Mid West REGIONAL BLUEPRINT





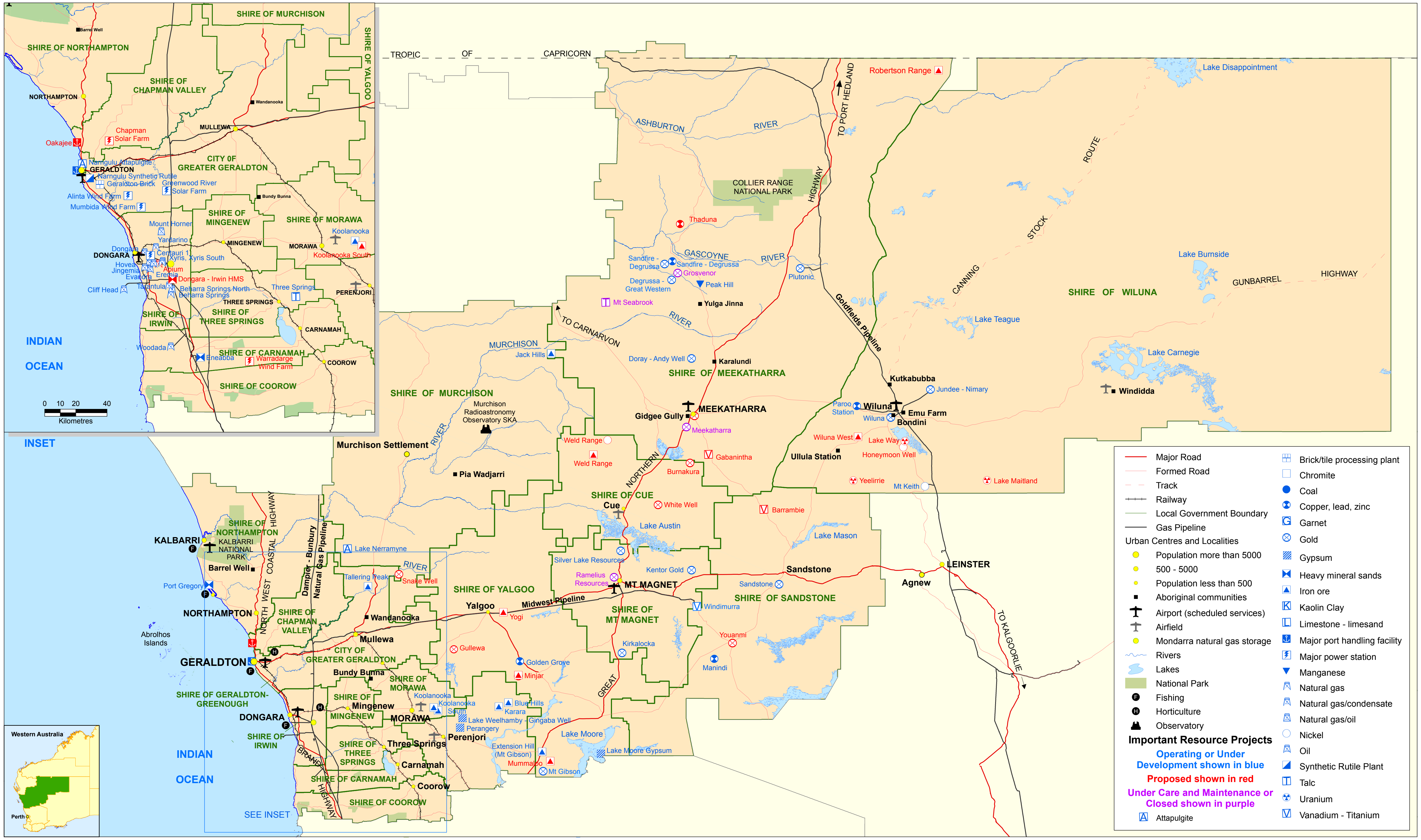
GOVERNMENT OF WESTERN AUSTRALIA

A 2050 growth and development strategy for an intergenerational, global, innovative and dynamic Mid West region that attracts and retains talent and investment

MID WEST DEVELOPMENT COMMISSION

Regional Development Australia
MIDWEST GASCOYNE

AUGUST 2015



MID WEST REGION

KEY FEATURES

Government of **Western Australia**
Department of **Regional Development**

Government of Western Australia
Department of Water

This map is a product of the Department of Water, Spatial Services and was printed on 06/08/2013.

This map was produced with the intent that it be used for display purposes at the scale of [1:1,225,000] when printing at A0.

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Datum and Projection Information
Vertical Datum:
Australian Height Datum (AHD)
Horizontal Datum:
Geocentric Datum of Australia 94
Projection:
Geodetic
Spheroid: Australian National Spheroid

Project Information
Client: Regional Development and Lands
Map Author: Patricia Farat
Filepath: J:\gisprojects\Project\D_Series\D1101\0038_Pilbara_Director\0007 DLGRD Request - Alex Ballie\A0_Maps\mxd\2013\
Filename: Perspective_Mid_West_2013_A0.mxd
Compilation date: 06/08/2013
Edition: 1

0 25 50 100 150 200
Kilometres

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DATA DICTIONARY		
THEME	SOURCE	DATE
Towns	LANDGATE/ABS	May 2013
Road Centrelines	LANDGATE	September 2012
Hydrography	LANDGATE	August 2009
Tenure	Department of Conservation	July 2013
Important Resource Projects	DMP - Modified from MINEDEX Database	July 2013

Figure 1. Mid West key features map

DISCLAIMER

CHAIRMAN'S FOREWORD

It's an exciting era in regional development in Western Australia (WA) and a perfect time to think about the challenges and opportunities that lie ahead. That is what the Mid West Regional Blueprint is all about.

Developed by the Mid West Development Commission (MWDC) in collaboration with Regional Development Australia Mid West Gascoyne (RDAMWG), the Blueprint is an aspirational growth and development plan that supports timely future investments in the region.

As a high level guiding agenda, the Blueprint proposes strategies against five priority pillars, each considered vital to either driving, or reducing barriers to, regional growth and development. Considering the possible impact of various national and global megatrends, the Blueprint strategies focus on the region's key strengths and those opportunities with genuine growth and development potential.

The Mid West Blueprint has deliberately stopped short of listing priority projects. As a strategic document it provides a logical basis for future growth and development. It now requires the Commission to work with stakeholders to determine the very best projects that can drive and / or enable regional growth and development, against each of the Blueprint's priority pillars.

The challenge for the region now is to develop a 'pipeline' of high priority 'game changing' projects that are well planned and ready for investment.

The main obstacle to growth in the Mid West is that many of its natural resource assets remain stranded by strategic infrastructure capacity constraints (eg port, power, roads, rail, communications). The region has been described as the "sleeping giant of the State" and in order to awaken the 'giant' and unlock its potential, major investment in key strategic infrastructure is vital.

The Blueprint involved extensive consultation with more than 140 regional and State level stakeholder groups and review of existing strategies and frameworks. The Commission made the strategic decision to closely align its Blueprint with the State Planning Strategy (2050). This will help ensure the Mid West Blueprint is fully contexted in the State's planning system and will hopefully assist efforts to secure resources for delivery.

This Blueprint brings together work of local and State governments, business, industry and community groups from across the region. The Commission had tremendous support from Blueprint stakeholders who worked collaboratively to shape a vision for the region's future. These partnerships are vital for the implementation of the Blueprint and I thank all contributors to this process.

The Mid West has enormous potential across a range of areas with opportunities to deliver significant benefit to the State and other regions. This Blueprint presents a long term vision to support key investments to help grow the Mid West and help ensure it remains an outstanding place to live, work, study and invest.

Hon Murray Criddle, Chairman
Mid West Development Commission

EXECUTIVE SUMMARY

The Mid West is a diverse and highly adaptive region with resilient mining, agriculture and fishing industries, coupled with strong tourism, retail, manufacturing, construction, logistics and population servicing sectors (health, education etc).

The Mid West has three distinct subregions (Figure 2), each with its unique social and economic profile, strengths and challenges. While the majority of the region's population resides in Batavia Coast communities (84%) and principally in Geraldton (70%), most of the region's major economic drivers are based inland (mining, farming etc). This creates an important symbiotic relationship between Geraldton and the Mid West hinterland; with significant codependence between Geraldton and the economic and trade activity that occurs inland. The capacity of Geraldton to service and support this economic activity is also critically important to the viability of inland industries and communities.

The region already boasts the State's most diverse regional economy, but must keep working hard to build on its strengths and tackle its challenges. With its wide open spaces, stunning landscapes, abundant natural resources, key strategic infrastructure and institutions, the Mid West has an outstanding platform for further growth and prosperity.

These regional strengths, combined with the potential impact of various national and global megatrends underpin the Blueprint and its aspirational vision for the Mid West in 2050 (Figure 3).

MID WEST VISION 2050

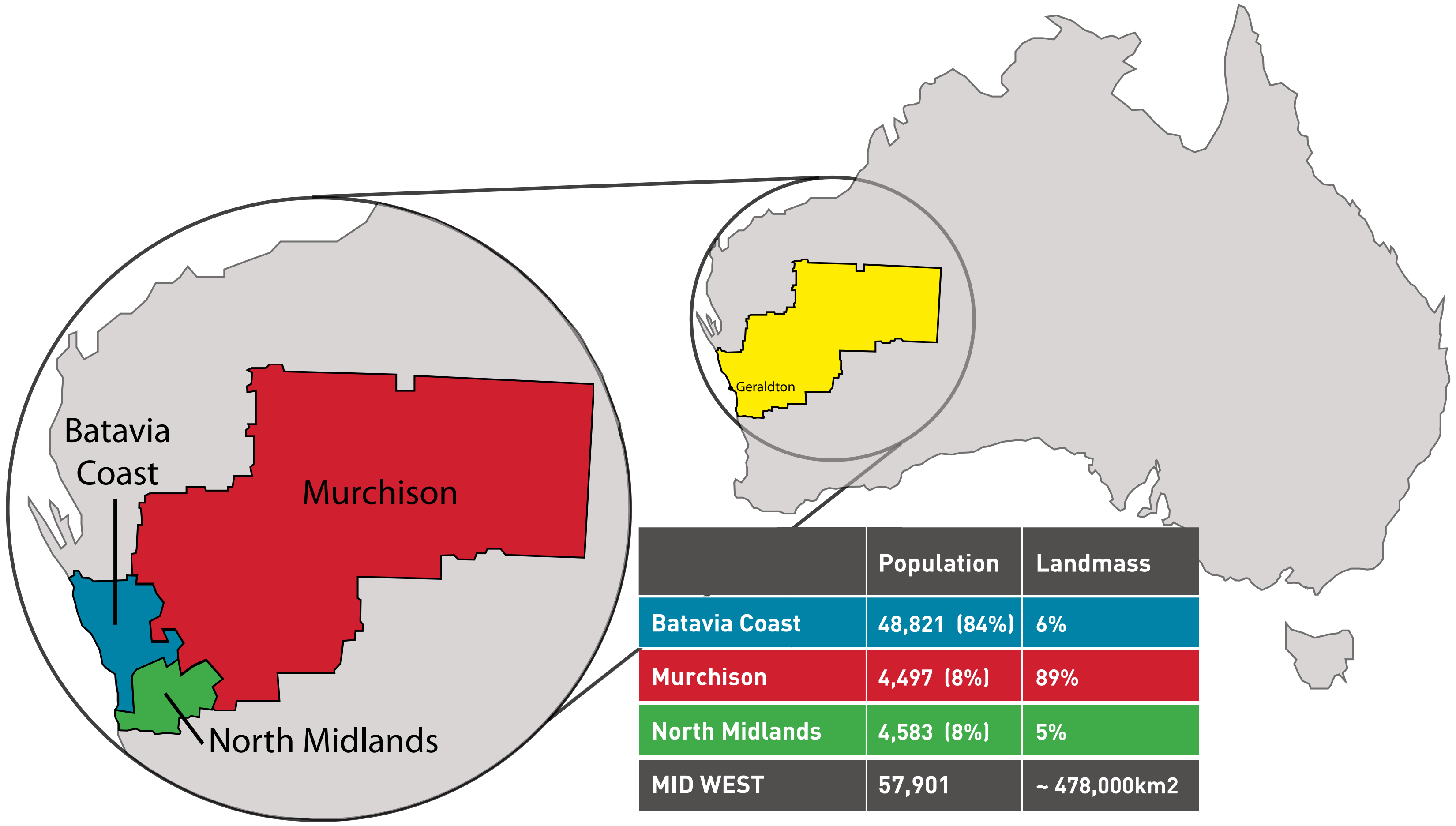
The Mid West exports the majority of what it produces. The Blueprint acknowledges that the Mid West essentially 'faces outwards', recognising the critical importance of its trade relationships for future growth and development. However, the Blueprint also maintains that any future growth and development from industry and trade growth must benefit all Mid West communities in a variety of meaningful ways. The Blueprint's vision for the Mid West, therefore, focuses both outward and inward.

BY 2050......

The Mid West is a national gateway to the globe through its diverse and entrepreneurial business and export economy.

High value industries generate prosperity and the most desirable, adaptive and connected communities in Australia.

Figure 3. Mid West Vision 2050



	Population	Landmass
Batavia Coast	48,821 (84%)	6%
Murchison	4,497 (8%)	89%
North Midlands	4,583 (8%)	5%
MID WEST	57,901	~ 478,000km2

Figure 2. Mid West subregions

IMAGINE STANDING IN THE MID WEST IN 2050....

By 2050, the Mid West has become a major trade link to a rapidly growing middle class in Asia and other developing nations.

Geraldton is the most liveable city for its size in the nation. The highly desirable regional city features an enviable lifestyle and is connected by innovative network solutions and traditional transport links to a range of attractive communities throughout the region. All Mid West communities offer excellent lifestyles, services, amenities and employment opportunities.

190,000 people call the Mid West home by 2050.

The Mid West has developed sophisticated strategic infrastructure that supports globally competitive industry and business to prosper in the region. It employs 71,500 people and houses a highly skilled, diverse, productive and connected workforce.

With the development of the Oakajee deepwater port and industrial estate, PortLink Inland Freight Corridor and international capacity airport, the Mid West is a dominant logistics hub for the State and a major gateway to Asian and other major economies. It is also linked to a national freight network, positioning Geraldton as an internationally important freight city.

The region has secure trade and cultural relationships on a "region to province" or 'region to region' basis with key countries across the globe. It is fully engaged for trade, investment and cultural outcomes, with multiple trade and investment connections.

An innovative affordable housing and development model has been pioneered in the Mid West, which has revolutionised housing investment and home ownership in communities with market failure. It services the needs of all housing groups including older people, Aboriginal people and new home owners. If you live in the Mid West in 2050, home ownership is a fundamental and achievable right and expectation.

The region's enviable education system provides the highest quality teaching outcomes and enables residents to reach their full potential. Raising children in the Mid West means giving them the best start in life, with excellent early childhood development and primary schooling opportunities throughout the region. The region's sophisticated upper school, training and tertiary education system provide a seamless pathway from education into employment. Secondary education, training and tertiary attainment rates exceed the national average, helping the region service many of its workforce requirements.

The Mid West is a highly adaptive, diverse and productive region. Despite the increased average temperatures and declining rainfall, its key food based primary industries (agriculture and fishing) continue to support the global increase in demand for food.

The region is globally renowned for its large scale production of high quality food through innovative and sustainable agriculture, fishing and aquaculture practices, with extensive value adding undertaken throughout the region. Mid West rock lobster and hard wheat products remain sought after internationally, with successful commercial scale horticulture and aquaculture enterprises also well established. Various niche food products are also produced locally and traded through secure domestic and global relationships.

With effective vermin control, lease flexibility and innovative use of technology, the region's pastoral industry has been revitalised and helps meet growing global food demands. Operations are more diverse, excel in the use of available water resources and capitalise at every stage of the various supply chains. The industry has diversified its activities to augment revenues and provide greater security, with outback tourism, innovative land management, contracting services and economies of scale achieved throughout the sector.

Advanced technologies are embraced throughout Mid West pastoral and agricultural sectors, enhancing productivity and competitiveness and enabling producers to participate in new markets.

Mid West water resources are sustainably developed and managed to diversify and grow competitive agribusinesses. New models for irrigated agriculture have been developed, enabling diversification and intensification of farming operations. Better understanding of Mid West water resources promotes responsible regional development and helps reduce the barriers to entry for new businesses or those wishing to expand or diversify.

The region's diverse economy helps buffer it against fluctuations in global markets. This strength is enhanced by expanding the region's high value industries such as education and research, knowledge economies, digital technology, professional services and value adding in agribusiness and minerals processing. Other population and support service industries have also grown, including aged care, health, housing and education services, which have helped the region maintain its strength and economic diversity.

Aboriginal people in the Mid West manage their own economic development opportunities by utilising native title and land resources in a collaborative and proactive approach. Like non-Aboriginal people, every Aboriginal person in the Mid West aspires to their own business or job, home ownership, quality education and desirable way of life.

Aboriginal culture is widely recognised and celebrated in all Mid West communities, presenting opportunities for strong and prosperous Aboriginal business and industry development.

The Mid West has capitalised off opportunities presented through technology based projects such as the SKA and its links to the Pawsey Centre (supercomputing) in Perth. The region is globally connected and digitally empowered, making it attractive to innovative and dynamic entrepreneurs from around the world.

The region has exploited technology to further diversify its economy and has built a knowledge economy based on creativity, innovation and development of new industries. The Mid West also provides highly sought after education and career development opportunities in specialised science and astronomy disciplines via knowledge and learning gained through the SKA and other radio astronomy projects.

Regional branding and marketing has enhanced awareness of the Mid West, its high quality products and diverse and prosperous development opportunities. The region is well known for its ability to attract investment through innovative partnerships and joint venture models; delivering a strong return for government and private sector investment. This has been supported by a dynamic and collaborative governance framework for the region, which has encouraged creative problem solving approaches to planning, building and driving growth and development in the Mid West.

The environment is maintained as a key regional asset, upon which many growth and development projects are based. Sustainability is enshrined in all planning and development. Environmental assets are protected and used appropriately so that current and future generations can enjoy sustained prosperity and a highly desirable relationship with nature.

The Mid West is a world recognised, highly accessible and authentic tourism and events destination. It has sophisticated networks of infrastructure and services for visitors to key tourism assets such as the Abrolhos Islands, Kalbarri National Park, coastal nodes, Murchison geo park, remote and outback settlements and conservation estates with critical biodiversity. It delivers some of the most unique and quintessential tourism experiences in WA that celebrate the region's natural assets, culture, heritage and first class customer service.

Throughout its strong growth and development phases, Mid West communities have preserved their unique and authentic signatures. They offer a distinctive way of life and are highly liveable, affordable, clean, safe, vibrant, attractive to diverse cultures, welcoming and universally accessible. Mid West people are resilient, adaptive, proactive, innovative, dynamic, proud and empowered to drive their own future.

REALISING THE 2050 VISION

The Blueprint proposes a region that is intergenerational, global, innovative, dynamic and one that attracts and retains talent and investment. To gain momentum towards its 2050 vision, the Blueprint seeks to ensure the Mid West realises its full potential by capitalising on its regional advantages and opportunities and addressing current and future challenges.

The Blueprint describes five key pillars imperative for the successful growth of the region. The focus areas under these pillars are designed to create more jobs, improve education outcomes, connect and enhance communities and support economic development to deliver the 2050 vision. This focus is consistent with the regional development portfolio's high level Blueprint objectives; namely:

- attracting population to the region;
- growing and diversifying the economy;
- growing private investment;
- addressing priority community amenity needs; and
- innovative approaches to delivering service effectiveness to communities and efficiencies to government.

1. Physical Infrastructure

With an economy underpinned by traditional agriculture, fishing and the resources sectors, the Mid West requires extensive and efficient supply chain infrastructure and transport networks to facilitate access to its domestic and overseas markets. As global demand grows, the region will focus on expanding supply of its products and services to new and expanding domestic and global markets.

Many of the region's natural resource assets are presently stranded by strategic infrastructure capacity constraints (eg port, power, roads, rail). These constraints will continue to impede regional productivity and substantial investment in physical infrastructure is essential to unlock the region's significant future growth and development potential.

2. Digital and Communications

The digital age is upon us and the Mid West needs to maximise its potential through a targeted partnership approach with communities, all levels of government, public, private and non-government sectors in order to develop a digital economy.

Communications infrastructure will largely underpin the development of many proposed major projects in the region, all of which require varying levels of advanced telecommunications systems. Investment in new communications infrastructure is necessary to achieve equity of provision in the region and help position Mid West business / industry on the global stage. This investment and a focus on embracing new technologies is also required to enhance productivity and competitiveness and enable Mid West businesses to participate in new markets.

A thriving digital economy would give the Mid West powerful new tools to build a competitive and inclusive region with even greater productivity and innovation. It would also provide communities with access to new jobs, training and economic opportunities.

3. Economic Development

The Mid West has the highest level of economic diversity of all WA regions.

Global, national and regional trends are having a profound impact on the economic development and sustainability of regional Australia. In addition to new possibilities for growth, this also increases competition for investment between regions. This increase in competition has highlighted the need for the Mid West to capitalise on its strengths and identify new sources of future growth.

In order to achieve sustained growth and a goal of around 71,500 jobs by 2050, the region needs to enhance its global competitiveness and create resilience to changing economic conditions. The Blueprint proposes further economic diversification and an increase in innovation to drive productivity growth in existing areas of regional advantage.

4. Highly Desirable Communities

The Mid West is extremely diverse, with populations, economies, attractions and challenges ranging significantly across the region's 17 local governments.

To facilitate growth, communities must be vibrant and inclusive with appropriate infrastructure and services that support social fabric and wellbeing. Urbanisation and the ageing of regional populations, also present both challenges and opportunities to developing the Mid West as a region of choice to live in.

Desirable communities with appropriate human capital help create thriving economies and exciting, vibrant local communities with a strong sense of belonging, are proactive, connected and welcoming. This supports communities to attract and retain workers and families and encourage young people to 'come home' after their studies.

5. Knowledge and Learning

A well-educated, trained and skilled Mid West population is fundamental to its social and economic development. Quality education and training are key drivers of economic growth, a higher standard of living and a socially cohesive community.

The region has a range of quality education and training institutions that offer diverse secondary and post high schooling options. Nevertheless, the Mid West faces a number of education and training challenges and continued investment is critical for regional growth and development.

Low education outcomes negatively impact on the future life options of the region's young people and correlates with poor childhood development and health and wellbeing outcomes. They are also unlikely to result in a highly skilled workforce of the future.

A growing body of work confirms the importance of pre-compulsory learning and early education, which is acknowledged in the Blueprint.

EXECUTIVE SUMMARY

Mid West REGIONAL BLUEPRINT

GUIDING PRINCIPLES
Aligned with State Planning Strategy 2050

- Global competitiveness
- Resilient and adaptive communities
- Infrastructure planning and coordination
- Strong and diverse economy
- Sustainability
- Innovation
- Highly collaborative governance and implementation

PILLAR	ELEMENT	REGIONAL GOALS	HIGH LEVEL STRATEGIES
PHYSICAL INFRASTRUCTURE Create an integrated network of infrastructure to generate new industry opportunities for an annual economic GROWTH RATE OF 5% BY 2025	Movement of people and resources	Optimal transport linkages to facilitate movement of people and product to domestic and international markets	1. Ensure a coordinated and strategic approach to key infrastructure development 2. Develop Oakajee port and associated infrastructure 3. Optimise and where appropriate, expand the Geraldton port 4. Optimise rail networks to meet industry and community demands 5. Pursue strategic investment in roads infrastructure 6. Enhance Geraldton airport and regional aerodrome networks / services 7. Implement effective public transport solutions throughout the region
	Water	Sustainable regional water supply that enables the intensification of agriculture, establishment of new industries and supply of communities with quality water	1. Develop an extensive understanding of water resource location, quality and quantity 2. Pursue economic and community development through reuse of mine dewater 3. Utilise and promote waste water as a valuable resource 4. Develop water projects for agricultural diversification and expansion 5. Ensure sufficient water supply for socioeconomic growth in all communities
	Energy	Energy infrastructure is in place to supply the growth needs of Mid West communities and industry and for development of renewable energy as a key industry	1. Develop priority strategic energy infrastructure 2. Become a national leader in renewable and remote energy solutions 3. Pursue alternative energy solutions 4. Develop energy management innovations to maximise efficiency
	Waste	Optimal diversion of regional waste from landfill and inherent emissions by 2025 including strategies to maximise the use of regional waste (water, agricultural, industrial and domestic) as a resource	1. Develop waste solutions at a regional or subregional level 2. Foster a strong recycling culture in which waste is viewed as a resource 3. Pursue waste management innovation
DIGITAL AND COMMUNICATIONS The Mid West will be a connected, digitally empowered and innovative region with competitive mobile and network infrastructure, creating opportunities for growth and development	Communications infrastructure	Internationally competitive communications networks exist throughout the region to enable high business productivity and community safety and amenity	1. Develop reliable high speed digital and communications infrastructure throughout the Mid West 2. Ensure cost effective access to technology across the region
	Connected communities	Mid West communities are highly connected and the region is digitally empowered	1. Develop highly connected communities in a digitally empowered region 2. Establish partnerships to leverage funding opportunities
ECONOMIC DEVELOPMENT GENERATE 10,000 NEW JOBS + in the Mid West by 2025 and an additional 35,000 by 2050	Resource Economy	To realise the growth and development potential of the region's minerals and energy resources and extract maximum regional value from resource sector activity	1. Optimise transport and services infrastructure to maximise sector cost efficiencies 2. Ensure sufficient serviced industrial land to meet future sector demands 3. Balance environmental and social expectations with industry needs 4. Explore opportunities for regional value adding 5. Create a supportive environment for investment 6. Create a region of choice for FIFO / DIDO workers to be based
	Tourism	The Mid West attracts one million visitors each year that stay in and enjoy the region for longer	1. Develop a world renowned tourism region with iconic attractions and destinations 2. Develop accessible tourism destinations and events with unique / quality experiences 3. Encourage investment by reducing red tape and creating investment ready sites 4. Ensure reliable Internet connectivity for tourists throughout the region 5. Ensure diversity and niche subregional tourism opportunities
	Agriculture and food	A region built on a diverse, innovative, profitable and productive agriculture and food sector that services local and global markets	1. New markets developed and maximum value extracted from regional supply chains 2. Develop intensive agriculture / horticulture 3. Reinvigorate a competitive and profitable pastoral industry 4. Ensure access to technology to optimise farming productivity and efficiency 5. Ensure optimal tenure arrangements for all agricultural / pastoral land uses 6. Ensure sustainable practices with strong research and development focus 7. Develop into a major aquaculture development region
	Land availability	Sustainable (available and affordable) supply of zoned land for future growth and development	1. Ensure sufficient employment land to support strong industry growth 2. Develop heavy industrial park at a serviced Oakajee Industrial Estate 3. Develop residential land with innovative land development models 4. Optimise land use by recycling and reusing land
	Business and industry development	An economically diverse and dynamic business sector that captures the productive capacity of the region and converts opportunity into employment	1. Drive new and existing industry development 2. Grow the region's diverse and productive economy 3. Build a dynamic, competitive and innovative business sector 4. Foster innovative business and entrepreneurship 5. Support diverse and competitive Aboriginal enterprise development
	Trade development	The Mid West will be a major trade link to a rapidly growing middle class in Asia and other developing nations	1. Provide quality trade support and infrastructure to build trade and investment 2. Develop a Mid West brand that is globally recognised 3. Build strong and resilient global trade partnerships 4. Build a diverse and profitable export portfolio for the region
	Security	The Mid West has the business and industry capacity to support Australian Defence Force operations in the North West to protect WA's people and strategic assets	1. Support the Australian Defence Force operations in the north west

Government of Western Australia
Mid West Development Commission

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Figure 4. Blueprint summary (page 1 of 2)

Mid West REGIONAL BLUEPRINT

GUIDING PRINCIPLES

Aligned with the regional development portfolio's high level Blueprint objectives

- Attracting populations to the Mid West
- Growing and diversifying the economy
- Growing private investment
- Addressing priority community amenity needs
- Innovative approaches to delivering service effectiveness to communities and efficiencies to government

PILLAR	ELEMENT	REGIONAL GOALS	HIGH LEVEL STRATEGIES
HIGHLY DESIRABLE COMMUNITIES Build communities with strong social capital and infrastructure that creates a REGIONAL POPULATION OF 80,000+ BY 2025 AND 190,000 BY 2050	Community development, leadership and collaboration	Enhance the capacity of communities and empower people to better manage change at a local level, supporting communities to be resilient, adaptable and self-reliant	1. Enhance the capacity of local communities to manage change 2. Build strong leadership and collaboration 3. Support a strong non government sector for social service delivery 4. Support local governments to deliver community infrastructure and services
	Spaces and places	Infrastructure and services that help create exciting, healthy and vibrant local communities with a strong sense of belonging	1. Build highly liveable communities that attract and retain populations 2. Create an active region with community sport and recreation provision comparable to Perth 3. Develop vibrant communities that celebrate their unique culture, arts and heritage 4. Celebrate Aboriginal culture and heritage throughout the region 5. Create an accessible and inclusive region that values diversity 6. Build highly attractive communities for young people
	Regional housing	Sufficient regional housing stock of suitable configuration to meet growth and development needs of each local community	1. Deliver regional housing through innovative models 2. Enable competitive housing markets in all communities 3. Ensure adequate crisis, short stay and transitional accommodation 4. Ensure student accommodation for all people choosing local education 5. Ensure adequate and appropriate housing stock for the region's workforce 6. Support ageing in place through provision of aged care accommodation in communities as appropriate 7. Ensure appropriate Aboriginal housing throughout the region with home ownership rates matching the broader community
	Health and wellbeing	Sophisticated health services and infrastructure provision to support improved health and quality of life within communities	1. Enable health infrastructure that enables the highest standard of healthcare 2. Attract and retain high quality healthcare workers in all communities 3. Prioritise healthy communities and preventative healthcare 4. Enable innovative healthcare provision throughout the region through technology 5. Provide best practice mental health and drug and alcohol services and support throughout the region 6. Ensure Aboriginal health indicators match the region's non–Aboriginal population 7. Ensure aged care services enable Mid West residents to age in place
	Remote communities	Remote communities have equal opportunity to create desirable, productive and healthy places, spaces and economic opportunities	1. Ensure remote communities have appropriate services and infrastructure 2. Enable appropriate land tenure secured in all remote communities
	Environment	The region's diverse natural assets are protected and managed for current and future use	1. Protect the region's unique biodiversity as a regional asset 2. Become a leader in regional climate change adaptation 3. Ensure sustainable primary production practices are broadly adopted
KNOWLEDGE AND LEARNING Create highly educated and skilled communities that meet the region's future workforce requirements	Education and training	Equitable and accessible high quality education and training is available to all Mid West residents	1. Deliver reforms that create a high performing education system 2. Ensure pre compulsory learning programs provide an excellent platform for entry into primary education 3. Support higher education and training systems that build the region's tertiary outcomes 4. Ensure optimal education and training outcomes through innovation and technology 5. Ensure Aboriginal education indicators reflect the broader regional population 6. Attract and retain high quality education workers in all communities 7. Ensure young people have educational aspirations equal to Perth students
	Workforce development	A dynamic and skilled workforce that matches regional economic growth and development	1. Develop a planned and coordinated approach to workforce development 2. Ensure the majority of the region's future labour requirements are sourced locally 3. Maximise transition of FIFO / DIDO workforces into permanent residents 4. Ensure Aboriginal employment and participation rates reflect the broader regional population
	Research and innovation	Investment in innovation and knowledge management supports growth and productivity in all economic and social sectors of the region	1. Create a SMART Mid West that drives innovation and entrepreneurship 2. Become a leader in regional innovation, research and development

Government of Western Australia
Mid West Development Commission

Regional Development Australia
MIDWEST GASCOYNE

Figure 5. Blueprint summary (page 2 of 2)

MAKING IT HAPPEN

The Blueprint will become the core focus of MWDC and the basis of its new strategic direction. A strategic review of MWDC resources and operational process is also being undertaken to align with the Blueprint and ensure its successful implementation.

