects an economy built on the State's abundant natural resources that has exhibited long-term resilience, punctuated by periods of rapid growth and prosperity, and downturns that have been both moderate and short-lived. It is also reflective of a community that has enjoyed a quality of life, recognised as among the world's best. Together, these attributes have delivered a 'crisis of complacency' that has curbed the perceived need to chart a new economic course.

Between 2000-15, complacency was amplified by optimism, as Perth experienced a mining investment fuelled economic upswing and a period of rapid population expansion. This period of growth and prosperity catalysed investment in urban regeneration, infrastructure, arts, culture and hospitality. It also expanded the productive capacity of the mining and resource sector in the State.

Consequently, while not all people and places benefitted from the boom, by the end of 2015, Perth found itself in a much stronger position than it was at the turn of the century, with economic activity higher than when the boom commenced in 2004-05.

Yet in 2011, commodity prices peaked, and from 2012-13 to 2015-16, annual mining investment in WA declined as resource projects were completed and fewer new projects reached final investment decisions.⁽¹⁾ The effects of falling mining investment spilled over to other sectors in the State, impacting on non-mining business investment and precipitating the current economic downturn.

The impact of the economic downturn has been significant. In 2016-17, gross state product in WA contracted for the first time since records began in 1989-90, and 2015-17 was one of just three periods in 40 years when unemployment was consistently above the national average.

The effects on the community is evident, with increasingly polarised reports of economic well-being, and satisfaction with both life in Perth, and employment prospects in the region. It is also evidenced by a rise in the proportion of Perth residents who would consider moving out of the region and the number of residents who have already migrated from Perth to other Australian capitals.

Yet the downturn in the economy is not the only force reported to be influencing Perth's competitiveness. Perth's perceived attractiveness as a place to live, visit, learn and do business is also relatively low, and is trending downwards compared to other cities in Australia, Asia and around the globe, which are benefitting from heightened competitiveness, resulting from long-term strategic efforts to generate innovative, knowledge economies, and build smarter, more efficient, sustainable and liveable urban areas.

Combined, these trends provide a strong case for Perth to re-evaluate its current economic path and take action to deliver a new economic future.

It is within this climate that the Committee for Perth, in conjunction with its members and funding partners, including core funder PwC Australia, has undertaken the *Bigger & Better Beyond the Boom* project.

The project, the findings of which are outlined in this report, examined the size, industry composition and spatial structure of the economy in the Perth and Peel region, and identified industry sectors that are growing, and industries in decline. It also articulated emerging economic threats and opportunities for the future and identified a need for immediate, collaborative action to both seize Perth's economic opportunities and address its weaknesses.

The B4 project focuses on Perth rather than WA in its entirety, recognising that Perth is home to 79% of WA's population and 79% of the employed workforce⁽²⁾⁽³⁾ and acknowledging the importance of Perth's role as the command and service centre for WA's broader industry and infrastructure networks.

This report identifies 11 high-level opportunities for the economic future of the Perth region, supported by 7 recommendations, which provide a conduit through which opportunities can be realised and Perth re-positioned on a path to a competitive, prosperous and stable economic future. Additional detail regarding Perth's economic opportunities and the economic development tools available to deliver them are provided within the body of the report.

**The competition for talent,
investment and visitors was once a
contest between countries or states
and now it is at the city scale.**

Opportunities:

1. Catalyse Perth's Crisis of Complacency	The current economic downturn is a 'call to action' for Perth and provides an opportunity to re-evaluate the region's economic course and devise a new pathway to a prosperous future.
2. Shift from Analysis to Action	There is an opportunity for Perth to build on the substantial research, discussion and analytical work undertaken by government, industry and non-government organisations over the past decade and shift from analysis to action.
3. Partner for Prosperity	Globally, partnerships between industry and government and international governments and organisations are formed to stimulate economic growth, fund infrastructure, progress science, research and development and foster innovation. There is an opportunity for partnerships to be a central tenant of strategies for economic development, investment and innovation in Perth.
4. Move Beyond 'Politics as Usual'	Long-term economic planning for the Perth region has been hindered by fragmented governance and political cycles. There is an opportunity for all levels of government to address this problem through formal collaboration, co-operation and bipartisanship.
5. Reverse Perth's Downward Competitiveness Trend	Perth has competitive advantages, including the State's diverse natural resource base and the region's liveability strengths. Despite this, Perth's competitiveness as a place to live, work and do business has been trending downwards, and there is an opportunity to take strategic action to reverse this trend.
6. Build on Perth's Mining and Resource Strengths	Perth's early twenty-first century mining-and-energy-fuelled economic expansion founded the region as a resource sector hub of global significance, supported by both substantial financial and human capital and strong business connections to countries in Asia and Africa. There is potential for Perth to capitalise on these strengths and connections.
7. Adapt to Disruption and Seize Global Opportunities	The capacity to capture opportunities and adapt to new challenges generated by global forces, including technological development, globalisation and the rise of Asia, shifting demographics, and climate change, will influence the short and long-term competitiveness of industries in Perth. There is therefore an opportunity to plan for this disruption and to seize the potential that global forces provide.

8. Leverage Mining and Resource Innovation	WA's economy remains heavily dependent on the mining and resource sector, but the sector has become more diverse and innovative, providing new opportunities for a resilient and innovative economy.
9. Expand Bright Light and Growth Sectors	Perth is home to primary and 'bright light' sectors and industries with capacity and/or a need for growth and innovation, including agribusiness and ag-tech; professional, technical and scientific services; higher education; tourism; recreation and creative services; health and social services (including aged care); and advanced manufacturing, and there is an opportunity for collaborative action to facilitate the short and long-term growth of these sectors.
10. Boost Non-Mining Business Investment	Perth's economic performance has been heavily tied to commodity prices and investment in mining. Mining investment in WA declined in the 2012-16 period, precipitating an associated fall in non-mining investment. It is evident that to increase economic stability, Perth needs new drivers to attract inward business investment.
11. Foster Perth's Innovation Ecosystem	Innovation is important to economic performance and has been identified as a weakness of Perth's economy. An opportunity has been identified for 'bottom-up' initiatives to foster an innovative and entrepreneurial ecosystem in Perth, combined with investment in new, sector specific industry clusters to facilitate collaboration and innovation.

The effects on the community is evident, with increasingly polarised reports of economic well-being, and satisfaction with both life in Perth, and employment prospects in the region.

Recommendations:

Recommendation	Actions	Refer Chapter(s)
1. Develop the inaugural investment, engagement and attraction strategy and associated brand to promote Perth as a place to invest, work and learn.	<ul style="list-style-type: none"> Government and industry to develop a prospectus for Perth. Committee for Perth to lead a collaborative exercise to develop a brand strategy to promote: <ul style="list-style-type: none"> Lifestyle Natural environment Industry specialisations Uniqueness/distinctiveness People and diversity Government to create a concierge-style approach to promote Perth as a destination for international investment. Government and industry to utilise alumni and networks to grow international partnerships. 	Chapters 1 and 7
2. Create the inaugural long-term economic growth and competitiveness strategy.	<ul style="list-style-type: none"> The Premier to appoint a taskforce that reports directly with appropriate levels of funding. The taskforce must have an independent chair, experienced in government and the private sector, and include relevant Directors General and sector representatives. The strategy should be built upon research and consultation in order to create a knowledge base that identifies Perth's unique regional assets, capabilities, competitive advantages and opportunities in the global economy, in consultation with federal, state, local government bodies, industry, higher education providers, and stakeholders and community. The strategy is tabled in Parliament. Ensure the strategy has bipartisan support to give it longevity beyond political cycles. Legislate five yearly updates. Commit to regular monitoring and review with necessary adjustments to the strategy. 	Chapters 1, 2, 7 and 8
3. Develop the inaugural long-term infrastructure strategy.	<ul style="list-style-type: none"> Through Infrastructure WA, or its precursor, and informed by Recommendation 2 above, identify the infrastructure required to facilitate and support Perth's future economic growth and competitiveness. Develop the strategy to improve and respond to: <ul style="list-style-type: none"> Economic growth Urban competitiveness & liveability Social infrastructure Smart technology ICT Connectivity Sustainability Clean energy <p>Infrastructure is developed to a world-class standard and where buildings accompany it they should reflect the distinctive character of WA and Perth.</p>	Chapters 6, 7, and 8

Recommendation	Actions	Refer Chapter(s)
4. Focus on sectors where Perth has a competitive advantage, opportunity or increasing demand in order to grow the economy.	<ul style="list-style-type: none"> The mining, resources and METS, higher education, tourism, agri-tech, aged care, renewables, science and research sectors develop reports that identify immediate barriers to growth and communicate these to government. Relevant sectors to develop case studies of examples where it excels. Informed by the inaugural economic development and urban competitiveness strategy in Recommendation 2, sectors that are identified for further/future growth opportunities prepare strategies that address: <ul style="list-style-type: none"> Global trends Innovation and technology Land/location requirements Infrastructure needs Workforce planning and development Local, global and national networks and opportunities 	Chapters 2, 3, 4, 5, 6, 7 and 8
5. Protect and nurture Perth's ecosystem of innovation and entrepreneurship.	<ul style="list-style-type: none"> Government to develop new clusters with an anchor industry. Government to revitalise existing clusters of industry through urban regeneration projects and by co-locating enterprise support services within clusters. Government to implement adequately funded 'bottom-up' initiatives for enterprise that both support innovation and investment within established industries and facilitate the emergence of new innovative enterprises. Place government at the heart of innovation and R & D through innovation in government service provision. 	Chapters 7 and 8
6. Implement 'smart city' initiatives for infrastructure efficiency and improved liveability and urban competitiveness.	<ul style="list-style-type: none"> Government to investigate smart city initiatives and engage with other global cities, innovative industries and research institutions to identify short and long-term opportunities for the Perth region including: <ul style="list-style-type: none"> Big data analytics Sensor technology Artificial intelligence/automation. Government to prepare a 'smart city' plan to guide long-term implementation of 'smart city' initiatives in regional Perth. Government to move to an open source data policy by making non-private, non-commercial data available. Government to engage with the private sector to understand and leverage company and sector know-how. 	Chapters 1, 2 and 8
7. Increase Perth's human capital and foster lifelong learning.	<ul style="list-style-type: none"> Government to work with industry to prepare a progressive, responsive and integrated education strategy to focus on: <ul style="list-style-type: none"> Structuring education to be future focused. Matching resident skills and requirements of industry. Lifelong learning and ongoing skill development. Equity of access to quality education. Maximising competitiveness as an international student destination. Connecting students with employment opportunities. Global connections, particularly with Asia, Indian Ocean Rim and Africa. 	Chapters 1, 2, 4, 7 and 8



Perth's economy is in a period of transition.

Photo by Carly Donohue, 2012 Passion for Perth Photographic Competition Winner.

CHAPTER 1

The Race for Global Competitiveness

Key Findings

- Perth's current economic downturn provides an opportunity for the region to evaluate its current trajectory and create a new path towards economic competitiveness and prosperity and catalyse action for a more prosperous economic future.
- Perth is perceived to lag behind many of its global urban competitors in key areas of economic competitiveness including innovation, technology and branding.
- Perth risks losing its perceived global and regional liveability advantage if the region's performance does not keep pace with improvements in other cities in Australia and Asia.
- Perth lacks a strong and unique competitive identity.
- Natural resources have been and remain WA's and Perth's most significant competitive advantage.
- Connectivity has emerged as a regional strength due to the region's role as a global minerals and energy hub, and physical connections between Perth and other global cities and countries have increased.
- Perth has developed strong business connections to Asia and Africa.
- Human capital is a relative strength, although Perth's human capital base is strongly linked to the mining and resource sector and has a smaller proportion of workers with a tertiary qualification when compared to Sydney and Melbourne.

1.0 Introduction

Perth's economy is in a period of transition. After rising to a peak of mining and energy sector investment fuelled expansion in 2012-13, mining investment and, more recently, productivity, job and income growth in Perth has been in decline. However, the downturn is arguably an opportunity for the region to re-evaluate its role and performance in the global economy and catalyse action to deliver a new and prosperous economic future.

It is important for Perth to grasp this opportunity because there is evidence that Perth's competitiveness is falling as cities around the globe reap the benefits of long-term planning for economic growth and competitiveness.

It is also important because the twenty-first century is expected to be the Asian century. While this will deliver new opportunities for Perth, the region will face new competition as Asian cities emerge as locations of choice for people, businesses and investment in the Asia-Pacific region.

1.1 Understanding Urban Competitiveness

Urban competitiveness refers to a metropolitan region's potential to achieve long-term economic growth and prosperity – by capturing opportunities for innovation and growth and by attracting new businesses, inward investment and talent. It is important because businesses, investment capital and people are increasingly mobile, and international companies are progressively assessing and comparing the attractiveness of cities, rather than just countries when making location decisions. It is also important because high-performing cities drive high-performing regions and nations by delivering positive rates of productivity, employment and wage growth, and low levels of income inequality and social exclusion.

Cities are home to an increasing proportion of the population and high-performing cities foster well-being, including better education, infrastructure, health and security. They are also better equipped to achieve goals for environmental sustainability.^{(4) (5)}

The race for urban competitiveness is a result of globalisation - the trend of increasing global economic integration – which, although present for hundreds of years, gained pace in the 1990s to emerge as one of the largest forces impacting on world economies today. The rapid pace of globalisation in recent decades was influenced by factors such as technological advancement and urbanisation and are outlined in Box 1.1.

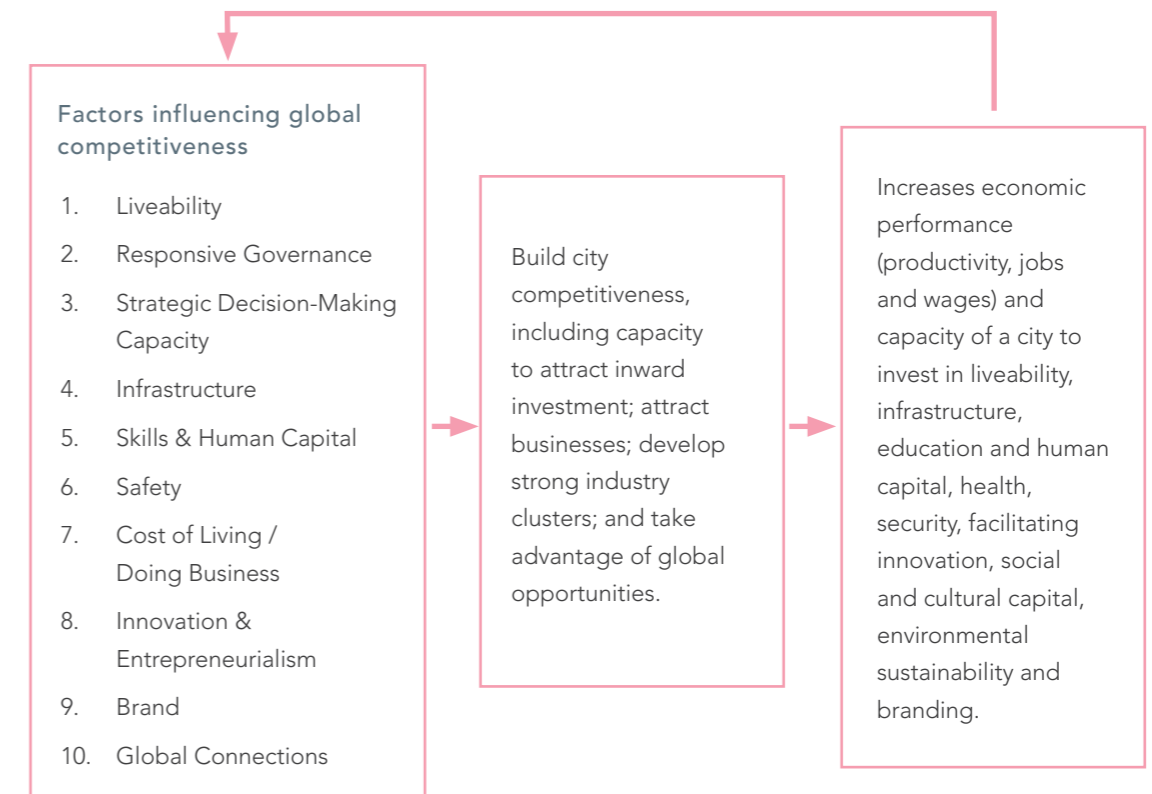
Box 1.1: Factors Influencing the Rapid Pace of Globalisation from the 1990s Onward

- China, India, the former Soviet Union and Eastern European states becoming part of the global economy.
- Technological developments, particularly in ICT and transportation, diminishing the importance of distance in trade.
- Convergence of income growth and technological developments, most notably as the economies of China and India grew, resulting in reductions in poverty levels and rising incomes.
- The relocation of production processes through offshoring and outsourcing.
- Trade and capital market integration.
- Increasing labour mobility.
- Urbanisation of the global population.

Source: (6)

In response, cities worldwide developed broad new initiatives for economic development which aimed to achieve the economic, social, cultural and environmental factors recognised as enhancing urban competitiveness. These include creating or exploiting an economic comparative advantage; facilitating technology, innovation and entrepreneurialism; improving strategic decision-making capacity; developing a skilled workforce; maximising connectivity, both internal and external; improving liveability and quality of life; and developing a strong, recognisable city-brand.

Figure 1.1: Building Urban Competitiveness



Consequently, investment in factors influencing competitiveness increased, and for some cities, heightened comparative global advantage and economic performance. This, in turn increased the capacity of the metropolis to invest in new initiatives to further enhance competitiveness, creating a self-reinforcing loop of reinvestment and success.⁽⁵⁾

1.2 Economically Competitive Perth – A Natural Advantage

Since the middle of the twentieth century, Perth has enjoyed a relatively strong and resilient economy and has built a position as a globally competitive mid-tier city and global minerals and energy hub. The primary drivers of this growth and transformation have been the discovery of new mineral and resource deposits, combined with increased global trade associated with economic deregulation and the continued expansion and increasing diversity of Western Australia's mining and resources sector.

Seventy years ago, WA was home to a little over half a million people, half of whom lived in Perth. As WA and Perth grew, the State became more modern and culturally diverse, with an increasing proportion of residents arriving from the United Kingdom and elsewhere in Europe.⁽⁷⁾ At that time, the State's economy was small and inextricably tied to the export of agricultural products and economic strategies focused on agricultural consolidation and diversification into the manufacturing sector.⁽⁷⁾

Yet in the 1960s, the economic fortunes of WA shifted dramatically with the discovery of significant iron ore deposits in the northwest of the State. This discovery aligned with the lifting of the iron ore export embargo in 1960 and rapid expansion of Japan's industrial sectors. Combined, these factors underpinned one of WA's most significant periods of economic prosperity. ^{(8) (9) (10)}

This resource sector boom transformed the structure of the Western Australian economy for the decades that followed and Western Australia became increasingly one of Australia's wealthier states. ⁽¹¹⁾

State and national governments have been driving this transformation. Since the 1950s, successive Western Australian governments have used State Agreements to facilitate investment in WA's resource, industrial and manufacturing sectors. At the same time, economic deregulation opened Australia's economy to the world and, combined with new investment and global demand, contributed to strong export growth and the expansion and diversification of WA's mining sector. ⁽¹²⁾

From the modest economic circumstances in the 1950s, diversification and expansion have occurred. By the 1990s, resources were a primary source of export earnings and Perth was home to diversified national and multi-national companies. The resulting benefit was highly-skilled people and global connections and the region established a competitive advantage in the mining equipment, technology and service (METS) sector. ⁽⁷⁾

For the first 15 years of the twenty-first century, while many other developed nations grappled with the impact of global competition and the Global Financial Crisis, rising demand and surging prices for commodities driven by growth in China and other Asian nations propelled a period of unprecedented investment in WA's mining and resources sector. This drove the importance of the sector to the WA economy to its peak.

This twenty-first century 'gold-rush' transformed the economic and urban fabric of Perth and was characterised by rapid economic and productivity growth; rising household prosperity; a migratory swell in the population and labour force of the State; a shift towards trading with Asian nations; and the development of an increasingly diverse base of export resources. ^{(7) (13)}

The region also benefitted from economic prosperity with heightened investment in major urban renewal projects and through investment in new transport, health, arts, cultural, sporting and recreational infrastructure.

Reform in spheres such as liquor licensing and retail trading has also catalysed the emergence of new, independent and creative events and businesses that have transformed Perth's recreation and cultural sector.

Yet in 2014-15, a significant period of growth in annual investment in the mining and resource sector in WA came to an end. This period of mining investment growth drove a super cycle of construction, which helped lift the industry to higher levels of production.

As construction projects came to an end, the pace of economic growth and demand for labour in the Perth region also declined, and the region entered a period of economic adjustment. Despite the downturn, the productive capacity of the mining and resource sector remained substantially higher than in the pre-boom era. The impacts of this period are quantified in Chapters 3 and 4. This evidence indicates that the current decline in economic performance is currently impacting on Perth's economic and global competitiveness as a place to live and work.

However, despite the current downturn it is apparent that Perth has achieved an enviable level of economic growth over the past 70 years and this has been fundamentally driven by WA's primary competitive advantage, its abundant natural resources. It has also been supported by the region's long-term competitiveness as a liveable city, in comparison to many of its global counterparts. What is less certain is whether Perth can retain a competitive position based primarily on its natural resource strengths into the future. Perhaps an unintended consequence of Perth's long-term economic stability and relative prosperity has been a level of complacency regarding planning for the region's economic and competitive future and responding to global forces of change.

1.3 Benchmarking Perth's Global Urban Competitiveness

Since the early to mid-2000s, global urban competitiveness has been reflected in the emergence of multiple city indices, which compare and rate the performances of cities around the globe against a range of economic, social and environmental factors.

The primary purpose of these indices has been to deliver intelligence to international businesses and investors regarding the suitability of cities as regions to invest and do business and their attractiveness for global staff. While these indices have some limitations in scope and methodology, they provide a useful tool for governments and policy makers to benchmark the performance of a metropolis on an international scale, by identifying a region's comparative strengths and weaknesses, measuring performance over time, and providing an external perspective on regional competitiveness. ⁽¹⁴⁾

A review of Perth's performance against other major Australian capitals and a small selection of developed metropolitan centres in the Asia-Pacific region is provided in Table 1.1. It relies on the analyses of recent city indices and benchmarking reports.

It finds that Perth is a comparatively competitive mid-tier global city and the fourth most competitive capital in Australia. It also finds that the region has strong rivals – notably other major capitals within Australia and the Asia-Pacific region.

The indices identify liveability as Perth's greatest competitive advantage.

However, despite the current downturn it is apparent that Perth has achieved an enviable level of economic growth over the past 70 years and this has been fundamentally driven by WA's primary competitive advantage, its abundant natural resources.

Table 1.1: Index Ratings for Australian and Asia-Pacific Cities

City Index (top performer noted in pink)	Perth	Sydney	Melbourne	Brisbane	Adelaide	Auckland	Singapore	Osaka	Hong Kong
Economist Intelligence Unit's Global Liveability Index 2018	14	5	2	22	10	12	35	3	37
Mercer Quality of Living Ranking 2018	21	10	16	37	29	3	25	59	71
Mercer Cost of Living Ranking 2018	61	29	58	84	87	81	4	10	1
Numbeo Cost of Living Index 2018	77	40	86	144	110	60	38	85	81
2thinknow Innovation Cities Index 2018	105	10	16	54	163	96	6	45	27
QS Best Student Cities 2018	39	9	3	21	41	23	15	19	12
EasyPark Smart Cities Index 2017	41	12	10	N/A	61	48	2	52	68
Resonance World's Best City Brands 2017	62	5	11	29	N/A	N/A	2	61	34

Source: (15); (16); (17); (18); (19); (20); (21); (22).

Perth consistently rates below Melbourne and Sydney in all indices, except cost of living and ranks below other cities in the Asia Pacific region including close neighbour Singapore on factors including innovation; smart city initiatives; branding; and attractiveness to international students.

Cities in Asia have also increased their global liveability performance, with Tokyo and Osaka making their debut in the Economist Intelligence Unit's top 10 most liveable cities in the world in 2018 and Singapore and Hong Kong shifting up nearly ten places from 2015 to 2018 in the EIU rankings.

1.3.1 Liveability

Liveability has been one of Perth's long-term global competitive strengths – but it is a strength it shares with other Australian and Asian capitals and Perth's global EIU ranking has declined in recent years due to improvements in the liveability scores of other cities.⁽¹⁵⁾ Cities in Asia including Singapore, Tokyo, Hong Kong and Osaka are among the cities that substantially improved their liveability scores, as ranked by the EIU, while the liveability scores of cities in Australia have remained relatively static.

1.3.2 Cost of Living

Perth's cost of living performance has improved over the past three years with indices reflecting declining living costs in Perth in comparison to other global cities. Despite this, in 2018 Perth continued to be rated among the most expensive Australian cities for expatriates, behind Adelaide and Brisbane.^{(18) (23)}

1.3.3 Innovation

The Innovation Cities Index rates cities against 162 indicators associated with cultural assets, human infrastructure and networked markets. It rates Perth just outside the top 20% of most innovative cities in the world. While the Perth region's rating has substantially improved since 2015, Perth lags behind Sydney and Melbourne, which are ranked in the top 10 and top 20 cities respectively. Perth is also rated substantially below Singapore, which is identified as the sixth most innovative city in the world. Other cities in Asia are also very high performers on the innovation ladder including Tokyo (1st) and Seoul (12th).⁽¹⁹⁾

1.3.4 Student Cities

Perth's was ranked the 39th best student city in the world in 2018. While this is a relatively strong global performance, the region again sits in fourth place behind Australia's capitals of Melbourne, Sydney and Brisbane, with Perth's major weaknesses identified as isolation and post-graduate employment opportunities.

1.3.5 Smart Cities

Perth rates within the top 50 'smart cities' in the world and is identified as the third 'smartest city' in Australia, but is ranked well below Singapore, Sydney and Melbourne, all of which sit within the top 15. Perth's weaknesses according to this index include traffic; car sharing and smart parking; sustainability initiatives including clean energy; and a low scoring innovation economy. Access to digital infrastructure, particularly Wi-Fi hotspots and digitisation of government were also identified as weaknesses for Perth, while smart phone penetration and standards of living were identified as notable strengths.

1.3.6 City Brand

Perth was identified as the 62nd strongest city brand out of 100 global cities, and Australia's fourth strongest brand behind Sydney (5th), Melbourne (11th) and Brisbane (29th). It is noted that Perth was rated as a strong performer (14th) in its attraction of people/human capital, due to the diversity of the region's population and workforce.

Box 1.2: The Role of a Strong Competitive Identity

The Committee for Perth has researched city brands and international perceptions of Perth to better understand and examine Perth's identity in the global economy ⁽²⁶⁾.

The research established that a strong competitive identity is important in the global economy and effective, outward looking metropolitan governments were those with an understanding that:

1. Brand or competitive identity is a hugely important asset that needs to be managed, measured, protected, leveraged and nurtured over the long-term as a critical factor that underpins every transaction between the place and its consumer (trade partners, investors, visitors and future residents).
2. Places need to engage with the outside world in a clear, co-ordinated and communicative way.
3. Together, vision and brand can unite people around common goals, creating a powerful dynamic for progress.
4. Sustained and coherent innovation is important in all sectors of national or state activity.