To realise the region's potential and effectively coordinate the Blueprint's implementation, the Commission will continue working across boundaries and in collaboration with key stakeholders.

The Blueprint's implementation framework includes key Strategy Stakeholder Groups (SSGs) to progress priority pillars / elements. These groups will oversee the preparation of a themed development strategy aligned with each element,which includes a list of priority project opportunities.

Further analysis of the identified project opportunities will be undertaken to assess / confirm their merit, viability, potential impact and priority. This 'filter' will help refine the list and produce a 'pipeline' of potential 'game changing' projects for targeted action by MWDC and Blueprint stakeholders / partners.

The ultimate aim of MWDC and the respective SSGs will be to ensure the best projects (with the greatest potential for 'game changing' regional growth and development) are identified, resourced and progressed.

The priority setting process for the Blueprint will occur in two main methods; namely:

- a quantifiable multi-criteria analysis (MCA) that will be used to assess potential opportunities for their potential to contribute to achieving the Blueprint's objectives; and
- development of robust and comprehensive business cases that will be used to raise funding and support for the highest priority projects.

The MWDC Board will determine which projects are to be put forward for investment. MWDC will also determine if additional work / analysis is required to enhance a project's readiness and appeal to possible funding streams. In some cases a pilot or demonstration project may be undertaken to help determine proof of concept.

Creating a pipeline of quality projects and linking these with potential capital will be a key challenge of the Blueprint. This may require more creative approaches and innovative financing models than those typically employed. Advancing projects as far as practicable to help minimise risk and provide confidence around commercial viability will help to reduce hurdles for potential investors.

In addition to meeting Blueprint outcomes, the investment promotion and facilitation efforts will need to articulate a value proposition for project funders. This alignment of projects with capital sources will commence through each themed development strategy and be ongoing.

The Blueprint implementation approach is discussed in more detail in "Chapter 6" from page 121.

WHAT WILL SUCCESS LOOK LIKE?
– A STATE AND NATIONAL PERSPECTIVE

Despite its potential individual prominence, the Mid West is eager to play its part in Statewide regional development outcomes. It will foster partnerships and collaboration with its fellow Regional Development Commissions (RDC) and other State Government agencies to progress the cross regional Blueprint themes that deliver key strategic outcomes for WA more broadly.

If the Blueprint's highest growth scenario (transformational) 2050 vision is realised, the Mid West would become a significant economic region and a major contributor to a State and nation building agenda. Its growth rate of 5% (by 2025) would exceed the national average and rival other leading regions in WA. Some of the initiatives expected to have significant State and national benefits include the:

- development of the proposed Oakajee deepwater port;
- completion of new road and railway corridors connecting the region's southern, eastern and northern mining provinces to Geraldton / Oakajee;
- connection of the Yilgarn area, Mid West and Pilbara regions to ports in Geraldton / Oakajee, Esperance, Port Hedland and Fremantle as part of the PortLink Inland Freight Corridor;
- establishment of the Oakajee Industrial Estate;
- completion of the 330kV transmission line to Geraldton / Oakajee;
- establishment of a freight and logistics hub, inclusive of sophisticated port, road, rail and international capacity airport infrastructure;
- servicing the State's strategic defence force presence in the north west;
- expansion of food production;
- development of education, knowledge and innovation sectors; and
- development of telecommunications and digital networks.

The Oakajee deepwater port and PortLink project may support the development of the region's stranded resources and enhance its exposure to global trade markets. Unlocking the resources sector potential could increase State royalties generated from the Mid West to over $1 billion each year, as well as generate new revenues from other areas of growth and development. It would also attract new private sector investment, assist the development of new export markets for the State, help increase WA's productivity and enhance the State's competitive advantage.

As a result of Oakajee, the creation of a freight and logistics hub in Geraldton with deepwater port capacity would take pressure off other WA ports, several of which are already constrained. It would connect WA more efficiently to interstate and international markets and strengthen Geraldton as a prime service location for the North West.

As the largest industrial estate in WA, the Oakajee Industrial Estate could play a vital role in facilitating new industrial activity in WA. Its heavy industry component would create opportunities to attract heavy industry to WA and complement Oakajee's port and associated supply chain infrastructure. The industrial estate would have the capacity to support up to 13,000 new jobs in the longer term.

The Oakajee port and industrial estate would also help reduce congestion in the Perth metropolitan area. Various industries would be able to use the Mid West for bulk exports and for the collection and distribution of goods and supplies throughout regional WA. The addition of the PortLink Inland Freight Corridor would expose the region to the east coast of Australia and could create a new international gateway for the nation.

The completion of a 330kV transmission line from Perth through to Geraldton / Oakajee would facilitate the development of a number of major renewable energy projects in the region. The Mid West already contributes 30% of the State's renewable energy and with the 330kV line could facilitate significant further increases for the State's grid. It would also provide greater energy security for the Mid West, assist the State achieve its renewable energy targets and potentially enable energy to be exported in the longer term.

The Blueprint's strategies around expanding food production would benefit domestic markets, help the State increase exports and stimulate inward investment in its agrifood and fisheries sectors. The region's strengths in agriculture and fishing and its focus on developing best practices and supply chain efficiencies would add value and improve food production in WA. Enhancements would also elevate the State's reputation as a global supplier of quality food.

The region's heavy focus on education, knowledge and innovation would enhance the State's ability to provide a skilled and diversified workforce. This would increase its competitiveness, reduce reliance on importing skills and may help lower the cost of doing business in WA.

The region's attractive temperate climate, cherished lifestyle and a growing regional economy could attract a significant number of new residents. This could reduce stress on infrastructure in Perth and help to rebalance population distribution between the metropolitan area and regional WA. Provision of additional health care and support services for an ageing regional population is expected to drive employment growth in this sector, and may increase the region's appeal as a retirement destination.

The Mid West would be networked via high speed broadband and mobile services, with well connected and high quality lifestyle towns and settlements throughout the region. This connectivity would contribute to the liveability of the region and help make it an attractive place to live, work, study, do business and invest.

Some of the indicators that might be used to measure the impact of the Blueprint are shown in Figure 6.

REGIONAL BLUEPRINT ASPIRATIONS

	2013	2025	2050
Gross Regional Product	$6 billion	$24 billion (in 2025 $)	$47 billion (in 2050 $)
Jobs	25,083	36,420	71,500
Traditional FIFO jobs performed by people living in the region	65%	75%	85%
Unemployment rate	6.8%	4.5%	4%
Population (ERP)	57,901	85,000	190,000
Annual (population) Growth Rate	2% (in 2013)	Peak at 5% (in 2025)	3% (from 2026 - 2050)
Developmentally vulnerable in one or more AEDC domain	31%	20%	10%
NAPLAN - likely to perform above NMS (average across measures)	16% less likely	5% less likely	10% more likely
Population with year 12 (or equivalent) attainment	37.8%	40%	60%
Population with Diploma level or higher qualifications	16%	20%	25%
Port export tonnages	15 mtpa	60 mtpa (includes Oakajee)	150 mtpa
Annual tourist numbers	400,000	600,000	1,000,000
Economic diversity (Shannon and Equability Indices)	2.72 / 0.87	Remain highest WA region	Remain highest WA region
Socio-Economic Index for Areas (SEIFA) - number of Mid West communities (out of 29) scoring below 1,000	19/29	10/29	0/29

Figure 6. Regional Blueprint Aspirations - possible measures of impact

010 CONTENTS

AAGR	Average Annual Growth Rate
ABS	Australian Bureau of Statistics
ACC	Australia's Coral Coast
ACBPS	Australian Customs and Border Protection Service
ADF	Australian Defence Force
AEDC	Australian Early Development Census
AGO	Australia's Golden Outback
ALT	Aboriginal Lands Trust
ASKAP	Australian Square Kilometre Array Pathfinder
ATAR	Australian Tertiary Attainment Ranking
BCMI	Batavia Coast Maritime Institute
CASA	Civil Aviation Safety Authority
CASS	CSIRO Astronomy and Space Science
CBD	Central Business District
CBH	Cooperative Bulk Handling
CGG	City of Greater Geraldton
CME	Chamber of Minerals and Energy
CPPPs	Community Public Private Partnerships
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CRSWT	Centre for Resources Sector Workforce Training
DAA	Department of Aboriginal Affairs
DAFWA	Department of Agriculture and Food WA
DCA	Department of Culture and the Arts
DIDO	Drive-In / Drive-Out
Durack	Durack Institute of Technology
DoE	Department of Education
DoH	Department of Housing
DoL	Department of Lands
DoP	Department of Planning
DRD	Department of Regional Development
DSD	Department of State Development
DSR	Department of Sport and Recreation
DTWD	Department of Training and Workforce Development
ECEC	Early Childhood Education and Care
EDS	Economic Development Strategy
ERA	Economic Regulation Authority
ERP	Estimated Resident Population
ESCAS	Exporter Supply Chain Assurance System
FIFO	Fly-In / Fly-Out
FttN	Fibre to the Node
FttP	Fibre to the Premises
FTA	Free Trade Agreement
FW	Fixed Wireless
GP	General practice
GFC	Geraldton Fisherman's Co-operative
GGS	Geraldton Grammar School
GHC	Geraldton Health Campus
GHETAP	Geraldton Health, Education and Training Accommodation Project
GRAMS	Geraldton Regional Aboriginal Medical Service
GH	Geraldton Hospital
GMML	Goldfields Midwest Medicare Local
GP	General Practice
GRP	Gross Regional Product
GSC	Geraldton Secondary College
GSP	Gross State Product
GUC	Geraldton Universities Centre
HOMS	Housing Online Management System
HQAL	High Quality Agricultural Land
ICT	Information Communications Technology
IP	Intellectual Property
JWC	John Willcock College
LTTS	Long Term Satellite Service
MAOA	Midwest Aboriginal Organisations Alliance
MCA	Multi Criteria Analysis
MRO	Murchison Radio-astronomy Observatory
MSF	Murchison Radio-astronomy Observatory (MRO) Support Facility
mtpa	Million tonnes per annum
MW	Megawatt
MWA	Murchison Widefield Array
MWAS	Mid West Academy of Sport
MWCCI	Mid West Chamber of Commerce and Industry
MWDC	Mid West Development Commission
MWDF	Mid West Waste Disposal Facility
MWIP	Mid West Investment Plan
MWRPIF	Mid West Regional Planning and Infrastructure Framework
MWSIG	Mid West Strategic Infrastructure Group
MWWDA	Mid West Workforce Development Alliance
NAPLAN	National Assessment Program – Literacy and Numeracy
NBN	National Broadband Network
NCC	Nagle Catholic College
NFIT	New Facilities Investment Test
NGO	Non Government Organisation
NMS	National Minimum Standard
OIE	Oakajee Industrial Estate
ONIC	Oakajee Narngulu Infrastructure Corridor
RCDP	Regional Centres Development Plan
RCS	Rural Clinical School
RDAMWG	Regional Development Australia Midwest and Gascoyne
RDC	Regional Development Commission
RDCo	Regional Development Council
RfR	Royalties for Regions
RFDS	Royal Flying Doctor Service
ROI	Return On Investment
RMCP	Regional Mobile Communications Project
RPT	Regular Passenger Transport
RV	Recreational Vehicle
SCC	Strathalbyn Christian College
SCOR	Strengths, Challenges, Opportunities and Risks
SEIFA	Socio-Economic Indexes For Areas
SKA	Square Kilometre Array
SPMP	Separation Point Marine Precinct
SPS	State Planning Strategy
SWIS	South West Interconnected System
VACP	Value of Agricultural Product
WA	Western Australia
WACRH	Western Australia Centre for Rural Health
WARFTNP	WA Regional Freight Transport Network Plan
WATC	WA Tourism Commission
WWTP	Waste Water Treatment Plant
YTK	Yellow Tail Kingfish

REGIONAL WESTERN AUSTRALIA

GEOGRAPHY

Western Australia has nine distinct Regional Development Commission regions areas outside Perth; namely the Gascoyne, Goldfields-Esperance, Great Southern, Kimberley, Mid West, Peel, Pilbara, South West and Wheatbelt (Figure 7).

WA's regions span more than 2.5 million km^2 and include the vast majority of WA's 12,889km of mainland coastline (offshore islands have an additional 7,892km of coastline). Regional WA's eastern boundary extends 1,862km and is shared with the Northern Territory and South Australia.

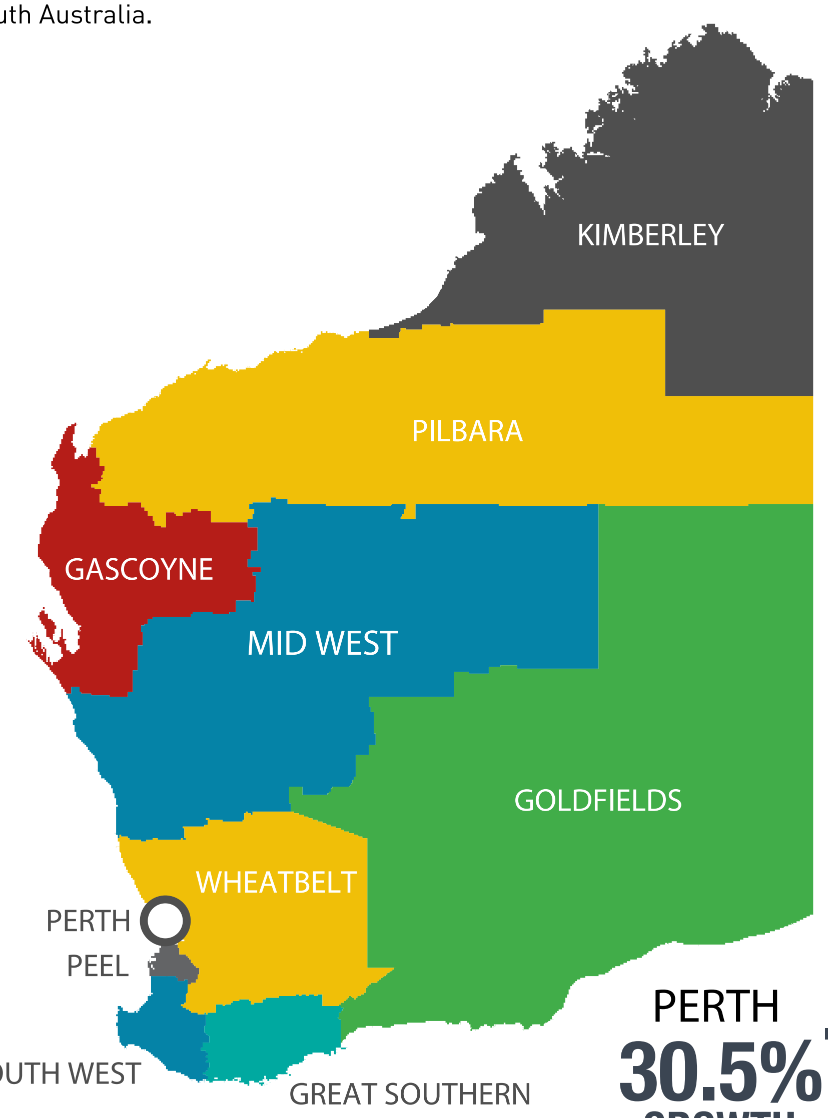


Figure 7. Regional WA

POPULATION

As at 2013, regional WA's estimated resident population (ERP) was 664,302 people, or around 26.4% of the State's population (2.52 million) (Figure 8).

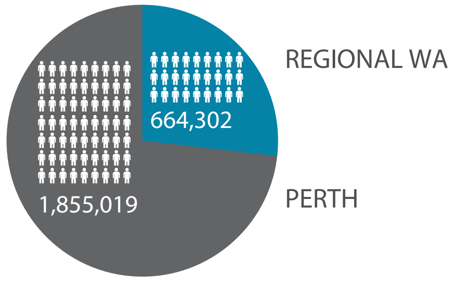


Figure 8. Regional population share of WA

In the mid-1900s (before the advent of fly-in-fly-out (FIFO) workforces), regional WA housed around 40% of the State's population (compared to 26.4% in 2013). Population growth in WA since that time has predominantly been in the Perth metropolitan area.

From 2003-13 regional WA grew at an average annual growth (AAGR) rate of 2.3%, which is lower than the State's AAGR over the same period (2.6%) and that of the metropolitan area (2.7%). More recent growth (from 2012-13) was notably stronger, with regional WA's population increasing by 3.0%, the State's population increasing by 3.3% and the metropolitan area by 3.5%.

The State's AAGR was significantly higher than the national rate over the past decade (1.6%). Along with Queensland, WA was the fastest growing State in Australia during this period, with its population increasing by around 29% from 2003 to 2013 (Figure 9).

Under certain scenarios the State's population could more than double over the next 40 years, providing potential for significant growth in regional WA.

This growth represents both challenges and opportunities and will need to be managed strategically with regional investment essential to attract more people to live, work, and invest in regional WA.

Planning for, and enabling a more balanced population distribution, is increasingly important in the State context. This will not only help develop sustainable regional communities, but will also limit the pressure of population growth on metropolitan areas. Attracting and catering for a larger share of future State population growth is a focus for most regions.

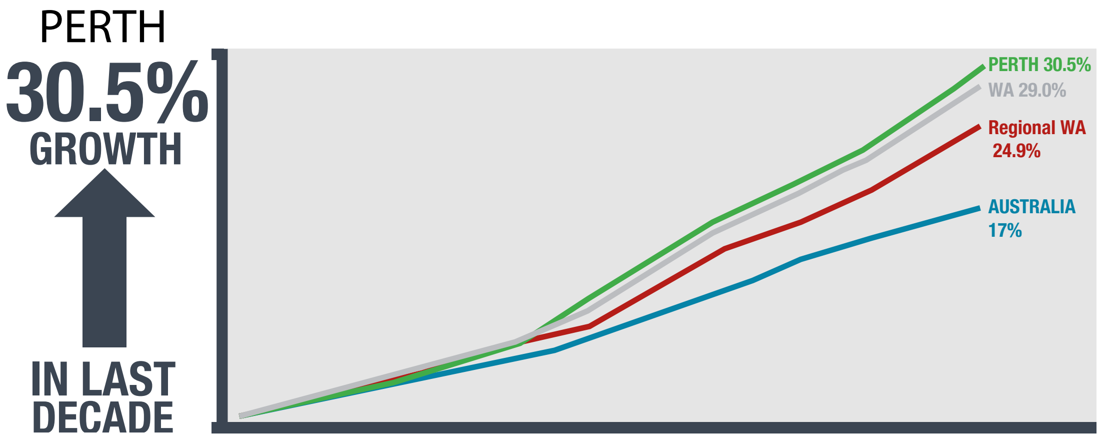


Figure 9. Growth rate comparisons (2003-13)

ECONOMY

"There is no national economy ... but a series of regional economies that trade with each other and the rest of the world" (Michael Porter, Harvard University Business School).

Regional WA is vital to the economy, cultural identity and environmental amenity of our State. The economies of Australia's regions and cities are codependent and linked through economic, cultural and social ties, meaning the performance of a single region can have a significant impact on the performance of the State or nation as a whole. Regional WA is crucial to Australia's national prosperity and is the 'engine room' of Australia's economy.

WA's contribution to the national economy is substantial. Gross State Product (GSP) for WA was valued at approximately $243 billion in 2012-13 - a 16% contribution to the national economy. By contrast, WA only accounted for around 11% of the national population, meaning GSP per capita for WA ($98,069 / person) was significantly higher than the national average ($66,397 / person).[1]

Mining directly contributed 31% to the WA economy and also contributed to growth in service industries such as construction, utilities, logistics and manufacturing. The Department of State Development (DSD) suggests that mining and petroleum comprised 91% of the value of WA's exports in 2013, with WA accounting for nearly half (48%) of the nation's exports.

Construction and retail were the largest employer groups within the service sector (2014), with mining responsible for a substantial part of construction in the State. Private new capital investment in WA was dominated by mining (83%) and WA accounted for more than half (54%) of private new capital investment in Australia (2014).[2]

Agriculture still makes an important contribution to the WA economy ($7 billion in 2013-14) and with the expansion of the Ord River development will increase in importance.[3]

Industries tend to cluster within regional economies, with clusters often described as "hot spots of productivity and collaboration" as well as being "innovation and opportunity driven." Developing clusters will promote growth in productivity, wages and jobs.

The WA State Planning Strategy 2050 identifies regional development as one of its key drivers of change.

It provides the State context for regional planning to focus on regional 'shapers' capable of delivering transformative change within and between regions. These shapers of transformative change are a focus of this Blueprint.

1 ABS, Australian National Accounts 2012-13 (Cat 5220.0)
2 Department of Regional Development, information supplied for Blueprint
3 Department of Agriculture and Food, information supplied for Blueprint

PURPOSE OF THE BLUEPRINT

The Mid West Regional Blueprint proposes an aspirational vision for the Mid West to 2050. It provides the framework to achieve this vision and highlights the key interventions required to transform the region and enable it to realise its full potential as a strong, connected and resilient region with a prosperous future.

This Blueprint starts to build a logical, robust, dynamic and evidence based case for transformation. It identifies and addresses the major challenges we will face in the future by leveraging our region's natural advantages, industry strengths, emerging opportunities, existing expertise and future potential.

HOW THIS BLUEPRINT WAS DEVELOPED

The Blueprint takes its strategic context from the recently launched State Planning Strategy 2050 and is consistent with its goals and strategic directions. It is also closely aligned with the Mid West Regional Planning and Infrastructure Framework.

The Blueprint draws heavily on supporting evidence from a range of contributing sources and existing planning frameworks. In addition to referencing these documents, a number of reports were commissioned and submissions received from various agencies and sectors.

The alignment of the Blueprint and some of its informing frameworks and reports is represented in Figure 10.

Comprehensive analysis of global megatrends, regional Strengths, Challenges, Opportunities and Risks (SCOR) (Attachment A) and of all Mid West local government corporate business plans was conducted. Information was gained from of over 140 different stakeholders as indicated in Figure 11. The community sector (non profit and non government entities) represented the largest consultation cohort.

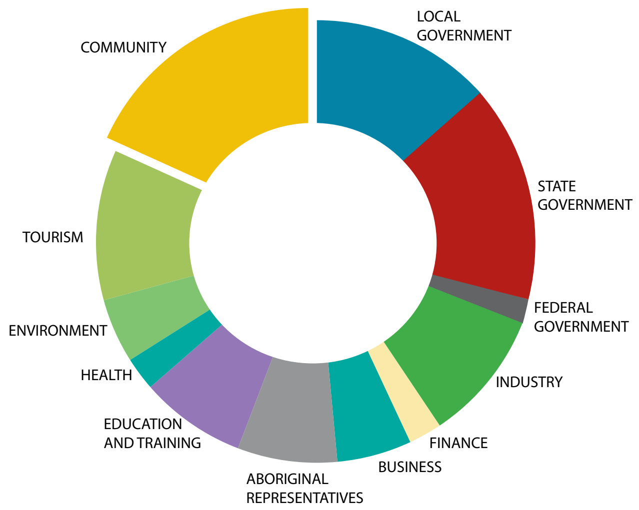


Figure 11. Blueprint consultation mix

BUILDING THE BLUEPRINT (PROCESS LOGIC)

Figure 12 demonstrates the logic flow of the Blueprint development process. It links to the more detailed evidence based background paper, which allows readers to interrogate the contributing source and assumptions captured in the planning process.

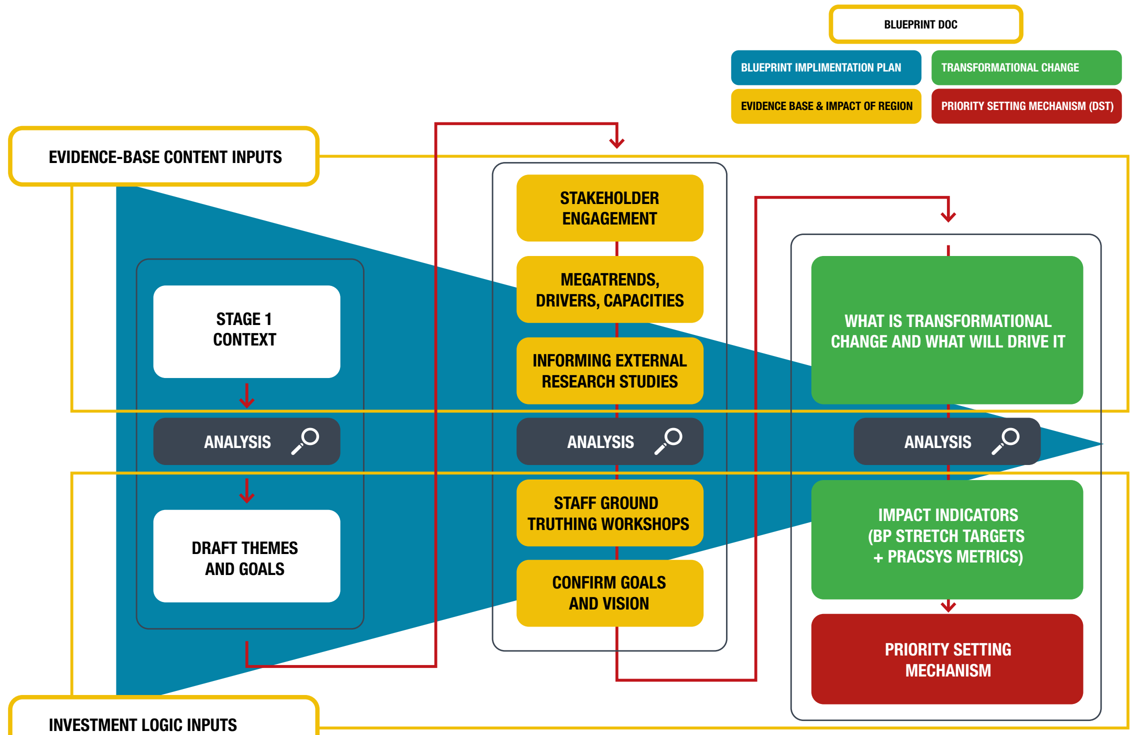


Figure 12. Blueprint process logic. Adapted from Kimberley Blueprint Process Logic

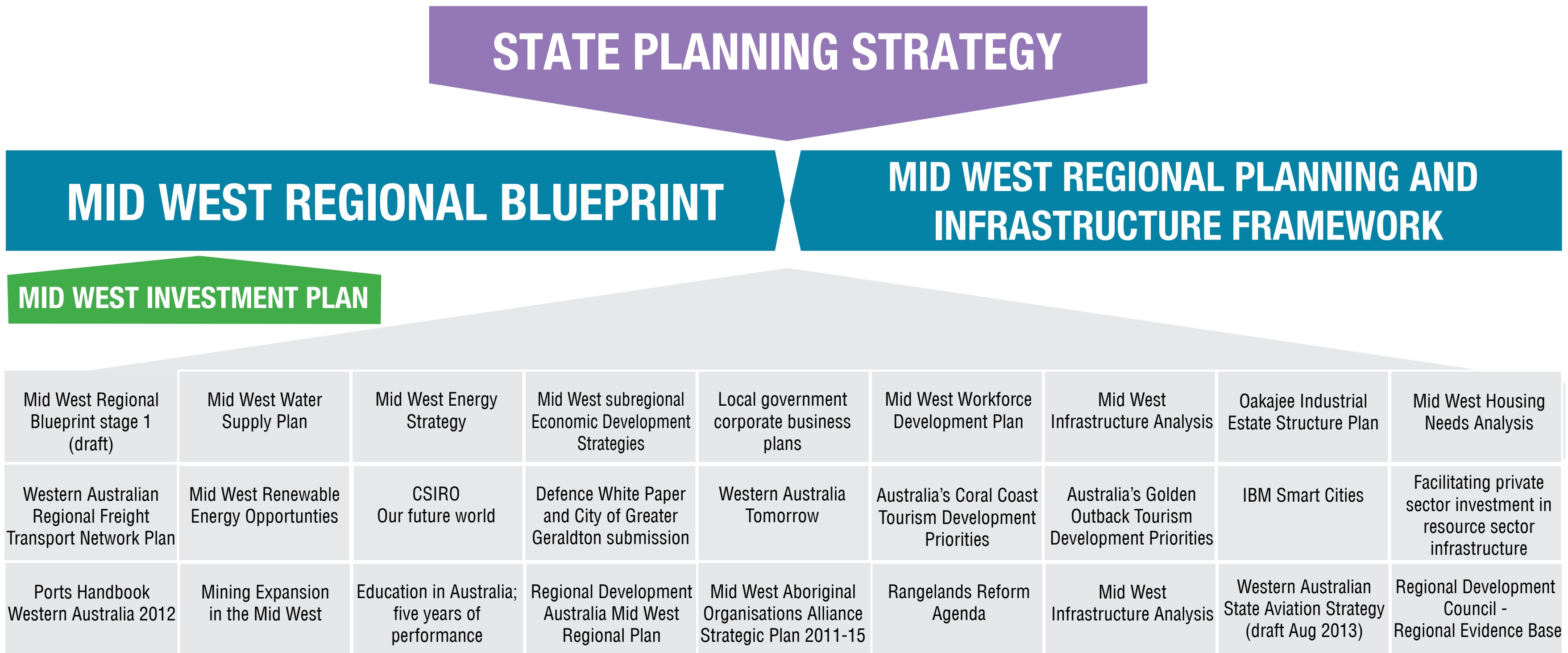


Figure 10. Frameworks and reports informing the Mid West Regional Blueprint

EXPLAINING THE LOGIC FLOW AND HOW IT WAS APPLIED

Widespread stakeholder engagement was undertaken in 2013, resulting in extensive information, ideas, opinions and aspirations. This confirmed the region's 2050 vision and the Blueprint's 'pillars' and goals.

Analysis of the Mid West was undertaken using various data sources and subjects. An analysis of global megatrends and their potential impact on the region was conducted, as was a SCOR analysis to describe the region's Strengths, Challenges, Opportunities and Risks. This helped identify drivers for growth and some of the region's capacity issues (opportunities and challenges). It also helped define the 'regional advantage'.

Workshops with MWDC staff and Board members assisted to "ground truth" the early Blueprint draft. This also reinforced the perceived barriers and enablers that may affect the region's growth and development agenda.

Draft regional goals and visions were reviewed and endorsed by the MWDC Board. Ongoing analysis and strategy development and refinement was undertaken concurrently.

A draft of the Blueprint was shared with key stakeholders early in 2014, resulting in significant feedback and further refinement. This also created strong partnership and collaboration with stakeholders, which will be invaluable during Blueprint implementation.

014 ALIGNING REGIONAL BLUEPRINTS

RELATIONSHIP BETWEEN REGIONAL BLUEPRINTS, STATE PLANNING STRATEGY AND REGIONAL CENTRES DEVELOPMENT PLAN

WA's regional centres will play a vital role in supporting regional economic and population growth.

The WA Planning Commission's (WAPC) State Planning Strategy 2050 (SPS) provides a settlement hierarchy, which categorises regional settlements (in descending order) as a "Regional Centre", "Subregional Centre" or "Other Centre". Figure 13 identifies the network of Pilbara Cities, SuperTowns and Regional Centres currently identified in the SPS as regional or subregional centres.

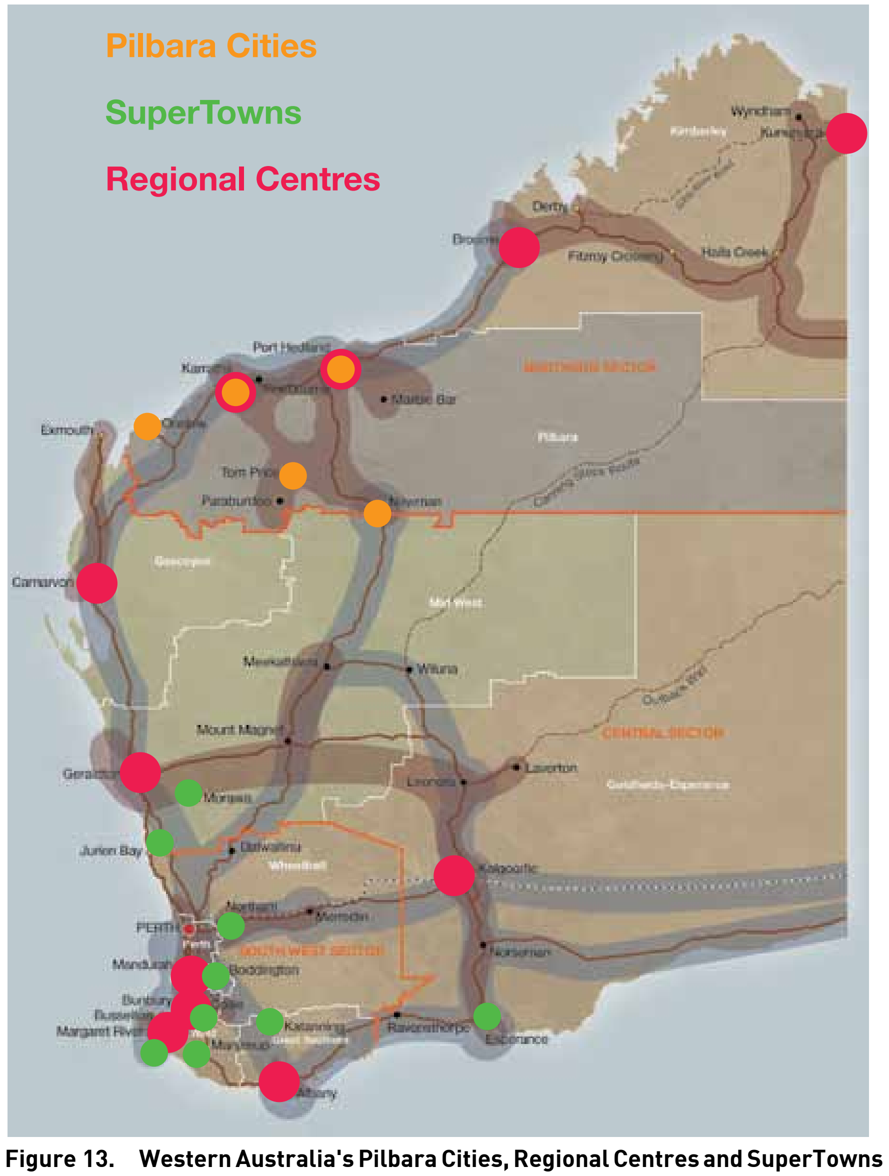


Figure 13. Western Australia's Pilbara Cities, Regional Centres and SuperTowns

The SPS does not detail any specific roles, functions or relationships between regional settlements, their potential for growth or evolving economic and social roles in the global context. This provides an opportunity for Blueprints to:

- set the high level context for growing regional settlements, including the importance of these settlements to globally competitive regional economies and to communities, and the strategic role they need to play into the future; and
- inform the next phase of the Regional Centres Development Plan (RCDP), which is proposed to support regional settlements (not already supported under Pilbara Cities) that are categorised as Regional Centres in the SPS. As Regional Centres are likely to face common challenges, such as attraction and retention of people, there may be potential for the RCDP to address challenges in a strategic way.

This work will help provide a platform to grow regional centres, reframe their role and reimagine them for the 21st century, as well as support cross-regional collaboration through a common policy agenda.

REGIONAL CENTRES DEVELOPMENT PLAN

The RCDP aligns the State Government's objectives for enhancing WA's global competitiveness, the sustainability of regional economies and communities, and for managing the distribution of the State's growing population (predicted to double to almost 4.5 million by 2050).

It aims to deliver long term economic and social growth in regional WA through a collaborative approach to growing business and attracting investment and people. The RCDP encourages regional communities to build on their unique strengths, advantages and economic drivers to enhance their desirability as places to live, work and invest.

The SPS recognises the role of the RCDP to support the sustainable growth of regional settlements to support regional economies and communities and ease growth pressure on the Perth metropolitan area. The RCDP supports the growth of strategically located regional settlements with the aspiration and economic potential to develop and grow sustainably over the long term.

Geraldton is the global gateway to the Mid West and acts as the focal point for the region's economy and communities. It plays a key role in servicing local businesses and industries, and smaller regional communities including Dongara and Morawa.

SUPERTOWNS

SuperTowns supports the growth of subregional centres identified in the SPS in the southern part of WA; namely Boddington, Collie, Esperance, Jurien Bay, Katanning, Manjimup, Margaret River, Morawa and Northam.

The WAPC has endorsed the SuperTowns' growth plans and recognised the SuperTowns as subregional centres in the SPS for the strategic role they will play in supporting regional economies and communities.

As a SuperTown in the Mid West, Morawa has the opportunity to increase its amenity and services that will benefit the Morawa community and surrounding towns in the North Midlands. Morawa will continue to develop the range and quality of its education and training services and aims to develop into a Centre of Excellence associated with education, training and employment, servicing the broader subregion.

Morawa streetscape plan, artists impression

COMMONWEALTH NORTHERN AUSTRALIA POLICY AGENDA

The State Government's submission to the Commonwealth Joint Select Committee on Northern Australia (2014) draws upon the policy position of its agencies and articulates a WA view of developing northern regions[1].

As part of advancing the collective development aspirations of Northern WA, the RDCs that cover the Kimberley, Pilbara, Gascoyne, Mid West and Goldfields Esperance have identified elements of their transformational priorities that are common across the regions that collectively comprise Northern WA.

Consistent with the aspirational development objectives of the Blueprints, and perhaps unsurprisingly, there is a narrow range of common high level development themes across northern WA regions, including:

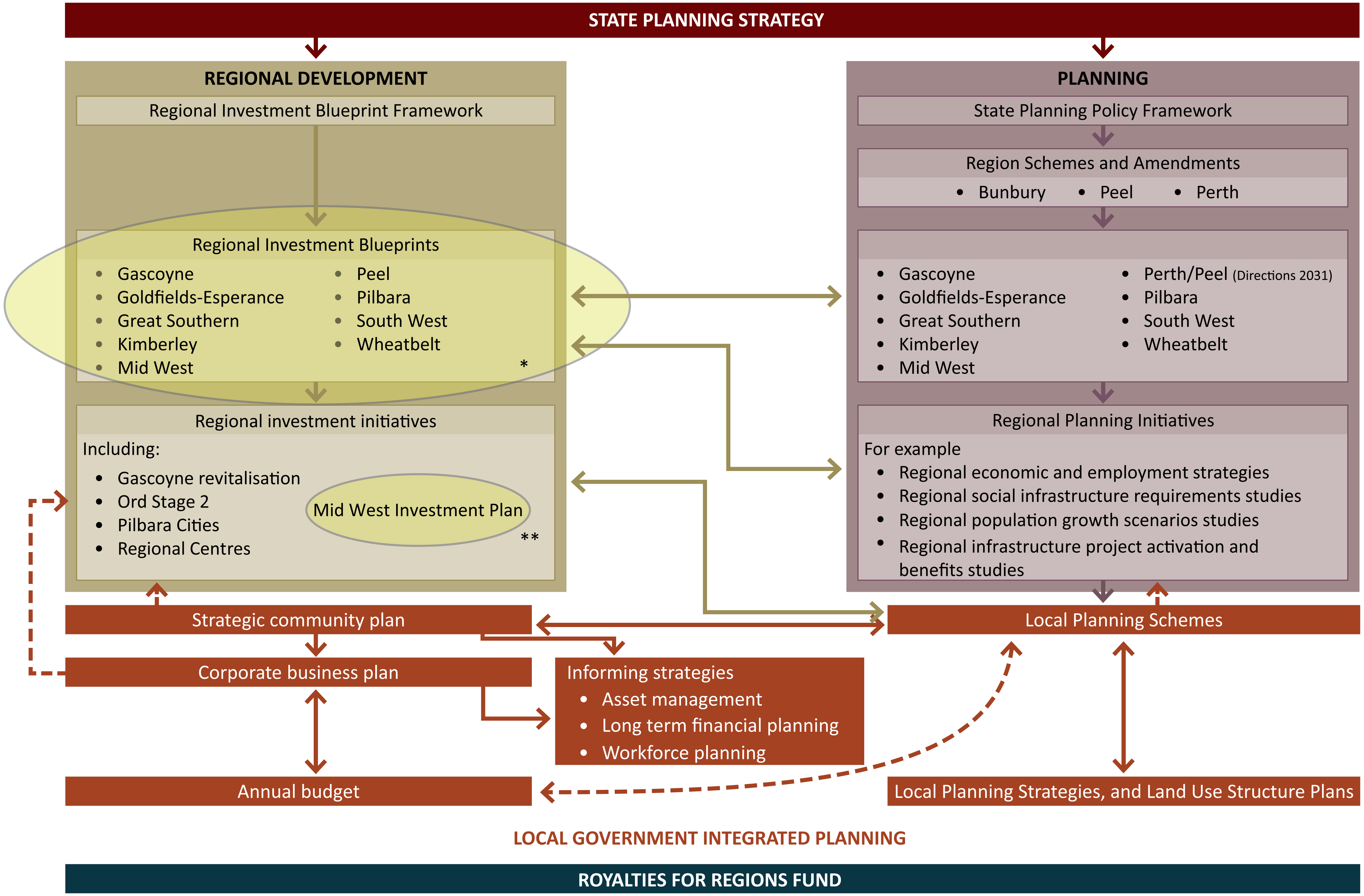
- agriculture, food and fibre;
- tourism visitation;
- minerals and energy ;
- Aboriginal opportunity;
- services for people – health, education and training and housing;
- facilitating business and industry growth and diversification; and
- strategic infrastructure.

1 WA State Government submission to Commonwealth Joint Select Committee on Northern Australia – March 2014 – page 2 (derived)

The State Planning and Development Framework is a key feature of the SPS. It illustrates the proximity and interrelationships between various processes and instruments across the portfolios of regional development, local government and planning (Figure 14).

The Framework also demonstrates the close alignment between the Blueprints and the Regional Planning and Infrastructure Frameworks. This connection will ensure the Blueprints are fully contexted within the State's planning system.

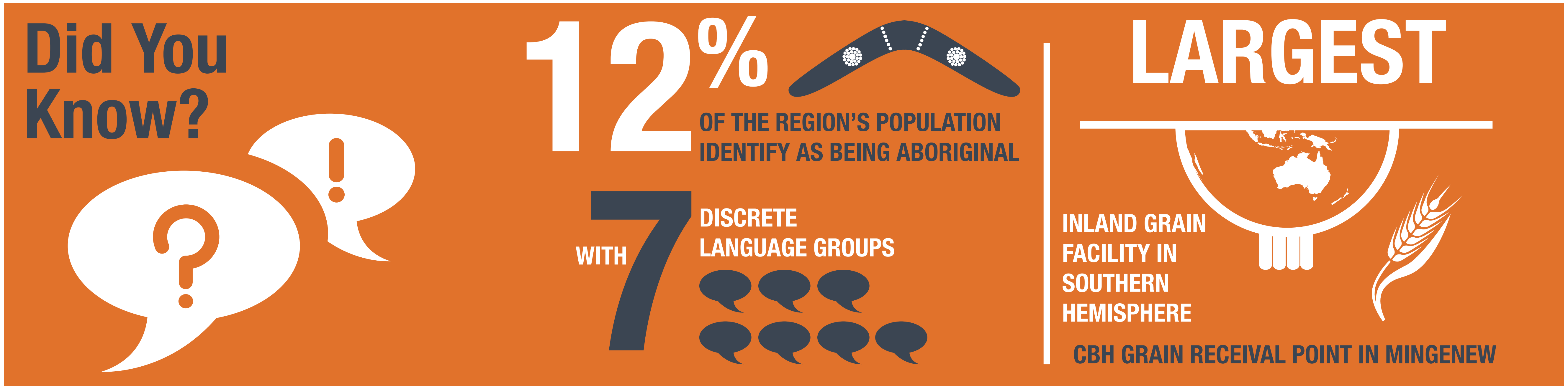
The Mid West Investment Plan (MWIP) was developed by MWDC in collaboration with the Department of Regional Development (DRD) following extensive consultation. The MWIP will guide the spending of $220 million in RfR funding over the period 2011/12 to 2018/19. The objectives of the MWIP and subsequent investment in prioritised regional projects clearly link to RfR objectives and policy.



* emphasis added by MWDC

** text added by MWDC

Figure 14. State Planning and Development Framework. Source: State Planning Strategy 2050



The Mid West has....

Unique history and culture

- The Martu people in Wiluna share the title (with other Western Desert peoples) of being the oldest living culture on the planet.
- Approximately 12% of the region's population identify as being Aboriginal with seven discrete language groups represented (Nhanda, Amangu, Widi, Wadjarri, Naaguja, Badimaya and Martu).
- Australia's two most notable maritime losses, the Batavia and the HMAS Sydney II, both occurred off the Mid West / Gascoyne coast.
- The Geraldton to Northampton railway line was the first Government railway line in WA, with the Geraldton railway station also WA's first.

Rich resources and rocks

- Australia's first lead mine at Galena (Geraldine Lead Mine, 1849).
- Home to the first iron ore mine in WA (Koolanooka, 1966).
- Mount Magnet is the longest surviving gold mining settlement in WA.
- The oldest and most productive talc mine in the southern hemisphere (second most productive in the world) is located in Three Springs.
- Wilgie Mia near Cue is the oldest known mining operation in the world with excavations of ochre occurring for at least 40,000 years.
- The world's oldest rocks are located in the Mid West (in the Murchison subregion).

Some really 'hot' spots

- One of only five areas in the world that is home to both marine and terrestrial biodiversity hotspots.
- The world's southern-most coral reef at the Abrolhos Islands.

The State's most diversified regional economy

- The Mid West has the highest Shannon's and Equability Indexes in regional WA, confirming it as the State's most diversified regional economy. The Shannon's Index accounts for both the quantum and diversity of employment in a region, while the Equability Index accounts for diversity and evenness.[1] The Mid West has:
  - one of Australia's most diverse mining provinces that includes talc, gold, lead, tin, tantalum, zinc, heavy mineral sands, iron ore, copper, clays, pigments, nickel, vanadium, titanium, gypsum, chromite, platinoids, limestone, limesands and manganese ore;
  - the largest fishing industry in the State with a dominant rock lobster fishery, significant finfish and mollusc production and an emerging aquaculture sector;
  - intensive and broadacre agriculture including significant livestock, cropping and horticulture production;
  - an emerging renewable energy sector with high prospectivity for solar, wind, wave, geothermal and biomass generation; and
  - employment across all 19 major industry sectors with strength in construction, retail and health care, in addition to mining, fishing and agriculture as previously discussed.

Sun, wind and water

- Geraldton's ocean winds make it one of the world's top windsurfing / kitesurfing destinations.
- On average Geraldton has only around 80 cloudy days each year.
- When opened in October 2012, the 10 MW (Megawatt) Greenough River Solar Farm was Australia's largest utility scale solar farm, with potential for further expansion to 40 MW.
- Meekatharra was the first town in Australia to be powered by solar energy (solar diesel), which when constructed (1982) was the largest of its kind in the world.

1 Pracsys Economics, November 2013. Regional Evidence Base Report

The only local government in WA without a town (Shire of Murchison)

Large scale strategic infrastructure

- The CBH grain receival point in Mingenew is the largest inland facility in the southern hemisphere.
- The proposed Oakajee Industrial Estate (6,400ha) would be the largest industrial estate in WA.
- Geraldton is the second largest grain export terminal in Australia.
- Geraldton is also the most diverse regional port in WA. Exports include wheat and other grains, iron ore, mineral sands, talc, stockfeed, livestock and concentrates (containing copper / zinc and other metals). The port had its eighth consecutive record year in terms of trade throughput in 2013-14 exporting 18.5mt.
- A rail network with 25mtpa transport capacity, upgradable to beyond 75mtpa.
- A network of airports that includes the Geraldton Airport, which has runway, taxiway and apron infrastructure capacity for A320 / B737 operations, serviced with multiple daily regular public transport (RPT) services. Meekatharra, Mount Magnet and Wiluna have airports that accommodate regular flights to and from Perth. Other airports include Dongara, Kalbarri, Morawa, Perenjori, Murchison, Yalgoo and Cue.
- A network of 20,427km of sealed roads. Major arterial roads include the Brand Highway (from Perth to Geraldton); the North West Coastal Highway (from Geraldton to the North West via Northampton); the Midlands Road (from Moora to Dongara); the Geraldton Mount Magnet Road (which extends to Leinster) and the Great Northern Highway (from Perth to Port Hedland). The Goldfields Highway (from Meekatharra to Kalgoorlie) is largely unsealed with sections being progressively upgraded.

THE MID WEST IS.....

'The best place on earth to observe the Universe'

- The Mid West covers around one fifth of the WA landmass.
- The Murchison subregion of the Mid West represents approximately 17% of the WA landmass, but is very sparsely populated averaging only around one person to every 96km^2 (providing significant radio quietness).
- The significant radio quietness of the Murchison area was a key to Australia attracting part of the $2 billion (Euro) international Square Kilometre Array (SKA) project (hosted jointly with South Africa).
- The Commonwealth Scientific and Industrial Research Organisation (CSIRO) Astronomy and Space Science (CASS) has a presence in the Mid West through the $152 million Australian Square Kilometre Array Pathfinder (ASKAP) at the Murchison Radio-astronomy Observatory (MRO). The MRO will be a base for part of the SKA (the largest radio astronomy project ever developed) and a pre-eminent site for radio astronomy research and development.
- CSIRO also operates the MRO Support Facility (MSF) in Geraldton.
- The MSF provides support for CSIRO's radio astronomy projects at the MRO. The MSF has access to super computer facilities at the Pawsey High Performance Computing Centre in Perth.
- The Murchison Widefield Array (MWA) is also located at the MRO. Led by Curtin University, the MWA is an international collaboration between institutions in the US, Australia, New Zealand and India.
- Both the existing ASKAP and MWA projects will be expanded from Australia's component of the SKA (stage 1).
- The WA Space Centre near Mingenew was Australia's first satellite park. The facility is owned and operated by Space Australia, a subsidiary of the Swedish Space Corporation (SSC).

Aiming high in education, research and training

- The Durack Institute of Technology (Durack) offers more than 250 qualifications from Certificate 1 to Advanced Diploma level and was recently allocated RfR funding to develop a Centre for Training in the Resources Sector at the proposed Geraldton airport technology park, and a Health Sciences and Community Services facility and Aboriginal Learning Centre at the Fitzgerald Street campus in Geraldton.
- Durack also operates the Batavia Coast Maritime Institute (BCMI) within the broader Separation Point Marine Precinct (SPMP), established as a world-class marine education, training and industry research centre. The Precinct includes a Department of Fisheries research facility.
- The Geraldton Universities Centre (GUC) works in partnership with universities across Australia to support tertiary education delivery that meets Mid West student and industry needs. GUC's community based model, the first of its kind in Australia, has drawn attention from regional communities throughout Australia with some now replicating the model.
- The Department of Agriculture and Food WA (DAFWA) has a regional office in Geraldton that services the Northern Agricultural Region and supports WA's $6 billion agriculture and food sector to be sustainable and profitable, with a clear focus on export-led growth.
- The WA Centre for Rural Health (WACRH) was established in Geraldton to improve rural, remote and Aboriginal health through research, education and student support and community services. Through its new 'EdSim' Centre, WACRH can deliver streamed, real time, high fidelity training opportunities across regional WA with advanced simulators that can mimic critical medical events. EdSim is the only facility in regional WA with access to such advanced technology.
- The Geraldton Health, Education and Training Accommodation Project (GHETAP) aims to provide affordable and appropriate quality accommodation for students and some staff studying and working within the Geraldton Health, Education and Training Precinct. GHETAP is a flagship project of the Mid West Investment Plan (MWIP).

Highly prospective for renewable energy

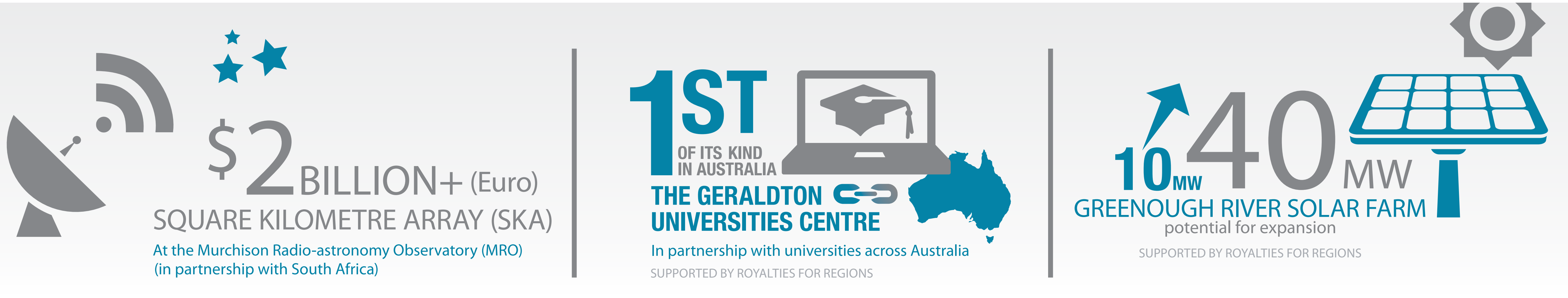
- The Mid West is highly prospective for solar, wind, wave, geothermal and biomass energy projects and related technologies. Wind farms include the Walkaway Wind Farm 20km south of Geraldton and the 55MW Mumbida Wind Farm.
- Supported by RfR funding, the 10 megawatt (MW) Greenough River Solar Farm has potential for expansion to 40MW. Other proposed solar generation initiatives include the 50MW Chapman Solar Farm and 1.5 MW North Midlands solar thermal project.