The research established that Perth did not have a strong or unique competitive identity when compared to other global mid-tier cities or a unifying vision for the future.

It determined a need for Perth to establish a recognisable image that truly reflects the region's ambition, contribution and potential on the world stage. One that is connected to a regional vision that is an honest reflection of: the city; the genius of our people; and what we are working towards becoming in the future.

1.4 Global Networks and Connectivity

Connectivity is recognised as an important feature of a competitive global city. Connectivity refers to hard connections like physical infrastructure, and soft connections such as business, trade, research and investment relationships. Connectivity is important because it influences the capacity for, and logistics of, business, trade and investment relationships between places.

In the early twentieth century, Perth's isolated and peripheral geographical location was a significant barrier to building business and trade relationships. However, today, developments in transport and information and communications technology have overcome many of the logistical challenges associated with the tyranny of distance.

As a result, while Perth's geographical location still limits the region's potential to have a central presence in global transport networks, Perth's physical connectivity by air and sea has improved, and the region has also developed strong 'soft' global connections, most notably through its role as a global mining and resources hub.

1.4.1 Connectivity through Mining and Resources

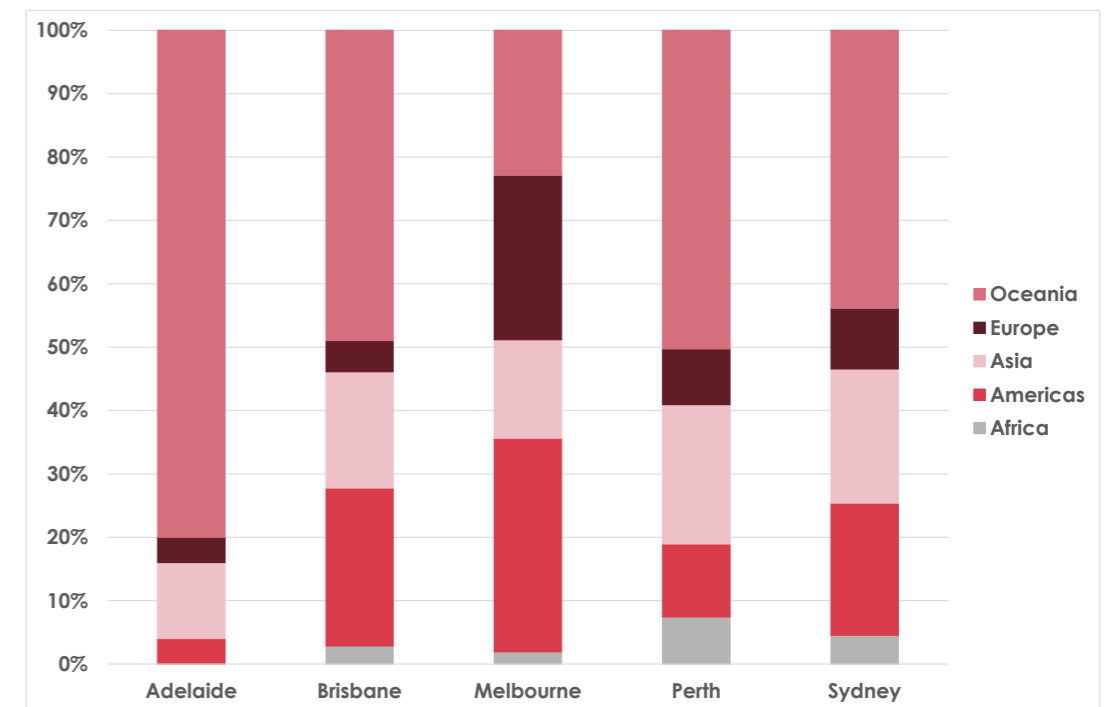
Mining and resource sector growth in Perth resulted in a substantial increase in the number of Australian Securities Exchange (ASX) listed firms headquartered in the Perth region. This in turn, rapidly enhanced the region's global connectivity, such as the flows of people, goods, services and capital. ⁽²⁴⁾

FACTBase Bulletin 60, *Perth's Global Connectivity*, identified 652 Perth-headquartered firms listed on the ASX. Sixty per cent of these are minerals sector firms and 17% are energy sector firms. These firms have 195 overseas branch offices in 58 countries. Of the overseas branches of Perth-based companies, 49 were in the materials sector and 45 were in energy, representing approximately half of the total of 195. Of the total overseas branches, 27 were in Africa, 42 in the Americas, 80 in Asia, 32 in Europe, and five in Oceania. ⁽²⁴⁾

When Perth's global connections are compared to other Australian capitals, as illustrated in Figure 1.2, Perth is found to have uniquely strong connections to and Asia and Africa.

The research also reveals that, when the networks and sub-networks, such as branch offices, of ASX companies are mapped, Perth emerges as the most or second most connected capital in Australia.

Figure 1.2: Relative Geographic Distribution of ASX-Listed Firm Branches by Headquarter Location



Source: (24).

Perth's connectivity by air has increased over the past 10 years and is projected to continue to expand into the future, see Figure 1.3. Continuous improvement to Perth's air connectivity remains central to the development of international business networks and is critical to the growth of potentially propulsive industries including tourism and higher education. In the past, air connectivity has been a weakness for Perth compared to cities such as Sydney and Melbourne, as outlined in FACTBase 55 - *Sizing Tourism in Western Australia*. ⁽²⁵⁾

Figure 1.3: Perth's Connectivity by Air 2018



Source: (26).

1.5 Human Capital

Human capital, or skilled and educated people are also critical to city competitiveness because they catalyse new business, provide human resources to support business, and both drive and enable industry growth, innovation and adaptation.

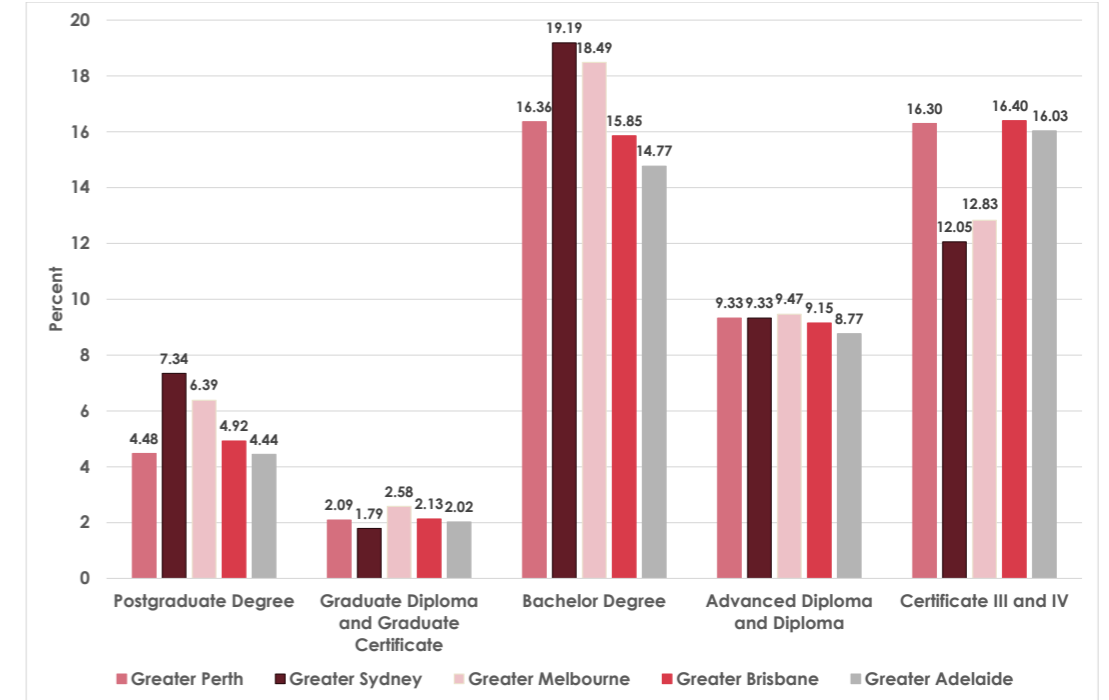
Over time, Perth's human capital base has changed relative to social and economic conditions of the region and in response to industry demands. Over the past two decades, human capital in Perth has been strongly influenced by migratory population growth associated with expansion and investment in the mining sector and associated demand for labour. This migratory growth has now slowed.

In 2012-13, WA had a net overseas migration rate of 21% with a net gain of 51,809 people from overseas per annum. ⁽²⁷⁾ Yet, by 2015-16, net overseas migration had fallen 74% with a net gain of just 13,640 from overseas. In 2015-16, net interstate migration was negative, with a net total of 7,703 people leaving WA for other Australian states and territories. ^{(28) (27)}

The skill base of Perth's population today is linked to the region's existing mining, construction and manufacturing industry base, with relatively high proportions of workers with Certificate III and IV level qualifications, the basic post-secondary qualifications that provide training in more advanced skills and knowledge.

As shown in Figure 1.4, Perth has a higher proportion of tertiary qualified workers than Adelaide or Brisbane but remains significantly behind Sydney and Melbourne.

Figure 1.4: Workforce Educational Attainment, Australian Capitals 2016



Source: (29).

Human capital is also influenced by demographic change and, in Perth, the population is getting older. In 2016, 50% of West Australians were of working age and there were 29 children and 21 'dependent' adults for every 100 people of working age ⁽³⁰⁾. By 2100, the total number of 'dependents' in the population is projected to increase to 79.5 per 100 people of working age ⁽³⁰⁾. Unless addressed positively, ageing may also negatively impact on the workforce and on the regional skill base ⁽³⁰⁾.

Over time, Perth's human capital base has changed relative to social and economic conditions of the region and in response to industry demands.



Perth faces strong competition from cities within Australia and its city-neighbours in the Asia-Pacific region

Photo by entrant, 2012 Passion for Perth Photographic Competition.

CHAPTER 2

Globally Competitive Perth - A future of opportunity or challenges?

Key Findings

- Global forces including technology and innovation; climate change and the shift to renewables; social change and urbanisation; globalisation and the rise of Asia; geopolitical instability and protectionism are delivering multiple opportunities and challenges for Perth.
- A strategic approach to economic planning, investment and adaptation will be needed for Perth to capture opportunities associated with global change and disruption.
- Perth faces strong competition from cities within Australia and its city-neighbours in the Asia-Pacific region. Capturing the highest potential benefit from global opportunities hinges on Perth retaining and strengthening a competitive position in the global economy.
- In the short to medium-term, forces such as demographic change, shifting knowledge and skill requirements, as well as new technological advances, including automation and robotics have the potential to deliver unprecedented impacts on workers and industries.
- There is short to medium-term potential for Perth to implement 'smart city' initiatives to maximise planning and infrastructure efficiency and improve government service delivery.
- In the medium to long-term, Perth needs to adapt to climate change and capture opportunities associated with the global shift to renewables.

2.0 Introduction

Independent research has ranked Perth as Australia's fourth most competitive capital. The region has benefitted from long-term economic competitiveness as a mining and resource hub and natural resources remain Perth and WA's number one economic competitive advantage. Innovation within the mining and resources and emerging sectors are also delivering new opportunities for the region's future.

Yet the economy is currently in a phase of downturn as it transitions from high mining-sector driven growth to a new stability. There is evidence that this is impacting on the region's competitiveness as a place to live and work. At this same time, the competitiveness of other cities within Australia and the Asia-Pacific region is rising and global forces are disrupting industry performance and shaping the economy of the future.

Perth will need to strategically plan, adapt and invest to capture the potential of disruptive global forces. The primary question for the region today is whether it has the capacity to capitalise on its competitive advantages; capture new global opportunities; and address regional weaknesses within an adequate timeframe to maintain a competitive position in the global economy and ensure a stable, prosperous future.

2.1 Global Forces

As Perth sits on the precipice of the third decade of the twenty-first century, global forces, most notably technological advancement, innovation, globalisation and the rise of Asia; climate change; shifts in social and demographic make-up; and geopolitical instability have the potential to disrupt the performance and future growth of existing and emerging industry sectors and sub-sectors in the Perth region.

These forces can be feared or captured and there is broad, international consensus that cities need collaborative, regional and industry specific strategies with deliberate plans of action to seize the disruptive potential and propel economic growth and competitiveness. Some of the opportunities and challenges for Perth that are arising and may occur from these forces are identified in Figure 2.1.

Figure 2.1: Global Forces and Trends, Opportunities and Challenges for Perth





Source: (31); (32); (33); (34); (7); (35); (36); (37); (38); (39); (15).

As Figure 2.1 highlights, global forces are delivering multiple opportunities for Perth, yet the region also faces strong and increasing competition from its Australian and Asian neighbours. Capturing the highest potential benefit from these opportunities therefore hinges on Perth retaining a competitive position in the global economy.

Yet, as outlined in Chapter 1, Perth is currently perceived to lag-behind many of its global urban competitors in key areas of economic competitiveness and the region risks losing its perceived global liveability advantage if its performance does not keep pace with improvements in other cities in Australia and Asia, particularly as Asia expands its role in the global economy.

Technology and innovation are also critical disruptive forces and drivers of growth in the global economy, yet Perth is currently ranked well below Sydney, Melbourne, Brisbane and Singapore regarding its perceived innovation capacity.

Furthermore, forces such as demographic change, shifting knowledge and skill requirements, as well as technological advances, including automation and robotics are expected to deliver unprecedented impacts on workers and industry, while trends towards protectionism or heightened geopolitical instability could slow global economic growth.

Perth will need to strategically plan, adapt and invest to capture the potential of disruptive global forces.



Natural resources are Western Australia's primary economic strength and are likely to remain the State's key advantage into the future.

CHAPTER 3

Failure to Act

Key Findings

- Cities need deliberate plans of action to seize the disruptive potential of global forces and propel economic growth and competitiveness.
- Perth does not have a clear plan or pathway to deliver economic stability and prosperity and build a competitive position in the global economy.
- If Perth fails to act in response to global opportunities and challenges, the region risks a future in which it falls behind its city competitors and industries face increasing local and global headwinds.

3.0 Introduction

This report establishes a need for the region to take action to seize the potential of disruptive global forces and propel Perth on a pathway to a competitive and prosperous future. It also identifies the current economic downturn as an opportunity to catalyse change and highlights that in the current global climate, failing to actively plan to adapt to global change and grasp new economic opportunity could be a high-risk strategy.

This chapter examines the major forces and disruptors influencing industry growth and liveability in Perth in detail and articulates the possible consequences for the region if it fails to act to build competitiveness and prosperity.

This is structured under five major themes:

- Mining and Resource Hub
- Under-Developed Diversity
- Human Divide
- Twentieth Century Liveability and Connectivity
- Politics as Usual

3.1 Mining and Resource Hub

Natural resources are Western Australia's primary economic strength and are likely to remain the State's key advantage into the future. In 2016-17, WA exported \$121 billion of goods and services annually, 90 per cent of which are produced by the mining and energy sectors, most notably oil and gas, iron ore, gold, alumina, and nickel.⁽²⁴⁾

Prior to and during the most recent mining boom, Perth gained increasing prominence, initially as the State's service centre for the mining industry and ultimately as a global minerals and energy resource hub. In response, an increasing number of global mining and resource companies set up offices and operations in the region.⁽⁷⁾ While the number of mining firms in Perth has declined since the height of the boom in 2012, Perth-based firms retain strong global corporate networks and have the capacity to leverage these networks to add value to overseas operations, and to create new markets deploying the city's expertise.⁽²⁴⁾

Yet it is also evident that the mining sector is in a period of disruption, with changes including but not limited to: a drive for innovation and productivity improvement; technological advancement; digitisation; shifting social and environmental expectations; and a global shift to renewable energy.⁽³⁷⁾ Many of these changes have the potential to benefit the mining sector, yet there is also capacity for negative impacts including reduced demand for some low-skill workers, as well as declining demand for, and investment in, some parts of the industry.

Perth, as a region with a mining sector history, is home to some of the world's largest mining companies and pre-eminent mining and resources research institutions. It has the potential to capitalise on disruptive forces by incubating a strong METS sector to develop first-in-the world technological innovations and best practice responses to twenty-first century mining sector challenges.⁽⁷⁾ But if the region does not take the lead in this sector, it risks becoming a knowledge and resource-tech importer.⁽⁴⁰⁾

3.2 Under-Developed Diversity

The FACTBase Special Report, *Perth as a Resilient Economy* identified a number of emerging industries as 'bright lights' for Perth's economic future. These industries include the recreation and creative industries; the professional, technical and scientific services industries; tourism; and higher education. Although not the biggest employment industries, or industries with the largest number of firms in Perth, they are growing and making an increasing contribution to economic vibrancy and diversity. The industries are also globally connected and have capacity for employment growth.⁽⁷⁾

It is noted, however, that some 'bright light' industries are experiencing growth challenges. The tourism and higher education industries in WA are growing, but at a much slower pace than these sectors nationally.^{(25) (41)} Research indicates that, while Perth has opportunities and strengths in these sectors, including well-regarded internationally competitive education institutions, expansion has been hindered by issues including distance; accessibility; branding and marketing; increasing national and global competition; and perceptions of high living costs. Perth also suffers from a dispersed model of attraction and institutions which are relatively 'suburban'.⁽⁴¹⁾ In terms of attracting international students, recent visa restrictions have resulted in a flow of students to other parts of Australia, to Perth's detriment.^{(41) (25)} Inquiries also suggest that growth of new creative industries, such as technology start-ups, has been held back by lack of access to funding and networks as well as limited availability of skilled technology workers.⁽⁴⁰⁾

Beyond the 'bright light' sectors, industries that are important to Perth, but are facing economic or social headwinds include health care and social assistance; retail; and manufacturing industries.⁽⁷⁾ By contrast, agriculture is an industry of opportunity, yet is currently delivering jobless growth.

While the number of firms in the health care and social assistance sector has grown rapidly, this growth is linked to the ageing of the population, a trend that is also placing the health system under increasing stress.⁽⁷⁾ Employment in the health care and social assistance sector is expected to continue to increase into the future, yet many of these jobs are predicted to be low skill and low pay.⁽⁷⁾ It is widely recognised that innovation is needed in these sectors by engaging with smart technologies, innovating in the delivery of care, and adapting to reform and quality care practices. Countries that lead health care innovation will be best positioned to benefit from social change.⁽³⁰⁾

By contrast, the number of traditional retail and manufacturing firms in Perth is declining. Total firms in the retail trade industry in Perth fell significantly from 2009 to 2016 and retail vacancies in the Perth CBD are the highest of all Australian capitals.⁽⁷⁾ There is evidence that the retail sector in Perth is being disrupted by digital and technological innovation such as online shopping.⁽⁷⁾ Similarly, the number of traditional manufacturing firms in Perth has also declined, yet there has been an associated rise in small, high-tech advanced manufacturing firms which have been boosted through federal and state initiatives such as the establishment of the Australian Marine Complex.⁽⁷⁾

Agricultural industries have also been a staple of WA's economy, yet since the 1980s, when government policies imposed a restructuring of the industry, the number of people involved in the sector has continually contracted.⁽⁷⁾ While business consolidation and the application of high-tech mechanisations increased productivity, the overall number of firms in Perth whose business is agriculture, forestry, and fishing declined 35.3% between 2009 and 2016.⁽⁷⁾ Yet Asia's demand for food is forecast to outstrip supply and this presents a huge opportunity for agriculture and agribusiness. Agribusiness is listed in the top five industries in which Australia has a comparative advantage and if the State captures this opportunity, Perth may have a considerable role to play as an agricultural service centre and hub of research, development and agri-tech businesses.⁽⁷⁾ However, if WA fails to seize this advantage, other jurisdictions will.

3.3 Human Capital Divide

Perth has a strong human capital base with notable strength in the proportion of people with Certificates III and IV. This has been attributed to established industries including mining and construction. Perth also has a relatively high proportion of residents with tertiary qualifications when compared to capitals such as Adelaide and Brisbane but continues to sit behind Sydney and Melbourne.


Data also indicates that Perth attracts a higher proportion of higher education enrolments in fields associated with established industries in the region, including education, engineering and related technologies, architecture and building, and a lower proportion of enrolments in industries of potential future importance such as information technology.⁽⁴¹⁾

Trends such as technological innovation, digitisation and automation are expected to be associated with a decline in demand for lower skilled workers. In Australia, it is projected that, while jobs for people at all skill levels will increase between 4.4 and 10.7% over the next five years, job growth will be highest for workers with a tertiary level qualification and lowest for workers with only a secondary education.⁽⁴²⁾

An ageing population is also predicted to have an impact on the size and composition of the workforce and the economy. A key impact of ageing is expected to be a reduction of the proportion of people of working age in the population and in the size of the labour force. While these trends may strengthen employment opportunities for people in the labour market, it may also reduce business access to labour and required skills. Employment is also predicted to become more precarious, with an increase in contract and part-time employment augmenting workforce participation but also increasing the potential for under-employment.⁽³⁶⁾

3.4 Twentieth Century Liveability and Connectivity

Perth has strong lifestyle and environmental strengths and while liveability remains the region's primary strength, the region's global liveability ranking has fallen as other cities strategically invest to maximise their competitiveness as a high-quality place to live. Perth's net score in the EIU Liveability Index did not change in 2018 but the region's ranking dropped from 7th to 14th because other cities improved their score.^{(43) (15)}



In addition, while it has also been widely acknowledged that Perth's urban fabric emerged better beyond the boom as a result of major redevelopment, urban renewal and infrastructure projects, placemaking and cultural initiatives, and legislative and regulatory reform, the pace of investment in these projects and improvements was markedly slowed. ⁽¹³⁾

Furthermore, evidence indicates that perceptions of liveability are closely tied to economic performance, opportunity and outlook. As a result, as economic and employment performance and wage growth has declined in post-boom Perth, satisfaction with the region and optimism regarding the region's performance and future has also fallen. ⁽⁴³⁾

Competition among cities to attract businesses, people and skilled labour has also been rising and Perth performs relatively poorly when benchmarked against key twenty-first century indicators, including the growth and expansion of an innovation economy and application of smart technologies to deliver efficient infrastructure and liveable, sustainable places. In addition, some of Perth's Asian neighbours including Singapore, Seoul and Tokyo are emerging as world leaders in these fields. ^{(44) (21)}

Outward low-density growth patterns also prevail in Perth and research shows that this can hinder economic competitiveness by increasing commute and travel times, decreasing infrastructure efficiency and limiting connectivity between businesses, people and economic hubs. ⁽⁴⁵⁾ Connectivity deficits also limit the capacity for the emergence of vibrant geographical knowledge industry hubs, which are known as 'innovation melting pots'. ^{(46) (40)}

3.5 Politics as Usual

Strong, effective government has been identified by residents as the highest priority requirement for a stable political and economic future. ⁽⁴³⁾ Yet Perth has well-documented governance inefficiencies including fragmentation of local government across the region and the lack of a governance system to explicitly serve the Perth region in its pursuit of economic development and competitiveness. As a result, local governments have prepared strategies for economic development yet there is no economic development strategy for the Perth region.

Despite an understanding of these problems, to date reform of this system has been hindered and stalled. Without a region-wide economic development strategy that is developed in a collaborative manner, has bipartisan support and is supported by a funded action plan, Perth is at significant risk of falling behind its competitors.

3.6 Failure to Act Scenario

If Perth fails to act, the region risks a future in which its opportunities, competitive advantages and position in the global economy slowly erode. This future scenario is outlined below.

3.6.1 Mining and Resource Hub

1. The region retains and builds its role as a minerals energy and resource hub. This has delivered broad, regional benefits but the economy remains vulnerable to market fluctuations and commodity cycles.
2. While innovation within the sector grows and demand for high-skill, knowledge workers continues to rise, this is accompanied by a reduced need for traditional, lower skill workers.
3. Parts of the sector are also grappling with reducing demand as the globe shifts towards investment in and use of renewable energy sources.
4. The minerals and energy sectors are ever more innovative and the number of resource tech firms in Perth increase, yet WA has failed to capture the breadth of this opportunity and remains primarily a resource tech and knowledge importer.

3.6.2 Under-Developed Diversity

5. Innovative new firms emerge in Perth's creative industry sectors, but they are primarily small employers and their growth is hindered by issues such as skill deficits and a lack of access to funding, networks and markets.
6. Larger industries including higher education and tourism also continue to grow but are not able to successfully capture a share of the national market commensurate with WA's population base. As a result, while these industries play a positive economic role, they are not of a size or scale sufficient to propel future prosperity.
7. Population growth and ageing has increased the number of firms in the health sector, but the health system and health services are still increasingly stretched.
8. Perth is home to world-leading health research and health technology organisations, yet they remain relatively small, and a number of new jobs in the health sector are primarily low skill and low pay.
9. The economic contribution of the traditional retail and manufacturing firms has declined. Regional retailers are losing market share to national and international online retailers.
10. High-tech advanced manufacturing firms are established but remain small.
11. Agriculture and agribusiness continue to transform through technology and consolidation, yet while productivity has increased, jobs have not.
12. The agri-industry faces increasing competition from other Australian states and nations around the globe in meeting growing demand for food from Asia.

3.6.3 Human Divide

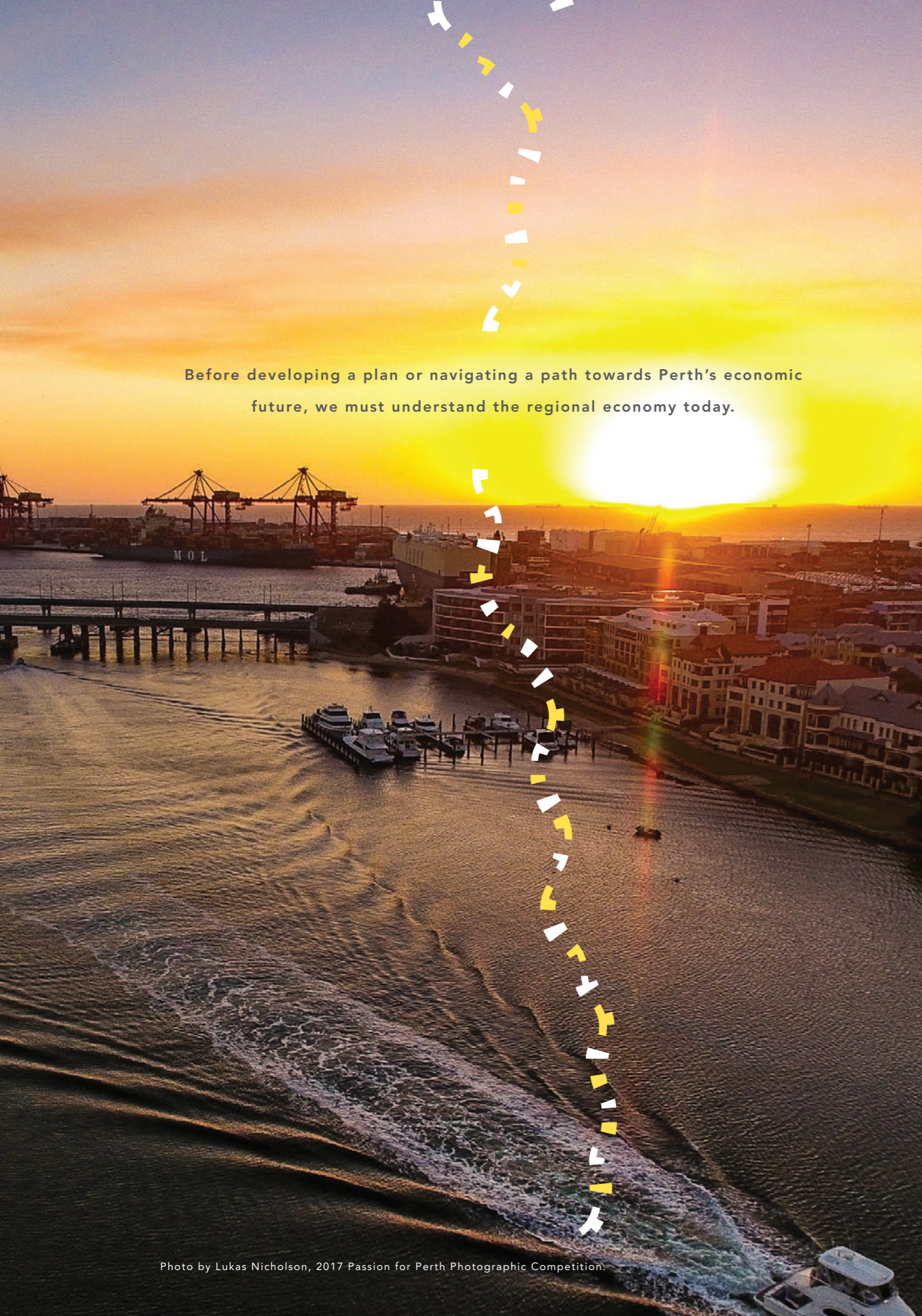
13. Most workers in Perth have a higher education qualification, yet human capital remains geared towards meeting the needs of mining and construction.
14. There is a deficit of skill and knowledge to meet the needs of technology and emerging creative industries.
15. A reduction in people of working age in the economy has strengthened employment performance but there is a problem of entrenched unemployment and under-employment among low-skill workers, older people, and residents of some geographical locations.
16. There is a deficit of skilled workers, particularly highly skilled and knowledge and technology sector workers, generating an increasing divide between the haves and have-nots.

3.6.4 Politics as Usual

17. Perth retains a 'politics as usual' approach to governance in which local government is fragmented and there is no dedicated mechanism for regional governance. As a result, there is no governing body to explicitly serve the needs of Perth in the pursuit of economic development.

3.6.5 Twentieth Century Liveability and Connectivity

18. Perth remains liveable within a twentieth century model of low density, car-based development, but its global liveability ranking has fallen as the region loses its competitive edge to the smarter, more connected, efficient, sustainable, creative and diverse cities emerging as economic and urban innovators in Australia and Asia.



Before developing a plan or navigating a path towards Perth's economic future, we must understand the regional economy today.

CHAPTER 4

Perth's Economy – Performance, diversity and competitive edge

Key Findings:

- Attracting investment in mining and non-mining sectors is critical to economic performance and declining mining investment in WA has substantially dampened short-term growth and prosperity in Perth.
- Perth's economy has exhibited long-term resilience, but the most recent economic slow-down has been significant. The 2016-17 period was the first time that WA's average annual GSP contracted since records began in 1989-90.
- The 1978-1982, 1989-1992 and 2015-2017 periods are the only periods during which the Western Australian unemployment rate was consistently above the national rate.
- Non-mining investment has been in decline since 2012-13, and WA attracts significantly less non-mining investment than New South Wales, Victoria or Queensland.
- Investment in the mining sector is expected to remain subdued in the short-term.
- Despite the recent slow-down, there are positive signs and opportunities for the region's economic future including the emergence of new growth industries outside the mining and resource sector including professional, technical and scientific services industries, tourism and higher education. There is also evidence of increasing innovation in the mining and resource and agricultural sector and substantial potential for growth in the health and social services sector, including in aged care.
- Perth's mining and resource sector has become increasingly diverse.
- Co-ordinated economic policies and planning for growth in emerging and growth sectors, coupled with strategic public investment could assist in stimulating growth and investment in the economy.

4.0 Introduction

Before developing a plan or navigating a path towards Perth's economic future, we must understand the regional economy today. This chapter provides an overview of Perth's economic performance through key economic indicators. It also provides an overview of the region's economic base and strengths in important industry sectors.

It finds that the recent economic slowdown in WA and Perth has been significant and is the result of the conclusion of a period of large-scale investment in mining and resources projects and a subsequent decline in investment in mining and non-mining sectors. It also outlines that other states are now leading economic growth in Australia and are attracting investment in sectors outside mining, while investment in WA has remained on a downward trajectory.

The chapter emphasises that the economies of WA and Perth remain heavily reliant on the mining and resource sector to drive economic growth and the State's economy is less diverse than the economies of other Australian cities.

However, it also identifies positive signs and opportunities for the region's future. This includes increasing diversity within the mining sector, the emergence of new growth or 'bright light' industry sectors, heightened global connectivity including strong connections to Asia and Africa, combined with a relatively strong human capital base that is closely linked to the region's primary industries.

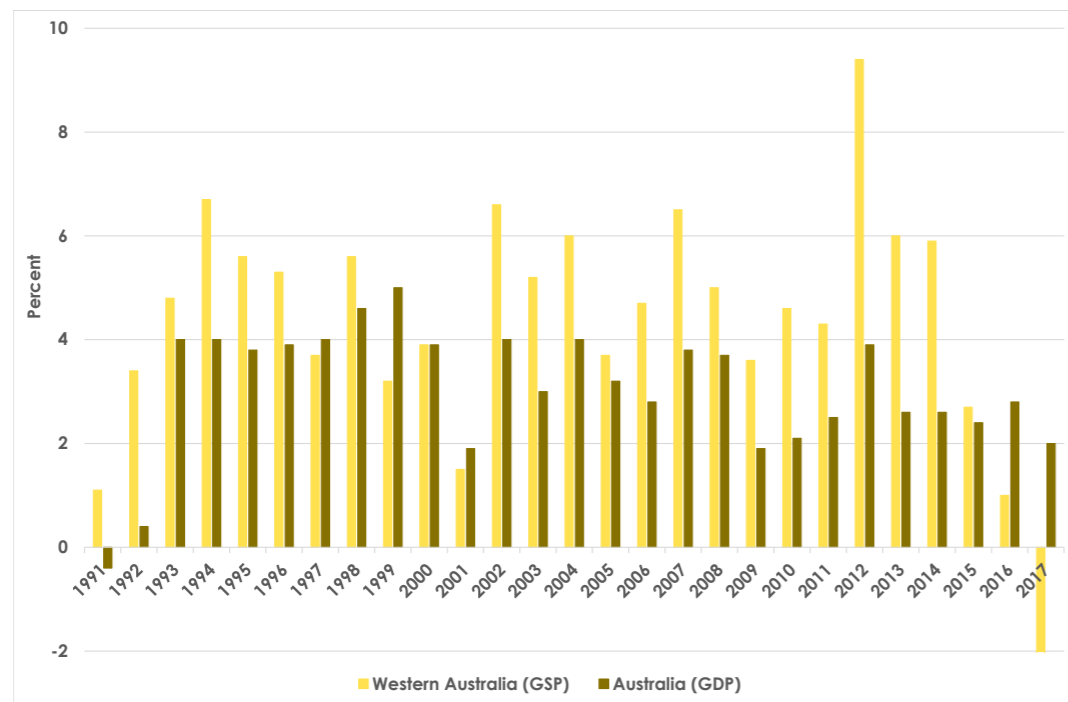
While a substantial proportion of data in this chapter relates to WA, it is noted that Perth is home to 79% of the population of the State and 79% of the employed workforce.⁽²⁾⁽³⁾ Successive research by the Committee for Perth has articulated Perth's role as the knowledge, command centre and workforce hub, servicing WA's broader industry and infrastructure networks and co-ordinating the extraction and delivery of WA's resources to the rest of the world.⁽¹³⁾ As a result, the performance of Perth's economy is intrinsically linked with that of WA more widely.

4.1 Long-term Stability, Short-term Shock

Perth's economy has demonstrated both strength and stability over the past three decades. The economy has repeatedly, and rapidly, recovered from short-term economic shocks caused by external political and economic forces and has been highly adaptive, with the ongoing evolution of existing industries, the emergence of new sectors, and a changing set of global networks reinforcing this adaptation.

Data demonstrates that, when examined against key economic indicators, including Gross State Product (GSP) and Gross Domestic Product (GDP), WA's economy grew every year between 1990-91 and 2015-16 and WA had higher economic growth than Australia as a whole in 20 of the 27 years between 1990-91 and 2016-17, see Figure 4.1. In 2016-17, GSP in WA contracted for the first time since records began in 1989-90.

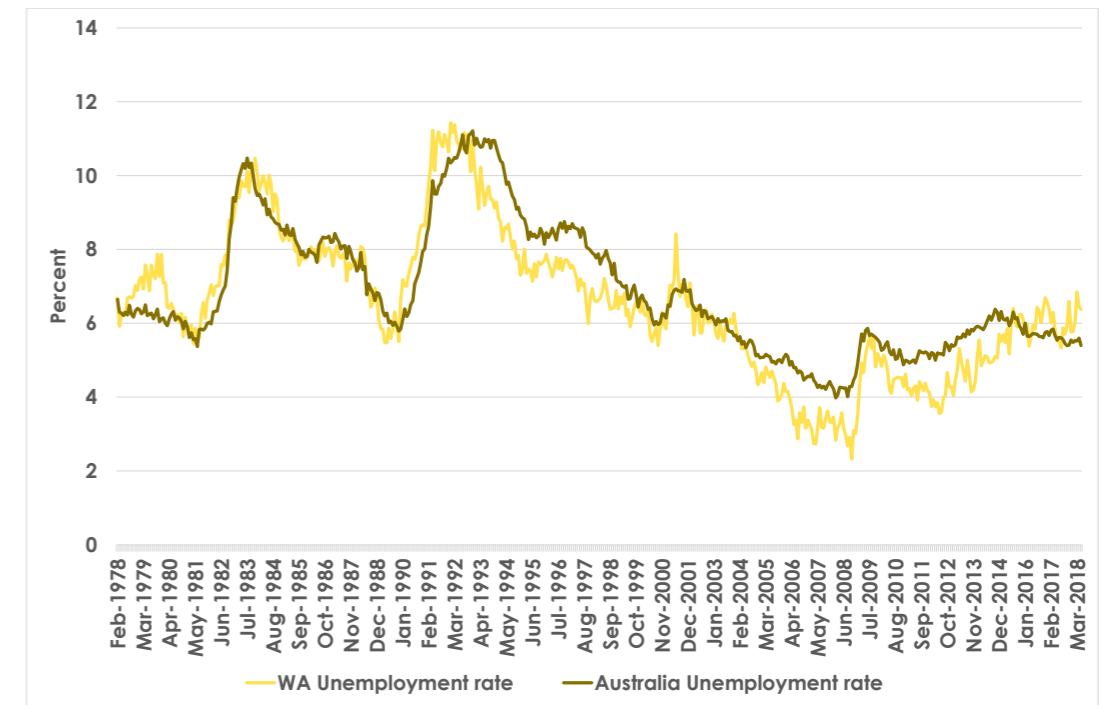
Figure 4.1: Annual Percentage Change in GSP/GDP, 1990 to 2017



Source: (47).

Unemployment figures also illustrate long-term economic stability. As illustrated in Figure 4.2, WA's unemployment rate has remained lower than the national rate for most of the past 40 years. The 1978-1982, 1989-1992 and 2015-2017 periods are the only years during which the Western Australian unemployment rate was consistently above the national rate.

Figure 4.2: Western Australian and Australian Unemployment Rates, 1978 to 2017



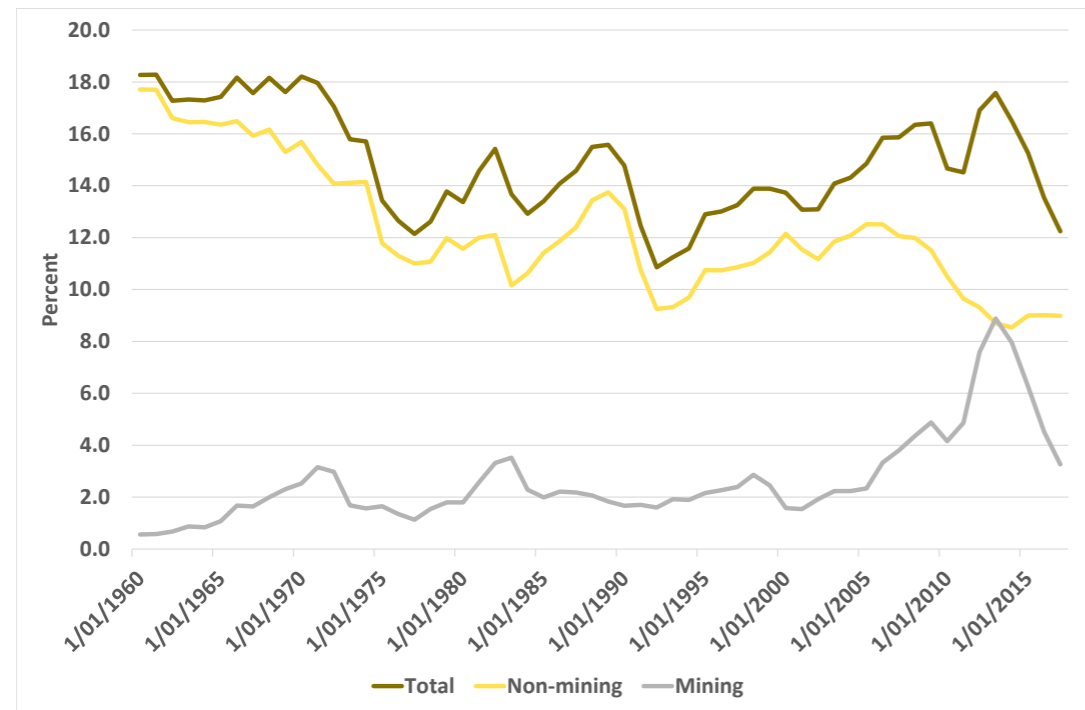
Source: (48).

4.2 Investment and Economic Performance

The decline in GSP growth and higher rates of unemployment exhibited in WA since 2012 reflect a state in transition from the peak of mining investment fuelled growth.

Large movements in commodity prices and investment in mining and resources have shaped Australia's economy and driven WA's strong economic performance since the mid-2000s, when the mining and resource sector grew strongly in response to historically high commodity prices. From 2004-05 to 2012-13, close to \$296 billion was invested in WA's mining sector, with more than \$62 billion invested in 2012-13 alone.⁽¹⁾ Commodity prices peaked in 2011, and as illustrated in Figure 4.3, mining investment and mining investments' share of GDP in Australia declined considerably from its peak in 2012-13 as resource projects were completed and fewer new projects were invested in.⁽¹⁾
⁽⁴⁹⁾ In WA, annual mining investment declined 37% from 2012-13 to 2015-16.⁽¹⁾

Figure 4.3: Business Investment as a Per Cent of Nominal GDP



Source: (49).

During the upswing in mining investment, positive multipliers delivered an increase in demand for construction, business services and a range of other inputs such as construction contractors, transport and equipment hire firms. (49)

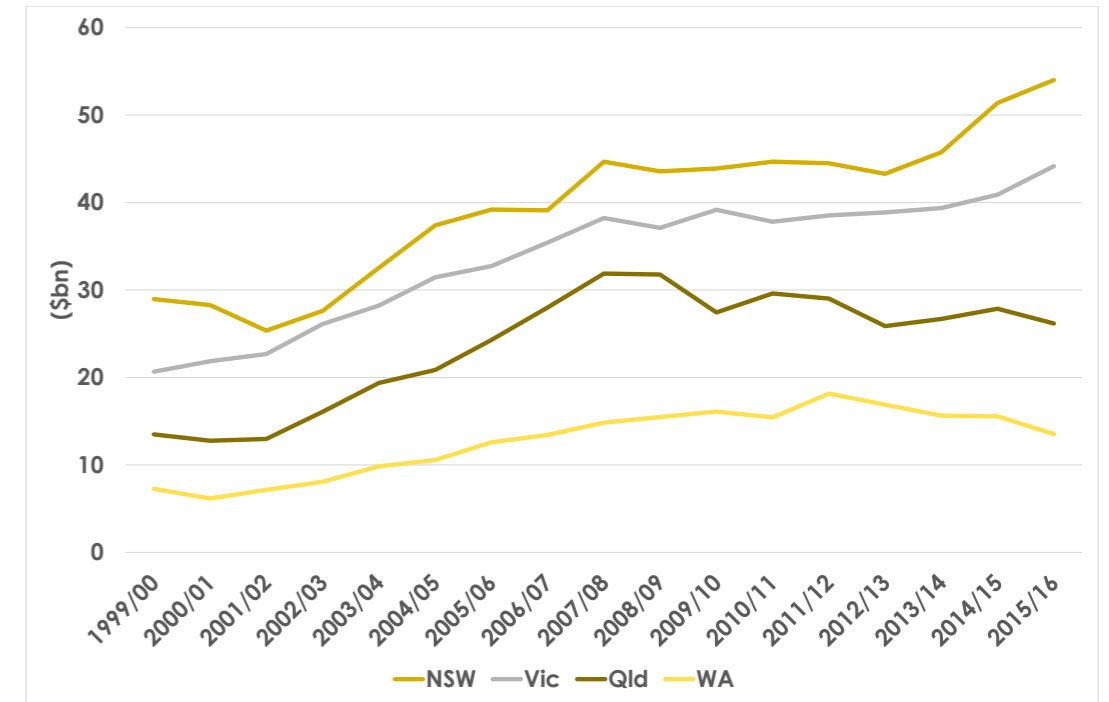
These firms provided services to the mining sector and responded to increases in demand and profitability by expanding capacity. Furthermore, population and wage growth drove an increase in household consumption, benefiting a broad range of firms, not just those directly involved with mining activity. (1)

Mining investment impacted on all Australian states, but the benefits were most pronounced in Western Australia and Queensland, which have the highest concentrations of mineral and energy resources. In these states, mining and non-mining investment grew, although Australia-wide investment in non-mining sectors was subdued. (1)

However, as commodity prices and mining investment fell, negative spill-overs impacted the economy and had an adverse influence on jobs and wages growth in the mining and resources sector, and on investment and growth in other, non-mining sectors. This was a drag on the economy, particularly in the mining states of WA and Queensland where, as illustrated in Figure 4.4, non-mining investment also declined. (1)

The economies of WA and Perth remain heavily reliant on the mining and resource sector to drive economic growth and the State's economy is less diverse than the economies of other Australian cities.

Figure 4.4: Non-Mining Investment by State



Source: (49).

While rates of economic growth in WA initially remained positive, due in part to growth in commodity exports, which resulted from the increase in the sectors' productive capacity during the boom, by 2016-17 GSP in WA contracted and the economy also displayed weakened household consumption; declines in per capita disposable income and household saving ratios; an outward flow of interstate migrants; declining workforce participation rates; and an increase in part-time work, which has mitigated the impact of the downturn on employment in the State. (1)

4.3 Economic Performance and Investment in Other States

In contrast to WA, economic growth and non-mining business investment in states less dependent on mining have picked up. Today, New South Wales and Victoria are driving economic growth in Australia, propelled by a gradual strengthening in non-mining activity and supported by the depreciation of the Australian dollar and low interest rates. (1) These factors have helped stimulate population and consumption growth, dwelling investment and expansion of business and household service sectors in these states, supported by a significant pipeline of private construction and public investment in transport, education and health projects.

The depreciation of the Australian dollar since 2013 has also helped to improve the competitiveness of other highly trade exposed industries including some parts of the manufacturing industry - food and beverage and pharmaceuticals, and the performance of domestic and international tourism in most Australian states. (49)(1)

4.4 Mining Investment Outlook

Looking forward, mining investment is expected to remain relatively subdued over the next few years as firms focus on maintaining their newly expanded productive capacity rather than investing in expansion. This means that in the short to medium-term, WA will need new drivers of economic competitiveness to attract business investment and growth outside the mining sector. ⁽⁵⁰⁾

Policies to achieve this include regulatory reform; boosting productivity through investment in research and innovation; facilitating federal and state investment in key industry sectors; assisting WA businesses to capitalise on the competitive advantage offered by the lower Australian dollar; strategic investment in hard and soft infrastructure; and action to stimulate inward investment in small to large regional projects to build the State's core strengths and boost employment and population growth. ⁽⁵¹⁾

4.5 Economic Diversity

Mining and resources have propelled WA's economy for the past 30 years and the most recent mining investment boom heightened the importance of the sector to the State and the Perth region. Therefore, despite the recent economic slow-down, mining and resources remain the backbone of WA's economy and the State remains more dependent on mining than any state is on any other industry. ⁽⁷⁾

However, while WA has not diversified away from a strong reliance on mining and resources, there is evidence of increasing diversity outside the mining and resource sector. In addition, over the past two decades, the mining sector itself has become more diverse and has expanded to deliver more to Perth than raw-material exports. ⁽¹³⁾ The sector has facilitated the emergence of a robust and skilled service sector and positioned Perth on the national and world stage as a centre of corporate power, and a globally connected mining and resource knowledge and innovation hub. ⁽⁷⁾

Table 4.1 provides the proportional contribution of the top five industries by Gross Value Added (GVA) for the 12 months to 20 June 2000, 2006, 2012 and 2017.

It shows that mining has consistently been the largest contributor to GVA in WA, followed by construction and manufacturing. Yet, what is particularly noteworthy is that during the latter parts of the most recent period of resource sector growth, other industries began to make a bigger contribution to GVA. Most apparent were professional, scientific and technical services and health care and social assistance. ⁽⁵²⁾ These reflect not only Perth's economy building on the activities in the resources sector, particularly in professional, scientific and technical services, but also expanding into new economic arenas.

Major projects such as the Square Kilometre Array, the expansion of the scientific research ecosystem between universities, government and the private sector, and new research and development activities in areas related to energy, biotechnology and health have been important drivers of change. Health care and social assistance links closely with the expansion of the city's population, but also demographic changes, including ageing. Yet against this increasingly diverse background, resource industries continue to be the main driver of regional economic performance. ⁽⁷⁾

Table 4.1: Gross Value Added of Top 5 Industries in Western Australia, 2000 to 2017

Year to June 2000					
Total GVA (\$m)*	#1 Industry Proportion of Total GVA	#2 Industry Proportion of Total GVA	#3 Industry Proportion of Total GVA	#4 Industry Proportion of Total GVA	#5 Industry Proportion of Total GVA
\$60,478	Mining 21.36%	Manufacturing 10.37%	Construction 8.21%	Financial and insurance services 6.42%	Public administration 6.07%
Year to June 2006					
\$108,891	Mining 26.62%	Manufacturing 10.39%	Construction 9.58%	Professional, scientific and technical services 5.25%	Public administration 5.08%
Year to June 2012					
\$219,266	Mining 37.84%	Construction 11.42%	Manufacturing 5.80%	Professional, scientific and technical services 5.68%	Health care and social assistance 4.23%
Year to June 2017					
\$221,300	Mining 32.65%	Construction 9.17%	Health care and social assistance 5.99%	Professional, scientific and technical services 5.68%	Manufacturing 5.36%

*Ownership of dwelling excluded from GVA total.

Source: (47).

There is further evidence that Perth's economy has an increasingly diverse economic base. Analysis of the industry structure of Perth examined location quotients to determine the 'concentration' of industry activity. A quotient above 1.0 is considered to represent a propulsive industry. Table 4.2 identifies 10 industries that score a quotient above 1.0 in Perth. The most concentrated is the mining industry, but other sectors such as education, arts and recreation services, and professional, scientific and technical services are also important. While some of these sectors undoubtedly build on the resources sector, others are quite distinctive and add new and creative dimensions to the city. This is particularly evident in education, arts and recreation and some of the city's non-resource scientific endeavours.

Table 4.2: Location quotients* for Greater Perth, 2016

	2011		2016	
	Location quotient	Proportion of employment	Location quotient	Proportion of employment
Mining	1.87	3.28%	1.89	3.14%
Rental, hiring and real estate services	1.26	1.98%	1.14	1.94%
Arts and recreation services	1.08	1.62%	1.09	1.81%
Other services	1.06	3.99%	1.09	4.07%
Education and training	1.12	8.92%	1.09	9.40%
Electricity, gas, water and waste services	1.02	1.17%	1.06	1.15%
Retail trade	1.06	11.12%	1.06	10.41%
Professional, scientific and technical services	1.25	9.06%	1.04	7.55%
Health care and social assistance	1.01	11.73%	1.03	12.96%
Public administration and safety	1.02	6.96%	1.02	6.80%

* Measures the concentration or dominance of industries in the Perth region compared to Australia as a whole.

Source: (52).

The diversity of Perth's mining sector is highlighted through a sector focused location quotient analysis. Table 4.3 shows the location quotients for all sub-sectors in the Australian Bureau of Statistics industry classification for mining. It highlights industry concentration in oil and gas, metal ore mining and exploration services. Arguably, one of the most important sectors here is exploration and other mining services.

Table 4.3: Location quotients for Greater Perth, mining sub-sectors, 2016

Mining sub-sector	Location quotient 2016
Exploration and other mining support services	1.984
Oil and gas extraction	1.893
Mining (not further defined)	1.295
Metal ore mining	1.169
Non-metallic mineral mining and quarrying	0.414
Coal mining	0.046

Source: (29).

4.6 Strengths, Weaknesses and Emerging Industries

This evidence, combined with recent literature, provide guidance regarding the industries that may support future economic diversity and non-mining investment in WA and Perth. The FACTBase Special Report, *Perth as a resilient economy* grouped key industry sectors according to their current performance and future growth trajectories. These groups are:

- Bright Lights Industries
- Primary Industries
- Industries in Transition

Table 4.4: Industry Categories and Characteristics

1. Primary Industries	These industries have been long-term regional strengths and include mining and agriculture, forestry and fishing - the economic perennials in the Perth economy. These industries continue to be important and there are signs they are adapting, innovating and engaging with national and global growth opportunities. For example, evidence points to the emergence of METS businesses as technology and innovation leaders in Perth's economy today. ⁽⁷⁾ It is noted, however, that outlooks vary for sub-sectors within these industries.
2. Bright Light Industries	These industries are emerging opportunities. They are not always the biggest employers or industries with the most firms, yet their contribution to vibrancy and economic diversity suggests new employment opportunities and enhanced global engagement. These industries include the recreation and creative industries, the professional, scientific and technical services industries, tourism and higher education. Yet it is also noted that these industries are facing challenges including competition from other Australian, and global capitals. ^{(30) (41) (7) (40)}
3. Industries in Transition	These industries are important, yet face global economic or social headwinds, which are exerting challenges on their long-term growth. These include the health care and social assistance, retail and manufacturing industries.

Primary industries are economic strengths and are expected to remain critical to the economy. Bright light sectors are growing and have capacity for future growth, while industries in transition are facing significant headwinds but may also have potential to adapt and increase their contribution to future prosperity.

Industries identified as having potential to positively contribute to future growth, diversity and investment in the Perth region include business service industries such as the METS sector; ag-tech; and professional, scientific and technical services industries. Tourism, higher education and health and aged care have also been identified as having potential to facilitate short to medium-term economic growth.