Connected

- Geraldton was the first regional area in the State to be connected with the National Broadband Network's (NBN) 'fibre to the premises' platform and will become the Point of Interconnect for all telecommunications activity in WA (north of Geraldton).
- The Australian Defence Satellite Communications Ground Station is located at Kojarena 30km east of Geraldton. Operated by the Australian Defence Force, the station is a major Australian signals interception facility, and is part of a worldwide system of satellite communications keyword monitoring known as Echelon.

A region of innovation

- One of the world's largest beta carotene operations is found near Port Gregory, south of Kalbarri.
- The City of Greater Geraldton's (CGG) has a focus on technological advancements and a carbon neutral agenda, emanating from its participation in the IBM Smarter Cities challenge.
- The Pollinators organisation nurtures people and innovations, particularly those most likely to result in community benefit.
- A technology precinct is being developed at the Geraldton airport.
- Grower group alliances, focussed on agriculture and Natural Resource Management, are proactive across the region.



CHAPTER 2 - MID WEST HEARTBEAT

Understanding where a region has been can help us predict where it is going. The past defines who people are and underpins who they believe they can be in the future. A region's history echoes its culture and helps describe its authentic 'heartbeat'. This heartbeat is unique to each region and distinguishes it fundamentally from all other regions not only in Australia, but globally.

The Mid West's Indigenous and European history is as diverse as its landscape.

For thousands of years the region has been home to many different groups of Aboriginal people. The main language groups recognised today are Nhanda, Nagguja, Amangu, Wajarri, Badimaya and Martu. Collectively, the region's Aboriginal population is known as Yamaji People.

Before European colonisation Aboriginal people lived according to the rhythm of the land. Laws and customs were (and in many places still are) determined by the stories of the dreaming spirits and cultural lore. These stories underpin a complex social structure, which determines factors such as where a man or woman can go, whom a person can marry or talk to, the food they may eat and the springs or waters they can drink from.

Aboriginal people mined red ochre from Wilgie Mia Mine near Cue some 30-40,000 years before European settlement, which is understood to be the world's oldest mining operation. Indigenous tribes and groups traversed the breadth and width of Australia to access this 'magical' ochre, which was used in artwork and as body paint for tribal ceremonies. The ochre was considered 'magical' due its magnetite content, which caused the paint to sparkle and shine when the light from a fire reflected upon it.

People travelling from afar for the ochre included the Yolgnu people from Arnhem Land in the Northern Territory. The ochre is understood to have been used in some of the first examples of international trade between Indigenous Australians and the Maccasans from the Kingdom of Gowa (Indonesian island now called Sulawesi).

Today the Mid West is home to a number of traditional Aboriginal groups, with indicative regions shown in Figure 15. Precise boundaries vary between sources and the figure is provided purely for indicative purposes.

Portuguese sailors ventured past the Geraldton coastline as early as 1527. The Dutch were the first European people to make an impact on the Mid West, most famously in 1629 the Dutch trading ship 'Batavia' ran aground at the Houtman Abrolhos Islands; a chain of 122 islands and coral reefs around 60km off the Geraldton coast.

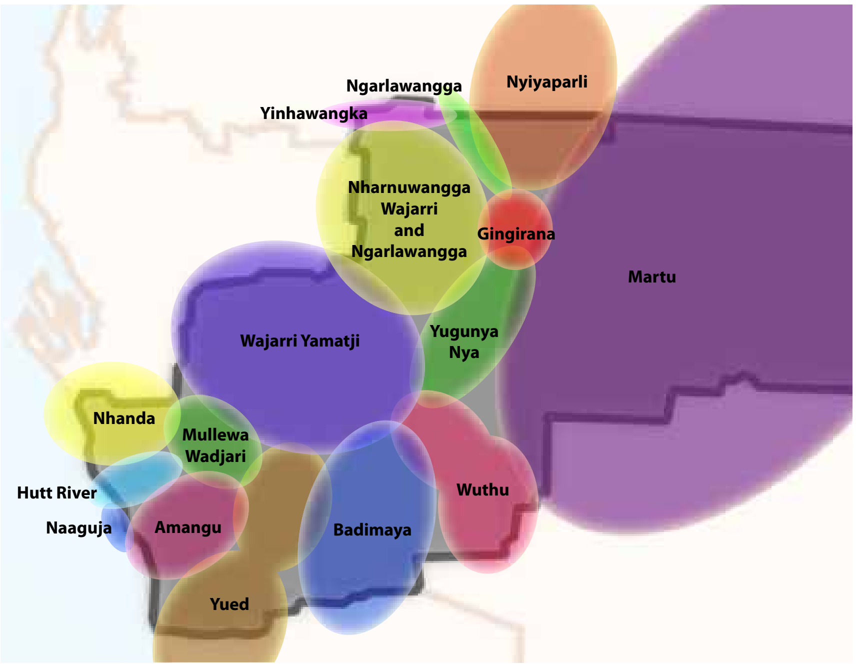


Figure 15. Traditional Aboriginal groups - indicative regions

European exploration and settlement in the Mid West commenced in the early 1800's following the establishment of Perth in 1829. Lieutenant George Grey explored and named many of the region's coastal geographical features on a voyage to Shark Bay around 1839 aboard 'The Russell'. Shipwrecked at Gantheaume Bay (Kalbarri), Grey was forced to trek over 500km back to Perth. Along the way he named the Murchison, Greenough and Chapman Rivers, among other sites.

Explorers Augustus and Gregory traversed much of the region in 1846 with Augustus reporting lead at the Murchison River near Kalbarri. This area was named Galena, which is Latin for lead. Australia's first lead mine, the Geraldine Lead Mine, was opened at Galena in 1849.

Geraldton began operating as the region's major seaport in around 1840 when its inaugural vessel, the HMS Champion, first anchored off the coast. The area was subsequently known as Champion Bay and exported the region's first lead shipment in 1849. The Geraldton townsite was declared in 1851. Originally called 'Gerald's Town' after Governor Fitzgerald, it was later shortened to Geraldton. A jetty was built in 1857 not far from the current port, which saw consistent growth of Geraldton as a port district thereafter.

Augustus also reported good land at the Greenough Flats near Geraldton and pastoralists soon ventured north during the 1850s and 1860s with their sheep to make a living from this new land. Mullewa was one of the first inland settlements to develop with its heavy sandplain country forcing pastoralists to stop their four wheeled wagons and transfer their loads onto smaller two wheeled drays. A warehouse was soon established to service this need, around which the Mullewa township gradually developed.

Stranded wool wagon near Mullewa. Source: Battye Library

By 1871, 500 people lived in Geraldton, which became the region's first municipality in 1877.

In 1865 one of the region's first settlers, John Perks, relocated two flocks of 1,000 sheep from his boss' property near Northampton to an area north east of Mullewa, later known as Yuin Station. In doing so, Perks effectively launched the Murchison pastoral industry and by 1890 sheep were grazing much of the district with homesteads and permanent stations developed throughout the region's inland.

A network of 'wool' roads from the region's east into Mullewa soon developed, to dispatch wool to the Geraldton port. Mullewa soon developed accommodation services, had four local pubs and was declared a municipality in 1895.

Transport costs into the Geraldton port were constraining the region's emerging mining and farming industries. Subsequently, the State's first government railway was opened from Geraldton to Northampton in 1879 with another from Geraldton to Mullewa in 1894. The Geraldton to Northampton railway was soon deviated east into the region's Chapman Valley (agriculture region) from Wokarina to Naraling in 1910 and on to Yuna in 1912. It was also extended from Northampton to Ajana (just south of Galena) in 1913 with the Galena townsite gazetted in 1917.

In 1892-93 a railway jetty was developed to aid the import and export of large shipments at the Geraldton port. This was later extended in 1902 and 1909. Sections of the jetty were destroyed during World War II to thwart any potential invasion attempts by the Japanese and the remainder of the jetty was destroyed soon after.

Meanwhile Robert Austin, who named Mount Magnet in 1854 due to the magnetic effect the stones had on his compass, also reported the region's incredible potential for gold. It was several decades later before the region was explored for gold.

Railway Jetty opposite Durlacher Street. Source: Geraldton Library

It is said that gold was first found near Mount Magnet in 1888 although the claim wasn't registered until 1891. With significant further discoveries soon after, the region's gold rush began and the 'Murchison Goldfield' was proclaimed in September 1891. Mount Magnet joined the gold rush in the same year, with Cue (1892), Sandstone (1895) and Meekatharra (1896) soon to follow. Paynes Find (1911) south of Yalgoo saw the region's gold mining activity venture south into the more typical agricultural areas.

To support the gold rush, the Geraldton to Mullewa railway was soon extended to Pindar and Yalgoo in 1896, Cue in 1897 and to Meekatharra and Sandstone by 1910. The 1930s depression slowed activity in the region but gold and pastoral industries again boomed in the 1950s.

Peak populations in some of the Murchison communities include Cue – 10,000 (down to 283 in 2013); Sandstone – 6,000-8,000 (110 in 2013); Wiluna – 9,000 (1,212 in 2013); and Yalgoo – 2,300 people (422 in 2013). By 1898 there were 18 pubs in Yalgoo and it was said that hotel trade was second only to mining. In 1902 Mount Magnet had 14 hotels, two newspapers and more than 30 mines.

During the boom, townsites were also established along the railway line between the various inland communities. Between Mount Magnet and Cue (80km apart) there were other townsites, including Lennonville with up to 3,000 residents and five hotels. Between Cue and Meekatharra (120km apart) Austin and Nannine townsites once existed, with Paynesville between Mount Magnet and Sandstone (160km apart) once housing several thousand people. With the decline of the mining industry and closure of the railways many of these historic mining towns no longer exist.

Bordering the Indian Ocean, the Mid West is a productive fishing region with commercial activity gaining momentum around the late 1800s. One of the local pioneers was Richmond (Dick) Burton who was listed as Geraldton's only fisherman in 1877-78. Burton fished for snapper, dhufish, cod, Spanish mackerel and baldchin groper and is understood to have performed other maritime activities including charter services for explorers such as John Forrest.

Mine near Mount Magnet, 1896. Source: Battye Library

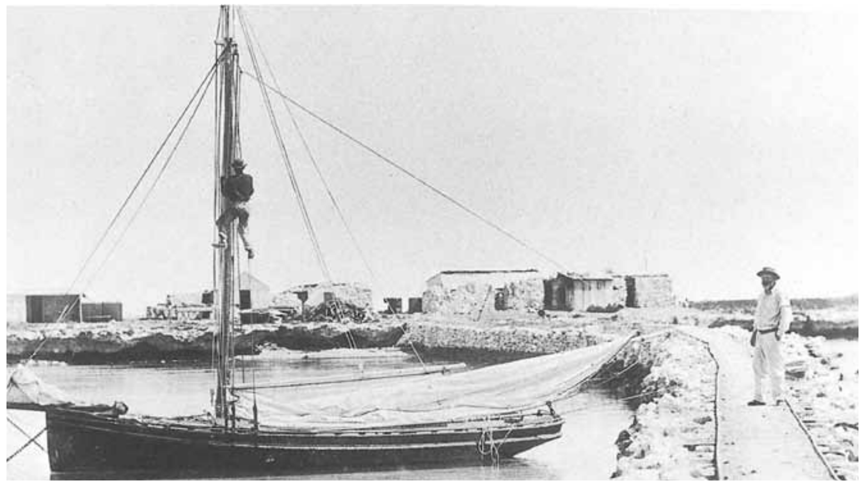
The local industry developed with several large fishing boats relocated from Fremantle to Geraldton in 1902 and the Nor-West Fishing Company formed in 1903. The industry progressively expanded up and down the Mid West coast to towns such as Dongara, Leeman, Port Gregory and Kalbarri plus fishing villages in between. A number of Norwegians, Danes, Swedes, Finns and Italians ventured to Geraldton to earn a living from fishing. By 1907 the Geraldton population was around 2,800.

Charles Broadhurst, who had been canning fish from Mandurah since 1878, ventured to the Abrolhos Islands in around 1882 to mine guano (for fertiliser). A visitor to the mine in 1884 noted the abundant fish, rock lobster (crayfish) and oysters, which triggered new fishing interest at the Islands. With the cessation of guano mining in the early 1900s the only activity at the islands was line fishing and to a lesser degree crayfishing (mainly for bait). The jetties, dwellings and light rail left by the mining operations lent themselves to these emerging enterprises.

The rock lobster industry was gaining momentum throughout WA with particular focus on waters off Fremantle and Rottnest and to a lesser extent Geraldton. By 1930 six Geraldton boats were listed as rock lobster fishers, with three of them listing this as their sole pursuit. Crayfishing at the Abrolhos Islands was still only limited until around 1929 with a basic cannery established in 1931.

The course of the local industry changed dramatically with the outbreak of World War II in 1939 with regulations introduced to maintain national security and numerous fishermen being enlisted. By 1943 the number of fishers in WA had dropped from 700 to 200 with only ten of the previous 40-50 boats in Geraldton still at sea.

During the war the WA government developed modern canning facilities and confirmed huge orders of rock lobster to supply defence force personnel. By this time a military station and air training centre had been established in Geraldton, with a US Catalina flying-boat base operating from the local harbour. Rock lobster were eagerly sought by the US military and before long the local industry was having trouble meeting defence force demands.



Charles Broadhurst's Abrolhos Islands guano mine (1892)

The return of the servicemen to the industry after the war quickly boosted rock lobster production. Supply from the Abrolhos Islands quickly exceeded the processing capacity of its cannery and Geraldton fishers were able to start selling 25% of their catch on the open market at higher prices.

During its early evolution the Western Rock Lobster industry was controlled by a small group of factories that purchased lobster from the fishermen at the lowest possible price, processed and sold them to various markets – predominantly the USA. Consumer palettes soon evolved and canned lobster started losing its appeal. WA fishermen implemented new grading and quality control standards, mirroring the South African industry, to gain entry to the lucrative US tails market.

Between 1949-51 a small group of Geraldton based fishermen floated the idea of a northern fishing co-operative, with the intention to deregulate the industry controlled by the factory owners, increase returns on their catch and develop greater marketing efficiencies. The Geraldton Fisherman's Co-operative (GFC) followed with its first shipment of 'Brolos' brand Western Rock lobster processed in 1951. By 1952 the GFC was one of ten lobster processors operating in WA, offering a range of frozen lobster tail products to the United States and supporting Co-op fishermen and members with various services (pot leasing, marine brokerage, financial advice/ assistance).

Later in the 20th century the substantial value of other regional commodities including petroleum and other minerals led to further population growth in some communities. The Mid West has grown into WA's most diverse regional economy.

The region's unique heartbeat and diverse social and economic history rings true today. Its mainstay industries continue to drive the regional economy and its innovative and resilient people continue to pursue opportunity and a desired way of life.

CHAPTER 3 - THE MID WEST REGION - CONTEXT AND ANALYSIS

MID WEST GEOGRAPHY

The Mid West region of WA covers approximately 478,000km^2 or almost one fifth of the WA landmass. It extends around 340km along the coast from the town of Green Head (south) to Kalbarri (north) and inland around 1,000km to Wiluna's eastern boundary in the Gibson Desert.

Figure 16. Indicative regional boundaries

The coastal areas of the Mid West experience a mild Mediterranean climate of cool / wet winters and hot / dry summers, strong coastal sea breezes in summer and around 260 sunny days annually. Inland areas of the Mid West have an arid climate with very hot / dry summers and cold / wet winters. Moving inland from the coast, the climate becomes increasingly semi-arid.

LANDSCAPE, GEOLOGY AND ENVIRONMENT[1]

The majority of the Mid West overlies Archean rocks of the Yilgarn Craton, a part of the Earth's crust that has been stable for over 2.5 billion years (Figure 17). About 80% of the area consists of granite-greenstone rocks, with the remaining 20% consisting largely of gneisses whose distinction from similar rocks within the granite-greenstone country was not recognized until 1979. These rocks of the Mount Narryer and Jack Hills areas form one of the largest known intact fragments of early Archean (3.3 billion years+) crust on Earth. Zircon crystals found in metamorphosed sandstones indicate the presence of an older crustal component near Jack Hills believed to be more than four billion years old.

In the Northampton area strongly deformed granites and sediments of the Proterozoic Northampton Complex are found that were formed in the roots of an ancient (1 billion years old) mountain range. Much of the complex is buried beneath younger sedimentary rocks of the Phanerozoic Perth Basin. The northeast Proterozoic sedimentary basins comprise thick sequences of sedimentary rocks intruded by large volumes of basaltic magma, making it one of the largest accumulations of igneous rocks in the world.

South of Geraldton the Phanerozoic Perth Basin is a deep linear trough of terrestrial and marine sedimentary rocks deposited from 445 million years ago to the present day.

The region's coastline includes long stretches of white sand dunes and limestone cliffs, the steepest of which occur north of Kalbarri (Zuytdorp Cliffs). Inland is the sandplain, with high scenic quality features such as wildflowers, the Murchison River gorge and the Moresby Range. Further east is the Meekatharra Plateau, which is characterised by vast sandplain areas, breakaways and broad saline drainages.

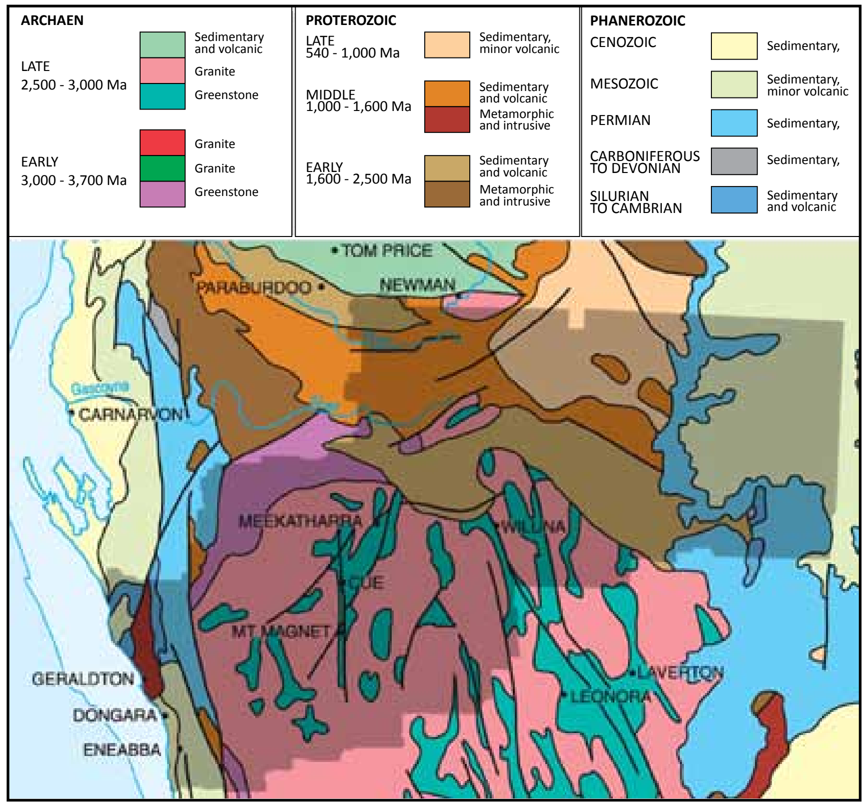


Figure 17. Indicative Mid West geology

SOILS AND PRODUCTION

The Mid West contains the broad landscape types of the Geraldton Plain, Dryandra Uplands, Meekatharra Plateau, Kalbarri Sand Plain and Talisker Plain. The soils are derived mainly from ancient sedimentary rocks which have been subjected to dramatic climate changes resulting in soils with deeply weathered profiles that are inherently low in nutrients. Clearing for agricultural has exacerbated soil hazards such as wind erosion, water erosion, ground water rise and salinity, nutrient leaching, acidification and water repellence.

BIODIVERSITY

The Mid West region falls squarely within the South West Australia Ecoregion, which is globally recognised as one of the planet's major biodiversity hotspots. The South West Australia Ecoregion is Australia's only recognised international hotspot and meets the two strict criteria; containing at least 1,500 endemic plant species and having lost at least 70% of its primary vegetation.

The region is characterised by vast plains, plummeting river gorges, flat-topped mesas, sandstone outcrops and dune systems supporting a variety of vegetation associations – heath and scrub heath, shrublands, low woodlands and tree heaths – that provide habitats for native species. In spring the green and brown sandplain vegetation erupts into dazzling colour: brilliant yellows, pinks and whites carpet the landscape as everlastings burst into bloom; the bushland explodes with the vibrant hues of thryptomenes, grevilleas, eremophilas and a kaleidoscope of other wildflowers.

The nationally recognised Geraldton to Shark Bay Biodiversity Hotspot also incorporates a large proportion of the Mid West region and is equally endowed with high endemism and biological diversity. This is under increasing threat from development.

CLIMATE CHANGE

The State of the Climate (2014) report by the Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation (CSIRO) suggests a range of climate changes are occurring, some of which may affect the Mid West:

- Australia's climate has warmed by 0.9°C since 1910 and the frequency of extreme weather has changed, with more extreme heat and fewer cool extremes;
- rainfall averaged across Australia has slightly increased since 1900, with the largest increases in the North West since 1970;
- rainfall has declined since 1970 in the South West dominated by reduced winter rainfall;
- extreme fire weather has increased and the fire season has lengthened across large parts of Australia since the 1970s;
- global mean temperature has risen by 0.85°C from 1880 to 2012;
- the amount of heat stored in the global oceans has increased and global mean sea level has risen by 225mm from 1880 to 2012;
- average annual global atmospheric carbon dioxide concentrations reached 395 part per million in 2013 and concentrations of the other major greenhouse gases are at their highest levels for at least 800,000 years;
- Australian temperatures are projected to continue to increase, with more extremely hot days and fewer extremely cold days; and
- sea level rise and ocean acidification are projected to continue.

1 Mid West Regional Planning and Infrastructure Framework (MWRPIF) with input from Northern Agricultural Catchments Council and Department of Mines and Petroleum

The Mid West is home to 57,901 people (Estimated Resident Population (ERP), 2013).[1]

The region's 17 local governments are notionally divided into three subregions that reflect similarities of environment, land use, demography, industry and issues; namely the Batavia Coast, Murchison and North Midlands subregions (Figure 18).

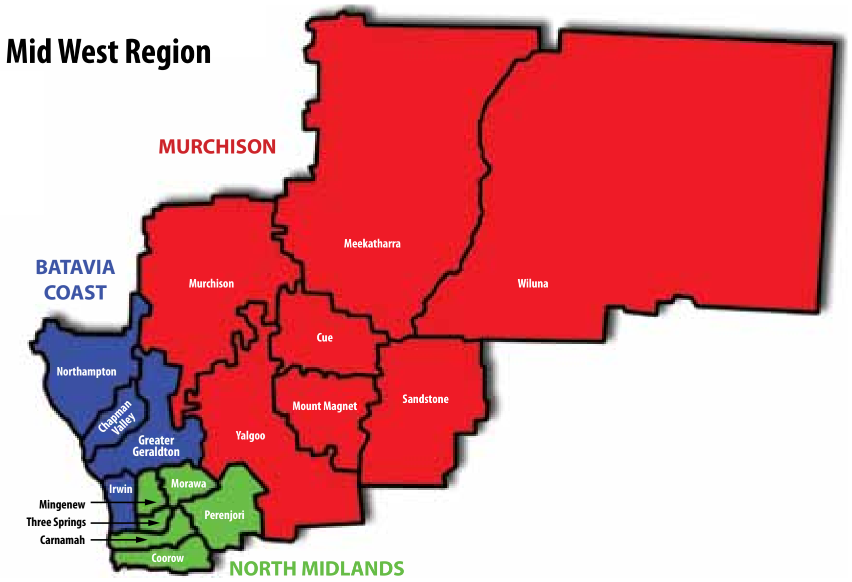


Figure 18. Mid West region and its three subregions (as defined by MWDC)

BATAVIA COAST

The Batavia Coast spans 31,212km^2, or 6.5% of the Mid West land area. The subregion consists of the region's four most populous local government areas. It includes Greater Geraldton, which contains the coastal city of Geraldton (the region's commercial and government service centre) and the adjacent shires of Chapman Valley, Irwin and Northampton. Its ERP of 48,821 persons accounts for 84% of the region's population, with 10.5% of people identifying as being Aboriginal.

The Batavia Coast boasts one of the most diverse economies in regional WA. It is a fast-changing subregion that is quickly evolving from its traditional agricultural and commercial fishing base, into a diverse resource economy with a significant population and service industry. Geraldton is the regional centre for retail, manufacturing, commercial fishing, shipping, transport, health, education and training services and is the primary base for most Mid West government services.

Although not immune to the effects of major downturns in global economic activity, the subregion's economy is likely to continue to grow over time, with:

- agriculture, resources and population services continuing to provide a diverse and stable economic base;
- expansion of the subregion's tourism industry;
- development of community capacity to support new developments;
- additional growth opportunities arising from more intensive agriculture and technological advances;
- spin offs from major regional project developments;
- expansion of Geraldton as a logistics centre (especially through increased capacity of its port and the expected eventual development of Oakajee);
- enhancement of the amenity and vibrancy of Geraldton's town centre; and
- targeted investments in education and enterprise-development.

MURCHISON

The Murchison incorporates the shires of Cue, Meekatharra, Mount Magnet, Murchison, Sandstone, Wiluna and Yalgoo. It spans more than 423,000km^2; representing 89% of the Mid West and 17% of WA's total landmass.

While it covers 89% of the region's landmass, the Murchison's ERP of 4,497 people represents around 8% of the region's population, equating on average to one person to every 96km^2. In 2011 around 36% of Murchison residents identified as being Aboriginal.

The Murchison is a very diverse minerals province and hosts the majority of existing and proposed resources projects in the region, including gold and iron ore operations as well as copper, nickel, vanadium and uranium. Furthermore, due largely to its remote location and radio quietness, the Murchison has been selected as the primary location for the Australian component of the international Square Kilometre Array radio telescope (SKA); the world's largest and arguably most important radio astronomy project. The main economic drivers for the Murchison relate to mining and pastoral activities, with an emerging outback tourism sector developing that holds promise for the subregion.

NORTH MIDLANDS

The North Midlands spans 23,269km^2 (4.9% of the Mid West) and incorporates the shires of Carnamah, Coorow, Morawa, Perenjori, Mingenew and Three Springs. It accounts for a total ERP of 4,583 people or around 8% of the region's total, with approximately 7% of the North Midlands' resident population being Aboriginal.

Agricultural production has traditionally dominated the North Midlands. Western rock lobster fishing from the coastal towns of Green Head and Leeman has also been a considerable contributor to the subregional economy. Mining at Eneabba has also been a significant contributor, where from the 1970s until recently, a succession of companies mined what was a major world class mineral sands deposit.

Agriculture (and potentially horticulture) is expected to underpin the subregional economy for some time, although recent iron ore developments are emerging as potentially dominant contributors going forward. These include the active Karara Mining Ltd ($2.6 billion construction) and proposed Asia Iron Extension Hill ($3 billion) magnetite projects. Tourism is also an increasingly important industry for the North Midlands.

Table 1 provides a summary of Mid West subregions, local government populations (2013 ERP) and main communities.