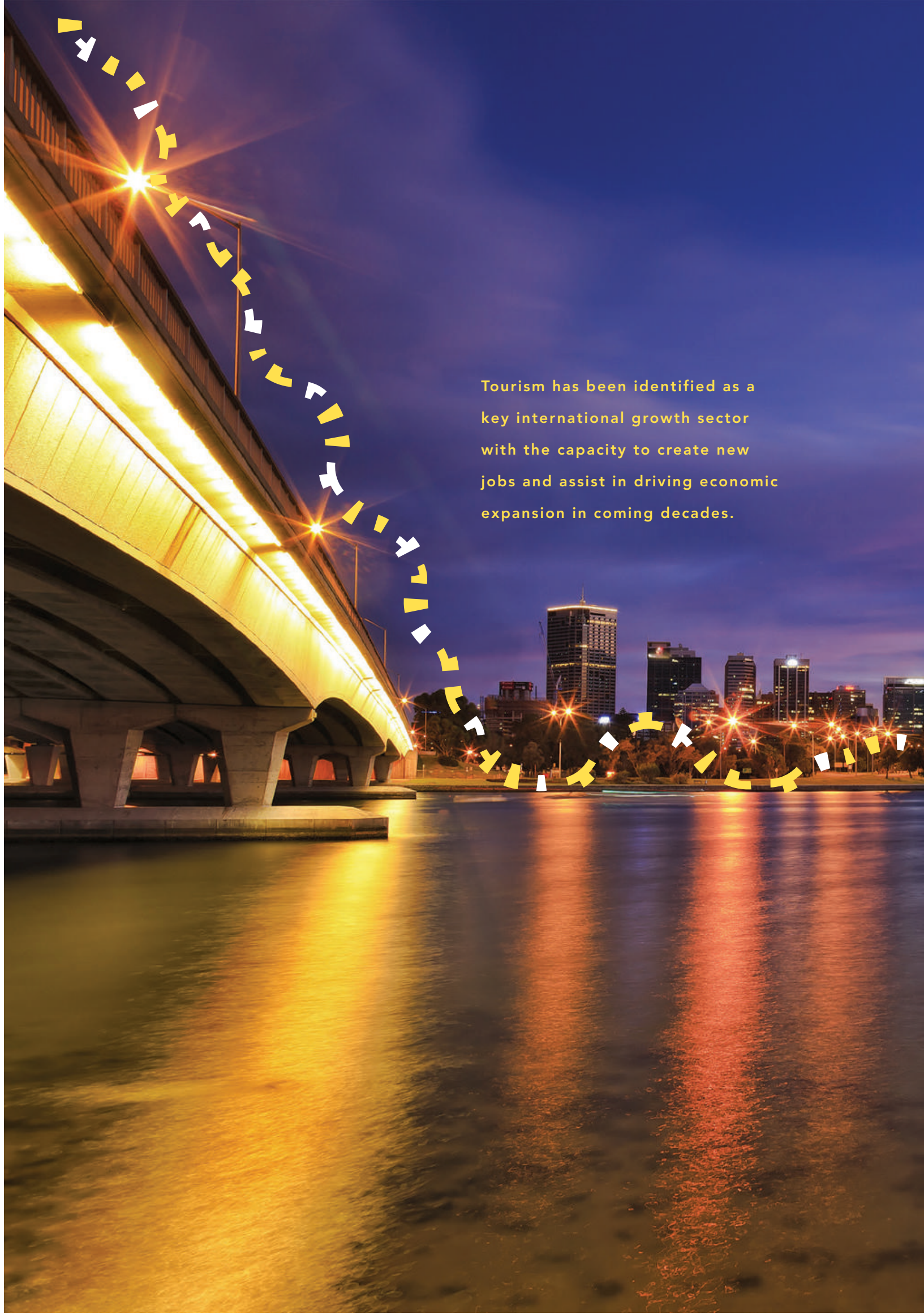
Box 4.1: Bright Light Industries: A Focus on Tourism

- Tourism has been identified as a key international growth sector with the capacity to create new jobs and assist in driving economic expansion in coming decades.
- International visitor numbers to Western Australia have shown continued growth over the past 10 years, however over the past five years growth has been slower than the national average.
- Domestic tourism makes a higher contribution to the WA economy than international tourism, however in recent years domestic visitor numbers have been declining.
- The economic downturn has had a significant impact on tourism growth, with reduced numbers of business travellers to the State and fewer people traveling to WA to visit family and friends.
- Perth gained a reputation for being poor value for money and lacking accommodation during the resource sector boom, however these problems have now eased.
- Improvements to Perth's global connectivity by air provides an opportunity for tourism growth and the State's independent tourism agency, Tourism WA is a notable existing industry strength.

Additional opportunities and challenges facing Perth's tourism industry include:

- Developing a strong brand or competitive identity.
- Continued domestic and international promotion of WA and Perth's natural environment and lifestyle strengths.
- Lower Australian dollar.
- Improved value for money and access to accommodation since the mining and resource sector boom.
- Increasing Asian middle-class.
- Boosting international student numbers.
- Improving connectivity within Perth and connections to the regions.
- Developing Perth as a cultural capital, most notably as region that respects and celebrates Indigenous culture through the development of a World Indigenous Centre.
- Attracting sporting events and associated tourism.
- Improving information available to travellers about travel and movement in Perth and through WA.

Source: (25).



Tourism has been identified as a key international growth sector with the capacity to create new jobs and assist in driving economic expansion in coming decades.



Cost of living is a significant concern for households who report being worse off than they were three years ago despite literature and indices reporting reduced price pressures in the region.

CHAPTER 5

Perth's People – Strengths and weaknesses from a resident perspective

Key Findings

- The current economic downturn has impacted on Perth's perceived short-term competitiveness as a place to live and work.
- Most people are positive about living in Perth and residents identify the region's greatest strengths as its natural attributes and family-focused lifestyles.
- More than 80% of residents would recommend Perth as a place to live and most people would like to stay in Perth long-term.
- The recent economic downturn has impacted on resident perceptions of Perth: 41% of people think Perth has continued to improve since 2015, 33% of people believe the region has changed for the worse.
- The impacts of the current downturn are not being felt evenly: 40% of people in Perth report being worse off financially in 2018 than they were five years ago, while 37% believe their situation has improved.
- 30% of people in Perth would consider leaving for a while but intend to return, while 16% of people intend to leave Perth long-term.
- Job opportunity and uncertainty and dissatisfaction with current employment has emerged as a heightened issue of concern for Perth residents. Concern about these issues is higher in Perth than in other Australian capitals.
- Cost of living is a significant concern for households who report being worse off than they were three years ago despite literature and indices reporting reduced price pressures in the region.
- Few people in Perth consider entrepreneurialism as an option for their employment future.
- Strong and effective governance is viewed by Perth residents as the biggest existing deficit for the delivery of a stable political and economic future.
- The priorities of Perth residents have shifted over time, however quality health, aged care, education and public transport are among the most consistent issues identified as priorities for Perth's future.

5.0 Introduction

Perth's economic performance, quality of life and competitiveness is also reflected in the experiences and perceptions of the region's residents.

This chapter provides an insight into the perceptions of Perth residents about the economic performance of the Perth region; the impact that the most recent economic downturn in Perth is having on regional households; and current satisfaction with life in Perth. The chapter also identifies the regional economy's key strengths and weaknesses from a resident perspective and outlines evidence to support or refute these perceptions.

It finds that growth and change in Perth over the past decade has primarily been viewed with optimism, with notable positivity about urban redevelopment and infrastructure projects. A large majority of Perth residents, more than 80%, would recommend the region as a place to live and would like to stay in Perth long-term.

However, the recent economic downturn has been associated with increasing division in satisfaction with life in Perth and this appears to be linked to the impacts of the downturn on households – which are not being felt evenly. It suggests a growing problem of inequality in Perth.

Looking to the future, Perth residents support focusing on the region's mining sector strengths while also concentrating on improving economic diversity, technological advancement, providing equal opportunities, and most crucially, strong and stable governance.

5.1 Growth Positivity

Over time, most residents have been positive about Perth, with its greatest strengths being its natural attributes and family-focused lifestyles. ⁽⁴³⁾ However, the community has also been specifically optimistic about the changes that occurred in the region while the economy was experiencing growth.

Young and middle-aged people were particularly upbeat about life in Perth in 2012 and 2015, and in 2015, urban transformation and infrastructure investment were identified as the biggest regional benefits of economic growth in Perth. ⁽⁵³⁾

Yet growth in Perth also catalysed less positive change. This included a decline in housing affordability; rising costs of living; burgeoning disparity between the incomes of people living in Perth's wealthiest and poorest areas; and an increasing State deficit as government spending rose. ⁽¹³⁾ The region was also impacted by negative externalities of rapid population growth, including sprawling urban expansion; increasing pressure on infrastructure such as the transport and health system; and stress on the natural environment. ⁽¹³⁾

People in Perth were widely concerned about the negative impacts of these changes, but it did not override a general positive sentiment. ⁽⁵³⁾ There was also a strong rising sense of optimism and positivity among young people.

✓	In 2015, 60% of people thought Perth had changed for the better in the three years since 2012.
✓	All age groups thought Perth was better in 2015 than in 2012, but young (16-24) and middle-aged people were most positive about change in Perth over this period.
✓	Satisfaction with living in Perth increased from 60% in 2012 to 73% in 2015.
✓	People were most positive about urban change, including infrastructure investment and urban development projects.

Source: (53); (43).

5.2 Downturn Division

As the regional economy has slowed, opinions about life in Perth have become more divided. While 41% of people think Perth has continued to improve since 2015, 33% of people believe the region has changed for the worse. Despite this, more than 80% of people would still recommend Perth as a place to live and visit.

Improvements in Perth since 2015 are linked to numerous changes. As outlined in Chapter 2, the extraordinary economic and migratory population expansion of Perth from the mid-2000s slowed in 2014-15 and fell sharply to 2017. ⁽²⁾ This precipitated a fall in growth-pressure on the region and its infrastructure and an associated drop in concern about growth-related issues. ⁽⁴³⁾

At the same time, Perth's transformation continued through urban redevelopment, sports and infrastructure projects such as Optus Stadium and hospital developments. These investments are recognised as positive changes by approximately 80% of residents. ⁽⁴³⁾

From an economic perspective, people in Perth view the region's mining sector as a key economic strength, and important to the region's future. There is also strong recognition of the need for the region to become more technologically advanced. ⁽⁴³⁾

On the flip side, it is evident that for some people, the benefits of urban transformation have been overshadowed by the negative impacts of weakened regional economic performance. These impacts have not been felt evenly. While 40% of people in Perth report being worse off financially in 2018 than they were five years ago, 37% believe their situation has improved. ⁽⁴³⁾ For households that report being worse off financially, cost of living remains an important issue – although literature indicates that price pressures have fallen post-boom. ⁽⁵⁴⁾

Age is a significant divide, with middle-aged people most likely to express negative sentiment about Perth and the economy today. ⁽⁴³⁾ This may be linked to heightened financial responsibility and a focus on wealth creation within this phase of life.

-	41% of people think Perth has continued to improve since 2015, while 33% of people believe the region has changed for the worse.
✓	83% of Perth residents would recommend it as a place to live and 84% would recommend Perth as a place to visit.
✓	Young people are most positive about change in Perth over the past three years, with 50% indicating that Perth has changed for the better.
x	Satisfaction with life in Perth has declined among all age groups except young people, who reported higher satisfaction levels in 2018 than in 2012.
x	45% of people expect no improvement in their quality of life in Perth.
x	Middle-aged people are most concerned and negative about the economy.
x	Cost of living and social problems are primary concerns among residents who think that Perth has changed for the worse.

Source: (53); (43).

5.3 Declining Opportunity

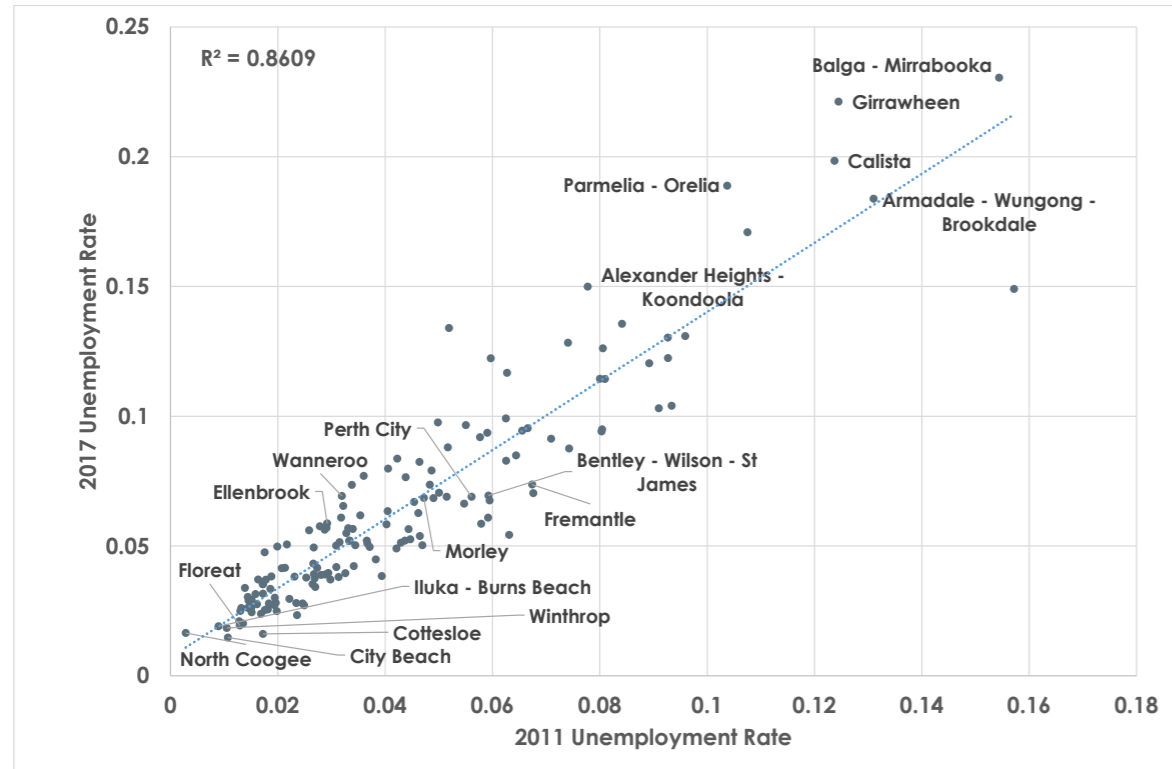
Job opportunity and employment uncertainty has also emerged as a heightened issue of concern for Perth residents in the current economic climate, with concern about these issues higher among Perth than residents of other Australian capitals. ⁽⁴³⁾

x	83% of Perth residents would recommend it as a place to live and 84% would recommend Perth as a place to visit.
x	Young people are most positive about change in Perth over the past three years, with 50% indicating that Perth has changed for the better.
x	Satisfaction with life in Perth has declined among all age groups except young people, who reported higher satisfaction levels in 2018 than in 2012.

Source: (43).

Employment concerns are likely linked with the higher rates of unemployment and employment volatility identified in Chapter 2. Division in resident concerns may also be linked to geographic disparity in entrenched unemployment, illustrated in Figure 5.1, as well as to population and industry trends including declining employment in mining and associated sectors; an ageing population; a human capital base strongly linked to mining and associated sectors; and declining demand for low-skill workers. ^{(55) (42) (30) (41)}

Figure 5.1: 2011 and 2017 Unemployment Rates Greater Perth by ABS Statistical Areal Level 2



Source: (55).

Looking forward, 60% of people want to remain in the workforce, however 69% would like to work more flexible hours. This includes older workers, 78% of whom would like more flexibility in transitioning out of full-time work. (43)

Few people in Perth consider entrepreneurialism an option for their employment future, with only 26% identifying a preference for self-employment. It is also apparent that opportunity is not perceived equally, with women less optimistic about opportunities in Perth than men.

x	51% of men believe there are no barriers to upward mobility in Perth compared to 36% of women.
x	35% of men think everyone has equal access to opportunity compared to 23% of women.

Source: (43).

The result is that, while 80% of people in Perth want to stay in the region long-term, 30% of people in Perth would consider leaving for a while but intend to return, while 16% of people intend to leave Perth long-term. (43)

Over time, most residents have been positive about Perth, with its greatest strengths being its natural attributes and family-focused lifestyles.

5.4 Governance Inefficiency

Strong and effective governance is viewed by Perth residents as the biggest existing deficit for the delivery of a stable political and economic future. (43)

The inefficiencies of Perth’s existing systems of regional governance have been examined and documented through broad cross-sector research over the past decade. These include fragmented local government and the lack of a dedicated mechanism for regional governance; limited capacity for integrated planning and delivery of policy for functional economic, cultural and social areas; and divided regional governance. (56)

In response, a local government reform process was initiated in 2013, yet the region failed to identify a unifying reform pathway and the process was subsequently shelved. The result is that Perth is one of the only major Australian capital cities that has not reformed its regional and local governance framework in recent decades.

5.5 Priorities for the Future

The *Perth Perception Survey* also provides a unique insight into the issues that Perth residents believe should be prioritised to deliver a positive future for the region. The survey responses indicate that, early in this decade as the economy maintained a high-growth pathway, the desires of people for the region were primarily focused on urban infrastructure investment and increasing regional liveability. Yet as the economy has slowed, resident priorities have shifted away from infrastructure, services and urban issues and towards ensuring long-term economic strength, stability, opportunity, cost-of-living and quality of life for all people.

Table 5.1: Resident Priorities for Perth’s Future

Top 10 2012	Top 10 2015	Top 10 2018
Strong economy	Effective public transport system	Strong and effective government
Effective public transport system	Safety	Strong economy
Quality education system	Quality education system	Affordable
Safety	Quality health and welfare system	Stable economy
Quality health and aged care	Affordable	World-class aged care
Forward thinking	Suitable for families	Effective public transport
Diverse economy	Friendly and welcoming	World-class education system
Friendly and welcoming	Quality aged care	Diverse economy
A place for families	Environmentally friendly	Technologically advanced
Environmentally friendly	Accessible by walking and cycling	Equal opportunity

Source: (57); (53); (43).

Quality health, aged care, education and public transport are among the issues/priorities for Perth’s future that have most consistently been identified by the region’s residents.



It is evident that the current economic downturn presents an opportunity for Perth to shift its focus from analysis to action.

CHAPTER 6

Perth's Spatial Economy – Location, connectivity and competitive advantage

Key Findings:

- Perth's low-density, dispersed urban form has delivered liveability benefits but may also limit long-term infrastructure efficiency, quality of life and urban competitiveness.
- Dispersed, car dependent industry hubs limit the capacity for informal business interactions.
- Education and training nodes in Perth are more dispersed and suburban than other metropolitan regions and this, combined with limited on-campus and inner-city student housing, has been identified as decreasing Perth's competitiveness as an international student destination.
- The City of Perth is the region's most significant tourism node. Other nodes include Scarborough; Fremantle; Trigg, North Beach, Watermans; Como; South Perth; Rockingham; and Mandurah. These destinations are relatively dispersed and poorly connected by alternative (non-car) transport modes.
- Strategies for economic growth and development in regional Perth have primarily been prepared and focused at a local government level, however there is a need to plan for Greater Perth as a functional economic unit rather than as a collection of fragmented local economies.
- Planning and land use strategies for economic growth and development should respond to industry locational needs and preferences and the establishment of specific industry clusters to maximise potential competitive advantages for all industry types through spatial form and connectivity.
- The recent economic downturn and associated slow-down of the mining and resources sector has reduced the competitiveness of the Perth CBD.
- Perth's primary and bright light industries are primarily located in CBD and inner urban locations. Strategic investment to strengthen connectivity and urban form in these locations may assist in driving future growth and prosperity.

6.0 Introduction

Factors influencing urban competitiveness include liveability, infrastructure quality and efficiency, access to housing and social services, safety and stability, employment opportunities, the financial well-being of residents and environmental sustainability. Competitiveness is also impacted by economic performance and the ability of a city to innovate and adapt to new technological opportunities to facilitate economic growth and productivity. These factors are strongly influenced by the spatial framework of cities.

Economic activities are interactions between businesses, people and goods and services. The spatial framework of a city or region, including the location of businesses and the quality of connections between them and their workers, competitors, clients and service providers can therefore have a significant impact on productivity.

This chapter examines the spatial framework and economic geography of Perth today. It identifies Perth's CBD and inner and middle areas as prime locations for primary and bright light industry sectors, while industries in transition and other industrial sectors dominate in outer employment areas.

This chapter highlights the need for strategies for economic growth, land use and development to be regional, to respond to industry locational needs and preferences, and to maximise potential competitive advantages for all industry types through spatial form and connectivity.

6.1 Spatial Framework and Liveability in Perth

The Perth region is primarily low-density and stretches in a relatively linear north-south pattern along the Swan coastal plain. This spatial form emerged in response to long-term community preferences for stand-alone dwellings and low-density lifestyles in coastal locations.

For the most part, higher population and employment densities in Perth are found in central locations and lower population densities in outer locations, although over time, patterns of population density have become more dispersed, with higher-density nodes also emerging in outer residential areas.

Perth's low-density urban form delivers lifestyle benefits and negative externalities. Most positively, low-density development has delivered access to stand-alone houses and suburban lifestyles and has been supported by high-quality, road-based transport.

On the other hand, low-density development has been found to limit housing diversity and choice; increase car dependence; reduce public transport use resilience; place pressure on infrastructure such as roads and parking; and reduce access to employment and services, particularly for people living in outer suburban locations. ⁽⁵⁸⁾

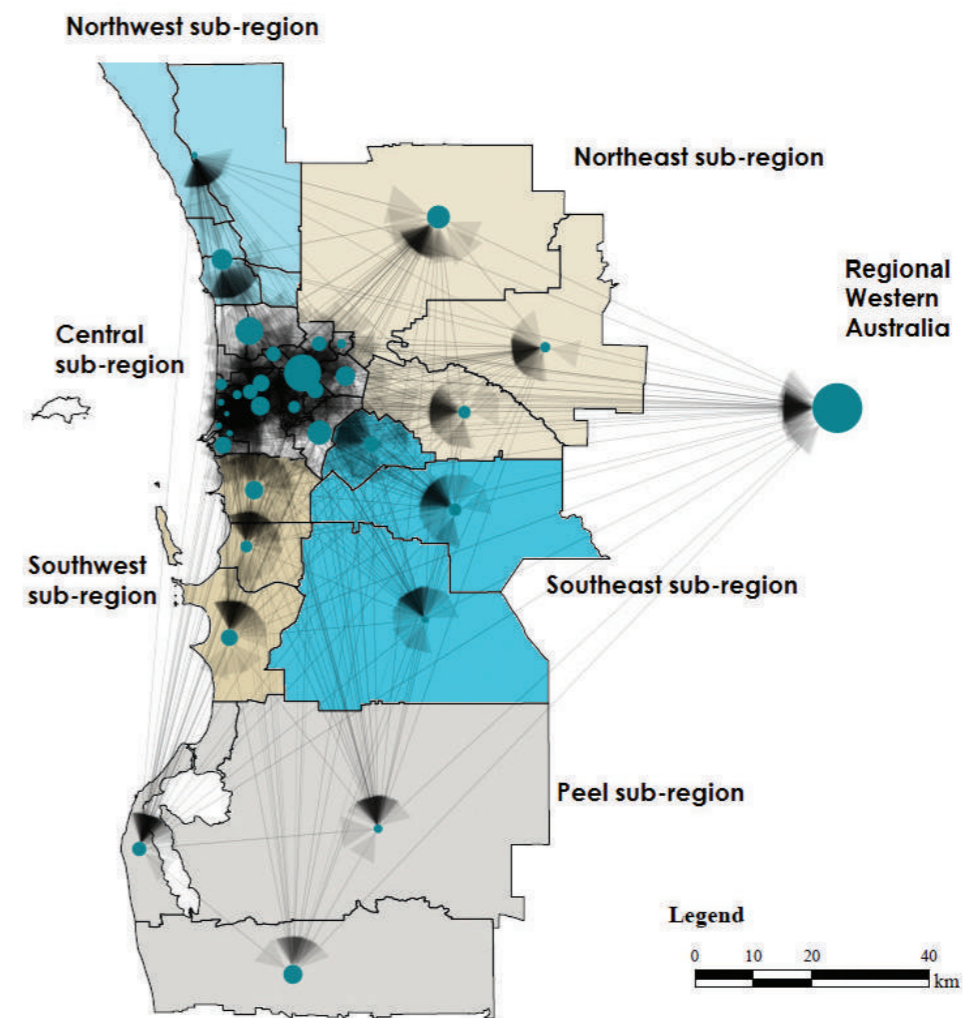
Maintaining Perth's low-density, dispersed growth pattern may have an adverse impact on the region's future liveability and urban competitiveness.

6.2 Economic Geography of Perth

Industry and employment in Perth have an 'inner and middle decentralised' structure. This means that whilst the CBD remains the primary and highest density employment centre, other major employment areas are also focused in inner and middle locations. ⁽⁴⁵⁾

This structure has benefits. The 'centralised' nature of the economy delivers the potential for economies of agglomeration. It also provides capacity for infrastructure efficiencies because investment can be focused towards improving public transport accessibility and connectivity to and within central locations in a 'hub-and-spoke' pattern, as illustrated in Figure 6.1. ^{(58) (59)}

Figure 6.1: Commute Patterns in Perth and Peel



Source: (59).

Yet in the context of Perth's low-density, dispersed urban form, centralised employment also means that some people commute long distances to reach their workplace, particularly workers who live in less accessible, outer suburban locations. ^{(60) (58)}

Long commutes impact on quality of life. They also impact on roads and parking because people in Perth are more likely to choose to travel by car if they are travelling to a non-CBD destination that is not directly accessible by public transport from their home.

As a result, most businesses outside the CBD depend on formal, car dependent interactions with industry peer and client networks. Research suggests this can limit productivity and hinder the potential for industry innovation, which is known to thrive through both formal and casual interaction. ^{(58) (61)}

Perth's dispersed, low-density urban form has also been identified as a competitive disadvantage for industries such as higher education and tourism.

Higher education institutions in Perth are geographically dispersed. Perth is considered a 'suburban' student destination and recent research indicates that while most international students prefer living on or close to campus, within approximately six kilometres of their campus, or in an inner-city location, Perth has a very low supply of dedicated on-campus accommodation and has limited inner-city housing options compared to other Australian cities. ^{(62) (41)}

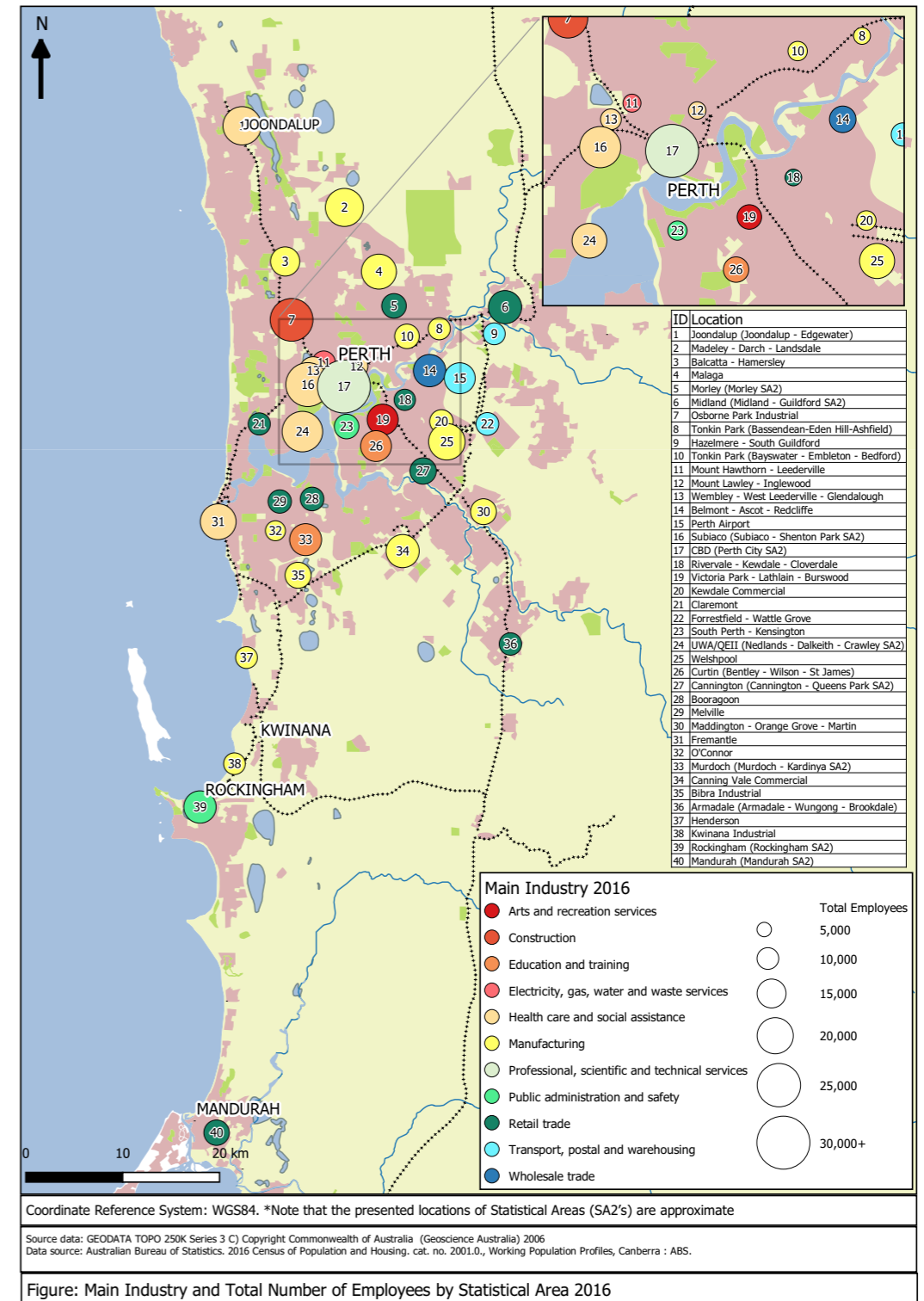
Similarly, positive visitor experiences, ease of access and ongoing investment in infrastructure and new attractions have been identified as critical success factors for a sustainable tourism destination. The City of Perth is the region's most important tourism destination, however other destinations including Scarborough; Fremantle; Trigg, North Beach, Watermans; Como; South Perth; Rockingham; and Mandurah are relatively dispersed and poorly connected by alternative (non-car) transport modes. ^{(25) (58)}

6.3 Industry Dispersal and Locational Requirements

Perth can be broadly categorised as having a primary and service based inner core, or CBD, which is a significant hub for materials, energy, financial and professional, scientific and technical services, legal and government services firms ^{(58) (59)}; a creative, knowledge and logistics based inner and middle circle, hosting nodes of arts and recreation services; health care and social assistance; and education; and an industrial, transport and local and service-based outer ring of manufacturing, warehousing, transport and logistics; and retail, health, education and services. This is illustrated in Figure 6.2.

Perth can be broadly categorised as having a primary and service based inner core, or CBD, which is a significant hub for materials, energy, financial and professional, scientific and technical services, legal and government services firms.

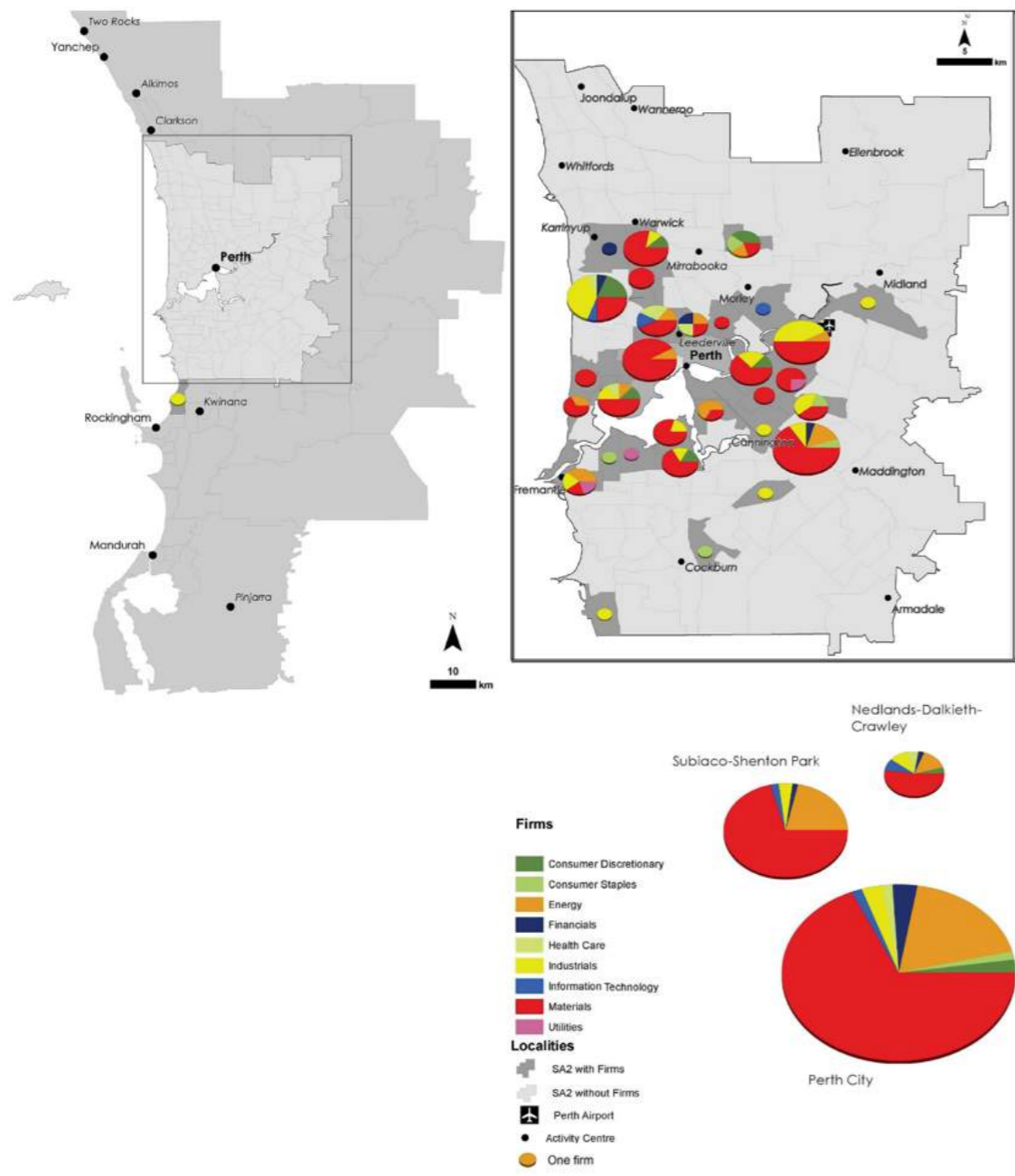
Figure 6.2: Main Industry of Employment and Number of Employees by ABS Statistical Area Level 2



Source: (29).

This economic framework is also illustrated by the mapping of ASX company headquarters as shown in Figure 6.3, which paints a picture of a highly concentrated group of corporate headquarters within approximately eight kilometres of the Perth CBD. ⁽⁶³⁾

Figure 6.3: Total Headquarter Office Locations of ASX-listings at January 2014, Activity Centres are Noticed, Size of Circles Relates to Relative Number of ASX Offices

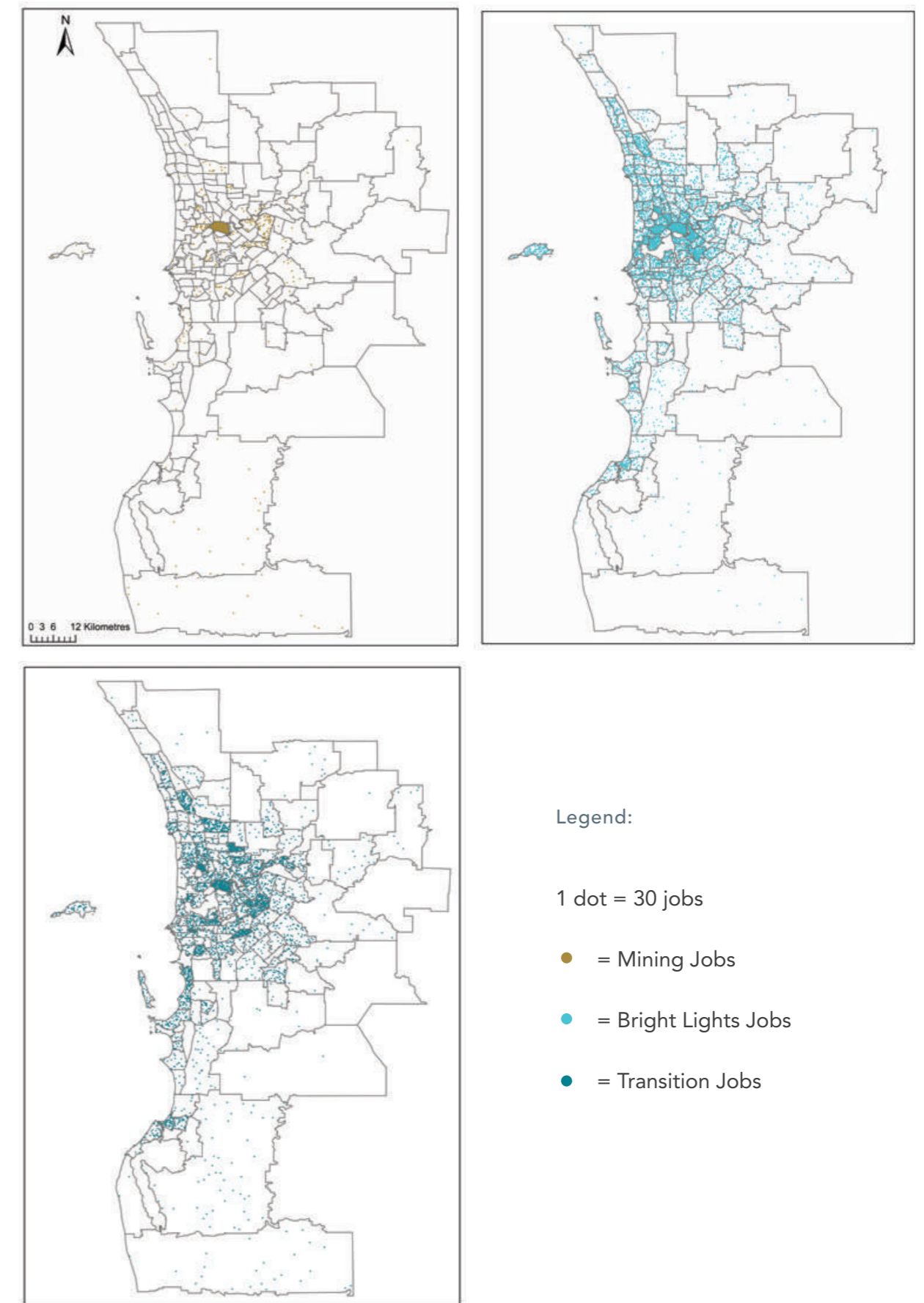


Source: (63).

Expressed in the context of primary, bright light, and transition industries, it is evident that the CBD and inner and middle urban areas attract the dominant proportion of primary and bright light industries - mining, resources and energy; professional, scientific and technical services; arts; education and tourism, while outer areas are the primary homes of industries in transition - manufacturing and retail. Education exhibits some dispersal outside the central core and inner and middle rings with Joondalup a key education node in the north-west. Similarly, key health care and social assistance nodes are evident in inner and middle locations.

Therefore, strategies to promote growth in primary and bright light sectors should also focus on improving the urban competitiveness, connectivity and capacity for innovation within CBD, inner and middle urban industry hubs.

Figure 6.4: Location of Primary, Bright Lights and Industries in Transition, 2016



Source: (29).

6.4 Industry Dispersal, Growth and Government Policy

Industry dispersal and productivity is influenced by multiple industry specific locational and infrastructure requirements, combined with regional land use patterns and connectivity.

CBD businesses require central locations due to multi-modal transport accessibility, availability of high-density office floor space, prestige, access to skilled workers, peer and client networks, and amenity. These firms therefore benefit from spatial proximity to organisations in the same sector and other sectors. ^{(58) (64) (65) (61)}

Businesses in Perth's inner urban ring are attracted by factors including ease of access to the CBD without paying CBD rents, proximity to competitors and clients, accessibility by road and public transport, car parking for staff and clients, a relaxed atmosphere and good amenity, and less congested freeway access points. ^{(58) (64)}

By contrast, outer locations offer larger parcels of lower cost land, and better access by road, air and port infrastructure than central locations. ^{(66) (61) (58)} More dispersed outer locations also provide increased capacity to manage potential land use conflict associated with industrial land uses and associated heavy transport movements.

This indicates that Perth operates as a functional economic unit with industries locating and interacting according to their individual requirements. Yet to date, strategies for economic growth and development in regional Perth have primarily been prepared and focused at a local government level.

These strategies arguably promote intra-regional competition, with local authorities aiming to attract industry and employment from other geographic areas within Perth. They have also been influenced by broad State government policy objectives to reduce commute distances by shifting the geographic distribution of employment, including the facilitation of a shift of knowledge-based industries to outer suburban 'activity centres'. ⁽⁵⁸⁾

However, while there are minor exceptions, evidence indicates that business locational preferences are relatively static. Therefore, the broad geographic distribution of private sector industries has not been strongly influenced by state planning or local government economic development policy, and most major corporate and professional, service and technical service sector businesses remain committed to CBD and inner locations. ⁽⁵⁸⁾

Alternatively, major, successful government economic interventions have been planned at a regional level, capitalise on geographic characteristics and strengths and are responsive to industry location preferences - such as the establishment of the Kwinana Industrial Area (KIA) and associated port infrastructure and the Australian Marine Complex in Henderson. ^{(67) (68)}

In this context, planning for Perth as a functional economic unit rather than as a collection of fragmented local economies has the capacity to deliver regional and local benefits. In addition, strengthening the performance of geographical industry clusters to meet specific industry preferences and needs can assist to enable economic growth.

Research indicates that the productivity of employment hubs is supported by connectivity to the CBD, access to strategic transport infrastructure, such as port or airports, or connectivity to specialised technology, science or innovation clusters. Strategies to achieve this include strategic infrastructure investment and planning to increase accessibility to and between key hubs. ⁽⁴⁵⁾

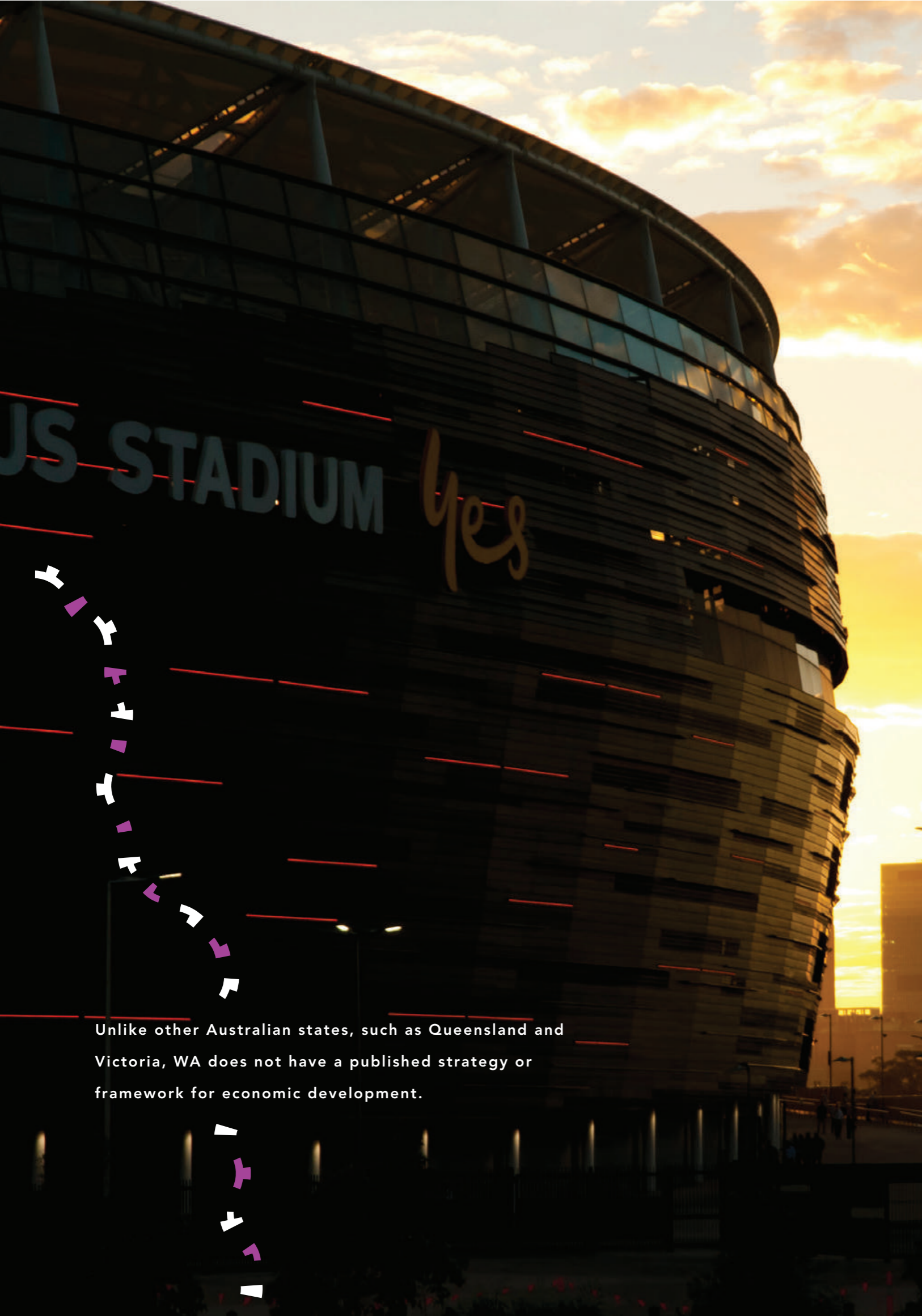
6.5 Economic Downturn and Economic Geography of Perth

The recent economic downturn has not had a significant impact on the overall spatial distribution pattern of industry in Perth, however there is evidence that from 2011-16, the role and competitiveness of outer employment centres increased when compared to inner and middle locations. ^{(55) (69)}

This appears to be associated with a decline in mining and resource sector employment and associated sectors such as professional, scientific and technical services in the Perth CBD, combined with substantial investment in new residential, commercial and industrial development in outer areas over the same period. ⁽⁶⁹⁾

Reduced competitiveness within the CBD is significant because the CBD has been Perth's largest and most productive employment centre and businesses in these locations are known drivers of regional productivity. ⁽⁵⁸⁾ Therefore, supporting growth and innovation within primary and bright light industries in Perth also means investing in the connectivity and competitiveness of the CBD and inner urban locations.

There is a need for strategies for economic growth, land use and development to be regional, to respond to industry locational needs and preferences, and to maximise potential competitive advantages for all industry types through spatial form and connectivity.



Unlike other Australian states, such as Queensland and Victoria, WA does not have a published strategy or framework for economic development.

CHAPTER 7

Perth's Economic Future – Action, ideas and analysis

Key Findings:

- Long-term satisfaction with life in Perth, economic resilience and the prosperity delivered by the mining and resource boom in the first 15 years of the twenty-first century has diverted government attention away from planning for longer-term economic resilience.
- State and federal government initiatives have assisted in facilitating economic growth and major projects in WA over time, however multiple government agencies have a role to play in economic development and there is no unifying government plan or strategy for WA or Perth's long-term economic growth and resilience.
- There is potential to capitalise on current infrastructure projects such as METRONET to stimulate investment, jobs and urban regeneration.
- A wide body of research and strategy documents identify strengths, weaknesses, opportunities and potential initiatives to drive a prosperous future for Perth. Combined, this research delivers a consistent evidence base to underpin strategies for the region's future.
- Identified priorities for Perth's economic future include:
 1. Innovation and Technology
 2. Skills and Education
 3. Networks and Collaboration
 4. Budget Repair, Governance, Tax and Regulatory Reform
 5. Infrastructure Investment
 6. Economic Diversity
 7. Global Minerals and Energy Hub
 8. Connections with Asia/Being 'Asia Ready'
 9. Access to Finance
 10. Liveability and Urban Innovation
 11. Branding and Marketing
 12. Geographical Industry Hubs

7.0 Introduction

While most of the economic challenges and opportunities facing Perth today are not new, the region's long-term economic resilience and high satisfaction with life in Perth, combined with the prosperity delivered by the mining and resource boom in the first 15 years of the twenty-first century arguably diverted government attention towards addressing immediate issues such as industry skill and workforce short-falls and rapid population growth, and away from planning for longer-term economic resilience. As a result, there is no unifying long-term plan or strategy for economic development in the State or the Perth region.

However, government, organisations and industry have not been entirely complacent. The State Government has some policy initiatives in place to facilitate economic growth, and action has been taken to heighten urban competitiveness. In addition, private and non-government organisations, including the Committee for Perth, have actively examined Perth's economic strengths and weaknesses and developed big ideas to position Perth at the cutting edge of global economic planning.

This chapter provides an overview of State Government policy and initiatives for economic development in the Perth region. It also examines the findings and recommendations of a broad cross-section of research reports and strategy documents prepared over the past decade with relevance to the economic future of Perth to identify the strengths, weaknesses, opportunities and threats identified as most important for the region's future.

7.1 Economic Development Policy in Perth and Western Australia

Western Australia has a history of government investment and policy initiatives to facilitate economic growth. This history stems from the middle of the twentieth century when subsidies and State Agreements were used to 'industrialise' the State, secure long-term, major resource projects and support the State's manufacturing sector. The establishment of the Kwinana Industrial Area in 1952 and the development of manufacturing industries in the early post-war period, such as the Chamberlain tractor project, are among early examples and success stories. ⁽⁷⁾

Since this period, successive State Governments have been active in implementing mechanisms such as State Agreements, primarily to facilitate major resource sector projects. A recent example is the Gorgon Project. Notable projects outside the resource sector that have been facilitated through State and Federal initiatives include the establishment of the Australian Marine Complex in Henderson and WA's involvement in the Square Kilometre Array. ⁽⁷⁾ The State Government has also initiated new infrastructure projects in Perth such as METRONET, a significant public transport investment program which will increase urban efficiency and has the capacity to stimulate jobs, investment and urban regeneration. ⁽⁷⁰⁾

State Government economic development activities in WA are currently managed by the Department of Jobs, Tourism, Science and Innovation. This Department is responsible for facilitating and developing major projects, identifying, planning and developing strategic industrial areas including LNG precincts, and science and innovation. ⁽⁷¹⁾

There are multiple other State Government departments involved in economic development in Perth, both directly and indirectly. They include:

- Department of the Premier and Cabinet
- Department of Treasury
- Department of Training and Workforce Development
- Department of Education
- Metropolitan TAFE's and universities
- Health Department
- Economic Regulation Authority
- Environmental Protection Authority
- Department of Planning, Lands and Heritage
- Department of Transport/Public Transport Authority/Main Roads Western Australia
- LandCorp/Metropolitan Redevelopment Authority
- Fremantle Port Authority

Federal government and local authorities in the region are also active in promoting local economic development.

Unlike other Australian states, such as Queensland and Victoria, WA does not have a published strategy or framework for economic development.

WA does however have an innovation strategy which has been operationalised through a \$16.7 million New Industries Fund. This Fund was announced in November 2017 and forms part of the Government's Plan for Jobs. The Fund aims to support the development of new industries in WA and aligns with a national policy shift towards fostering innovation to increase productivity. It was designed to support and accelerate new and emerging businesses to create Western Australian jobs. Prior to this period, WA's focus on fostering innovation ecosystems was secondary to facilitating growth and development in the mining sector. ⁽⁷²⁾

WA's 2017 New Industries Fund takes a 'horizontal approach' and highlighted four pillars on which Western Australia's innovation future would be built:

- Talent, skills and entrepreneurship
- Investment and infrastructure
- Culture and collaboration
- Marketing and promotion.

\$4.5 million of the \$16.7 million, has been allocated specifically to support regional innovation (i.e. innovation outside Greater Perth). ⁽⁷²⁾

7.2 Research and Policy Review 2008-2018

As part of the *Bigger & Better Beyond the Boom* project, the findings and recommendations of 27 research reports and strategies prepared over the past decade with relevance to the economic future of Perth were reviewed, consolidated and analysed. ⁽⁷³⁾

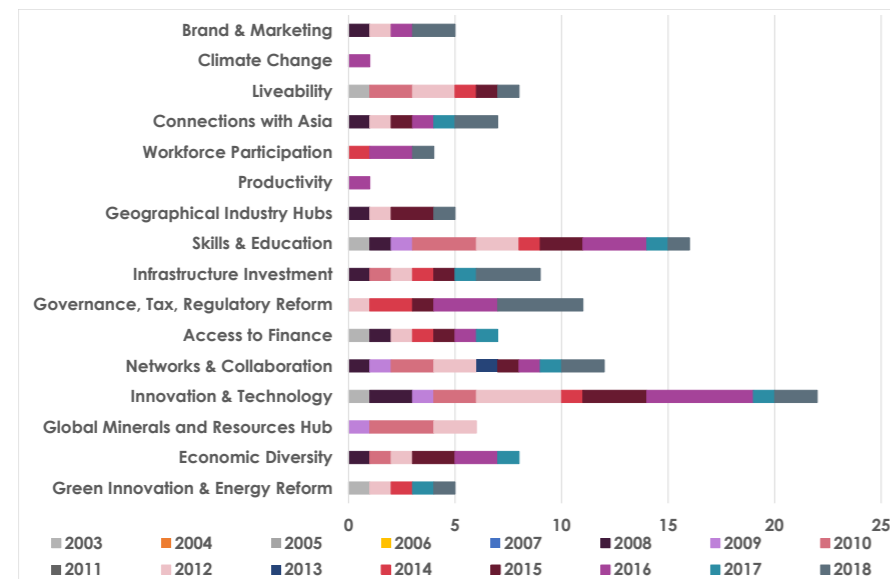
While not an exhaustive list, the research examined provides a representative sample of documentation prepared by a broad range of organisations including federal, state and local government, peak and industry bodies, non-government organisations and research institutions. It also includes research and strategies prepared by the Committee for Perth prior to the commencement of the B4 project.