Local Government	2013 Population	Main communities
BATAVIA COAST - 48,821 (84.3%)		
Chapman Valley	1,214	Nabawa, Nanson, Yuna
Greater Geraldton	40,448	Cape Burney, Drummond Cove, Geraldton, Greenough, Mullewa, Walkaway
Irwin	3,780	Dongara, Port Denison
Northampton	3,379	Binnu, Horrocks Beach, Kalbarri, Northampton, Port Gregory
MURCHISON - 4,497 (7.8%)		
Cue	298	Cue
Meekatharra	1,521	Meekatharra, Karalundi, Yulga Jinna
Mount Magnet	711	Mount Magnet
Murchison	127	Murchison Settlement, Pia Wadjarri
Sandstone	116	Sandstone
Wiluna	1,279	Wiluna
Yalgoo	445	Yalgoo, Paynes Find
NORTH MIDLANDS - 4,583 (7.9%)		
Carnamah	550	Carnamah, Eneabba
Coorow	1,085	Coorow, Green Head, Leeman, Warradarge
Mingenew	486	Mingenew
Morawa	906	Morawa
Perenjori	924	Latham, Perenjori
Three Springs	632	Three Springs

Table 1. Mid West local governments, populations and main communities

1 Australian Bureau of Statistics (Data released 3 April 2014)

022 POPULATION TRENDS

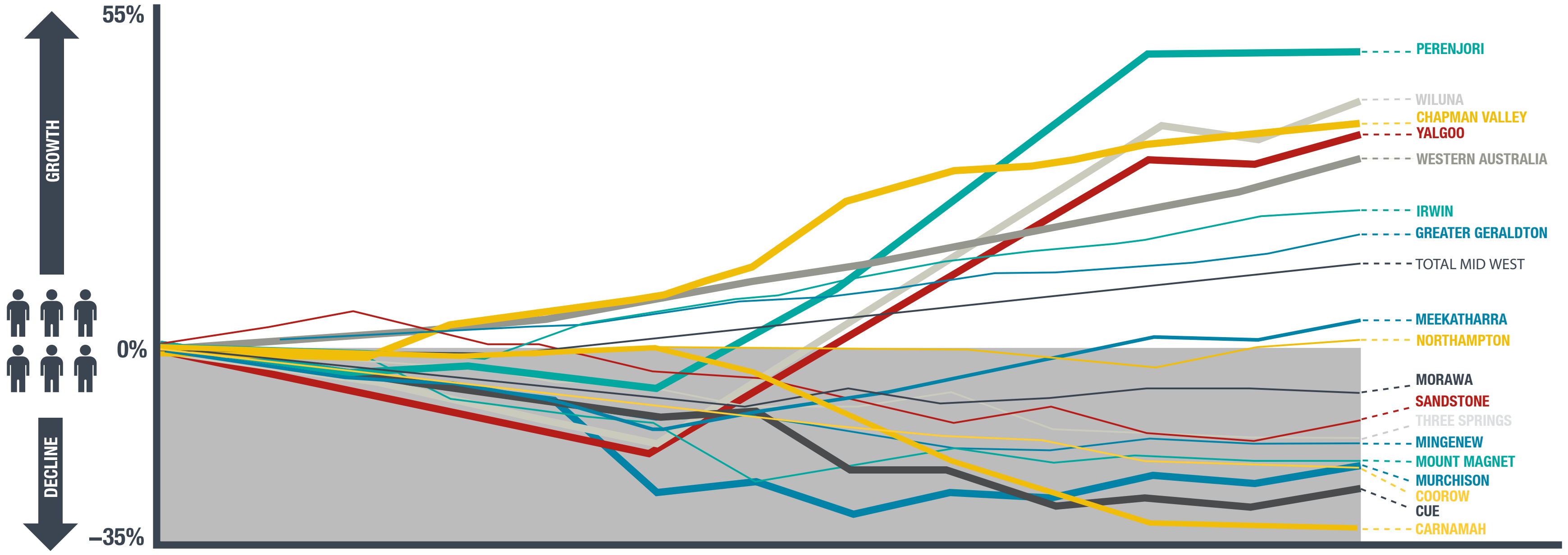


Figure 19. Mid West local government population movements (2001 - 2013), based on ERP growth / decline

RATE OF POPULATION CHANGE

From 2003-13 the region's population increased at an average annual growth rate (AAGR) of 1.4%, which is considerably lower than the State AAGR of 2.6% and regional WA generally at 2.3%.

The region's growth trajectory has risen strongly in recent years, with its AAGR from 2008-13 being 1.9% with 2.4% growth from 2012-13. This escalated recent growth has most likely resulted from major project developments, including resource and infrastructure projects. The City of Greater Geraldton (CGG) grew by 2.9% from 2012-13.

Figure 19 above highlights the extreme variability in the cumulative population movement in different Mid West communities from 2001-13. The combined Mid West and WA growth trends during the same period are included for comparative purposes.

The Shires of Chapman Valley, Irwin and CGG have grown steadily over the decade. Much of Chapman Valley's population growth has been in its western fringe (adjoining Greater Geraldton) with many new Chapman Valley residents using Geraldton as an employment, shopping and schooling base. Consistent decline can be seen in many of the region's agriculture based communities, with surges in mining activity the likely cause of strong recent population spikes in Perenjori (includes the new Karara mine), Wiluna and Yalgoo. The presence of temporary workforces may have distorted population figures for some communities.

Despite a number of Mid West local governments showing negative population growth over the term of the graph, most have trended upwards in recent years.

SUBREGIONAL POPULATION TRENDS

In absolute terms the region's population grew by 7,426 from 2001-13 (from 50,475 to 57,901). Population changes in the Mid West's three subregions reflect steady growth in the Batavia Coast, steady decline in the North Midlands and a notable 'recovery' in the Murchison, which has grown relatively strongly since 2006 after a period of decline (Figure 20).

The majority of the region's population growth occurred in the Batavia Coast (41,150 to 48,821) (Table 2). In percentage terms, growth was greatest in the Shires of Chapman Valley and Irwin, but the greatest absolute growth occurred in the CGG (34,348 to 40,448).

The 2013 population in the Murchison (4,497) was 283 people greater than its 2001 figure (4,214). However, while the Murchison's population declined by 446 between 2001-07, there was a notable trend reversal with a 4.1% AAGR from 2008-13 (equating to 923 people). The more recent population increase was particularly strong in Wiluna and Yalgoo, likely as a result of resource sector growth in the subregion, partly offset by a decline in pastoralism. Government efforts to enhance local services may have also contributed.

The North Midlands recorded a net loss of 528 people from 2001-13 (5,111 to 4,583), but this decline was entirely in the earlier part of the decade (from 2001-07). Continued farm amalgamations, compounded by drought conditions in the middle of the decade, were the most likely cause of the downward trend in the North Midlands population. From 2007-13 the population remained relatively stable with its 2013 population only 23 people greater than in 2007. The emergence of iron ore projects in the subregion has helped arrest the decline, as has effort by government to enhance local services (health, education, business development).

	2001	2013	CHANGE
Chapman Valley	876	1,214	**338**
Greater Geraldton	33,882	40,448	**6,566**
Irwin	3,059	3,780	**721**
Northampton	3,333	3,379	**46**
BATAVIA COAST	**41,150**	**48,821**	**7,671**
Cue	394	298	**-96**
Meekatharra	1,453	1,521	**68**
Mount Magnet	851	711	**-140**
Murchison	160	127	**-33**
Sandstone	133	116	**-17**
Wiluna	898	1,279	**381**
Yalgoo	325	445	**120**
MURCHISON	**4,214**	**4,497**	**-283**
Carnamah	804	550	**-254**
Coorow	1,375	1,085	**-290**
Mingenew	584	486	**-98**
Morawa	985	906	**-79**
Perenjori	612	924	**312**
Three Springs	751	632	**-119**
NORTH MIDLANDS	**5,111**	**4,583**	**-528**
MID WEST - 50,475 - 57,901 (7,426)			

Table 2. Summary of Mid West local governments population movements (2001 - 2013)

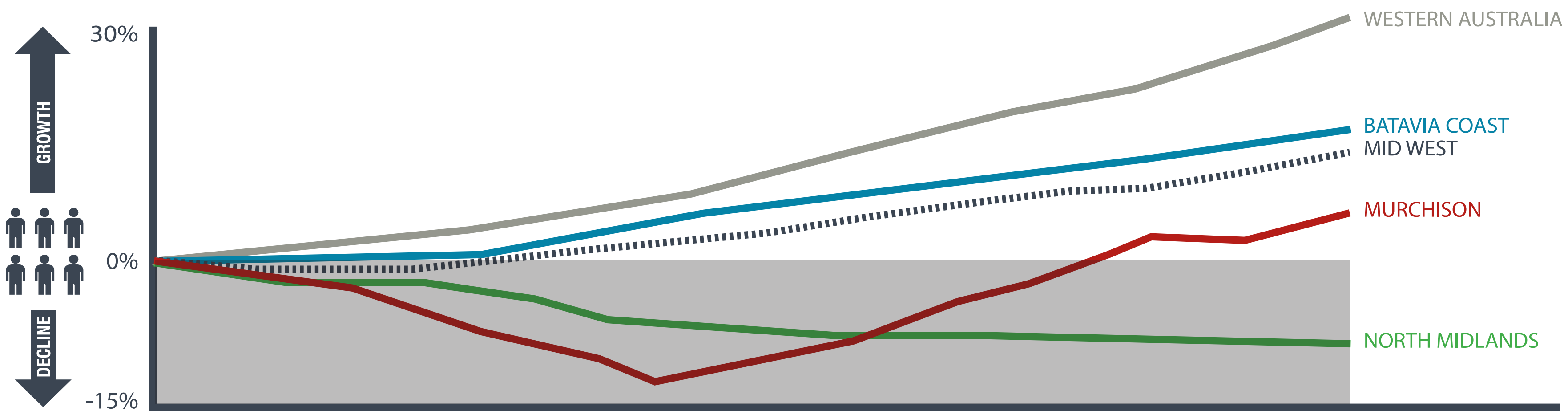


Figure 20. Subregional cumulative population movements (2001 - 2013), based on ERP growth / decline

RESIDENT PROFILE (AGE AND GENDER)

Most age demographics of the Mid West broadly reflect the WA profile with 21% of the population aged 14 years or under (WA 20%) and 13% over 64 years (WA 12%). However, the State's median age (37 years) is lower than the Mid West (40 years) and the region's youth population aged 0–19 (27.9%; 15,008 people) is slightly higher than State (26.3%).

A 'narrowing' in the teenage and young adult cohort is evident in the Mid West population pyramid, which is characteristic of much of regional Australia due to a need or desire to move away for education, employment or lifestyle opportunities. The variances between the Mid West and national age pyramids (for 2011) are seen in Figure 21 below, with the national age profile overlaid above that of the Mid West. The main variances are also shaded.

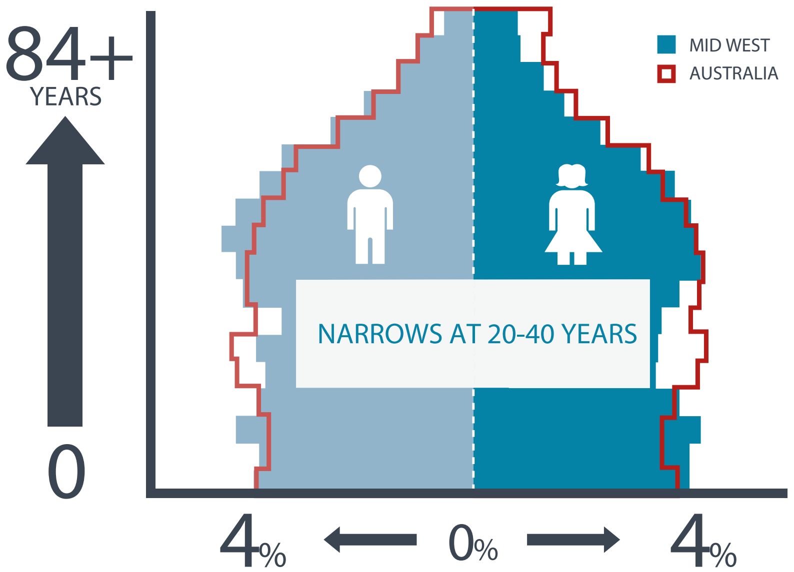


Figure 21. Population pyramid comparisons of Mid West and Australia

Mid West residents aged 55+ (13,368) represent around 25% of the region's usual residents. Projected growth in the region's older population groups are indicated in Table 3.[1] The percentage growth in the number of residents aged 70+ and 85+ are significant and will have an impact on future provision of services and accommodation.

	2011	2026	% INCREASE
55+	13,368	22,220	66.2%
75+	4,526	8,875	95.1%
85+	633	1,414	123.4%

Table 3. Projected growth in older Mid West population cohorts

AGE / GENDER BALANCE

Subregional population pyramids highlight the distinct differences in age and gender profile in parts of the Mid West.

Batavia Coast (Figure 22)

As the base for the majority of the Mid West's population, the Batavia Coast shows a notable absence of young adults aged 20-34 years. There is a slightly smaller percentage of 15-19 year olds than might be expected, but this is not as extreme as from other parts of the region. This is largely due to Geraldton having a number of senior secondary schools and tertiary education and training providers to meet the needs of many of the region's youth. The shortage of younger adults in the Batavia Coast is offset by a larger proportion of people in their forties and fifties.

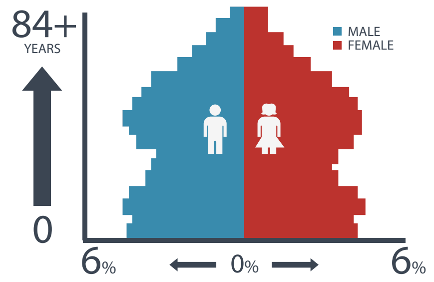


Figure 22. Batavia Coast age and gender

Murchison (Figure 23)

The Murchison has a very different age and gender composition. There is a significant deficit of 15-19 year olds resulting from the limited schooling options available locally. There is also a very large proportion of young men in their twenties, with more men than women in most age brackets up to 55-60. The proportion of people over 40 is lower than in the Batavia Coast, reflecting in part the lower life expectancy of Aboriginal people (36% of the Murchison's population). It may also be indicative of a relative scarcity of health and aged care services available locally, including housing, resulting in some retirees relocating elsewhere.

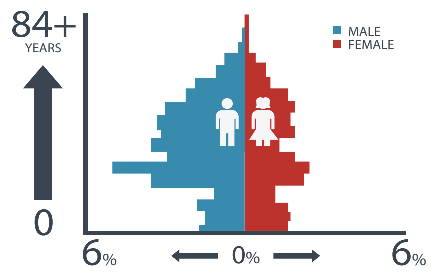


Figure 23. Murchison age and gender

North Midlands (Figure 24)

The North Midlands has a unique population composition in comparison to the rest of the region. The subregion includes all of the features normally characteristic of inland agricultural communities. There is the 'bite' out of the pyramid where 15-24 year olds should be, characteristic of many regional communities. There are also disproportionately more older adults of working age and more men than women (although not as pronounced as in the Murchison). Older adults (past retirement age) make up a higher proportion of the subregion's population; again characteristic of agricultural communities.

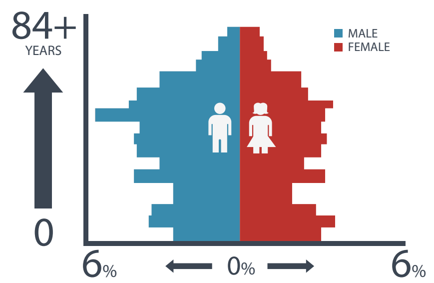


Figure 24. North Midlands age and gender

ABORIGINAL POPULATION

Approximately 12% of the Mid West population identifies as being Aboriginal, which is substantially higher than the WA rate of 3.8%. This equates to around 6,700 Aboriginal people in the Mid West (2011).

The age and gender profile of Aboriginal people in the Mid West as shown in Figure 25, indicates that Aboriginal population growth is likely to be through natural increase rather than migration.[2] The pyramid shows a young population with 36% under 15 years of age (compared to 21% across the Mid West).

Unlike the trend in the total population for the region, there is no apparent loss of youth (teenage and young adults) or swelling in the working age population. Only 4% of the region's Indigenous population is over age 65 compared to 13% of the total regional population, which is likely to be a legacy of higher mortality rates combined with a larger proportion of children.[3]

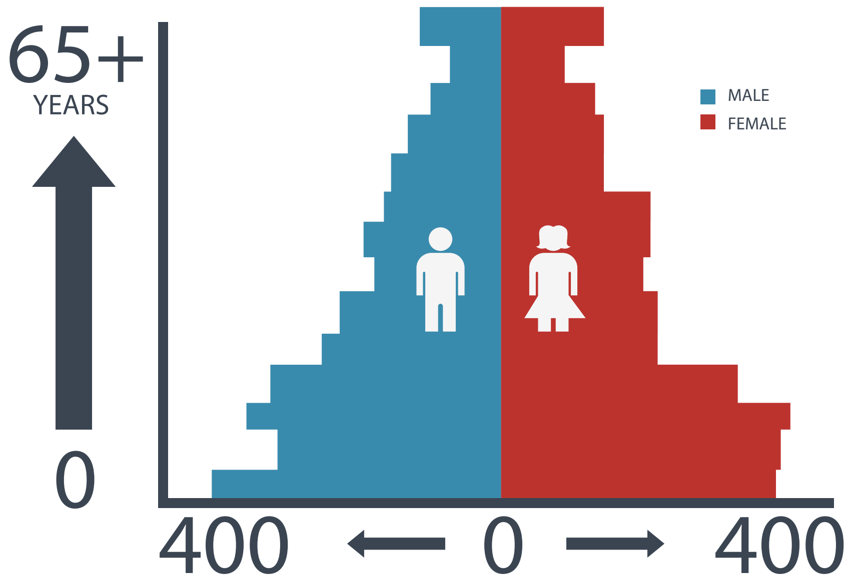


Figure 25. Aboriginal people population pyramid - Mid West usual residnets

ABORIGINAL POPULATION - SUBREGIONAL VARIANCE

The subregional variance of the region's Aboriginal population is significant; with the Batavia Coast 11%, Murchison 36% and North Midlands 7% (2011). The majority of Aboriginal people in the Mid West live in the Batavia Coast (73%) and principally in Greater Geraldton (67% of the region's total). Almost 23% of Aboriginal people in the Mid West live in the Murchison (2011 ERP).

1 Statewide Ageing in the Bush Mid West preliminary findings. Verso Consulting (2014)

2 Social Dimensions. Research undertaken for RDAMWG (2013)
3 Social Dimensions. Research undertaken for RDAMWG (2013)

024 SOCIAL PROFILE

REMOTENESS AND ACCESSIBILITY

The Accessibility / Remoteness Index for Australia (ARIA) provides an indication of remoteness and accessibility based largely on proximity to service centres and other people. It is one of several measures available and ranks communities on a scale of 0-12.

Mid West communities range between 2.76 (accessible) for Geraldton to 12 (very remote) for Wiluna. Thirteen of the region's 17 local governments rate as either remote or very remote, including all Murchison and most North Midlands local governments (Table 4).[1]

Highly accessible (0 - 1.84)	Accessible (→1.85 - 3.51)	Moderately Accessible (→3.52 - 5.8)	Remote (→5.8 - 9.08)	Very Remote (→9.08 - 12)
-	Geraldton (*ex Mullewa)	Irwin	Carnamah	Cue
		Mingenew	Chapman Valley	Meekatharra
		Three Springs	Coorow	Mount Magnet
			*Mullewa	Murchison
			Morawa	Sandstone
			Northampton	Wiluna
			Perenjori	Yalgoo

Table 4. ARIA rankings for Mid West local governments

SOCIO-ECONOMIC INDEX FOR AREAS

Socio-Economic Index for Areas (SEIFA) is a general measure of relative socio-economic advantage and disadvantage. SEIFA indices are constructed from a broad range of ABS Census data and the scores for all similar areas are normalised. A score of 1,000 means an area ranks in the middle of the distribution for similar statistical areas across Australia. SEIFA data is available by a variety of different statistical areas / zones.

Of the Mid West region's local government areas, 16 / 18 scored below 1,000 in 2011 and were therefore considered in the lower half of the national distribution (NB Geraldton / Greenough and Mullewa were counted separately, but have since been amalgamated). However, this is somewhat skewed with almost 70% of the region's population residing in the one local government. Alternatively, looking at Mid West State suburbs (smaller population groupings), around half scored below 1,000 (35 / 68).

MIGRATION

Research undertaken for RDAMWG[2], indicated the following:

- migration has been the principal source of population growth in WA. The in-migration rate in WA has generally exceeded the national rate, especially over the past 50 years;
- like most of WA's regions, the Mid West attracts far fewer migrants than the Perth metropolitan area, with only 12% of the region's population not born in Oceania (compared to WA at 26%);
- in percentage terms, 'net migration' contributed more to populations in the Murchison and North Midlands than in the Batavia Coast (from 2010-11). This correlates with new resource sector employment opportunities in the Murchison and North Midlands during the period;
- in-migration to the Mid West is almost entirely from people who lived elsewhere in WA before coming to the region. At least half of the people moving to the Murchison and North Midlands subregions lived in Perth a year earlier. The Batavia Coast, which has less in-migration overall, draws proportionately more people from outside WA;
- from current data it appears that there is a predominance of males in the working ages moving into the region, particularly the Murchison and North Midlands. There is also a notable in-migration of females in their twenties in the Murchison and North Midlands;
- roughly equal numbers of men and women move to the Batavia Coast, reflecting a diverse job market and couples and families moving to take advantage of the amenities of coastal regional towns; and
- unlike in-migrants, slightly more females than males moved away from the Mid West in the 12 months before the 2011 Census. Out-migration consisted mainly of couples / families and young people (10-29 years).

DISABILITY

The ABS (2011) estimates that 20.6% of the WA population reported having some form of disability, with 12.6% caring for people with disabilities. The Disability Services Commission (DSC) Mid West indicated similar patterns in the Mid West, suggesting that almost 12,000 Mid West residents have a disability (based on ERP). DSC added that an average of one in 30 people experience significant impairment in one or more areas of communication, social interaction, learning or mobility.

The rate of disability increases with age. As our population ages, the number and proportion of people with disabilities is also increasing. DSC predicts that within a decade one in four people will have a disability and one in three people will be directly affected by disability.

The number of people accessing services in the Mid West is similar to those accessing services across the State (per 1,000 head of population). However, as indicated in Table 5, there are significantly fewer Mid West residents accessing shared, supported accommodation and intensive family support.[3] This may in part reflect reduced provision of such services in regional areas. NB the DSC Mid West region also includes the Gascoyne.

	People accessing LAC*	People accessing shared supported accomm	People accessing individual community living	People accessing ATE^ / PSO+	People accessing intensive family support
Mid West	4.07	0.27	0.51	0.84	0.19
WA	3.89	0.88	0.51	1.12	0.42

* LAC: Local Area Coordination service (Disability Services Commission)
^ ATE: Alternatives To Employment
+ PSO: Post School Options

Table 5. Services accessed by people with disabilities in the Mid West

MULTICULTURALISM

Of the region's 53,657 usual residents (ABS Census, 2011), 7,693 (14%) indicated being born in one of 32 countries (or groups of countries) other than Australia.[4] Of these 32 countries, 10 have more than 100 people living in the region with 17 having more than 50 people living in the region. The largest representation was the United Kingdom (2,891) and New Zealand (1,359) (Figure 26).

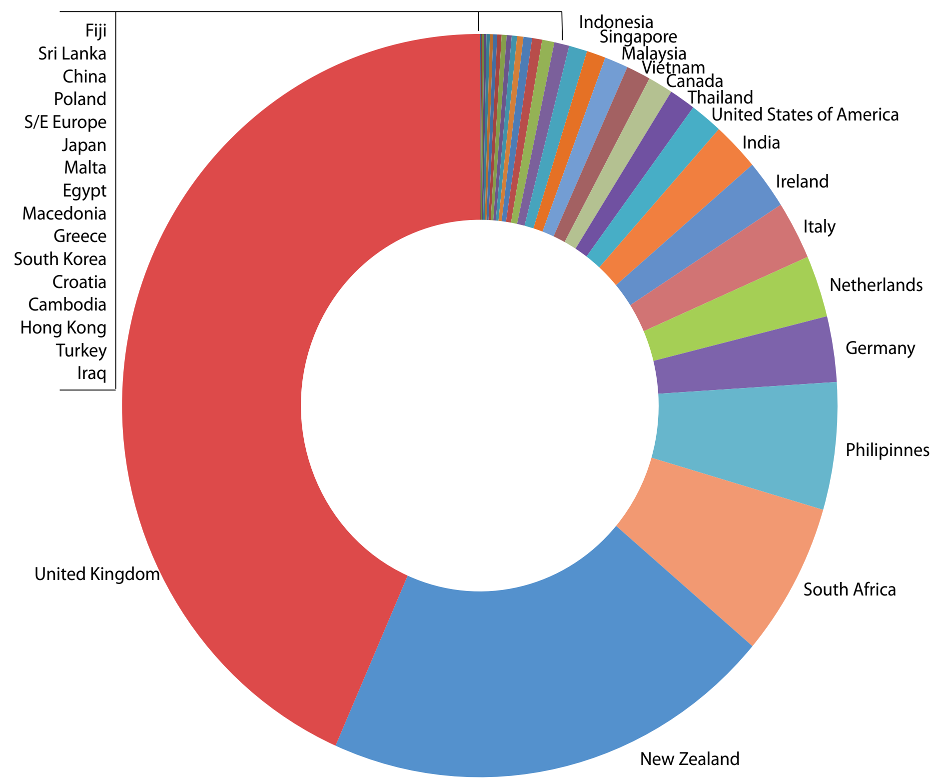


Figure 26. Mid West usual residents' place of birth (other than Australia)

Around 12% of Mid West residents speak languages other than English at home, which is significantly lower than the WA average (23%). At least a dozen multicultural organisations operate in the region to provide support to residents from a range of ethnic backgrounds.

VOLUNTEERISM[5]

In WA 17% of adults reported doing volunteer work in the year before the latest Census, compared to 21% in the Mid West. Volunteering is exceptionally high in the agricultural communities of the North Midlands and low in the remote towns of the Murchison. Women are more likely to volunteer in all Mid West subregions (Table 6).

	Batavia Coast	Murchison	North Midlands	Mid West
Men	17%	12%	27%	18%
Women	23%	16%	37%	24%
Total	20%	13%	31%	21%

Table 6. Rates of volunteerism in the Mid West by subregion

1 Accessibility / Remoteness Index for Australia (ARIA)
2 Social Dimensions. Research prepared for RDAMWG (2013)
3 Profile - Midwest area. Disability Services Commission (January 2013)
4 2011 Census of Population and Housing (2001.0)
5 Social Dimensions. Mid West population profiles prepared for RDAMWG (2013).

EDUCATION AND TRAINING

The majority of the Blueprint's education and training findings relate to the public school system as there was low data availability for private schools. Gaining a better understanding of private school outcomes to complete the regional education profile is an area requiring further effort.

Pre compulsory learning

Early childhood and parental involvement in the education pathway has increased in focus in recent years. The Department of Education will have 16 new Child and Parent Centres operational in WA by 2016. One of these will be in Geraldton (Rangeway).

The Bidi Bidi Early Childhood and Parenting Centre has operated in Mount Magnet for several years as an independent entity. The Perenjori Early Childhood Centre also commences operations in 2015. Both were significantly RfR funded.

The Australian Early Development Census (AEDC) completed nationally every three years, is a population measure of young children's health and development in communities across Australia.

In 2012, around 31% of Mid West children were considered developmentally vulnerable in one or more of the five AEDC 'domains', compared to 23% of WA children and 22% nationally. These domains are important areas of child development and also good predictors of adult health, education and social outcomes.[1]

Mid West AEDC zones varied dramatically with some having up to 65% considered developmentally vulnerable in one or more domain. The highest rates of developmental vulnerability were recorded in the Murchison and some Geraldton zones; with the lowest rates recorded in Kalbarri, Irwin, Morawa / Perenjori and some outer Geraldton zones.

Primary and secondary education

In 2013 the Mid West had almost 50 schools with around 10,794 enrolments from kindergarten to year 12. Around 21% of Mid West students are Aboriginal, which is significant given that Aboriginal people represent only 12% of the region's total population.

In the public system there are two senior high schools (both in Geraldton), eight district high schools and 21 primary schools. The region has a number of Catholic education facilities; including three primary schools and one secondary school in Geraldton and primary schools in Mullewa and Northampton. There are also two independent Colleges in Geraldton supporting students from kindergarten to year 12 as well as a number of alternative and specialist education facilities.

There are three Remote Community Schools - Wiluna, Yulga Jinna and Pia Wadjarri, as well as an Aboriginal Education Centre at Karalundi. Agriculture based secondary education is available in Morawa and the Meekatharra School of the Air operates out of Geraldton to service remote communities.

Education facilities are situated throughout the region with predominance in the more populous Batavia Coast (Table 7).

1 Australian Early Development Census website - www.aedc.gov.au

	Batavia Coast	Murchison	North Midlands	Mid West
Secondary Schools (public)	2	-	-	**2**
District High Schools (public)	3	2	3	**8**
Primary Schools (public)	12	2	7	**21**
Secondary Schools (Catholic)	1	-	-	**1**
Primary Schools (Catholic)	5	-	-	**5**
Christian Colleges (K-12)	1	-	-	**1**
Private Schools (K-12)	1	-	-	**1**
Agricultural Colleges	-	-	1	**1**
School of the Air	1*	-	-	**1**
Remote Community Schools	-	3	-	**3**
Aboriginal Education Centre	-	1	-	**1**
Other (Camp School, Independent Community School, Behaviour Centre, Education Support Centre, Special Needs School)	5	-	-	**5**
	31	**8**	**11**	**50**

*Meekatharra School of the Air - based in Geraldton (servicing the Murchison)

Table 7. Mid West primary and secondary school by subregion

Attendance of Mid West public school students is below the average attendance for public schools in WA. The proportion of Mid West students (pre-primary to year 12) categorised as 'severe' absentees (9%) is significantly higher than the WA average (3.6%). The disparity in attendance appears greater as the age group increases, particularly in high school. There is a strong correlation between attendance and attainment.