The analysis shows that Perth's thinkers and policy makers have been diligent in drawing attention to future opportunities and challenges for the region. As a think-tank, the Committee for Perth has also been a leading voice on the need to stop relying on a business as usual approach and a growing chorus of voices both in and out of government agree. The review process identified significant continuity in the issues identified as important for the future of the Perth region and WA, but also highlighted a shift in the narrative in the post-boom period.

As illustrated in Figure 7.1, the top 12 issues or areas of focus for Perth's economic future were identified as:

1. Innovation and Technology
2. Skills and Education
3. Networks and Collaboration
4. Governance, Tax and Regulatory Reform
5. Infrastructure Investment
6. Economic Diversity
7. Global Minerals and Energy Hub
8. Connections with Asia
9. Access to Finance
10. Liveability and Urban Innovation
11. Branding and Marketing
12. Geographical Industry Hubs

Figure 7.1: Top 12 Issues for Perth's Economic Future



Source: (73).

In the first half of the decade, at the height of the most recent mining and resource sector boom, researchers and policy makers identified a need for:

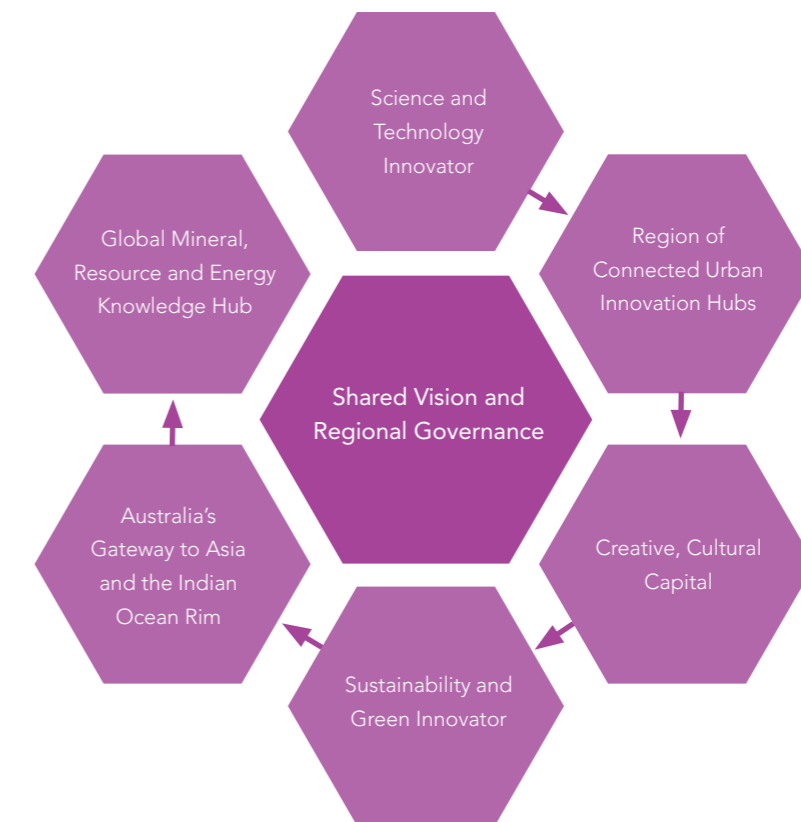
- A strong innovation system
- Education and skill development
- The strengthening of Perth as a global minerals and resources hub
- The development of strong collaborations
- A liveable region.

In the latter half of the decade, as Perth transitioned in the post-boom period, increased attention was given to:

- The need for innovation and technology
- Governance and regulatory reform
- Infrastructure investment and connections with Asia.

The Committee for Perth's *'Towards a Bright Future'* report was prepared in 2012 and provides an example of ideas for Perth's economic future, outlined in Figure 7.2.

Figure 7.2: Towards a Bright Future - Big Ideas for Perth



Source: (31); (73).

The reports and strategies also highlighted a broad spectrum of strengths, weaknesses, opportunities and threats for Perth's economy, which are summarised in Table 7.1.

Table 7.1: Summary of Key Strengths, Weaknesses, Opportunities, Threats

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Mining/resource economy with highly diverse resource base. Complementarity between the minerals and energy sectors and firms engaged in producing and promoting technical, economic, logistical and intellectual products and services. Innovation and technological innovation within the mining and energy sectors. Strong small business sector. Strong brand (Australia as a whole). Liveability. 	<ul style="list-style-type: none"> Lack of other (non-mining/resource) sectors of sufficient scale to become future growth drivers. Early adopters of technology and innovation not first in the world developers. Small size of knowledge intensive industries. Labour market marked by weaker demand, growing precariousness and reduced work hours. Difficulties accessing foreign investment. Regulatory inefficiencies. Share of international student enrolments in decline. Loss of tourism market share. Limited size and scale of the innovation system. Infrastructure deficit (communications technology, transport/connectivity). Governance fragmentation. Urban sprawl/car-dependent urban form. Australia not optimising its role in the commodities value chain. Inequality and economic stress. 	<ul style="list-style-type: none"> Global command and knowledge centre in the global mining and resource community. Shift to/investing in an innovation economy. Geographical proximity to Asia and natural advantage in servicing demand for high value products and produce. Sophisticated partnerships between Australian and Asian organisations. Investment in life-long education by government and industry. New jobs/higher skill jobs associated with automation. Creation of geographical industry hubs as hubs of R&D, innovation and diffusion. Growing the small business sector as employers, exporters and innovators. Increased collaboration between industry and the education sector. Potential to grow agriculture, tourism and education sectors. Growth of health sector, this is seen as linked to population ageing. Smart City movement – improved infrastructure performance/efficiencies and capacity to analyse big data. 	<ul style="list-style-type: none"> Automation and loss of low-skill jobs. Increasing competitive advantage associated with innovation i.e. ‘superstar’ economics where innovators take a bigger share of the winnings than ever before. Changing labour market – more precarious, flexible, multi-faceted, portfolio-based. Climate change and transition to a low carbon economy. Ageing population. Geopolitical instability. Increased competition from Asia in some sectors. Lack of access to skilled/knowledge workers.

Box 7.1: Being ‘Asia Ready’ – Understanding Asian Growth and Opportunity

Developing connections with Asia has consistently been identified as an important opportunity for Perth’s future. Recent research has defined this opportunity and identified strategies that could be implemented to grasp it. These are summarised below:

- By 2025, Asia will produce half of the world’s total economic output, and the region’s middle-class will reach 3.2 billion by 2030. ⁽¹⁰⁰⁾
- The growing middle class in Asia will demand service-based industries services. Currently, our service exports to Asia make up 34% versus 54% to the rest of the world, mostly the USA and the UK. ⁽¹⁰¹⁾
- By 2030, Australia’s export growth in services to Asia could reach \$163 billion, a 135% increase from 2013 levels and support over one million jobs locally. ⁽¹⁰¹⁾
- Perth shares a time zone, of plus or minus two hours, with 60 per cent of the world’s population in the emerging economies of Asia. ^{(102) (103)}
- Asia capable skills include: sophisticated knowledge of Asian markets, extensive experience operating in Asia, long-term trusted relationships in the region, ability to adapt behaviour to Asian cultural contexts, capacity to deal with government, useful level of language proficiency. ⁽¹⁰⁴⁾
- By 2050, emerging markets including Indonesia, Brazil and Mexico will be more important than current economic powerhouses. ⁽¹⁰⁵⁾

A need has been identified for Perth to be ‘Asia ready’. This includes developing the workforce and business skills necessary to effectively do business with Asia. This may include:

- Asian language and cultural skills
- Understanding drivers of Asian economic growth
- Knowledge of governance and business systems
- Recruiting Asia-capable talent
- Establishing Asia capable advisory boards
- Removing bias against foreign income
- Facilitating business input in policy making ^{(106) (107) (104)}

7.2.1 Ageing, Aged Care and Health Care

Quality health and aged care has been repeatedly recognised by Perth residents as a priority for Perth's future, and an ageing population has been identified as a prominent social force that is generating global and regional economic headwinds.

Current research indicates that in WA, population ageing is occurring at a similar pace to that of the rest of the nation. In 2016, the age structure of WA's population almost mirrored the structure of the population nationally, with 50% of West Australians being of working age; 29 children for every 100 people of working age; and 21 adults aged 65 for every 100 people of working age. ⁽³⁰⁾

Looking forward, Australia's ageing trend is predicted to continue and is likely to lead Australia "into a demographic environment entirely unfamiliar to us". ⁽⁷⁴⁾ By 2060, it is predicted that 1 in 4 Australians will be aged over 65. There is also projected to be very high growth rates among Australia's 'oldest old' and by 2060 there are projected to be 25 centenarians for every 100 children aged under 1. ⁽³⁰⁾

In Australia, ageing is projected to impact on the economy by influencing:

- **People:** Reductions in the proportion of people of working age and size of the labour force.
- **Participation:** Increase in the proportion of the population over 65 who have lower rates of labour force participation.
- **Productivity:** Increased role of less productive industries combined with an expected fall in hours worked per capita is projected to lead to a fall in GDP.
- **Consumption:** Expenditure among households containing adults over 65 is lower than 'working age' households and the types of products and services consumed by these households differ.
- **Public expenditure:** The combined impacts of ageing and new health care technologies are predicted to place major pressure on the budgets of Australian governments. ^{(74) (30)}

Most strategies to address population ageing have two primary aims:

- 1) To realise the potential economic benefits of an ageing population
- 2) To minimise the economic impacts of an ageing population.

To date, policies have primarily focused on reducing negative economic impacts of population ageing, rather than seizing economic opportunities associated with this trend. Potential strategies to mitigate the economic impacts of ageing include increasing labour force participation among over 65s and all working age Australians, as well as investing in and facilitating innovation to mitigate stress on the health system and plan for an increase in the proportion of people aged over 65 years of age.


Looking forward, research has identified a need for an increased emphasis on maximising economic and societal benefits associated with living longer. Strategies aimed at realising the potential benefits of an ageing population include:

- Developing new and innovative businesses associated with health care products and services
- Encouraging entrepreneurship among older Australians
- Increasing and recognising volunteering and philanthropy among older Australians.

Box 7.2: Higher Education

Research has examined Perth's higher education sector and identified opportunities for the region's future. A summary of the research findings is provided below:

- Education is an economic activity that enables people to gain the skills and knowledge to maximise productivity and increase innovation in the workplace.
- Perth is home to well ranked higher education institutions and the education and training sector is important to the economy of the Perth and Peel region.
- Nodes of employment in education and training in Perth and Peel, which reflect the location of higher education institutions, are more dispersed than in other major metropolitan capitals such as Melbourne and Sydney.
- International education is a major export industry and is important to the economy of WA and the Perth and Peel region, however WA attracts less than its population based share of international students in the higher education and VET sector. While Australia's share of the international higher education student market has increased over the past 15 years, WA's share has been in decline.
- Fields of study in the higher education and VET sector in WA reflect the importance of the minerals and resources sector to the regional economy and the proportion of students studying in fields such as Information Technology is disproportionately low. This is important because it is the third most popular field of study for international students in Australia.
- WA is particularly under-represented in the higher education onshore international student market but has a high proportion of offshore student enrolments. Offshore students are an important source of income to local universities but do not deliver the value-added benefits to the WA economy that accompanies onshore student enrolments.
- WA attracts international students from a diverse range of countries, but Chinese students are under-represented in WA when compared with the Australian average.
- The global international student market is expected to grow over the next 15-20 years, however competition between host countries and cities is also increasing.
- Perth does not have a higher education strategy or a strategy for the attraction and retention of international students. A need has been identified to make the attraction and retention of international students a State government priority.
- There is a need to understand the skill and workforce needs of industry today and into the future as well as the study preferences of the next generation.



A partnership approach is central to successful strategies for economic development and innovation.

CHAPTER 8

From Analysis to Action – Learning from cities and countries around the globe

Key Findings:

- While some global cities have been actively planning and delivering integrated strategies and cutting-edge initiatives to maximise economic development and urban competitiveness for more than 20 years, Perth does not yet have a dedicated regional strategy for economic development.
- A partnership approach is central to successful strategies for economic development and innovation.
- Strategies for regional economic development and urban competitiveness in today's economy are complex and often rely on the unilateral implementation of multiple, complementary and integrated initiatives.
- Successful economic development strategies build on and respond to a detailed understanding of a region's unique competitive strengths and systems of innovation; are measurable; and provide mechanisms for review and updating.
- Strategies and initiatives that aim to build an 'innovation ecosystem' have been identified as important in numerous economies and include strategies to build human capital, knowledge, technology and innovation.
- Strategies for innovation should primarily focus on 'bottom-up' initiatives with 'top-down' strategies being applied only to respond to the needs or to develop industries in which the region has a key competitive advantage.
- Nations and cities in Asia have emerged as leaders in facilitating innovation, technology and the implementation of 'smart city' initiatives to build urban competitiveness and heighten infrastructure efficiency.
- Australia's two largest cities are actively investing in infrastructure initiatives to maximise global competitiveness.
- Private investment in infrastructure has been identified as important to deliver the nation's infrastructure needs.

8.0 Introduction

Since the latter part of last century, cities and countries around the world have initiated strategies to boost economic performance and build global competitiveness. These have included comprehensive, broad ranging strategic policy initiatives adapted over time to respond to shifting global opportunities and challenges, as well as ad-hoc initiatives to respond to specific challenges or opportunities. This chapter provides an overview of global economic policy trends and provides examples of strategies and initiatives for economic development from elsewhere.

The strategies and initiatives outlined have been selected to provide examples of approaches to regional economic development and urban competitiveness implemented around the world. Each of the strategies or initiatives outlined has been globally or regionally recognised /reported as providing economic or urban benefits.

8.1 Trends in Policy for Economic Development and Urban Competitiveness

In the 1990s, globalisation and technological development were the primary global forces influencing economic development. As the diffusion of information and communications technology accelerated, the internet emerged. As a result, global competition to attract increasingly mobile investment capital intensified, nations gained a heightened awareness of the importance of investment in intangible assets such as education, research and development (R&D) and software. ^{(75) (76)}

By the turn of the century, science, technology and innovation were widely recognised as key to improving economic performance and social well-being. There was broad acknowledgement of the need for government to act as a facilitator, enabling business and consumers to adapt to the demands and opportunities of the new economy. ⁽⁷⁶⁾

This precipitated a shift in industrial policy thinking from the neoclassical, market-failure correction approach into the so-called ‘systems approach’ or ‘New Industrial Policy’, which focused on generating knowledge and implementing horizontal actions to build systems, create networks and develop institutions to foster innovation growth. ⁽⁷⁷⁾

In response, economic development strategies emerged which promoted broad mechanisms focused on developing frameworks for innovation and economic growth. This included the restructuring of regulatory and taxation systems; investing in R&D and supporting science and technology; improving education and accumulating physical and human capital; and investing in IT infrastructure to attract the highest value-adding industries, particularly in knowledge intensive high wage sectors such as research, software, information technology and service industries. ^{(75) (76)}

National governments including Austria, France, Japan, Korea, Mexico, Portugal and Spain implemented large-scale initiatives to reform their science, technology and innovation (STI) policies in the 1990s and early 2000s, while Finland, Ireland, Japan, Korea and New Zealand, increased support for science. In the United States, support for basic research was increased by more than 10% in the 2000 budget alone. ⁽⁷⁶⁾

Yet in 2007-08, the world was struck by the Global Financial Crisis (GFC) and in the aftermath, governments’ interest in actions to accelerate structural changes in regional economies and support industrial competitiveness heightened.

At the same time, there was increasing recognition, particularly within the European Union, that not all regions are equipped to do everything in science, technology and innovation and that many regional strategies for economic development reflected a ‘me-too’ or ‘one-size-fits-all’ approach that were aspirational but not evidence-based, nor responsive to specific competitive advantages and conditions. ^{(78) (77)}

As a result, strategies with an aim to attract and develop sectors that were high-performing or emerging globally including life science, biotech, health, information and communications technology, environmental technologies, mobility and logistics, and new materials proliferated.

There was also evidence that ‘top-down’ strategies associated with governments ‘picking industry winners’ were delivering limited success – because they hindered the potential for the emergence of ideas, opportunities and innovation through processes of entrepreneurial self-discovery. ^{(78) (79)}

The reaction was a shift towards a ‘smart specialisation’ policy approach, precipitated by the European Union. This approach aims to achieve a balance between enhancing specialisation and competitive advantage and facilitating innovation by building on existing and potential advantages to foster entrepreneurial processes of discovery and maximise the region’s innovation performance. ⁽⁷⁸⁾ These were based on an accurate understanding of their unique knowledge base and strengths and weaknesses. ⁽⁷⁷⁾

However, it is widely recognised that translating this approach into policy is not easy. It requires a detailed understanding of the regional economy and processes of innovation and does not allow for ‘one-size-fits-all’ strategies and actions. It also requires a shift towards ongoing monitoring and review and adaptation in response to performance.

Table 8.1 provides an overview of the key factors associated with the successful implementation of a ‘smart specialisation’ policy.

Table 8.1: Smart Specialisation, Features for Success

Features of Successful ‘Smart Specialisation’ Policy
Identify the region’s unique knowledge assets, capabilities and competencies.
Support emergence of microsystems of innovation.
Make evidence-based policy and investment decisions.
Monitor implementation success and adapt and terminate strategies to respond to success and/or failure.
Avoid ‘picking winners’.
As much as possible, favour neutral or ‘bottom-up’ policy initiatives.
Factor in global forces and do not try to swim against the tide.

Source: ⁽⁷⁹⁾.

8.2 Examples of Regional and National Strategies for Economic Development and Urban Competitiveness

Literature indicates that while it is possible to develop sound economic policies on an ad-hoc basis, an integrated, co-ordinated, regional approach is more effective to deliver long-term, sustainable economic gains. ⁽⁷⁶⁾ It is also evident that, while Perth is currently trailing behind other cities in preparing and delivering a regional strategy for economic development and urban competitiveness, Perth has the potential to learn from the successes of other cities and regions, yet chart is own course.

This section provides an overview of some of the observed strengths of economic development plans and strategies for Brisbane, Singapore and the Navarre region in Spain. These three case studies are markedly different.

Brisbane is a comparative new-comer to overt planning for metropolitan economic development. The *Brisbane Economic Development Plan 2012-2031* was prepared by the Brisbane City Council. It aimed to position Brisbane to capture the potential of the mining and resource boom by sustaining a productive economy underpinned by investment growth, while also providing the high-quality living environment that will attract and retain a talented workforce. ⁽⁸⁰⁾

By contrast, Singapore has a long history of strategic initiatives to facilitate economic growth and innovation, and its most recent *Singapore Research Innovation and Enterprise 2020 Plan* builds on the success of previous national plans for innovation, technology and economic growth prepared since 1995. ⁽⁸¹⁾

The Navarre region developed its inaugural *Smart Specialisation Strategy* in 2010 in response to European Union policy requirements and a recognised need for economic stimulation in the post-GFC climate. The strategy has been recognised as a good practice example of smart specialisation integrated with higher education in multiple European policy reviews. ^{(82) (83)} The strategy was revised in 2016 and currently aims to deliver the following goals:

- Higher quality of life, through a system of social cohesion, health care of the highest quality and an excellent educational system as great strengths of Navarra.
- Greater prosperity, based on the development of the business and industrial fabric, integrating and boosting the talent of people, and promoting innovation and entrepreneurship to assist Navarra to maintain high competitiveness.
- Greater sustainability, respecting and enhancing the natural environment of Navarra, protecting natural resources and promoting efficient use of them in order to maintain and improve environmental quality.

Strengths common to all three strategies are:

- They are evidence-based.
- Implementation is overseen by a regional government agency.
- They primarily focus on unique regional competitive strengths.
- They incorporate delivery targets and processes for regular review and updates.
- They adopt a collaborative ‘partnership approach’ to economic development.

Table 8.2: Economic Development Strategies for Brisbane, Singapore and Navarre Spain – Key Elements and Strengths

Brisbane Economic Development Plan 2012	Singapore Research Innovation and Enterprise (RIE) 2020 Plan	Smart Specialisation Strategy Navarre, Spain 2010 (revised version released 2016)
Comprehensive preparation process incorporating detailed research and consultation with 1,000 individuals representing more than 500 different local, national and international organisations.	Builds on successive plans for research, innovation and enterprise – National Technology Plan 1995; National Science and Technology Plan 2000; Science & Technology 2005 Plan; Science & Technology 2010 Plan; Research Innovation and Enterprise Plan 2015.	Evidence-based, developed following the diagnosis of regional competitiveness; scientific-technological potential; exports; regional strengths, weaknesses, opportunities and threats.
Developed and implemented by dedicated metropolitan local authority.	Governance structure supports implementation and strategy is also supported by complementary strategies.	Implementation supported by a regional economic development agency.
Supported by and integrated with the Brisbane Long-Term Infrastructure Plan.	Success is measured, for example measurement of research quality, university and R&D performance and start-up businesses.	Focuses on a limited number of priorities selected in response to regional competitive advantage and existing technological specialisation.
Implemented through an action plan which is regularly reviewed and updated.	Implements horizontal actions to develop the innovation ecosystem including improving research collaboration; shift towards competitive funding; increased funding for public-private research initiatives; and sustaining a strong innovation workforce.	Implementation measured through a comprehensive tracking and monitoring model, which partly follows the macro structure and objectives established in 2010 and adapts to sources available. Also tracks sectorial specialisation of the economy and its territorial deployment.
Primarily focused on horizontal rather than ‘top-down’ actions to build regional industry competitiveness.	Incorporates ‘top-down’ initiatives (funding) to support industries in which Singapore has been identified as having a competitive advantage.	Reviewed and updated on a five-yearly basis.
Incorporates targets for regional economic performance but has not been published.	Highly targeted, bold and responds to Singapore’s current competitive advantages and needs.	Focuses on ‘horizontal’ actions to develop regional competitiveness and ‘top-down’ initiatives to build specific competitive advantages.

Source: (80); (81); (83).



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Education and entrepreneurship have been identified as the dominant influences and critical components of economic diversity and innovation.

8.3 Strategies and Initiatives for Economic Development

Strategies for economic development and urban competitiveness often combine multiple, interrelated interventions. This section provides examples of initiatives, interventions and trends in the areas of innovation and technology, human capital, knowledge and skill development; networks and collaboration; enterprise support and finance; and infrastructure. A review of international roles in economic development also indicates that metropolitan governance is increasingly shared with the private sector while critical national and state government input continues.

8.3.1 Human Capital, Knowledge, Skills, Innovation and Technology

The value of human capital, including a skilled and educated workforce, entrepreneurship and creativity in the economy, and particularly to the establishment of small and medium sized enterprises has been widely researched. Education and entrepreneurship have been identified as the dominant influences and critical components of economic diversity and innovation.⁽⁸⁴⁾ It is also widely acknowledged that as the age structure of the population changes, the value of a strong, highly-skilled and educated workforce is likely to grow.

As a result, initiatives to build and retain a skilled and knowledgeable workforce, as well as foster an entrepreneurial culture and generate innovative business activity within regions have become mainstream. Yet the actions and interventions they promote vary widely, from the development and restructuring of the school and higher education system, to investment in cultural infrastructure, urban regeneration and place making focused on increasing liveability as a strategy to attract and retain skilled people, and immigration and higher education schemes which aim to attract and retain international students and workers.

Strategies for entrepreneurialism also range from:

- Creating education and training programs.
- Teaching business and entrepreneurial skills.
- Increasing access to funding and finance for new business.
- Building the competitiveness of regional universities.
- Increasing R&D activities.
- Maximising the benefits of R&D and research organisations as incubators of innovation.

Singapore's successive strategies since 1995 for technology, science, innovation and enterprise provide examples of government interventions aimed towards the development of an innovative economy. Many of Singapore's initiatives have been focused towards the funding of R&D activities and the establishment of industry hubs and clusters. However, they have also been supported by a long-term national focus on building Singapore's human capital and knowledge base, through a high quality education system. The history and primary features of Singapore's education system are outlined in Box 8.1.

Box 8.1: Human Capital and a Competitive Strength: Singapore

Economic development strategies that focus on developing human capital to facilitate growth are not new. In 1965, Singapore welcomed independence, and as a small country, with very few natural resources, the newly formed national government recognised that human resources had the potential to be its primary competitive strength. Since then, human resource development has been a core element of the strategies for economic development in Singapore which has seen the nation develop a unique approach to education. These strategies have been central to Singapore's 50-year transformation from a developing nation to economic powerhouse of the Asia-Pacific region. Key elements of this approach include:

A forward focused, integrated planning system: Singapore established a uniquely integrated system of planning for education and skill development. The Ministry of Manpower works with economic agencies, such as the Economic Development Board, to identify industry critical, human resource needs and project demands for future skills. It then feeds these into policies and programs for pre-employment training and continuing education and training.

Close links between policy implementers, researchers and educators: Singapore has developed a close tripartite relationship between the Ministry of Education, the National Institute of Education (NIE) - the country's only teacher education institute, and schools. The Ministry is responsible for policy development, while the NIE conducts research and provides pre-service training to educators. NIE's research is fed back to the Ministry and is used to inform policy development.

Policies with the means to implement them: Singapore's education system is 'tightly coupled' and the key leaders of the Ministry, NIE, and the schools share responsibility and accountability for policy implementation. As a result, no policy is announced without a plan for building the capacity to meet it.

Commitment to equity and merit: Singapore has aimed to avoid large disparities in educational standards that are associated with schools for the privileged and those for the majority. As a result, Singapore has achieved high-standards across a spectrum of abilities and a large proportion of Singaporeans proceed to higher education.

A strong focus on mathematics, science and technical skills: Singapore has focused on the universal development of strong mathematics, science and technical skills.