National Assessment Program – Literacy and Numeracy (NAPLAN) results for Mid West schools indicate that Mid West students (years 3, 5, 7 and 9) are up to twice as likely to not meet National Minimum Standard (NMS) levels across all categories (numeracy, reading and writing) compared to the average of WA public schools:

- Numeracy: Mid West students are (on average) six percentage points (PP) more likely to perform below the NMS and 16PP less likely to perform above NMS;
- Reading: Mid West students are (on average) 7PP more likely to perform below the NMS and 14PP less likely to perform above NMS; and
- Writing: Mid West students are (on average) 13PP more likely to perform below the NMS and 19PP less likely to perform above NMS.[2]

The Mid West NAPLAN results reflect two statewide characteristics:

1. NAPLAN results for Aboriginal students are markedly lower than those of non Aboriginal students; and
2. the further students live from a major / regional centre, the lower their results tend to be than students from that major / regional centre.

The percentage of Mid West public school students at or above NMS is indicated graphically in comparison to WA public schools (Figure 27), with Mid West students underperforming at all stages.

2 Department of Education. Report and data supplied for the Blueprint

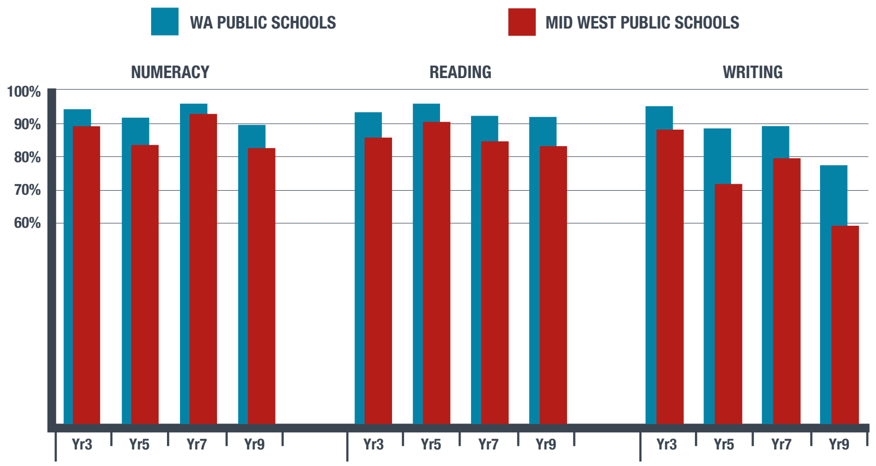


Figure 27. NAPLAN 2013 (Mid West vs WA). Percentage of students above NMS

Educational attainment is defined by the Organisation for Economic Co-operation and Development (OECD) as "the highest level of education completed by a person, shown as a percentage of all persons in that age group." As at the 2011 Census, 37.8% of the region's adult population (aged 15-64 who are no longer attending primary or secondary school) indicated year 12 (or equivalent) as their highest level of education attainment. This compared to 38.7% across regional Australia, 50.9% in WA and 52% nationally (Table 8).[3] Seventeen percent (17%) of Mid West Aboriginal residents completed year 12, compared to 38% of non-Aboriginal residents.[4]

Highest level attained	Mid West		WA	Regional Australia	Australia
Highest level of school completed	Persons (#)	Popn (%)	Popn (%)	Popn (%)	Popn (%)
Year 12 or equivalent	12,773	37.8	50.9	38.7	52
Year 11 or equivalent	4,976	14.7	10.4	11.2	9.1
Year 10 or equivalent	10,163	30.1	21.1	27.2	19.5
Year 9 or equivalent	1,733	5.1	3.1	6.3	4.3
Year 8 or below	946	2.8	1.8	3.8	3.3
No school / not stated	3,181	9.5	12.7	12.8	11.8

Table 8. Mid West residents - highest education level attained (aged 15-64 who are no longer attending primary or secondary school)

According to DoE,[5] in 2013 86.9% of eligible year 12 students enrolled in Mid West public schools attained year 12 or equivalent qualifications, only slightly below the national target of 90%. However, of the 328 year 12 public school students, only 64 applied for an Australian Tertiary Attainment Ranking (ATAR) in pursuit of tertiary entrance after year 12. Of those 64 students, 40 (62.5%) achieved an ATAR of 55+, with only six (9%) achieving an ATAR of 75+.

Year 12 attainment was significantly lower for Aboriginal students (74.2%) in the Mid West than non Aboriginal students (90.1%).

3 ABS 2011, Census of Population and Housing (2001.0)
4 ABS 2011, Census of Population and Housing (2002.0)
5 Department of Education. Report and data supplied for the Blueprint

026 SOCIAL INFRASTRUCTURE AND SERVICES

Year 12 attainment was highest in the Batavia Coast and lowest in the Murchison, with the percentage of Aboriginal students completing year 12 significantly lower than non Aboriginal students. Around 86% of year 12 students in the region were schooled in the Batavia Coast, with particularly low year 12 enrolments in the Murchison.

In 2013 62% of eligible year 12 students (128) in Mid West public schools undertook VET, with 45% of students completing a Certificate II or higher as part of their year 12 schooling. Although official 2014 figures are not available until the end of the year, the proportion of students undertaking VET is increasing, with the Geraldton Secondary College having 456 students enrolled in some form of VET and 392 enrolled in Certificate II or higher.

Retention of year 8 students through to year 12 has improved from 51% in 2004 to 69% in 2013. Retention of Aboriginal students has significantly improved from 18% in 2004 to 54% in 2013. This is likely due at least in part to State and Federal policy changes preventing students from leaving at 15 years of age unless they have further education or work.

Training

A number of private training providers operate in the region across a range of industry sectors.

The Durack Institute of Technology (Durack) is the largest provider of vocational education and training courses in the Mid West with campuses in Geraldton and Wiluna and also through flexible (online) delivery. Durack also provides training in the Gascoyne region, from its campuses in Carnarvon and Exmouth.

Durack offers around 250 qualifications (across 30 sectors) from Certificate 1 to Advanced Diplomas, offering numerous pathways to employment and further education. Around one quarter of delivery in 2013 was at Certificate IV level or above. Durack delivers training for around two thirds of apprenticeships in the region, 20% of traineeships and 90% of the government funded Vocational Education and Training (VET) programs.

Since 2006 Durack has also operated the Batavia Coast Maritime Institute (BCMI) within the broader Separation Point Marine Precinct (SPMP) in Geraldton. The SPMP was established as a world-class marine education, training and industry research centre, which along with BCMI, incorporates a Department of Fisheries operated Abrolhos Islands Research Institute supporting local marine research.

BCMI delivers training in a range of industry relevant courses such as aquaculture, horticulture, sustainability, laboratory science, conservation and land management, environmental science and a comprehensive range of maritime qualifications.

In 2014 Durack commenced construction of three new training facilities at a cost of $28.3 million, mainly funded through the RfR program. These include a Health Education and Community Services facility and a purpose built and designed Aboriginal Learning Centre at the Fitzgerald Street campus in Geraldton. A Centre for Resources Sector Workforce Training will also be developed as the first stage of the new Technology Park, adjacent to the Geraldton airport.

In 2014 Durack had 7,082 student enrolments across all courses, including 469 apprentices, 163 trainees and 326 Diploma and Advanced Diploma students; the remainder being mainly Certificate I to IV students. Aboriginal people make up approximately 17% of Durack students.

In 2014 Durack graduated 1,853 students, with approximately 13% who were residents of Gascoyne and other WA communities. Durack reported an average annual growth of 4% over the past four years.[1]

The percentage of Mid West residents with Certificate level (24.3%) and Diploma / Advanced Diploma (6.8%) qualifications reflect the regional Australia measures. Diploma / Advanced Diploma attainment is lower than WA and Australia levels, with Certificate attainment higher. Around 85% of Certificate level qualifications are at level III and IV.[2]

Higher education

Established in 2002, the Geraldton Universities Centre (GUC) is an independent, not-for-profit, organisation supporting the delivery of university courses in Geraldton in partnership with universities Australia wide. The GUC was established in response to the region's poor university participation rates and provides a tertiary option for those who wish to study locally.

The GUC model was the first of its kind in Australia and remains an innovative and unique response to meeting community and industry needs. GUC has received attention from regional communities throughout Australia with some now replicating the model. The GUC site also houses the Murchison Radio-astronomy Observatory Support Facility, which has dedicated access to the Pawsey High Performance Computing Centre in Perth.

GUC's Stage 2 building (RfR funded in 2014) has enabled the organisation to effectively manage increases in student enrolments. Further expansions may be required with population growth and further increases in course offerings. Courses currently include Nursing, Education, Business /Accounting, Communications, Engineering, Psychological Science, Social Work and a Skills for Tertiary Education Preparatory Studies (STEPS) bridging course.

GUC enrolments for the end of 2014 was 159 (excluding semester 2 Nursing course enrolments). More than 200 students have graduated from the GUC since its inception.

The WA Centre for Rural Health (WACRH) was established in 1999 to improve rural, remote and Aboriginal health through research, education, student support and community service activities. It is the only university department of rural health in WA and one of 11 Australia wide.

WACRH provides education and research services to support a range of health students (including nursing, physiotherapy, speech, occupational therapy, exercise physiology, pharmacy, dietetics and social work) with innovative clinical placement opportunities as part of their undergraduate courses.

1 Durack Institute of Technology, 2014 Annual Report
2 ABS 2011 Census of Population and Housing (2001.0)

WACRH operates with support from the University of Western Australia but also works closely with numerous health organisations on a local, State and national level. WACRH is structured with five WA based universities (UWA, Curtin, Edith Cowan, Murdoch, Notre Dame) with UWA being the administrative university. It is funded through the federal Department of Health and Ageing, and by accessing research grants.

WACRH recently opened its Education and Simulation Learning (EdSiM) Centre in Geraldton, which provides innovative education and training space with capability to link the Mid West, Goldfields and Pilbara through rural health and education activities. The Centre is the first in rural WA and includes three human-like simulation mannequins, simulated patients, two clinical demonstration areas and five customisable consultation rooms.

WACRH provides clinical placements for health science students in nursing and allied health. WA university student weeks on clinical placement has increased substantially from 175 in 2012 to 471 in 2014, with this expected to increase further in 2015. Students from various universities complete placements that prepare them for working in rural areas. WACRH provides this experience for a range of disciplines from nursing, physiotherapy, pharmacy, speech pathology, occupational therapy, social work, podiatry, dietetics and exercise physiology.

Established in 2002, the Rural Clinical School (RCS) is an Australian Government workforce initiative designed to attract more doctors to rural practice. Participating medical students spend their penultimate academic year in one of 14 rural areas, offering educational opportunities as well as a real understanding of, and enthusiasm for, community and rural life. The RCS has a presence in Geraldton.

Bachelor Degree attainment of Mid West residents (8.0%) is around half the national rate (15%) and lower than regional Australia 9.5%. Post Graduate attainment (1%) is around half that of regional Australia (1.7%) and one quarter of the national average (4%).

A summary of the highest non school qualifcation education attainment achieved by Mid West residents (aged 15-64) (as at the 2011 Census) is presented in Table 9.[3]

Highest level attained	Mid West		WA	Regional Australia	Australia
Non school qualification	Persons (#)	Popn (%)	Popn (%)	Popn (%)	Popn (%)
Postgraduate Degree	350	1.0	3.1	1.7	4.0
Graduate Diploma	386	1.1	1.8	1.5	1.9
Bachelor Degree	2,689	8.0	14.2	9.5	15
Diploma / Advanced Diploma	2,283	6.8	8.4	7.0	8.5
Certificate	8,219	24.3	20.3	23.5	19.1

Table 9. Mid West residents - highest non school qualification attained (aged 15-64 who are no longer attending primary or secondary school)

3 Extracted from ABS 2011 Census of Population and Housing (2001.0)

HEALTH

Geraldton is one of only two non-metropolitan cities in WA with public and private hospitals and an Aboriginal Medical Service, providing access to a broad range of specialist health services.

The Geraldton Health Centre (GHC) site incorporates the Geraldton Hospital (GH), regional health service teams, the regional executive and corporate services and other clinical and non clinical support services. The GHC provides support to smaller Mid West hospitals as well as multi-purpose service sites, health centres, nursing posts and remote clinics. For more specialised and tertiary level care, patients are referred to the metropolitan hospitals.

GH currently provides 73 acute, inpatient and multi day beds via an integrated general ward. This ward is composed of 37 medical / surgical beds, six paediatric beds, six rehabilitation unit beds, two mental health beds, one palliative care bed, six high dependency beds, eight maternity unit beds, four short stay observation beds and three neonatal beds. There are also two labour wards.

GH has two operating theatres and a scope procedure room. There are 27 same-day beds made up of 13 day surgery ward beds, five chemotherapy unit chairs and nine renal dialysis chairs. There are also five ambulatory, day surgery ward chairs. The current service profile enables provision of acute, subacute and post-acute care across the continuum. In addition, aged and community care, population health, cancer and palliative care, mental health and drug and alcohol services are offered.

The St John of God Hospital includes a 60 bed hospital with on-site consulting suites, operating theatres, a special care nursery, pathology, radiology, palliative and oncology services. The adjoining Specialist Centre houses a resident Medical Physician and Specialists in Obstetrics, Gynaecology, Anaesthetics, Ophthalmology, Orthopaedics and General Surgery. Sessional consulting rooms are used by visiting Specialists in Orthopaedics, Ophthalmology, Ear Nose and Throat, Urology, Dental, Faciomaxillary Surgery, Cardiology, Plastic and Reconstructive surgery, Psychology and Immunology.

WA Country Health Service provides smaller hospitals, nursing posts and health centres at a number of locations including Cue, Dongara, Kalbarri, Meekatharra, Morawa, Mount Magnet, Mullewa, Northampton, Sandstone, Three Springs and Yalgoo.

Major primary health care organisations within the region include Geraldton Regional Aboriginal Medical Service, Goldfields-Midwest Medicare Local (GMML), Ngangganawili Aboriginal Health Service (Wiluna), Silver Chain and the Royal Flying Doctors Service. Collectively these organisations provide a wide range of health services, including Aboriginal and community health services, health centres, aged care, after hours General Practice (GP) services and coordination, allied health and mental health services, chronic disease management, emergency services, general practice support, nursing posts and workforce development and support.

There were approximately 54 GPs based in Geraldton in 2014 (not all full time) and a number of small practice, solo and visiting GPs providing services across the region.[1] Public and privately funded allied health professionals deliver community based and outreach services across a wide range of communities within the Mid West. An example is the Three Springs dentist, with a mobile health service recently established for the North Midlands as a partnership between the Royal Flying Doctor Service (RFDS) and Karara Mining Ltd.

In 2011, there were 107.3 GPs per 100,000 persons and 78.2 medical specialists (resident and visiting) per 100,000 persons in the WA Department of Health's Midwest Health Region, which extends into the Gascoyne. These rates are 30% and 40% lower respectively compared with the WA per capita rates for GPs and medical specialists.[2]

The preliminary Statewide Ageing in the Bush findings[3] highlight:

- a total of 2,455 people aged 55+ in the Mid West indicated a need for assistance in daily living in the 2011 Census, with 1,928 carers in the region providing unpaid work for people over 55;
- there were 782 Aboriginal people in the Mid West aged 50-59, which are included in the same Department of Health and Ageing benchmarks as general population aged over 70; and
- the Commonwealth reported 354 operational residential care places and 237 home care places in the Mid West.

Many residents within the Mid West area are socio-economically disadvantaged compared with WA residents overall. In 2011, the Shires of Meekatharra, Mount Magnet, Murchison and Wiluna were ranked in the top 10% of the most socio-economically disadvantaged areas within WA and Geraldton was ranked within the top 20%.[4] Given that a community's socio-economic characteristics have a significant impact on health behaviours and outcomes, there is an important need to promote healthy communities and encourage preventative health care.

NON GOVERNMENT HUMAN SERVICES SECTOR

MWDC had an external review of the non government human services sector undertaken in September 2013.[5]

This revealed that excluding sport and recreation, arts and culture and general service clubs, there were around 80 Non Government Organisations (NGO) in the Mid West providing human services to people managing social issues or experiencing some form of disadvantage or hardship. Around two thirds were locally governed with the balance State or federally managed with a Mid West presence. Almost all NGOs in the region were small to medium enterprises in terms of numbers of local staff / presence.

1 Goldfields-Midwest medicare Local. Data supplied for the Blueprint
2 ABS 2011 Census of Population and Housing (2001.0)
3 Statewide Ageing in the Bush Mid West preliminary findings. Verso Consulting (2014)
4 ABS, Socio-economic Indexes for Areas (20033.0.55.011)
5 Transition Management, Non Government Human Services Sector review

The region also had a number of functioning 'networks' that support NGOs across a range of human service sectors including:

- children / youth;
- counselling;
- crime prevention /justice;
- disability;
- drug / alcohol;
- emergency relief;
- employment;
- financial;
- health;
- housing / accommodation;
- legal; and
- violence.

The peak body for the NGO sector at a State level is the WA Council of Social Services, with around 30 other peak bodies (generally based in Perth) supporting service providers in the Mid West.

Regionally, gaps exist across the sector with little coordination across the respective networks resulting in isolation of service providers and duplication of effort. There are also perennial sectoral challenges in terms of continuity of funding, capacity building, use of technology and remote community service provision.

The emergent Federal Government practice is to fund larger (sometimes national) NGOs with the capacity for multiple region / service delivery. Most of these entities run centrally managed models, with decisions for the Mid West commonly made from outside the region. This tendering and funding strategy favours large providers and creates competition and fragmentation between smaller regional NGOs. Increasing focus on compliance also means the ability of regional NGOs to focus on strategic issues (eg network development, collaborative projects that build sector capacity, seeking innovative solutions to problem solution, community development, community education, law/ policy reform etc) is reduced.

There are currently no local NGOs with a resource scale sufficient to compete with these larger entities in their own right, placing pressures on their survival and regional capacity generally. The review of Mid West NGOs confirmed that many local organisations are uncertain about their futures given the strong sense of competition for market share emerging in recent times.

A Mid West Community Service Network existed until 2012 with a charter to provide coordination across the sector but this has unincorporated and is now almost defunct due to resource capacity constraints. Particularly given recent 'competition' from larger providers, a need exists to intervene in support of local NGO networks, encourage collaboration (enabling competition with larger providers) and assist them progress towards sustainability.

028 INDUSTRY PROFILE

GROSS REGIONAL PRODUCT

Gross Regional Product (GRP) is an estimated measure of the market value of all final goods and services produced within a region. There are several methods of calculating GRP with no official figure produced, resulting in varying GRP estimates for the Mid West.

The Department of Regional Development (DRD) estimated the Mid West GRP at approximately $6 billion in 2012-13, which represented 2.5% of WA's Gross State Product (GSP) ($243 billion). This was down slightly from $6.2 billion in 2011-12 or 2.6% of the GSP for that year ($241 billion).[1]

In 2012-13 the region reported a GRP per capita (based on ERP) of $103,623, which was slightly higher than the WA average ($98,069). The region's GRP per worker was also slightly higher than the WA figure, which likely reflects the large contribution mining makes to the region's GRP. The mining industry tends to be highly mechanised and capital intensive and therefore generates more revenue per worker than other more labour intensive industries.

The different economic bases of the three subregions is evident through analysis of the percentage shares of industry contributions to GRPs by subregion for 2012-13. The apportionment of GRP to local governments and subregions was based on 'chain volume measures', which are indicative rather than precise measures of economic activity.

Figure 28 highlights the significant impact of mining throughout the region and its dominance in the Murchison.

It also shows the importance of agriculture to the North Midlands economy. The presence of significant construction and logistics (transport, postal and warehousing) activity throughout the region is also evident, most likely in support of primary industries (agriculture, fishing and mining).

Analysis of the subregional GRP values by industry again reinforces the more diverse industry mix in the Batavia Coast and the dominance of mining in the Murchison. Despite having less than 8% of the region's population, the Murchison contributes around 28% of the GRP for the Mid West. The development of new large scale mining operations in the North Midlands reinforces mining as the dominant contributor to the subregion's economy. The smaller GRP from agriculture in the North Midlands is noteworthy, given its traditional focus on that sector.

Figure 29 represents an estimate of Mid West industry contributions to GRP by subregion (by dollar value).

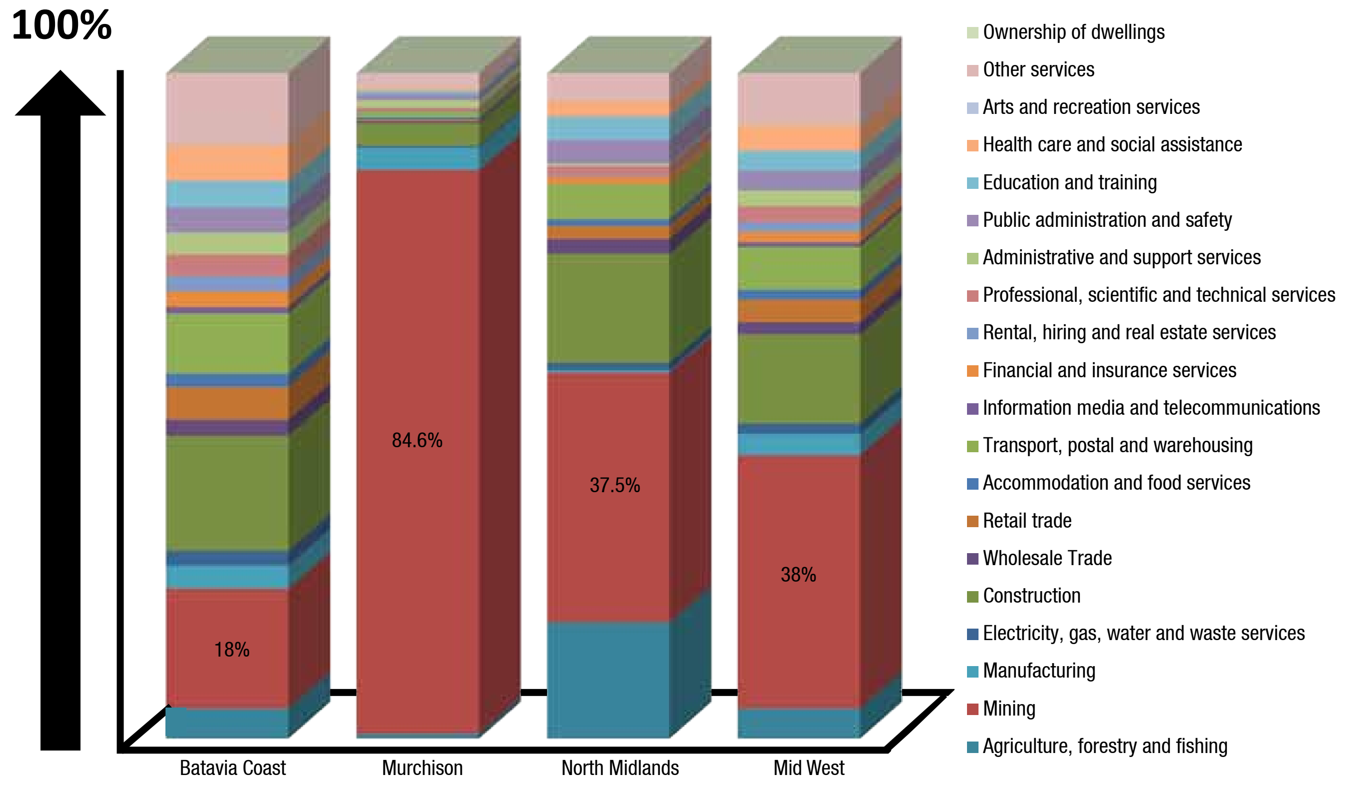


Figure 28. Indicative industry contribution to subregional Gross Regional Product by percentage share (2012-13)

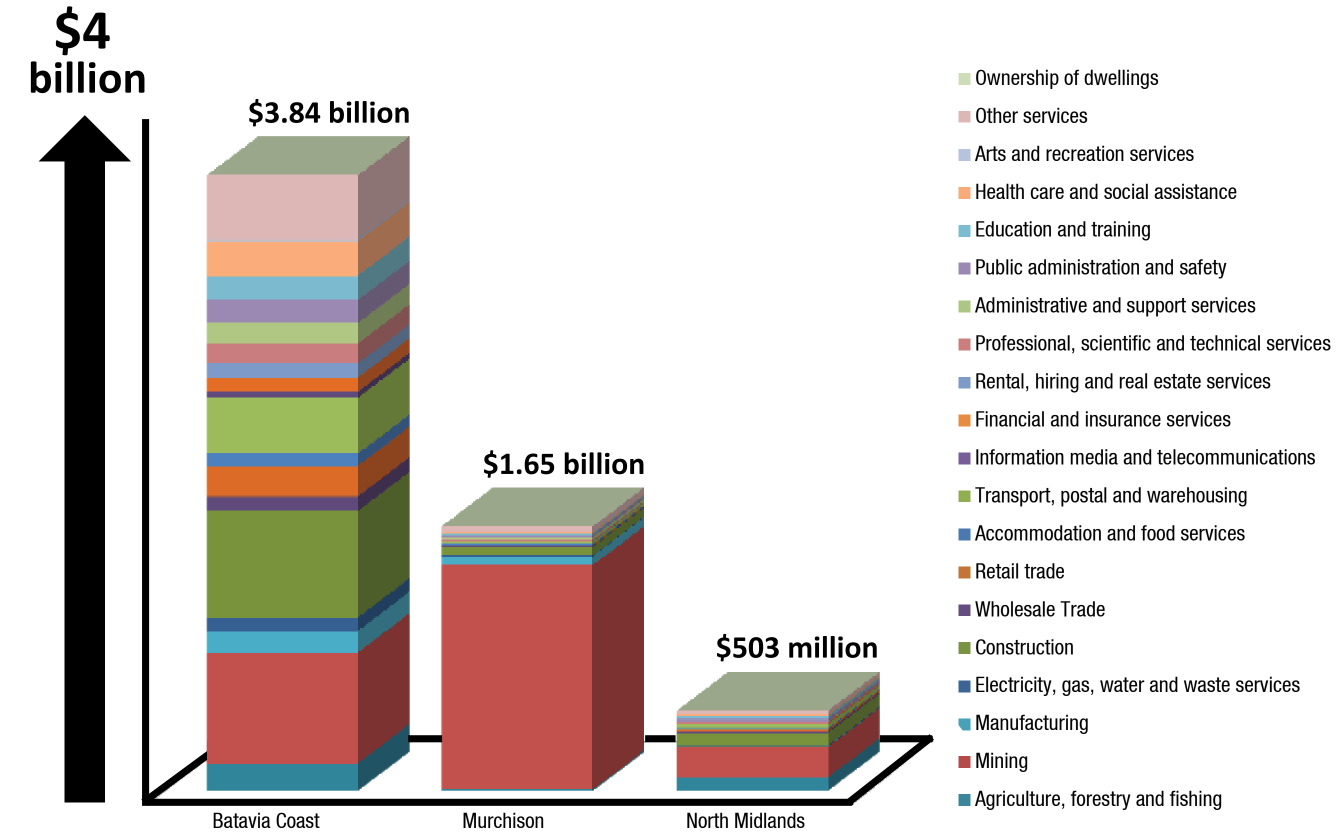


Figure 29. Indicative industry contribution to subregional Gross Regional Product by value (2012-13)

1 ABS, Australian National Accounts 2012-13 (Cat 5220.0)

MINING

In 2013-14 the Mid West was the State's fourth largest mining region by production value after the Pilbara, Goldfields-Esperance and Peel regions. Existing operations include oil and gas, mineral sands, base metals, iron ore and gold, with the expanding magnetite iron ore industry emerging as one of the region's primary economic drivers.

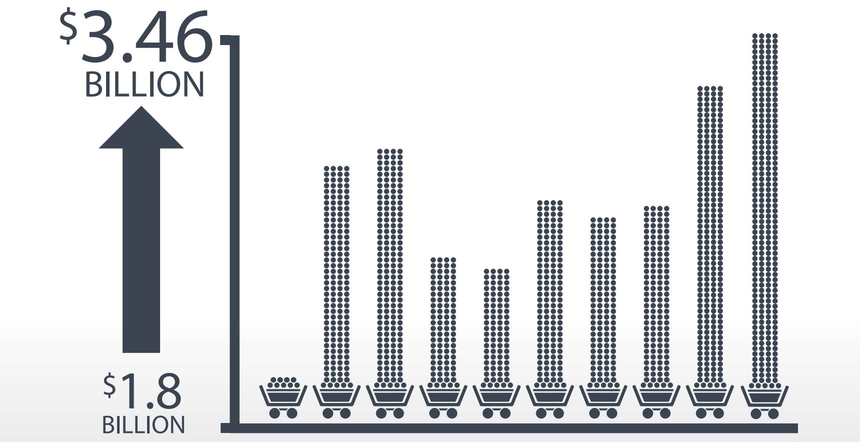


Figure 30. Mid West combined minerals production 2004/05 - 2013/14

The total combined value of Mid West minerals production value was around $3.46 billion in 2013-14; its record output (Figure 30). This represented around 2.8% of the State's mineral production value (excluding petroleum). Production value increased by around $417 million from the previous year (14%) and more than $800 million in the last five years (31%) (Table 10). The strong growth since 2012-13 reflects the commencement of production from the Karara iron ore mine.

As at December 2014 there were 58 producing mines in the Mid West and three more proposed. Minerals extracted include talc, gold, lead, tin, tantalum, zinc, heavy mineral sands, iron ore, copper, clays, pigments, nickel, vanadium, titanium, gypsum, chromite, platinoids, limestone, limesands, construction materials, gems and semi-precious stones, phosphate and manganese ore.

The region's three largest categories of minerals by production value are iron ore; copper, lead and zinc; and gold.

Iron Ore

The region's iron ore production value of $832 million in 2012-13 was at the time its highest recorded level. However, this grew significantly to $1.27 billion in 2013-14 (53% increase) as some Mid West mines commenced and / or ramped up production. The relatively high production value in 2010-11 reflects peak iron ore pricing.

The Mid West has abundant magnetite resources. Based on known Mid West projects (active and prospective) the Geraldton Iron Ore Alliance indicates potential production scenarios exceeding 150 million tonnes per annum (mtpa) in the 2030 horizon.

Copper, lead and zinc

The value of copper, lead and zinc production has more than doubled in recent years from its low of $373 million in 2010-11 to more than $986 million in 2013-14.

Gold

Until 2012-13 gold had consistently been the region's highest value commodity, being surpassed by iron ore and copper, lead and zinc in 2013-14. Gold reached its peak production value in 2012-13 at approximately $965 million, but declined slightly to $893 million in 2013-14 reflecting the lower gold price.

Mid West gold production value has trended upwards since 2005, which was the lowest in almost 20 years. Gold produced in the Mid West is principally flown to the Perth mint for refining.

	2009-10 $M	2010-11 $M	2011-12 $M	2012-13 $M	2013-14 $M	5yr % change
Iron ore	581	719	524	832	1,270	118%
Copper, lead & zinc	499	373	547	746	986	98%
Gold	793	788	913	965	893	13%
Cobalt, nickel, talc, vanadium, heavy mineral sands, chromite, gypsum and limesands	649	580	530	407	242	63%
Natural gas	14	20	43	43	37	166%
Silver	31	32	56	43	30	4%
Crude oil & condensate	25	19	9	4	1	98%
Other	52	4	5	4	1	98%
Total	**2,645**	**2,537**	**2,628**	**3,044**	**3,461**	**31%**

Table 10. Changes in Mid West minerals production values from 2009/10 - 2013/14

Karara Mining Ltd, Perenjori (magnetite)

Golden Grove, Yalgoo (copper)

Doray Minerals, Meekatharra (gold)

030 INDUSTRY PROFILE

AGRICULTURE

The Mid West is one of the largest agricultural regions in WA. In 2011-12 the region had approximately 17.8 million hectares allocated to agriculture, shared across an estimated 1,000 establishments. Only the Kimberley region has more agricultural land.

In 2011-12, the industry produced agricultural goods with a total value of $1 billion, making the Mid West the third largest agricultural region by production value in the State. Around 80% of the value of Mid West agricultural production is typically from cropping enterprises, with around three quarters of this being wheat (Figure 31).

The high 2011-12 value was the result of strong crop production, with improved rainfall from previous years. Wheat value in 2011-12 was particularly high at around $670 million.

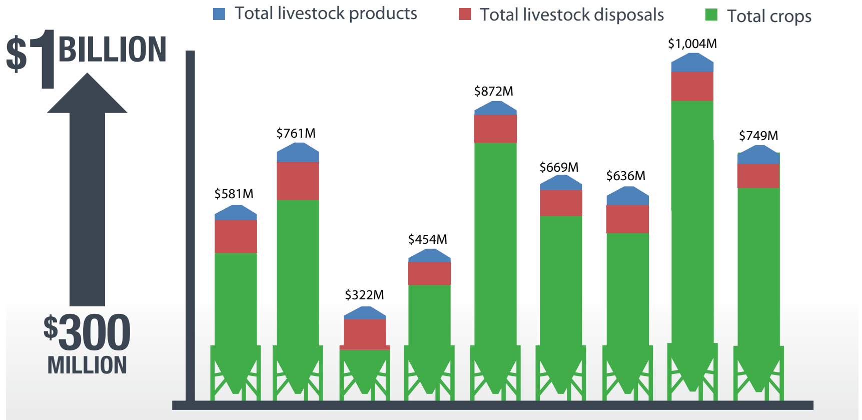


Figure 31. Mid West Value of Agricultural Commodity Production 2004/05 - 2012/13

Crops

The output of the region's agriculture sector is highly variable as evident through its Value of Agricultural Commodity Production (VACP) data, noting the impact of the 2006-07 drought on total production.

The region's mainstay broad acre crops are wheat, canola and lupins.[1]

Wheat

The Mid West produced around 1.25 million tonnes of wheat in 2012-13 valued at $414 million; around 22% of the State's wheat production.

Canola

In 2012-13 the Mid West produced approximately 118,000 tonnes of canola valued at around $66 million, representing an estimated 10% of the canola produced in WA.

Lupins

Approximately 119,000 tonnes of lupins were produced in the Mid West in 2012-13 valued at an estimated $35 million. This represented around 83% of the State's lupin production for the year.

Horticulture

Horticultural production generated around $25 million for the Mid West in 2012-13, with approximately 80% from vegetables and 20% from fruit.

1 Crop data provided by Department of Agriculture and Food (WA) and ABS

Livestock disposals

Cattle and sheep are the region's dominant livestock disposals. Poultry, pigs and goats are also produced but at much lower levels (Figure 32).[2]

Cattle

In 2011 the Mid West cattle population was around 175,000 head. This was the lowest count in recent history, falling below 200,000 for the first time since 2004. Improvements in cattle prices along with some encouraging seasonal conditions since 2011 are expected to see this number increase back above 200,000 in coming years.

Cattle turnoff (number sold) is typically one third of the population each year. Approximately half of turnoff is exported (around three quarters live and one quarter as boxed meat). In 2012-13, beef disposals were valued at approximately $37 million (8% of WA's total).

Sheep

The Mid West sheep population was around 968,000 head in 2011; 7% of WA sheep numbers. The region's sheep numbers have historically been much higher, trending down from above two million in 2004 and 2005.

Sheep numbers in the region's Rangelands (pastoral area) have declined from over 770,000 head in 2001 to less than 100,000 in 2011. This decline is largely attributed to the impact of wild dogs on small livestock industries in the area, coupled with low prices during much of the past decade. Relatively low rainfall is another contributing factor.

Despite strong recent sheep prices, the region's sheep population is expected to continue to decline in coming years.

Typically around two thirds of sheep meat is exported - either live or in boxed form. Sheep disposals were valued at approximately $27 million in 2012-13 (8% of WA's total).

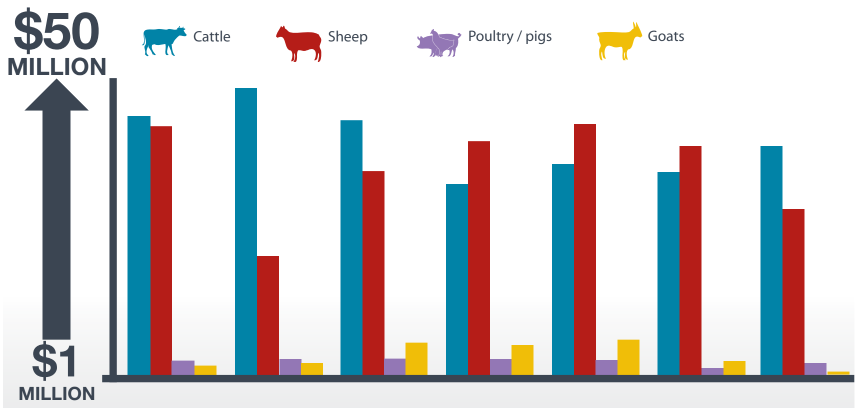


Figure 32. Mid West livestock disposals 2006/07 - 2012/13

Livestock products

Wool is the region's main livestock product. Wool produced in the Mid West was valued at around $41 million in 2012-13, representing 8% of WA production for the year.

Small quantities of eggs, and in recent years milk, were also produced in the region.

2 Livestock data provided by Department of Agriculture and Food (WA) and ABS

FISHING

As at 2013-14 the Mid West was the State's most important fishing region. In 2013-14, the Mid West produced fisheries products with a total estimated value of $161 million, accounting for 39% of the State's fisheries value.[3] This was the region's highest value since 2001-02, down from its previous high of $180 million in 1999-2000.

Much of the industry's production value in the Mid West is derived from its rock lobster fishery, with other significant products including pearling, prawns, scallops, abalone and finfish. Finfish caught commercially off the Mid West includes tuna, mackerel, snapper, dhufish, swordfish and shark.

Pearl aquaculture is well established in the Mid West (Abrolhos Islands). Other aquaculture is developing in the region with several trials already undertaken or planned. Species trialled include yellow tail kingfish (YTK), snapper, mulloway, seahorse, octopus and ornamental fish at various scales.

Figure 33 indicates the annual catch volumes of the region's three key fishing categories; rock lobster, finfish and molluscs. Quota restrictions and other reforms have resulted in declining wild catch volumes in recent years. However, higher market prices (in particular for rock lobster) as well as improved sophistication and rationalisation of the industry (including a reduced number of fishers) has enabled the sector to maintain relatively strong values and improved enterprise profitability.

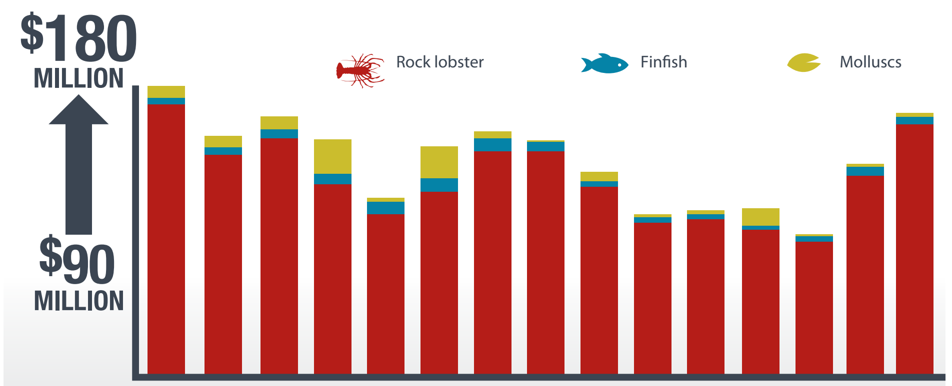


Figure 33. Mid West rock lobster, finfish and mollusc catch (value) 1999/00 - 2013/14

Rock Lobster

The Mid West produced 2,865 tonnes of rock lobster in 2013-14 (valued at $157 million); an estimated 49% of the State's catch for the year. This was down from its high of 6,261 tonnes in 1999-00 (value $169 million).

Finfish

The region's finfish production from wild catch decreased significantly from its highs of around 2,700 tonnes in 2001-02, to less than 400 tonnes in 2008-09. This downward trend has been seen globally with fish populations, climate impacts and regulation all contributing to the reduced catches. Production in 2013-14 was 1,224 tonnes.

3 Fisheries catch and effort data used was obtained on 11 August 2015 from the Research Division, Department of Fisheries WA.

Molluscs

Production of molluscs fluctuates significantly year to year in the Mid West from highs of 5,817 tonnes in 2002-03 (valued at $20 million) to only 34 tonnes in 2013-14 valued at $271,000.

Aquaculture

With the region's warm and clean waters and strong industry base, aquaculture has significant potential. There has been progress with species such as YTK, mulloway, ornamentals, pearls, seahorses and octopus.

Contrary to declining production from wild catch, output from Mid West aquaculture was at its high in 2009-10, with around 56 tonnes produced (various species) at a combined value of $660,000.[1] The recent growth in local production is consistent with global trends, with the fluctuations reflecting varying outputs from local production trials (Figure 34).

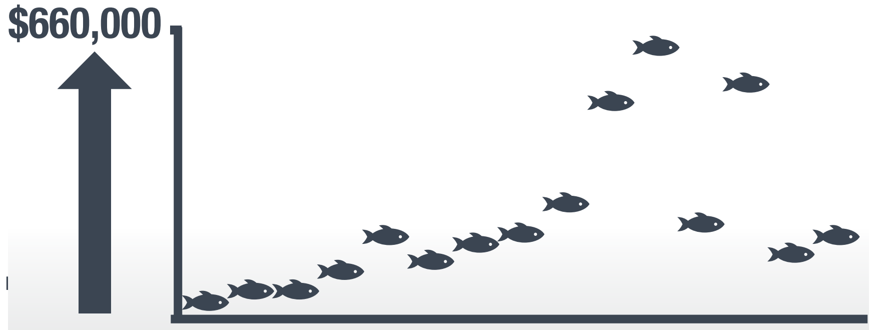


Figure 34. Mid West finfish aquaculture value 1999/00 - 2013/14

Yellow tail kingfish (aquaculture) - Indian Ocean Fresh Australia

1 Aquaculture catch and effort data used was obtained on 11 August 2015 from the Research Division, Department of Fisheries WA.

BUILDING AND CONSTRUCTION

In 2012-13 there was an estimated $227 million worth of building approvals in the Mid West ($158 million residential and $69 million non residential). This accounted for approximately 2.3% of the State's building approvals in that year.

RETAIL

In 2011-12, the retail industry in the Mid West turned over approximately $660 million, accounting for 2.8% of the State's retail turnover. Retail turnover in the Mid West has trended upwards each year over the past decade, averaging 5.2% growth each year over the past 10 years. Although it only contributes around 2% of the region's GRP, the retail sector is one of the region's largest employers (10% in 2012).

TOURISM[2]

As a destination, many of Australia's assets (world class nature, coastal, marine/wildlife experiences, food and safety) are entrenched within the Mid West and offer significant growth potential in the medium-long term.

In recent years (2011/12/13) domestic (overnight) visitor numbers to the Mid West have trended upward to an annual average of approximately 392,000, with the Batavia Coast accounting for around 70%, Murchison 20% and North Midlands 10%. International (overnight) visitor numbers trended downward slightly in recent years to an annual average of 42,900 visitors (Batavia Coast 84%, Murchison 10% and North Midlands 6%).

Overnight visitor numbers and expenditure have trended consistently upwards in recent years with expenditure reaching a new high of around $295 million ($257 million domestic; $38 million international) in the 2013 reporting period. Figure 35 summarises recent trends in Mid West visitor numbers and expenditure.

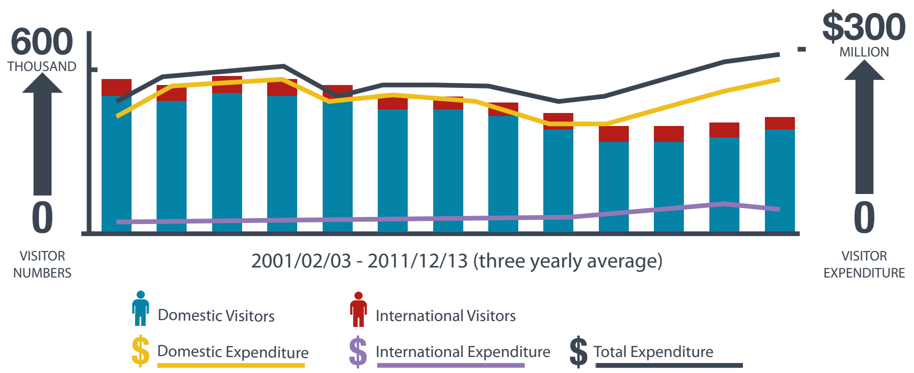


Figure 35. Mid West overnight visitor numbers and expenditure. Source Tourism WA

Intrastate daytrip visitors to the Mid West fluctuate year to year but remained fairly static over the longer term, averaging around 328,000 between 2005/06/07 and 2011/12/13 (324,000 in 2011/12/13). Total visitor nights averaged around 2.3 million for 2011/12/13, with an estimated average duration of 5.2 nights and average daily spend of $240 per visitor.

The Mid West's share of WA's domestic overnight visitors has remained steady, whilst its share of WA's international visitors has been declining.

2 Tourism WA, Mid West Overnight Visitor Fact Sheet YE Dec 2011/12/13 & Mid West Draft Tourism Development Strategy (2014).

Current drawcards for visitors to the region include Kalbarri, Dongara / Port Denison, Geraldton, the Wildflower Country regional towns and the Murchison for prospecting, outback experiences and station stays.

Kalbarri Gorges

Iconic Kalbarri

With its dramatic river gorges, rugged coastal cliffs, excellent fishing and surfing plus a myriad of adventure activities, Kalbarri is one of the State's iconic tourism locations. The Kalbarri National Park features approximately 800 species of wildflowers, some of which are found nowhere else on earth. The National Park features some amazing country with the Murchison River carving its way through the terrain over millions of years to form dramatic sandstone cliff faces and unique features such as Nature's Window, a natural rock arch that superbly frames the river view. The vicinity is also steeped in history, with nearby Wittecarra Creek believed to be the first permanent landing of white men in Australia, being the two mutineers from the wrecking of the Batavia on the Houtman Abrolhos Islands in 1629.

032 TRADE PROFILE

MID WEST TRADE COMMODITIES

The Mid West has a strong commodity base with heavy reliance on access to export markets and trade relations. Access to a market comprises physical access (including efficient transport infrastructure) and business relationships and networks. Transport connections and other infrastructure provision assists in attracting and retaining population and businesses. Establishing strong business relationships and networks across regional, national and international markets helps firms to expand trade, access new technologies and access domestic and foreign investment.

MINERALS

The export of iron ore from the Geraldton port almost trebled from 5.3mt in 2011-12 to 14.4mt in 2013-14,[1] due in part to Karara Mining Ltd commencing magnetite production in 2012.

The majority of Mid West iron ore is exported to China (around 95%), with the balance going to South Korea, Taiwan and Japan. The majority of the region's iron ore departs the Mid West from the Geraldton port, with some trucked to other WA ports for export. Iron ore represented almost 80% of total volumes exported from the Geraldton port in 2013-14.

Geraldton port arrival

1 Geraldton Port Authority, information provided for Blueprint

FISHING AND AQUACULTURE

Rock Lobster

The Geraldton Fisherman's Co-operative is the largest rock lobster processor in the world, exporting 3,572 tonnes in 2013-14 with a turnover of $237 million. Although the quantity exported was similar to 2012-13, the value was around $50 million greater ($178 million). The Mid West currently exports around 90% of its product via air to China as 'live' animals. Small quantities of frozen product were also exported to Japan, Taiwan, Hong Kong, Dubai and USA in 2013-14. [2]

Finfish and Molluscs

The majority of Mid West finfish (581 tonnes in 2011-12 valued at $3.55 million) and molluscs (22 tonnes in 2011-12 valued at $157,000) are sold domestically via the Geraldton Fish Market.

AGRICULTURE[3]

Crops

Wheat

Including grain delivered to Geraldton from outside the Mid West, 2.13 million tonnes of wheat was exported via the Geraldton port in 2012-13 - the primary gateway for agriculture north of Badgingarra (Wheatbelt region). Around 95% of Mid West wheat was exported in 2012-13.

The dominant importers of wheat from the Mid West are Indonesia (20%), South Korea (16%), China (16%) and Japan (10%). Mid West wheat is principally exported from the Geraldton port via the adjacent Cooperative Bulk Handling (CBH) facility.

Wheat exports volumes vary dramatically year to year due to climatic conditions and other external factors affecting regional production. Wheat export value in 2011-12 was almost double 2012-13.

Canola

In 2012-13, approximately 95% of Mid West canola was exported predominantly from the Geraldton port via the adjacent CBH facility. The principal markets are the Netherlands (54%), Pakistan (21%), Belgium (12%) and Germany (8%).

Lupins

The main export market for the region's lupins in 2012-13 was Korea. As with wheat and canola, lupins were also exported principally from the Geraldton port via the adjacent CBH facility.

2 Geraldton Fisherman's Co-operative (2014)
3 Department of Agriculture and Food. Data supplied for the Blueprint.

Livestock

Beef

Around half of WA cattle meat is consumed locally (51%). The largest customers of Mid West cattle meat are Indonesia (25%), Japan (17%), South Korea (15%) and New Zealand (9%) with some exported direct from the Geraldton port.

In 2012-13, two thirds of these exports were live, with almost half of the animals going to Indonesia (45%), with 25% to Israel, 12% to Egypt and 8% to Turkey. Indonesia is also the largest individual customer for boxed cattle meat, accounting for more than one quarter of boxed exports (27%).

Sheep

In 2012-13, the largest importer of Mid West sheep meat was China (14%), with 12% going to the United Arab Emirates, 11% to Saudi Arabia, 9% to the USA and 7% to Jordan with some exported directly from Geraldton port.

Livestock products

In 2012, China was the dominant market for the region's wool (84%), followed by India (7%), Czech Republic (6%), Italy (2%) and Taiwan (1%).

The major Mid West export destinations (agriculture and fishing) are indicated in Figure 36.

Strong links to China

The Mid West region has much to offer China in terms of clean, fresh produce; a refreshingly unique tourism destination; new technologies; best practice food production techniques; quality education with relatively small class numbers; and business partnerships. To facilitate opportunities, the region has established a Mid West chapter of the Australia China Business Council to foster relationships with China and provide a conduit for business networking. The CGG has a strategic partnership with Zhoushan city in the Zhejiang province and a sister city relationship with Zhanjiang in the Guangdong province. The purpose of these relationships is to explore mutual opportunities and to facilitate economic development.

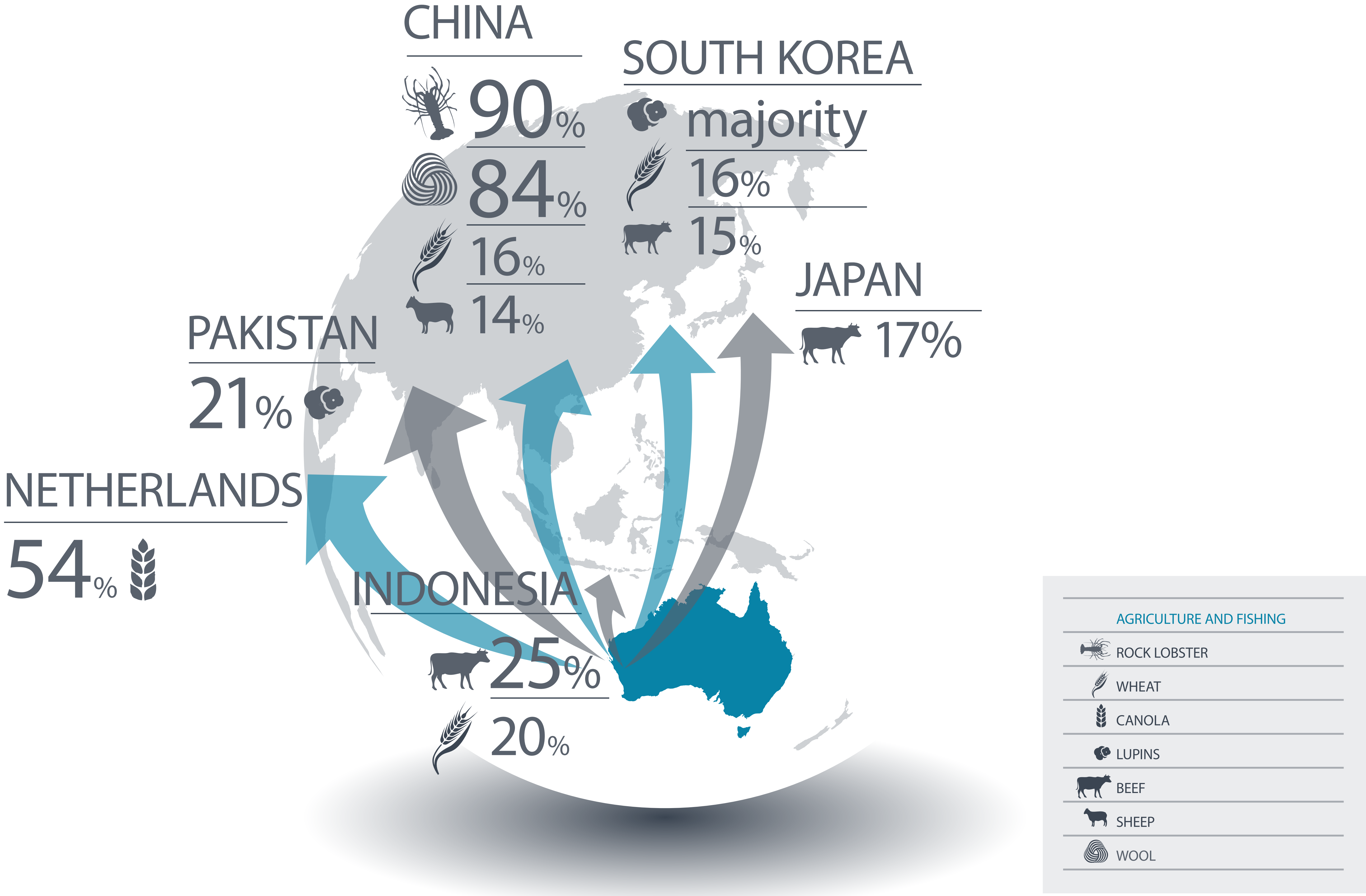


Figure 36. Major Mid West exports (agriculture and fishing) - percentage of Mid West production by destination ie 90% of Mid West rock lobster is exported to China

Source:

- Department of Agriculture and Food. Data supplied for the Mid West Blueprint.
- Geraldton Fisherman's Co-operative. Data supplied for the Mid West Blueprint.

034 BUSINESS PROFILE

STRUCTURE OF BUSINESS SECTOR

The Mid West has a strong small business sector, with its 5,016 small businesses (less than 20 staff) representing almost 96% of the region's private sector businesses (as at June 2012) and employing approximately 45% of all private sector workers.

The composition of the region's business profile is shown in Figure 37.

The majority of the region's small businesses (62%) are non-employing (3,098), with 25% employing 1-4 people (1,250) and 13% having 5-19 employees (668). Industry sectors with the largest number of small businesses are agriculture, forestry and fishing (28%) and construction (17%). More than two thirds of small businesses support the various services sectors.

Within the small business sector (less than 20 employees), those businesses employing 1-4 people (25% of businesses) provide more than half the total small business jobs (52%). Those employing 5-19 (13% of businesses) provide approximately 42% of small business jobs.

The region's 218 medium sized businesses (20-200 staff) account for around 25% of private sector employment, with six large businesses (200+) the remaining 30%.