Human resource management which matches the demands of the system: High-quality teachers and school leaders have formed the cornerstone of Singapore's education system and are a major reason for its high performance. Rather than focusing on just one element, Singapore has developed a comprehensive system for selecting, training, compensating and developing teachers and principals, thereby creating tremendous capacity at the point of education delivery.⁽¹⁰⁸⁾

Confucian system of higher education. This system has four interrelated features:

- Strong nation-state policy drivers and relatively close supervision with more detailed shaping of executive agendas, educational priorities and research creativity.
- The rapid growth of tertiary participation beyond 50% and towards universal levels; simultaneous with a continuing increase in the proportion of tuition costs funded by households.
- 'One chance' national examination systems at the end of schooling.
- A high and growing public investment in research science, combined with rapid growth in, and the improvement of research activity within universities.⁽¹⁰⁹⁾

8.3.2 Knowledge and Technology Clusters

The development of geographical knowledge and innovation clusters grew in importance as strategies to generate innovation and technological development during the mid to late 1980s to early to mid-2000s. The purpose of these clusters or hubs was to physically bring private and public sector industry players together, with an aim to catalyse ideas, promote collaboration and consolidation and co-ordinate research and development activities. ⁽⁸⁵⁾

This approach recognises that geographic proximity is critical to innovation - because innovation is a creative human endeavour that requires personal networks and trust. Clusters, or innovation districts, have been found to increase the innovation levels, efficiency, and productivity with which participating companies can compete, nationally and globally. ⁽⁸⁶⁾

In Perth, the creation of the Technology Park located in Bentley responded to this policy trend, but applies a lower density, more dispersed model of development than many of the innovation and technology clusters established overseas and current literature emphasises the importance of density to confer a productivity advantage for the firms within a cluster. ⁽⁸⁶⁾

Strategies to develop high-tech clusters have been successfully implemented world-wide including in Japan, which has established biomedical research clusters in Kobe and Osaka that are ranked among the most productive in Japan in terms of production volume of pharmaceutical products, and are examples of major industrial hubs leading the pharmaceutical industry. ⁽⁸⁷⁾ These high-density, specialised clusters house national research institutes, universities, colleges, hospitals and private sector companies. The clusters:

- Promote collaboration and integration.
- Support new, small and medium-sized enterprises through business partnering.
- Provide access to specialists in technical, regulatory and tax fields.
- Provide a business support system. ⁽⁸⁵⁾

There are also global examples of strategic projects with dual goals to achieve improved liveability through urban regeneration and generate economic activity through the establishment of knowledge hubs. The redevelopment of Norra Älvstranden in Gothenburg in Sweden is a case in point.

Box 8.2: Urban Regeneration and Knowledge Clusters – Gothenburg, Sweden

Gothenburg is Sweden's second city, an industrial centre and Scandinavia's main port. It is however, a long way from Europe's main centres of population. Norra Älvstranden lies across the river from the city centre and was the home of Gothenburg's world-famous shipyards up until the 1970s. Foreign competition, and the effects of the 1973 oil crisis, led to the closure of the yards, and all shipbuilding in Norra Älvstranden ceased by the end of the decade.

In the 1990s, the city council gained control of the site and developed a plan which aimed to initiate the regeneration of the area into a mixed-use waterfront. However, as part of this regeneration program the city, regional universities and leading companies, such as Ericsson and Volvo, worked together to create a cluster of knowledge-intensive firms in the area, along with the facilities and the environment to help them flourish.

By the middle of the last decade, the project was described as a 'triple-win' development, in that it provided more jobs, more housing and a much better environment than it had during its industrial heyday and had become a place people want to live in and businesses, including very large businesses, invested in. ⁽⁸⁸⁾

8.3.3 Accelerating Innovation within Government

Additional, unique mechanisms to foster innovation and entrepreneurialism include initiatives which aim to accelerate innovation within government and in the delivery of services to residents as a strategy to improve liveability; increase governance efficiencies; and support the development of new technology, business innovation and entrepreneurialism. Boston's New Urban Mechanics has been identified as a global leader in this space.

Box 8.3: Boston – Mayor's Office of New Urban Mechanics

The Mayor's Office of New Urban Mechanics (MONUM) was formed in 2010 and serves as the City's R&D laboratory. The unit undertakes research and design work to cover a vast range of issues and mayoral priority areas, including civic engagement, racial equity, city infrastructure, and education.

MONUM takes on risks that traditional government departments might not be able to take, such as undertaking experiments and trials to develop new technology or models of service delivery. When an experiment works, the unit partners with government departments to make it a permanent service. When an experiment doesn't work out, the unit documents key learnings and shares the findings with partners and cities around the world.

In addition to these experiments, MONUM also acts as a 'front door' for start-ups, universities, and residents wanting to collaborate with the City. The unit also acts as a mentor to other cities, such as Singapore, informing them how to establish innovation offices in their governments.

Source: ⁽⁸⁹⁾.

8.3.4 Global Networks and Connectivity

Initiatives to develop regional, national and global networks and connections have also emerged as core features of modern economic development strategies. Initiatives include investment in physical infrastructure improvements such as:

- Information and communications technology
- Road and public transport
- Ports and airports
- Increasing direct airline route links
- Trade agreements
- Strategic partnerships such as 'sister city' agreements
- Attracting international conferences and events
- Establishing strategic business alliances
- Providing government assistance to businesses seeking to enter new international markets

Institutions such as universities also play a central role in global connectivity and have responded by establishing national and international coalitions, including the Group of Eight (GO8) coalition of eight leading Australian universities; the Matakiri network of seven universities in Australia, Europe and New Zealand, which focuses on improving the undergraduate experience; and the Worldwide Universities Network (WUN) which spans 11 countries, across six continents and supports the facilitation of collaborative research and the exchange of research staff and students. ⁽⁹⁰⁾ Universities also form global connections by establishing offshore campuses, by partnering with international universities in the delivery of courses, and student exchange programs. ⁽⁹¹⁾

In addition, national governments have also been expanding their role. Governments in countries including Australia, New Zealand and Canada have become active in the development of science and technology partnerships, aimed at delivering important collaboration across innovation and science ecosystems and between international researchers and innovative companies.

8.3.5 Enterprise Support and Funding

Supporting business investment, developing new enterprises, and funding enterprise innovation and technological advancement are similarly fundamental elements of modern strategies for economic development. These include 'top-down' strategies such as targeted, sector specific funding or taxation incentives, as well as 'bottom-up' strategies which deliver financial support for growth and innovation to businesses in all sectors.

Examples of 'top-down' strategies are evident in Singapore's RIE 2020 plan, which prioritises funding for four strategic technology domains where Singapore has competitive advantages and/or important national needs, including:

- Advanced manufacturing and engineering
- Health and biomedical sciences
- Urban solutions and sustainability
- Services and digital economy ⁽⁸¹⁾

Bottom-up strategies for enterprise support include the Oregon E-Zone/Portland Enterprise Zone program and New Zealand's Callaghan Innovation Agency.

Supporting business investment, developing new enterprises, and funding enterprise innovation and technological advancement are similarly fundamental elements of modern strategies for economic development.

Box 8.4: Oregon E-Zone/Portland Enterprise Zone

The Oregon E-Zone Program is a state economic development program that allows property tax exemptions for up to five years in exchange for certain public benefits. Participating firms need to meet the program requirements set by state statute and the local sponsor.

The Portland Enterprise Zone is part of the Oregon E-Zone program and exists primarily to incentivise firms to invest in major capital outlays, and to create or retain quality jobs by offering property tax exemptions designed to encourage existing and new businesses. The program aims to:

- Attract new industrial and commercial capital investments
- Attract new capital investments by businesses that will be establishing their headquarters in the Portland E-Zone
- Increase economic opportunity and income for all Portland residents by linking them with quality jobs
- Increase business-to-business procurement opportunities between participating Portland E-Zone businesses and existing businesses located within the City
- Ensure that the jobs being created meet basic job quality and retention requirements

The geography of the Portland Enterprise Zone has evolved over time to reflect the city's commitment to ensure more broadly shared community benefits.

Since 1986, more than 75 companies have participated in the program, and approximately 60 projects are active. Since 1996, Portland's E-Zone programs are reported to have leveraged nearly two billion dollars in private investments and have created and retained between five and ten thousand full-time, quality jobs. ⁽¹¹⁰⁾

A report on the performance of E-Zone activities is required to be prepared annually and provided to the Portland City Council. ⁽¹¹¹⁾

Box 8.5: Callaghan Innovation Agency New Zealand

Callaghan Innovation is a government agency supporting high-tech businesses in New Zealand. Established in 2013, its mission is to accelerate the commercialisation of innovation by New Zealand businesses by growing New Zealand's innovation economy; helping businesses to succeed through technology; and increasing the diversity and value of exports from New Zealand.

It employs a mix of 300 researchers, engineers, scientists, technologists, designers, entrepreneurs, advisors and administrators, delivering self-help and on-demand services and tailored programmes. Key programmes include:

- Providing access to experts
- Technology and product development
- Innovation skill
- Business collaboration
- R&D grant
- Student grants

In 2016-17, Callaghan Innovation assisted close to 2,500 organisations and provided 831 R&D grants valued at approx. \$150 million NZ. ⁽¹¹³⁾

A 2016 review of the performance of Callaghan Innovation by the New Zealand Government identified strong internal and external support for the Callaghan Innovation purpose. External stakeholders identified the Callaghan Innovation mission as, "vital to New Zealand's economic success" and indicated that, "there was no one else in the innovation ecosystem that could play its role".

The review also identified partnerships to deliver innovation services to Maori businesses as a key element of Callaghan Innovation's success. ⁽¹¹²⁾

8.3.6 Infrastructure and Investment

Globally, infrastructure investment has long been used as a strategy to attract investment, stimulate economic growth and job creation. In Australia, delivering infrastructure of a standard comparable to other global cities is also recognised as a key ingredient for urban competitiveness. Major infrastructure initiatives currently underway in Australia's two major cities are outlined below.

Table 8.3: Infrastructure Projects and Programs in Sydney and Melbourne

City	Project /Program	Aim
Sydney	Capital works program which includes public domain master planning and development; the creation of pedestrian and cycling networks; traffic calming initiatives; the creation of new public squares and public places; the revitalisation of laneways and fine grain spaces; and new and upgrades to existing recreational and community facilities. Estimated cost: \$188 million per annum.	Strategic and well-resourced program of maintenance and upgrade works with an aim to achieve an infrastructure standard comparable to other global cities and enhance global urban competitiveness.
Melbourne	Building a Better Victoria and Plan Melbourne - program of major new infrastructure projects. Allocates up to \$11 billion for the Melbourne Rail Link, - including delivery of the Airport Rail Link, to increase the capacity of Melbourne's train network and \$8-\$10 billion for the East West Link – Western Section to improve reliability and provide connectivity between manufacturing and logistics precincts on Melbourne's fringes.	To create jobs, boost productivity and improve liveability.

8.3.7 Private Infrastructure Investment

Since the late 1980s, Australian governments have used public private partnerships (PPPs) to deliver social infrastructure projects such as hospital and education packages, as well as upgrades to major economic infrastructure such as road and rail networks. This approach aims to enable government to secure private sector funds for infrastructure projects and involves government defining the project and inviting the private sector to participate in financing, funding, owning and operating the infrastructure. The mix of private sector funding, ownership and operating control can vary, as there is no one-size-fits-all solution.

Internationally, nationally and in Perth there is a mixed record of PPP successes and failures. Lack of rigorous project assessment and inadequate management of risks and contracts or clarity about risk sharing have been linked to PPP failure.^{(92) (93)}

Recent national examples of public private partnerships include the \$3.7 billion Sydney Metro Northwest, the \$698 million Canberra Light Rail and the \$1 billion Victorian Comprehensive Cancer Centre.⁽⁹⁴⁾

The PPP model has been applied in Western Australia for the development of Midland Public Hospital, Optus Stadium and the Queen Elizabeth II Medical Centre multi-storey car park.⁽⁹³⁾ It is the case in WA however, that most infrastructure remains publicly funded and owned.⁽⁹⁵⁾ With private investment identified as important for the future of infrastructure development, a need has been acknowledged for improved business case analysis, risk management, procurement, project and contract management, negotiation and commercial and financial management within government to facilitate increased private infrastructure investment, and better outcomes for government and the private sector.^{(96) (93)}

8.3.8 Smart City Initiatives

Internationally, the delivery of efficient infrastructure, including transport infrastructure is also recognised as a critical component of urban competitiveness and fundamental to regional economic growth and productivity, however strategies do not always focus on a supply-oriented approach. Increasingly, cities and regions are maximising the efficiency of their infrastructure and managing demand through 'smart city' solutions. Smart City strategies and initiatives are being implemented around the world, in Europe in cities such as Amsterdam and cities in the United States including Atlanta, Boston, Kansas City, San Francisco and Washington DC, with implementation budgets of between \$649 million to \$13.9 billion US dollars. Initiatives include:

- Sensors for traffic and parking to improve efficiency and maintenance
- Data analytics tools to analyse real-time data of how the city is performing
- Paperless offices
- Internet of Things and artificial intelligence
- Big data initiatives

Seoul in South Korea is an example of an early adopter of 'smart city' technology to manage its infrastructure and service delivery and heighten liveability and global competitiveness.

Box 8.6: Smart City Seoul 2015

Seoul is the capital of South Korea and the country's largest metropolis with a population of more than 10 million people. Seoul has been consistently ranked one of the most tech-savvy cities in the world since early this century. Smart Seoul 2015 is an early example of a 'smart city' strategy aimed at upholding its reputation as a global ICT leader by boosting its sustainability and competitiveness through smart technologies. Smart Seoul 2015 was founded on three key principles.

ICT Infrastructure: Securing next-generation ICT infrastructure as critical to the success of emerging smart-city services. ICT infrastructure development must anticipate future service demands, rather than respond only to those most apparent.

Integrated City-management Framework: A well-defined 'integrated city-management framework'.

Smart Users: ICTs are the tools to enable a 'smart city' but are of no use without smart-tech users able to interact with smart services. Increasing access to smart devices and education, across income levels and age groups, was identified as one of the city's highest priorities.

Key initiatives of *Smart Seoul 2015* include: smart devices for all; free Wi-Fi for all citizens; online government and administrative services by 2014; establishing a communication network with the capacity to support smart services; reduced crime rate through responsive real time monitored CCTV; smart street lights; reducing power use by 10% through the use of sensors; smart work centres for government employees; community mapping projects; smart metering; and open governance.⁽⁹⁷⁾



Perth's long-term economic stability, mining sector growth and liveability strengths have delivered a 'crisis of complacency' by limiting the perceived need for long-term planning for economic development.

CHAPTER 9

Opportunities, Recommendations and Actions

This chapter details the 11 opportunities with 7 recommendations and 25 actions to take Perth on a pathway to prosperity.

Opportunities

It is clear that Perth is a region that has opportunity and potential ahead, yet long-term planning to ensure a prosperous future has not occurred. Below are the 11 opportunities starting with a shift in mindset, moving to a state of action and leveraging Perth's strengths and realising new opportunities.

Opportunity 1: Catalyse Perth's Crisis of Complacency

Perth's long-term economic stability, mining sector growth and liveability strengths have delivered a 'crisis of complacency' by limiting the perceived need for long-term planning for economic development. The current economic downturn is a 'call to action' for Perth and provides an opportunity to re-evaluate the region's economic course and devise a new pathway to a prosperous future.

Committee for Perth research has captured the long-term satisfaction of Perth residents with life in the region. It has also demonstrated that despite the lack of strategic regional planning for economic growth and development, the economy has demonstrated long-term strength and resilience. Combined, these factors appear to have limited the perceived need for economic and urban change in Perth.

Furthermore, the prosperity delivered by the mining and resource boom in the first 15 years of the twenty-first century arguably diverted government attention towards addressing immediate issues such as industry skill and workforce short-falls and rapid population growth, rather than planning for longer-term economic resilience.

Yet, the current economic downturn is significant and is having a detrimental impact on Perth's perceived competitiveness and on the financial well-being of a very substantial proportion of the region's residents and households. Global forces are also delivering new industry opportunities and challenges. Together these trends translate into a collective 'call to action' and provide an opportunity to re-evaluate Perth's current course and identify a new pathway towards long-term economic stability and prosperity.

Opportunity 2: Shift from Analysis to Action

Cities around the globe have been delivering integrated economic development strategies while Perth has been rooted in processes of analysis and discussion. There is an opportunity for Perth to build on the analytical work undertaken over the past decade and shift from analysis to action.

Since the latter part of last century, cities and countries around the world have initiated strategies to boost economic performance and build global competitiveness. In Perth, there has been substantial research, discussion and generation of ideas for the region's future, but this has not translated into strategic regional action.

It is evident that the current economic downturn presents an opportunity for Perth to shift its focus from analysis to action, and to learn from cities and regions elsewhere, as well as draw from the region's own collective evidence base in identifying its path to prosperity.

Opportunity 3: Partner for Prosperity

Around the world, partnerships between industry and government, federal, state and local government agencies, and international governments and organisations are formed to stimulate economic growth, fund infrastructure, progress science, research and development and foster innovation. There is an opportunity for partnerships to be a central tenant of strategies for economic development, investment and innovation in Perth.

A partnership approach has been identified as a central element of successful, evidence based economic development and industry strategies including: the long-term development of an appropriately skilled workforce and human capital base; fostering research, development and innovation and entrepreneurialism; establishing successful innovation clusters; attracting inward investment; creating successful international networks; building collaborative international research, science and technology partnerships; and infrastructure investment.

Consultation and research undertaken as part of the B4 project has identified a need for a partnership approach to be central to strategies and initiatives for economic development in Perth.

Opportunity 4: Move Beyond 'Politics as Usual'

Regional economic planning and the consistent application of economic initiatives has been hindered by fragmented governance and political cycles. There is an opportunity for all levels of government to address this problem through formal collaboration and co-operation.

Strong, effective government has been identified by residents as the highest priority requirement for a stable economic future.⁽⁴³⁾ Yet Perth has well-documented governance inefficiencies, including fragmentation and the lack of a governance system to explicitly serve the Perth region in its pursuit of economic development and competitiveness.

As a result, federal and state government initiatives for economic growth in Perth and WA are relatively ad-hoc, while planning for economic development in Perth has been primarily undertaken at a local government level. However, a need has been identified for a strategic economic development plan for Perth which recognises the region as a functional economic unit rather than as a collection of fragmented local economies.

The preparation and delivery of this strategy will require a formal mechanism for inter-agency and state and local government co-operation and collaboration. It will also require a consistent approach to economic development that transcends political cycles. This means Perth's economic development plan should be long-term and bipartisan.

Opportunity 5: Reverse Perth's Downwards Competitiveness Trend

Perth has competitive advantages including the State's diverse natural resource base and the region's liveability strengths. Despite this, Perth's competitiveness as a place to live, work and do business has been trending downwards and there is an opportunity to take strategic action to reverse this trend.

Perth has demonstrated long-term, mining and resource-backed economic resilience and liveability strengths that have gained international recognition and been central to the region's competitiveness as a place to live, work, invest and do business.

Yet globally, Perth is perceived to lag-behind in key areas of economic competitiveness including innovation, technology, branding and employment opportunities. Perth also risks losing its perceived global and regional liveability advantage if the performance of the region does not keep pace with improvements in other cities in Australia and Asia.

Furthermore, the current economic downturn has substantially reduced Perth's perceived competitiveness as a place to live and work among regional residents. In 2018, 4 in 10 residents expressed a belief that there are inadequate jobs in Perth to meet their skill set. The same proportion perceived there to be fewer jobs available in Perth than in cities elsewhere.⁽⁴³⁾

Perth's downward competitiveness trend is evidenced by the following lead indicators, which measure the region's competitiveness against other global cities, including selected competitive cities in Australia and Asia.

Trend	Evidence
Perth's global liveability ranking has fallen.	Perth's global liveability ranking fell from 7th in 2016/17 to 14th in 2018.
Perth is not perceived to be keeping pace with its Australian and global competitors in the implementation of innovation and technology.	Perth is ranked the 105th most innovative city in the world. Singapore is ranked 6th, Sydney 10th, Melbourne 16th and Brisbane 54th.
Perth's 'smart city' initiatives and capabilities are lagging behind cities such as Sydney and Melbourne.	Perth was ranked 41st in the Easy Park Smart Cities Index, while Sydney was ranked 12th, Melbourne 10th and Singapore 2nd.
Perth lacks a strong identifiable or unifying brand, particularly when compared to cities such as Sydney, Melbourne and Singapore.	In 2017, Perth's brand was ranked 62nd in the world in the Resonance World's Best City Brands Index, compared to Sydney which ranks 5th, Melbourne 11th, Brisbane 29th and Singapore 2nd.

Opportunity 6: Build on Perth's Mining and Resource Strengths

Perth's early twenty-first century mining and energy fuelled economic expansion founded the region as a resource sector hub of global significance, supported by both substantial financial and human capital and strong business connections to countries in Asia and Africa. There is potential for Perth to capitalise on these strengths and connections.

Natural resources are Western Australia's primary economic strength and are likely to remain a key advantage into the future.

Prior to and during the most recent mining boom, Perth gained prominence as a global minerals and energy resource hub. In response, an increasing number of global mining and resource companies set up offices and operations in the region.⁽⁷⁾ While the number of mining firms in Perth has declined since the height of the boom in 2012, Perth-based firms retain significant global corporate networks, including uniquely strong connections to Asia and Africa. Perth's human capital base also strongly reflects the importance of mining and resources in the regional economy and provides a substantial base of knowledge and know-how for the sector globally.

Mining and resource firms have the capacity to leverage this knowledge and network base to add value to overseas operations and create new markets deploying the city's expertise.⁽²⁴⁾ There may also be potential to capitalise on the connections, expertise and reputation of Perth's mining and resource sector to expand and diversify the region's global performance in non-mining industries.

Opportunity 7: Adapt to Disruption and Seize Global Opportunities

The capacity to capture opportunities and adapt to new challenges generated by global forces including technological development; globalisation and the rise of Asia; shifting demographics; and climate change will influence the short and long-term competitiveness of industries in Perth. There is therefore a need to plan for this disruption and to seize opportunities that global forces provide.

Global forces are delivering multiple opportunities for industries in Perth, yet they are also generating headwinds that are impacting on growth and performance in some sectors. Growth in some traditional sectors such as retail and manufacturing has declined, while health and social service industries face stress as the population ages.

Technological developments and shifting demographics are also facilitating workforce change. In Australia, it is projected that job growth over the next five years will be highest for workers with a tertiary level qualification and lowest for workers with only a secondary education.⁽⁴²⁾ An ageing population is also expected to impact on the size and composition of the workforce and the economy, while also providing new opportunities for a more diverse labour market and for growth and innovation in the health and aged care sector. Employment is also predicted to become more precarious, with an increase in contract and part-time employment augmenting workforce participation but also increasing the potential for under-employment.⁽³⁶⁾

The ongoing trend towards globalisation and the expansion of Asian economies is also delivering both opportunities and challenges. In a global economy, people, businesses and investors look outward for opportunity and Perth is competing with cities and regions around the globe to attract skills, industries and investment capital. Therefore, while growth in Asian economies within the same time zone as Perth is a notable opportunity, the rising global competitiveness of cities in Asia, like Singapore, mean increased competition for Perth.

Capturing the benefit of disruptive forces therefore hinges on integrated regional planning to build and retain a competitive position in the global economy. It will also require collaborative action by industry and governments to seize opportunities and propel industry growth and address industry-specific challenges such as workforce, technology and infrastructure.

In addition, it will hinge on the ability of government and industry to look outwards and capitalise on opportunities overseas for Perth, most notably Asia.

The impacts of disruptive global forces are already being felt in Perth. The primary question is whether Perth has the capacity to maintain and capitalise on its competitive advantages; capture new global opportunities; and address regional weaknesses and challenges within a short timeframe to maintain a competitive position in the global economy.

Opportunity 8: Leverage Innovation

WA's economy remains heavily dependent on the mining and resource sector, but the sector has become more diverse, providing new opportunities for a resilient and innovative economy.

Mining and resources have propelled WA's economy for the past 30 years and the most recent mining investment boom heightened the importance of the sector to the State and the Perth region. Therefore, despite the recent economic slow-down, mining and resources remain the backbone of WA's economy and the State remains more dependent on mining than any state is on any other industry.⁽⁷⁾

However, while WA has not diversified away from a strong reliance on mining and resources, over the past two decades, the mining sector itself has become more diverse and has expanded to deliver more to Perth than raw-material exports.⁽¹³⁾

The mining sector is also in a state of change, with trends including a drive for innovation and productivity improvement; technological advancement; digitisation; shifting social and environmental expectations; and a global shift to renewable energy.⁽³⁷⁾

In Perth, mining and resource companies and an emerging METS sector are responding to this change and are developing first-in-the-world technological innovations and best practice responses to twenty-first century mining, resource and energy challenges.⁽⁷⁾ There is an opportunity for the economy to build on these emerging innovative ecosystems to spur innovation and investment in other sectors.

Opportunity 9: Expand Bright Light and Growth Sectors

Perth is home to primary and 'bright light' sectors and industries with capacity and/or a need for growth and innovation, including agribusiness and ag-tech; professional, technical and scientific services; higher education; tourism; recreation and creative services; health and social services (including aged care); and advanced manufacturing, and there is an opportunity for collaborative action to facilitate the short and long-term growth of these sectors.

Emerging industries identified as 'bright lights' for Perth's economic future include professional, technical and scientific services; tourism; higher education; and recreation and creative services. Although not the biggest employment sectors, or industries with the largest number of firms in Perth, they are growing and making an increasing contribution to economic vibrancy and diversity. The industries are also globally connected and/or have capacity for employment growth.⁽⁷⁾

However, some 'bright light' industries are experiencing growth challenges. For example, tourism and higher education industries in WA are growing, but at a much slower pace than they are nationally, and research has established that expansion has been hindered by issues including the distance and accessibility of Perth from key markets; branding and marketing; increasing national and global competition; and perceptions of high living costs.

Furthermore, there is evidence that the establishment of new creative industries in Perth, such as technology start-ups, has been held back by constrained access to funding and networks, as well as limited availability of skilled technology workers. ⁽⁴⁰⁾

Beyond the 'bright lights', the health care and social assistance industry, including aged care, is facing rising demand as the demographic make-up of the population changes. ⁽⁷⁾ There is also potential for agricultural industries, which have also been a long-term staple of WA's economy, to respond to rising demand from expanding middle class populations in Asia and a small yet significant advanced manufacturing industry. ⁽⁷⁾

Short and long-term sector specific, collaborative strategies are needed to enable industries in Perth to build on competitive advantages, capture emerging opportunities and to address challenges hindering short and long-term expansion.

Opportunity 10: Boost Non-Mining Business Investment

Perth's economic performance has been heavily tied to commodity prices and investment in mining. Mining investment in WA declined in the 2012-16 period, precipitating an associated fall in non-mining investment. It is evident that to increase economic stability, Perth needs new-drivers to attract inward business investment.

Large movements in commodity prices and investment in mining and resources shaped WA's strong economic performance in the early to mid-2000s, when the mining and resource sector grew strongly in response to buoyant commodity markets. Commodity prices peaked in 2011, and mining investment declined considerably from 2012-13 as resource projects were completed and fewer new projects made final investment decisions. ^{(1) (49)}

During the upswing in mining investment, positive multipliers delivered an increase in demand for construction, business services and a range of other inputs such as construction contractors, transport and equipment hire firms. ⁽⁴⁹⁾ However, as commodity prices and mining investment fell, negative spillovers impacted the economy and had an adverse influence on jobs and wages growth in the mining and resources sector, and on investment and growth in other, non-mining sectors. ⁽¹⁾

While mining and non-mining investment in WA has remained subdued, economic growth and non-mining business investment in states less dependent on mining have picked up. Today, New South Wales and Victoria are driving economic growth in Australia, propelled by a gradual strengthening in non-mining activity and supported by the depreciation of the Australian dollar and low interest rates which has enhanced the international competitiveness of the Australian business services sector. ⁽¹⁾

Mining investment is predicted to remain relatively soft over the next few years as firms focus on maintaining their newly expanded productive capacity rather than investing in expansion. This means that, in the short to medium-term, WA will need new-drivers of economic competitiveness to attract business investment and growth outside the mining sector. ⁽⁵⁰⁾

Strategies to boost non-mining business investment include: branding; regulatory reform; investment in research and innovation; building the capacity of Perth-based firms to do business overseas; actively welcoming and facilitating inward business investment; and strategic infrastructure investment in hard and soft infrastructure.

Opportunity 11: Foster Perth's Innovation Ecosystem

Innovation is important to economic performance and has been identified as a regional weakness, and an opportunity has been identified for 'bottom-up' initiatives to foster an innovative and entrepreneurial ecosystem in Perth, as well as investment in new, sector specific industry clusters to facilitate collaboration and innovation.

By the turn of the century, science, technology and innovation were widely recognised as key to improving economic performance. There was broad acknowledgement of the need for government to act as a facilitator, enabling business and consumers to adapt to the demands and opportunities of the new economy. ⁽⁷⁶⁾

This precipitated a shift in industrial policy thinking around the world, from the neoclassical, market-failure correction approach into the so-called 'systems approach' or 'New Industrial Policy', which focused on generating knowledge and implementing horizontal actions to build systems, create networks and develop institutions to foster innovation growth. ⁽⁷⁷⁾

In response, many cities and regions have been actively planning and delivering integrated strategies and cutting-edge initiatives to foster ecosystems of innovation and build regional competitiveness for more than 20 years.

Globally, initiatives such as the restructuring of regulatory and taxation systems; investing in and supporting industry R&D in science and technology; improving education and accumulating physical and human capital; investing in IT infrastructure to attract the highest value-adding industries; and catalysing and supporting innovation through the technological transformation of government processes and services have been implemented to foster economic innovation. ^{(75) (76)} These include 'top-down' strategies such as targeted, sector specific funding or taxation incentives, as well as 'bottom-up' strategies which deliver financial support for growth and innovation to businesses in all sectors.

Another well-documented innovation initiative is the establishment of high-density, sector-specific, geographical industry clusters, which physically bring private and public sector industry players together, with an aim to catalyse ideas, promote collaboration and consolidation, co-ordinate research and development activities and attract inward investment.

In Perth, the region's dispersed, car dependent urban framework has been identified as limiting infrastructure efficiency, reducing competitiveness in some industry sectors, and limiting the capacity for the informal business interactions that catalyse innovation.

The Perth CBD is the region's largest, most accessible and productive knowledge employment centre. Mining and resource industry headquarters and 'bright light' sectors are primarily located in the CBD and in inner and middle employment centres, while other growth industries such as health care and social services are distributed throughout the region.

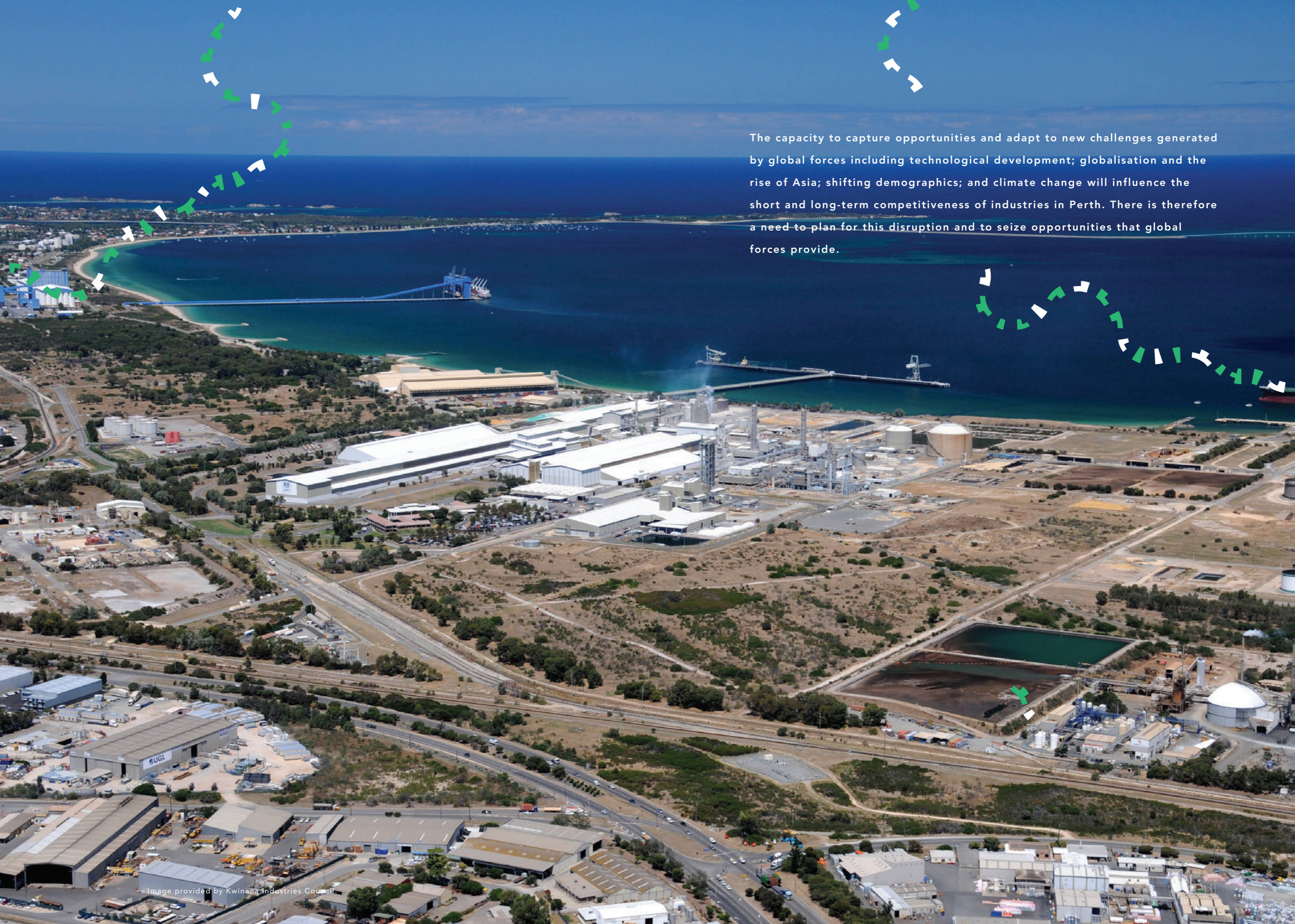
Ongoing investment in the competitiveness of the Perth CBD, combined with investment in establishing highly connected, industry specific innovation clusters that respond to individual industry requirements has been identified as important for growth, productivity and innovation in Perth's major and emerging knowledge sectors.

Recommendations

Seven recommendations have been prepared to catalyse these opportunities.

Recommendation	Actions
1. Develop the inaugural investment, engagement and attraction strategy and associated brand to promote Perth as a place to invest, work and learn.	<ul style="list-style-type: none"> Government and industry to develop a prospectus for Perth. Committee for Perth to lead a collaborative exercise to develop a brand strategy to promote: <ul style="list-style-type: none"> Lifestyle Natural environment Industry specialisations Uniqueness/distinctiveness People and diversity Government to create a concierge-style approach to promote Perth as a destination for international investment. Government and industry to utilise alumni and networks to grow international partnerships.
2. Create the inaugural long-term economic growth and competitiveness strategy.	<ul style="list-style-type: none"> The Premier to appoint a taskforce that reports directly with appropriate levels of funding. The taskforce must have an independent chair, experienced in government and the private sector, and include relevant Directors General and sector representatives. The strategy should be built upon research and consultation in order to create a knowledge base that identifies Perth's unique regional assets, capabilities, competitive advantages and opportunities in the global economy, in consultation with federal, state, local government bodies, industry, higher education providers, and stakeholders and community. The strategy is tabled in Parliament. Ensure the strategy has bipartisan support to give it longevity beyond political cycles. Legislate five yearly updates. Commit to regular monitoring and review with necessary adjustments to the strategy.
3. Develop the inaugural long-term infrastructure strategy.	<ul style="list-style-type: none"> Through Infrastructure WA, or its precursor, and informed by Recommendation 2 above, identify the infrastructure required to facilitate and support Perth's future economic growth and competitiveness. Develop the strategy to improve and respond to: <ul style="list-style-type: none"> Economic growth Urban competitiveness & liveability Social infrastructure Smart technology ICT Connectivity Sustainability Clean energy Infrastructure is developed to a world-class standard and where buildings accompany it they should reflect the distinctive character of WA and Perth.

Recommendation	Actions
4. Focus on sectors where Perth has a competitive advantage, opportunity or increasing demand in order to grow the economy	<ul style="list-style-type: none"> The mining, resources and METS, higher education, tourism, agri-tech, aged care, renewables, science and research sectors develop reports that identify immediate barriers to growth and communicate these to government. Relevant sectors to develop case studies of examples where it excels. Informed by the inaugural economic development and urban competitiveness strategy in Recommendation 2, sectors that are identified for further/future growth opportunities prepare strategies that address: <ul style="list-style-type: none"> Global trends Innovation and technology Land/location requirements Infrastructure needs Workforce planning and development Local, global and national networks and opportunities
5. Protect and nurture Perth's ecosystem of innovation and entrepreneurship.	<ul style="list-style-type: none"> Government to develop new clusters with an anchor industry. Government to revitalise existing clusters of industry through urban regeneration projects and by co-locating enterprise support services within clusters. Government to implement adequately funded 'bottom-up' initiatives for enterprise that both support innovation and investment within established industries and facilitate the emergence of new innovative enterprises. Place government at the heart of innovation and R & D through innovation in government service provision.
6. Implement 'smart city' initiatives for infrastructure efficiency and improved liveability and urban competitiveness.	<ul style="list-style-type: none"> Government to investigate smart city initiatives and engage with other global cities, innovative industries and research institutions to identify short and long-term opportunities for the Perth region including: <ul style="list-style-type: none"> Big data analytics Sensor technology Artificial intelligence/automation. Government to prepare a 'smart city' plan to guide long-term implementation of 'smart city' initiatives in regional Perth. Government to move to an open source data policy by making non-private, non-commercial data available. Government to engage with the private sector to understand and leverage company and sector know-how.
7. Increase Perth's human capital and foster lifelong learning.	<ul style="list-style-type: none"> Government to work with industry to prepare a progressive, responsive and integrated education strategy to focus on: <ul style="list-style-type: none"> Structuring education to be future focused. Matching resident skills and requirements of industry. Lifelong learning and ongoing skill development. Equity of access to quality education. Maximising competitiveness as an international student destination. Connecting students with employment opportunities. Global connections, particularly with Asia, Indian Ocean Rim and Africa.



The capacity to capture opportunities and adapt to new challenges generated by global forces including technological development; globalisation and the rise of Asia; shifting demographics; and climate change will influence the short and long-term competitiveness of industries in Perth. There is therefore a need to plan for this disruption and to seize opportunities that global forces provide.

Project Team



Marion Fulker, CEO and Project Director

Marion is the Chief Executive of the Committee for Perth Ltd. She took up the position in January 2007, having previously been the Executive Director of the Urban Development Institute of Australia (UDIA) WA Division. Marion has overseen the development of a number of landmark Committee for Perth research reports as part of the organisation's evidence based approach to the future of Perth. In the past decade, Marion has travelled extensively throughout the US, Europe, Australasia and the UK to examine how cities work. Her research focus has been on a range of topics including inner-city vibrancy, urban renewal, public transport, governance and economic development. Marion was named in 2015 as one of Australia's 100 Women of influence and in 2016 awarded WA Telstra Business Woman of the Year - For Purpose & Social Enterprise.



Gemma Davis, Lead Researcher

Gemma is a research, policy and strategic planning professional with 19 years of experience working in Australia, New Zealand and the Republic of Ireland. Gemma is a consultant for the Committee for Perth and was recently employed by the Committee as Manager of Research and Strategy.

Gemma is currently a Director with e3Scientific in New Zealand and is an Honorary Research Fellow with The University of Western Australia. Gemma has authored major reports for the Committee for Perth including *Towards a Bright Future* and *Get a Move On!*.



Georgia Harford-Mills, Research Officer and Project Coordinator

Georgia is a Research Officer with the Committee for Perth, joining the organisation in 2014. She holds a Bachelor of Science, Geography and received First Class Honours in Urban and Regional Planning from The University of Western Australia. In addition, Georgia received the 2015 Patrick Armstrong Prize in Geography for her research thesis.

To date, she has been involved in researching and coordinating a number of Committee for Perth projects including the landmark *Get a Move On!* report and the *What We Thought Would Kill Us* series. She is also responsible for coordinating the annual FACTBase Research program and the Committee's Working Groups and Project Steering Committees. Georgia is an Adjunct Research Fellow with The University of Western Australia and a Member of the Westport Taskforce Reference Group.



Tony Monaghan, Manager – Corporate Communications, The Brand Agency

Tony is the Manager of Corporate Communications at The Brand Agency. He has almost 30 years' experience as a journalist, political advisor and corporate communications consultant. He worked for ABC TV, Channel 9, Channel 7 and was Head of News for the Mirror Group TV in London. While working for State Government, he was a media advisor, chief of staff and principal policy advisor for the Department of Premier and Cabinet.

Project Steering Committee



**Justin Carroll, Steering Committee Chair
Partner, PwC**

Justin is a PwC Perth Partner with over 27 years with the firm. Having recently completed a five-year term as PwC's Perth Managing Partner, Justin is now a member of PwC's Australian Board of Governance, as well as the Asia-Pacific Governance Board. He has worked in PwC's Singapore, London and Sydney offices, with a focus on corporate governance, financial reporting assurance and technical accounting advice in both the public and private sectors. Justin was previously the leader of the Perth Assurance practice and continues to lead the audits of several major Western Australian organisations and subsidiaries of large international groups.

Justin is also a director of St John of God Health Care and The University of Notre Dame Australia and chairs the University's Finance, Audit and Risk Committee.



**Nadia van Dommelen, Steering Committee Deputy Chair
Partner, PwC**

Nadia van Dommelen is a Partner in PwC's Infrastructure and Urban Renewal practice with more than 20 years of industry experience focused in project direction of building and infrastructure projects. She has undertaken key roles on some of Perth's largest infrastructure projects, including METRONET, Perth Stadium, WA Schools PPP, Midland Health Campus, Fiona Stanley Hospital and CBD Courts.

Nadia is a Member of the Board of Trustees of the Perth Theatre Trust, Member of the Consultative Committee for 'Project Management, Management Information Systems and Supply Chain & Logistics Management' at the School of Business and Law at Edith Cowan University, Member of the National Development Committee and Local Fundraising Committee of HeartKids Australia, and a volunteer mentor for STEM programs aimed at developing problem solving and other 21st century skills, and inspiring and encouraging uptake of STEM subjects.

She holds a Bachelor of Engineering (Civil and Construction) from Curtin University.



David MacLennan
Assistant Director General, Department of Planning, Lands and Heritage

David MacLennan is currently seconded to the Westport Taskforce as a Special Adviser for Economic Development.

Mr MacLennan joined the then Department of Planning in March 2015 initially as the A/Executive Director of Regional Planning and Strategy and was subsequently appointed Assistant Director General of Policy and Priority Initiatives. Most recently he has been the A/Assistant Director General for Strategy and Engagement at the new Department of Planning, Lands and Heritage and led the integration of the strategy, policy, research, projects, legal and communications areas.

David MacLennan is an experienced public sector leader and served in various roles in the Commonwealth Government in Australia and overseas before joining the Western Australian Government. This includes diplomatic postings with the Department of Foreign Affairs and Trade (DFAT) in London, Lima, Mexico City and Papua New Guinea.

Mr MacLennan held the position of Head of the Political and Economic Branch at the Australian High Commission in London. Prior to that, Mr MacLennan was DFAT's State Director in Western Australia. He holds a Masters in Management from the Australian National University and a Bachelor of Arts from The University of Western Australia.



Jay Watson
State General Manager, Westpac Banking Corporation

Jay is a career banker, having worked for Westpac for more than 37 years. Jay has been fortunate to have worked in every State and Territory in Australia and has the benefit of honing his banking skills through diverse geographies and industries.

Jay takes a keen interest in the future direction of Western Australia and is active with the Committee for Perth and its present project *Bigger & Better Beyond the Boom*, working to build strategies and recommendations in regard to broadening the economy of WA. Previously he was a member of *Filling the Pool*, a deep dive on gender imbalance and strategies to improve career opportunities for the female workforce.

Additionally, for the past three years he has been involved with Chamber of Commerce WA and its Business Advisory Board.



Anne McCormack
Executive General Manager, Business Transformation and People Services, Silver Chain Group

Anne is the Executive General Manager, Business Transformation & People Services at Silver Chain Group. Anne joined Silver Chain in July 2011 to lead the organisation in building its capability to prepare for the acquisition of RDNS SA in South Australia, and also the unprecedented changes in a consumer directed Aged Care sector. Anne is also Silver Chain's Chief Risk Officer, and EGM of Silver Chain's Social Care Division.

Anne's background is in Banking, IT and Telecommunications across several jurisdictions including UK, Europe, USA and Australasia. Anne started her career with British Telecom, managing Channels to Market, Diversity agenda, and large scale business re-engineering programmes. Her enthusiasm for running the people and capability side of businesses saw her take on many similar roles, as well as customer service and business development roles at Hewlett Packard across two continents.

Anne is passionate about community and in particular how policy and infrastructure can support and nourish the evolving nature of the expectations of the community. Anne's focus is on optimising the communities capacity for health and well-being, in particular, the changing needs and expectations brought about by the stages of ageing. Anne cares deeply about facilitating ways to make it easier for individuals to remain connected to their community, and to access the services needed at various points in their life journey. This in turn leads to a very connected city, "A city for life" which can attract, develop, support and ultimately create value for the local economy.



David Fisher
Chief Operating Officer, Juniper

David is a highly innovative, results driven, and achievement orientated Executive Business Services / Chief Operating Officer (Deputy CEO) ex Group Financial Director, who holds a Bachelor of Accounting Science (Honours) and various other qualifications. He is recognised by CPA Australia as compatible, supplemented by more than 25 years of postgraduate experience in business, with the ability to demonstrate a track record of success in small to large organisations across Property Management, Intellectual Property, Information Technology and Aged Care Industries.

He is a current member of Chartered Secretaries Australia (CSA), following the completion of a Certificate in Governance for Not-for-Profits and the Graduate Diploma of Applied Corporate Governance.



Fred Chaney
Western Australian Planning Commission

Fred Chaney is an architect who has worked in the UK, the Middle East, South East Asia and Australia. In addition to his work as a practising architect, Fred has held board positions with numerous industry and advocacy groups including the Green Building Council of Australia and the Australian Institute of Architects (WA Chapter).

Fred is a Director of the Perth-based studio, Taylor Robinson Chaney Broderick. His appointment to the state's peak planning body, the Western Australian Planning Commission, reflects his keen interest in the relationship between planning, environmental outcomes, urban development and economic opportunity. He is Chairman of UWA's Australian Urban Design Research Centre and a Governor of the Foundation of the WA Museum.



Nicholas Ozich
Regional Director – Property and Development, Brookfield

Nick is responsible for the property and development activities of Brookfield Property Partners in Western Australia, currently Perth's largest commercial landlord.

Prior to his current role with Brookfield, Nick worked for Multiplex and Lendlease both in Australia and the UK, gaining an appreciation for the impact high-quality property developments can have on a city's culture.

Since returning to his hometown of Perth, Nick has been able to put this passion into action, playing a key role in the development of the award-winning Brookfield Place precinct, and is currently overseeing a number of large-scale office, retail and mixed-use developments in Perth's CBD at various stages of construction and planning.



Daniel Simms
Chief Executive Officer, City of Wanneroo

Daniel Simms is the Chief Executive Officer at the City of Wanneroo – one of the fastest growing local government areas in Western Australia and Australia. He has extensive experience in local government in both metropolitan and regional Western Australia, working across many disciplines including planning and development, finance and administration, governance and strategic planning.

Daniel holds a Bachelor of Applied Science and a Graduate Diploma in Business in Local Government Management from Deakin University. He is Chairman of the Growth Alliance Perth and Peel Policy Forum, Executive Member of the National Growth Areas Alliance and a member of the Infrastructure Coordinating Committee (Western Australian Planning Commission).



Dr Ian Martinus
Manager Advocacy & Economic Development, City of Wanneroo

Dr. Martinus is an economic development and ICT project management specialist with extensive government and private sector experience in systems integration, ICT implementations, ICT investment management, trade and investment, e-government, as well as small business innovation and development. A strong focus of his work has been in the ICT systems integration as Sector Lead for new IT operating systems and data migration (data centre) efforts. Dr. Martinus has the highest level of expertise in the co-ordination and execution of strategies particularly with respect to international business and is a current board member of Economic Development Australia (EDA) WA Chapter.

Dr. Martinus has managed trade and investment implementations in Iraq, Pakistan, Afghanistan, South Africa, for former Soviet countries, Indonesia and within the public and private sectors in the United States, Japan and Australia. Extensive Asian experience with Japanese companies including Tokyu Corporation (JV) and Sekisui House. Specific economic development experience in Australia includes the successful implementation of workforce development, training and innovation program delivery.



David McCulloch
General Manager, Industry and Investment, Department of Jobs, Tourism, Science and Innovation

David's career has been almost exclusively in international business, investment attraction, exports, major events and industry development. Presently he is General Manager, Industry & Investment, in the Department of Jobs, Tourism, Science and Innovation.

David has responsibility for several priority sectors including energy and mining, and their respective equipment, technology and service sectors. Other sectors include infrastructure, financial services and aviation. He is Western Australia's representative on the National Investment Advisory Board (NIAB) and the National Trade Working Group (NTWG) and is Chair of the Resources & Energy Working Group which reports to NIAB.

He managed Western Australia's trade office in Mumbai from January – April 2015 and was actively involved in the Sister State Agreement recently signed by the Governments of Western Australia and Andhra Pradesh. David has recently had several periods as acting Deputy Director General of the International Education, Trade and Investment division of the Department.



Shaun Griffin
Managing Director, Ipsos Australia Pty Ltd

Shaun is an accomplished commercial manager with 20 years' experience working across a range of local, regional and global roles spanning consulting, research, strategy, planning and analytics.

In recent years, Shaun has occupied senior roles in digital, running strategy and digital marketing for businesses in the financial services and consulting sectors.

As General Manager of Ipsos Perth, Shaun is working to help clients understand how to capitalise on the commercial and social opportunities of a post-boom Perth market.

With a diversity of skills and experience across sales, marketing, strategy, analytics, operations, e-commerce and IT, he has a unique understanding of the challenges facing business and government in the digital age.



Professor Matthew Tonts
Pro Vice-Chancellor Executive Dean | Faculty of Arts, Business, Law and Education,
The University of Western Australia

Matthew is Executive Dean, Faculty of Arts, Business, Law and Education at The University of Western Australia.

His research is focused on urban and regional development, with much of his recent work concerned with the shifting geography of corporate power, spatial labour markets and economic development and regional policy.



Professor Fiona Haslam McKenzie
Co-Director, Centre for Regional Development, The University of Western Australia

Fiona is Professor of Geography and the co-director of the Centre for Regional Development at The University of Western Australia. Her research interests are regional economic development and the analysis of remote, regional and urban socio-economic indicators. She is currently researching the socio-economic impact of different regional workforce arrangements and uneven economic development in Western Australia.

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- Our members and stakeholders who attended the socialisation sessions and provided feedback on the draft recommendations.
- People of all demographics of the community who completed the Community Survey and the Perth Perception Survey, two important feedback points in the project.

The people of Perth are reflected in this report and it is for you that we have set out a pathway for a prosperous future.

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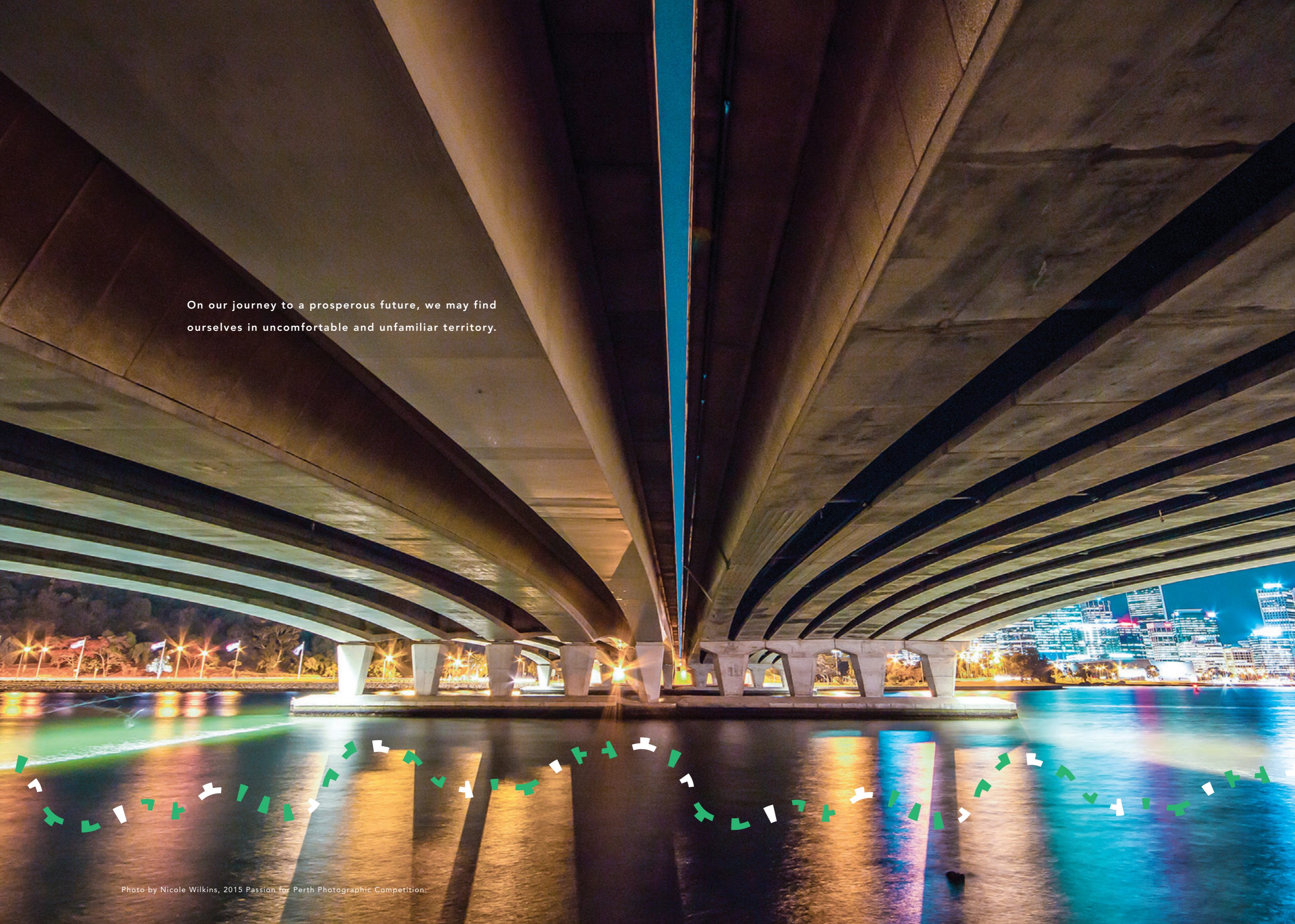


Photo by Nicole Wilkins, 2015 Passion for Perth Photographic Competition.

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