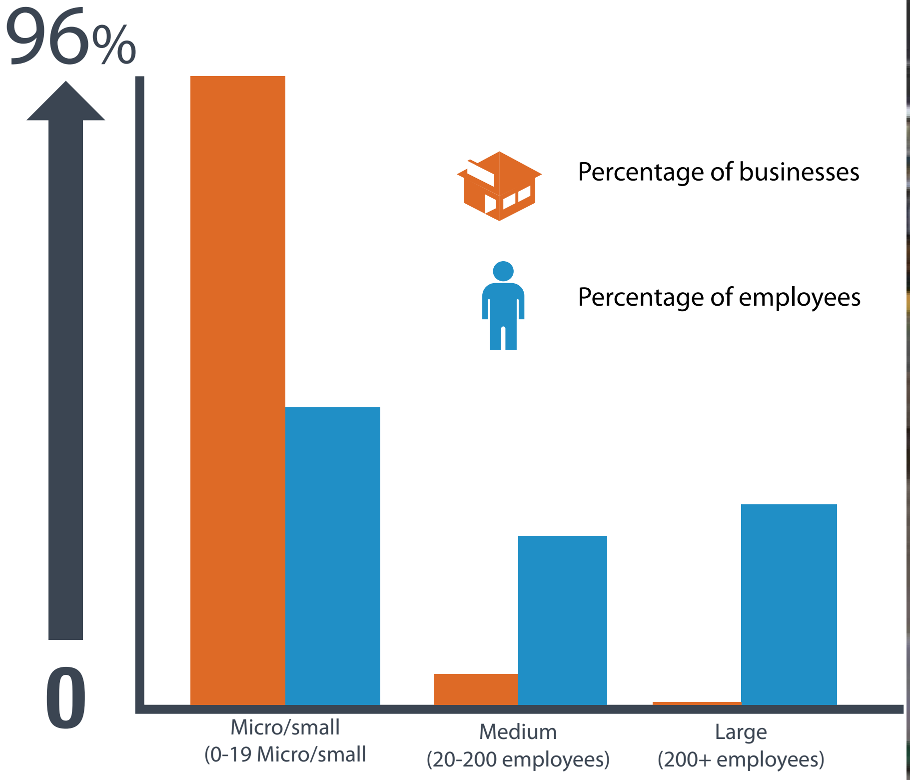


Figure 37. Mid West business size and share of employment

SMALL BUSINESS INDUSTRY MIX

The region's small business industry mix broadly reflects that of WA and other regional areas. The most notable exception is agriculture, forestry and fishing, which represents 28% of Mid West small businesses compared to 9% across WA generally.

Sectors with a lower proportion of small businesses in the Mid West (compared to WA) include professional, scientific and technical services (5% v 12%); financial and insurance services (6% v 9%); construction (17% v 19%); and rental, hiring and real estate services (8% v 10%).

GROWTH IN BUSINESS NUMBERS

As seen in Table 11, 26 new employing businesses emerged in North Midlands shires between 2009 and 2011, most likely related to mining support services. There was also strong turnaround in Greater Geraldton, from losing 33 businesses in 2009 to gaining 17 in 2011, again likely related to mining and support of other major regional projects. Small losses have occurred in a number of local governments across the period, with notable losses in Northampton losing 24 of its 214 businesses between 2009 and 2011.

Diab Engineering, Geraldton

LOCAL GOVERNMENT	2009	2010	2011	Total employing businesses (2011)
Chapman Valley	-3	-1	-2	50
Irwin	-2	-27	3	139
Greater Geraldton	-33	-11	17	1,430
Northampton	-10	-7	-7	190
BATAVIA COAST	**-48**	**-46**	**11**	**1,809**
Cue	-4	-	-	3
Meekatharra	-2	-2	-2	25
Mount Magnet	-	-1	-2	11
Sandstone	3	-3	3	3
Wiluna	-1	-2	-2	21
Yalgoo	-1	-	-	8
MURCHISON	**-5**	**-8**	**-3**	**74**
Carnamah	-	1	1	36
Coorow	1	2	3	71
Mingenew	-	2	1	32
Morawa	-	2	3	60
Perenjori	1	2	3	61
Three Springs	-	1	3	42
NORTH MIDLANDS	**2**	**10**	**14**	**302**
TOTAL	**-51**	**-44**	**22**	**2,185**

Table 11. Number of employing businesses in the Mid West
Source: Pracsys Economics (2013), from ABS 2007-2011

Mining benefits for local businesses and communities

The mining upturn in the North Midlands was a significant benefit to locally based small businesses, with 24 new businesses established from 2009 to 2011. Perenjori gained six small businesses during the period, with new enterprises established in the earth moving, haulage and logistics fields. This also enabled farmers to supplement their income with mine related work, with existing businesses also diversifying into fields such as mine worker transport. Associated benefits to the community include increased population, local employment, business activity and cash flows, consumer confidence and direct support of community events and other initiatives. Examples exist across the subregion as communities took steps to secure benefits from the mining boom.

EMPLOYMENT

The region's diverse economy is reflected in its employment mix with no dominant industry sector. This helps 'buffer' the region against contractions in a particular sector and enables people to transition between employment sectors if the need arises.

All 19 industry sectors are represented in the Mid West, although the top five sectors account for almost half (47%) of the jobs (construction; retail trade; health care; agriculture, forestry and fishing; education and training). Mining was the sixth largest employer and each of the six main industries are dominated by one gender or the other. Males far outnumber females in construction, agriculture and fishing, and mining, with females filling over 75% of jobs in health care and education, and almost 65% in retail.

Construction (11%) and retail trade (10%) were the region's largest employment sector in 2012. Health care and social assistance; agriculture, forestry and fishing; and public administration and safety were also significant at 9% each.

Despite being easily the largest contributor to the GRP for the Mid West, mining provides only 8% of jobs in the region. It is expected that a large proportion of jobs in construction, manufacturing and logistics directly support the key primary industry sectors (mining, agriculture and fishing).

As shown in Figure 38, the three Mid West subregions have distinctly different employment profiles. One third of jobs in the North Midlands are in agriculture, forestry and fishing (33%), with a similar proportion of people in the Murchison employed in mining (35%). The Batavia Coast is more diverse with one third of jobs spread relatively equally across retail trade (12%), construction (11%) and health care and social assistance (10%).[1]

First load of magnetite from Karara Mining Ltd (2013)

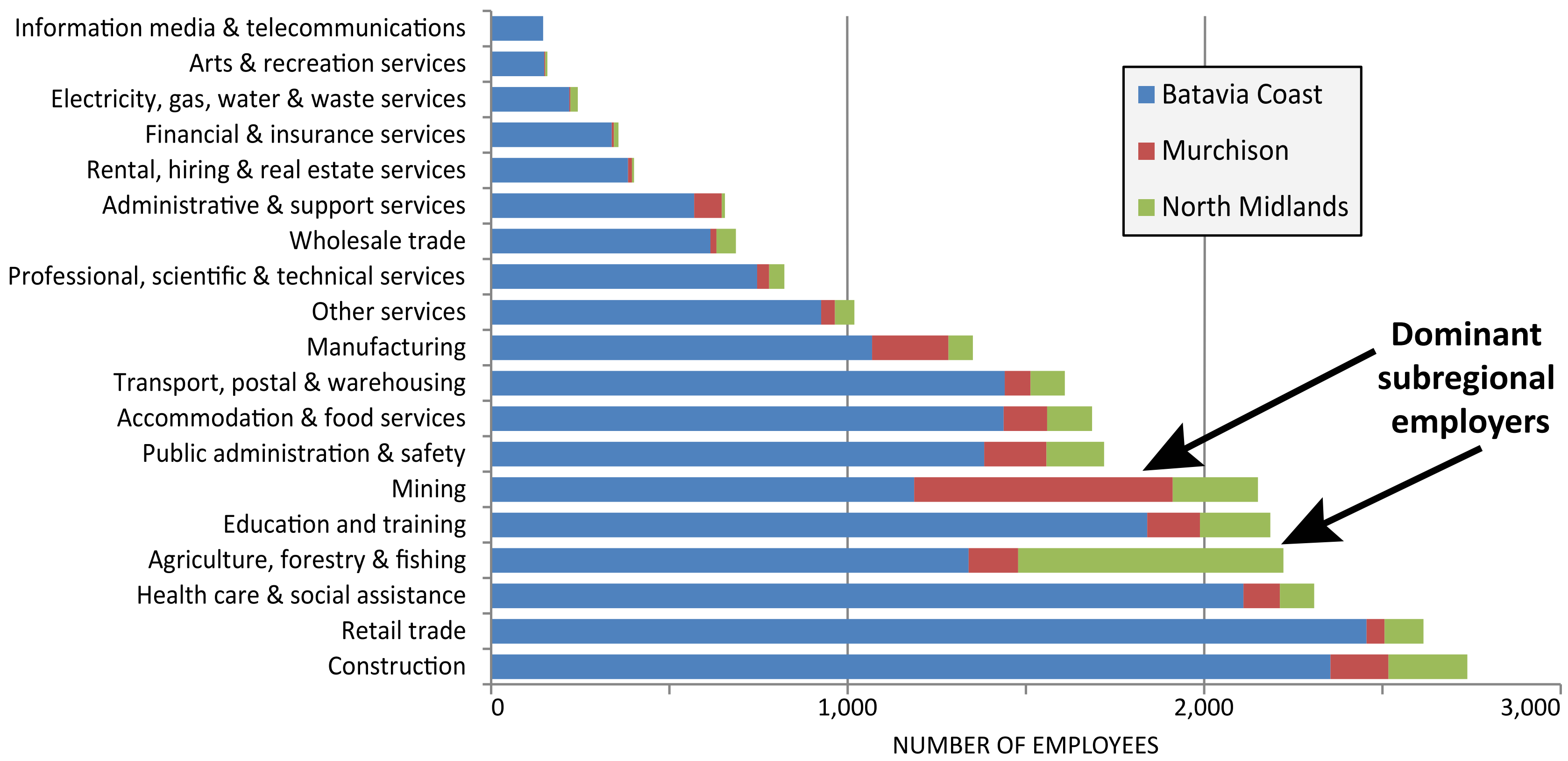


Figure 38. Mid West employment (by industry and subregion - 2011)

LABOUR FORCE CHANGES OVER A DECADE

To determine how the key industries in the Mid West have performed in terms of employment over a ten year period, a shift share analysis was performed using State, regional and subregional employment figures from the 2001, 2006 and 2011 ABS Censuses. This type of analysis looks at the change in employment of a region over a period of time and compares it to the State or national figures on three different levels.

Employment growth is broken down into different components (State, Industry and Regional) to determine what share of the growth can be attributed to growth in the State or national economy and what percentage can be attributed to the industry mix. The remainder is then assumed to result from particular competitive strengths / advantages developed in the region.

In the Mid West, construction, manufacturing and logistics (transport, postal and warehousing) were the strongest performers, which correlates with the strong growth experienced in the region's resources sector during this period. Agriculture, forestry and fishing showed the most notable decline. Given the scale of the rock lobster industry in the Mid West, the recent rationalisation of the industry would have contributed to the relative decline in regional employment in this sector.

Significant improvements were noted from 2006-11 compared to the earlier 2001-06 period. From 2001-06 the Mid West experienced jobs growth of 6.1% or 1,309 jobs. During the same period the national jobs growth rate (9.7%) and State growth rate (14.2%) were much higher. The Shift Share analysis revealed that the region's lower growth rate from 2006-11 was due to the structure of the respective economies (mix of employing industries in the region) (-0.1%) and a regional disadvantage score of -8.1%. This equated to a total of 1,750 fewer Mid West jobs than would have been realised if the region had experienced jobs growth at the same rate as the State.

However, the period 2006-11 painted a vastly different and improved economic picture. The Mid West experienced jobs growth of 17.1%, which was similar to the State's jobs growth (17.3%) and much higher than the national jobs growth rate (10.5%). The Shift Share analysis for this period also revealed a more favourable economic structure / industry mix (4.7%; compared to -0.1% from 2001-06). The regional disadvantage score of -4.3% also improved by around 50% (-8.1% from 2001-06). By comparison to 2006-11 (1,750 fewer jobs), this equated to only 54 fewer Mid West jobs than would have been realised if the region's jobs growth occurred at the same rate as the State.

The period 2006-2011, however paints a vastly different picture. Between 2006 and 2011 the Mid West experienced jobs growth of 17.08%, outperforming National jobs growth (10.48%) and coming very close to the State jobs growth (17.28%). The Shift Share analysis for this period shows a change to a more favourable economic structure (mix of industries) (4.68%) and a regional disadvantage of -4.27% representing an improvement in regional competitiveness of over 50% from the previous period and a negative impact of only 54 jobs less than if the region had experienced jobs growth at the same rate as the State.

1 ABS Census 2nd release 2012.

WORKFORCE

As shown in Table 12 construction accounted for 1,151 new jobs between 2001-11, representing an increase of 73%. This strong growth was largely associated with the significant construction phases of several Mid West mining projects. In 2011 construction represented 11% of the region's total labour force. Notable increases were also seen in healthcare and social assistance (772 new jobs; 50% increase), transport, postal and warehousing (758; 89% increase) and education and training (607; 38% increase).

There was a significant decline in employment in agriculture, forestry and fishing between 2001 and 2011 with a reduction of 930 people working in the sector; a loss of approximately 30%. This trend should be interpreted with caution as the Census only records one occupation and farmers may have increasingly recorded their off-farm employment rather than their farming vocation. Notwithstanding this, the trend towards larger agricultural properties (through acquiring nearby or neighbouring properties) and increasing mechanisation / technology is likely to have contributed to a loss of jobs in the agriculture industry during this period. One third of the labour force in the North Midlands still works within the agricultural sector.

The downward trend in the fishing industry is seen globally with declining fish populations, climate impacts and the introduction of quota systems, all contributing to the reduced catches. Decline in the pastoral sector is largely attributed to the impact of wild dogs on small livestock industries in the Rangelands, compounded by poor sheep profitability during much of the past decade as well as difficult climatic conditions.

WORKING POPULATION PROFILE

In 2011, 59% of Mid West residents over the age of 15 were employed, with the North Midlands slightly higher at 63%. This was similar to results for WA at 61%.

Until December 2012, the region's unemployment rate was notably low at 4.2%; lower than the State rate (4.5%), and higher than only the Wheatbelt (3.1%), Goldfields-Esperance (3.4%) and Pilbara (3.6%). However, like other areas of WA, the Mid West unemployment rate has trended upwards since early 2013.

As seen in Figure 39, the recent spike to 8.3% in September 2013 was notable and warrants close monitoring over ensuing periods. The return to 6.8% in December 2013 is positive. Anecdotally the recent peaks didn't appear to reflect local employment activity. The increases may however reflect a decline in major project activity experienced recently and contraction in the regional economy generally.

Labour force participation of youth (15–19 years) (53.5%) was slightly higher than the State (52.8%) but the unemployment rate was notably lower at 12.1% (compared to 13.5% for WA). Conversely, the participation rate for the broader youth cohort of 15-24 years (62.8%) was lower than the State's rate (64.5%). Both the Mid West and WA had a 10% unemployment rate for the cohort (based on place of usual residence).[1]

	2001 Number	%	2011 Number	%	2001-11 job growth	2001-11 growth rate
Agriculture, forestry and fishing	3,153	15%	2,223	9%	-930	↓ 29%
Mining	2,306	11%	2,151	9%	-155	↓ 7%
Manufacturing	1,022	5%	1,351	5%	329	↑ 32%
Electricity, gas, water and waste services	208	1%	245	1%	37	↑ 18%
Construction	1,586	8%	2,737	11%	1,151	↑ 73%
Wholesale trade	909	4%	687	3%	-222	↓ 24%
Retail trade	2,179	10%	2,615	10%	436	↑ 20%
Accommodation and food services	1,450	7%	1,686	7%	236	↑ 16%
Transport, postal and warehousing	852	4%	1,610	6%	758	↑ 89%
Information media and telecommunications	231	1%	146	1%	-85	↓ 37%
Financial and insurance services	334	2%	358	1%	24	↑ 7%
Rental, hiring and real estate services	283	1%	401	2%	118	↑ 42%
Professional, scientific and technical services	609	3%	823	3%	214	↑ 35%
Administrative and support services	591	3%	656	3%	65	↑ 11%
Public administration and safety	1,250	6%	1,721	7%	471	↑ 38%
Education and training	1,580	8%	2,187	9%	607	↑ 38%
Health care and social assistance	1,537	7%	2,309	9%	772	↑ 50%
Arts and recreation services	151	1%	158	1%	7	↑ 5%
Other services	749	4%	1,019	4%	270	↑ 36%
Total	**20,980**	**100%**	**25,083**	**100%**	**4,103**	**↑ 20%**

Table 12. Trends in labour force participation by industry, Mid West usual residents, 2001-2011. Derived from ABS Census 2001 and 2011.

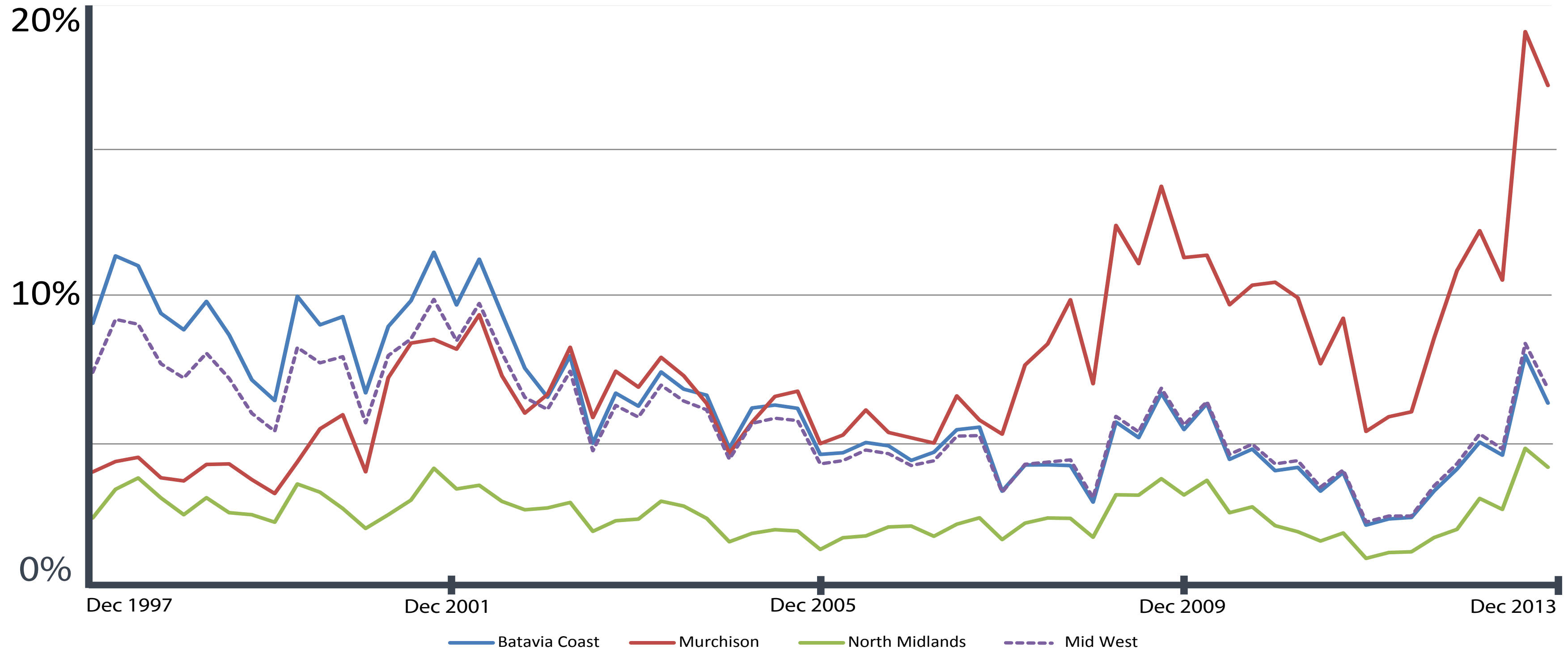


Figure 39. Mid West unemployment rates by subregion (quarterly figures)

Source: Department of Education, Employment and Workplace Relations with additional estimates by DRD

1 Department of Training and Workforce Development. Data supplied for the Blueprint.

SUBREGIONAL EMPLOYMENT DIFFERENCES

Subregionally the unemployment pattern is distinct (previous figure). The North Midlands has consistently maintained the lowest unemployment rate in the Mid West over the past 15 years.

The Murchison had low unemployment in the 1990s, but has consistently had the region's highest unemployment rates since 2008. The closure of key mines in 2008-09 likely correlates with the subregion's high unemployment rate of almost 17% (December 2013). Given the subsequent resurgence in mining activity the higher rates of unemployment likely reflect the strong fly in-fly out (FIFO) and drive in-drive out (DIDO) workforce patterns, with many new positions being filled by people living outside the subregion.

The Batavia Coast, with 84% of the region's population and around 83% of Mid West jobs, has a major impact on the region's overall unemployment rate.

FLY IN-FLY OUT (FIFO), DRIVE IN-DRIVE OUT (DIDO)

Live in the Mid West - work elsewhere

Data from Remplan[1] and ABS (2011)[2] both indicate that up to 20% of Mid West usual residents work outside the region (almost 5,000 workers). However, this includes a large number of respondents that didn't indicate their actual place of work and were assigned the 'other' or 'WA no fixed address' category by default (thus inflating the 'work outside the region' count). Of those that indicated a place of work, the largest numbers worked in the Goldfields (Leonora (233)) and the Pilbara (Ashburton (142), East Pilbara (79), Roebourne (60) and Port Hedland (54)), with smaller numbers working in Perth or northern Wheatbelt communities (eg Dandaragan and Dalwalliunu).

Nearly 40% of Mid West residents that worked outside the region were employed in either mining (21%) or construction (17%). By comparison, only 17% of Mid West residents that worked inside the region were employed in these industries.

Work in the Mid West - live elsewhere

There were 2,839 people that worked in the Mid West but lived outside the region (FIFO / DIDO / seasonal workers). Of these workers, 43% were employed in the Batavia Coast (1,166 workers), 39% in the Murchison (1,057 workers) and 17% in North Midlands (460 workers).

FIFO / DIDO workers represented only 7% of all people employed in the Batavia Coast, but a much higher proportion of total workers in the Murchison (30%) and North Midlands (19%).

Almost three quarters (74%) of those people working temporarily in the Mid West were employed in the mining (51%), construction (13%) and manufacturing (10%) industries. Figure 40 shows the proportion of jobs in these industries that were filled by Mid West usual residents compared to workers from outside the region.

1 Remplan 2014. Live in Mid West Region and Work Elsewhere
2 ABS Census 2nd release 2012

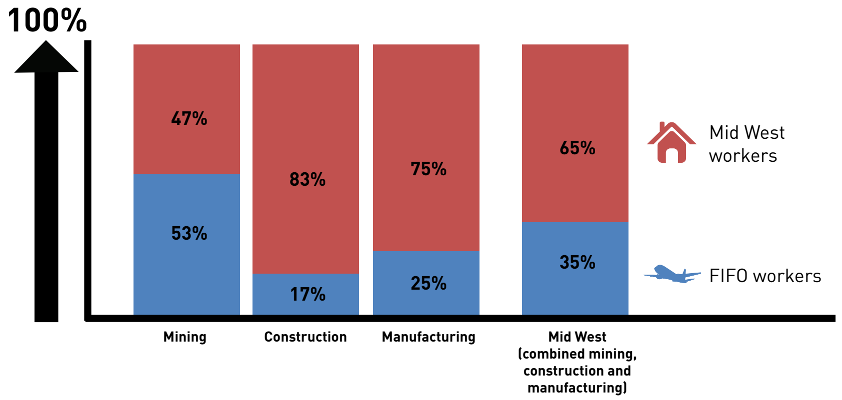
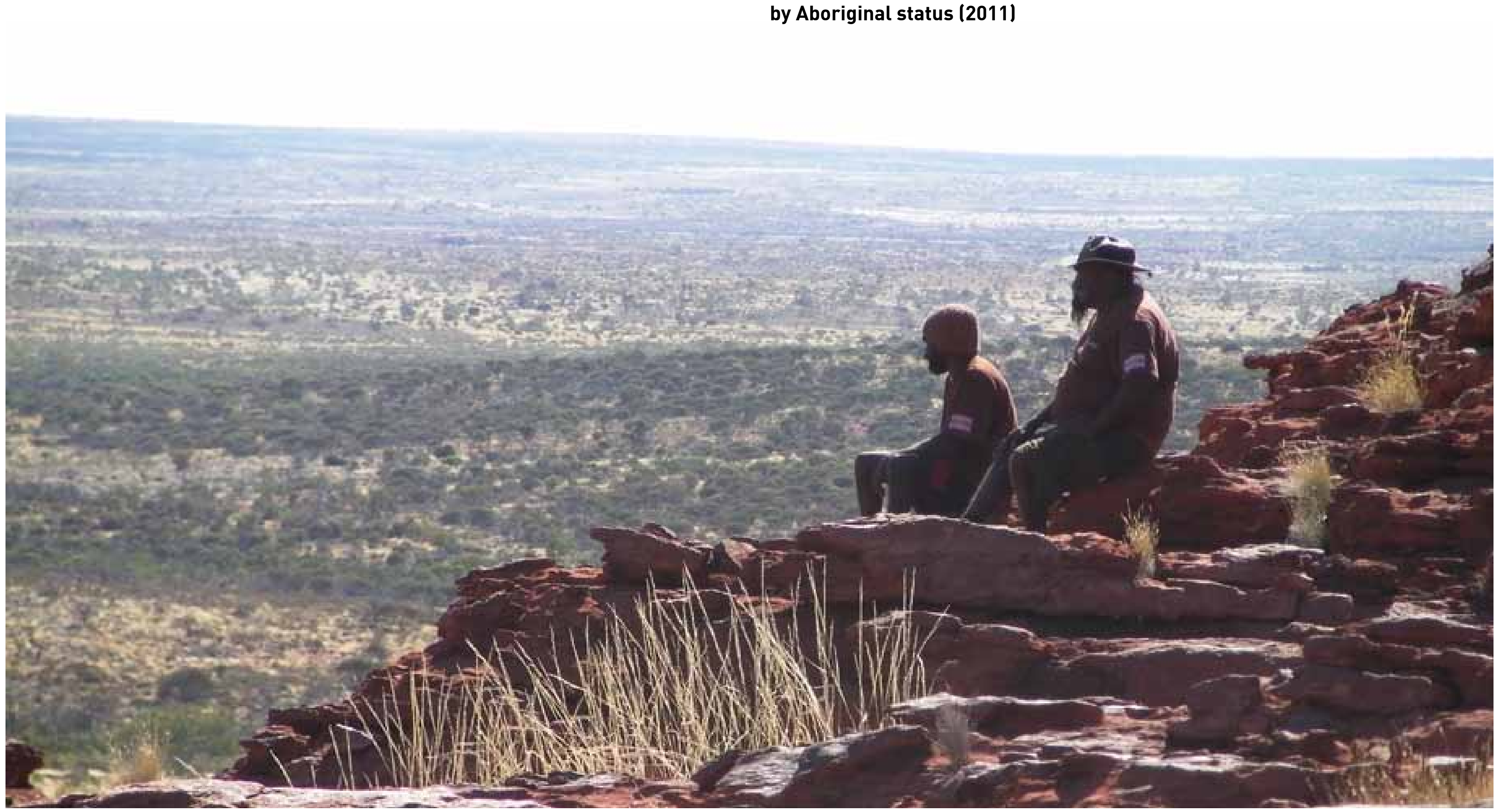


Figure 40. Mid West jobs filled by FIFO workers and Mid West usual residents

Although a significant number of Mid West mining, construction and manufacturing workers were recruited from outside the region, the region still supplied a significant proportion of these industries' workforce needs. In some regions with dominant resource sectors, up to 80-90% of jobs are filled by FIFO / DIDO workers.

Attracting more of these FIFO / DIDO workers to live in the Mid West presents a range of opportunities and challenges.



Wiluna Martu Rangers, Central Desert Native Title Services

ABORIGINAL EMPLOYMENT

Table 13 shows the employment differences between Aboriginal and non-Aboriginal people in the Mid West. Non-Aboriginal people were more than twice as likely to be employed than Aboriginal people.

Aboriginal people living in the North Midlands had the highest employment rate (39%) with the Murchison experiencing the lowest (29%).[3] This should be interpreted with caution as 7% of Aboriginal people in the Mid West did not report labour force participation in the 2011 Census.

	NON-ABORIGINAL	ABORIGINAL
Employed full-time	42%	17%
Employed part-time	18%	9%
Employed, hours not stated	5%	5%
Employed subtotal	65%	31%
Looking for work	3%	10%
Not in labour force	30%	52%
Not stated	2%	7%
Number of adults	36,391	3,378

Table 13. Labour force participation, Mid West usual residents (15 years+), by Aboriginal status (2011)

3 Social Dimensions. Mid West population reports prepared for RDAMWG (2013)

GLOBAL / NATIONAL MEGATRENDS AND POTENTIAL IMPACTS ON THE MID WEST

Global, national and regional trends have a profound impact on the economic development and sustainability of any region in the world. Over the next 35 years the Mid West faces a number of challenges and opportunities that are driven to an extent by external forces. The impact on the region has been considered and analysed to develop an understanding of how to use these to support the aspired transformative change agenda.

Globalisation | **Digital age & changing expectations** | **Ageing populations** | **Depleting natural resources**

Globalisation

OVERVIEW

The world economy will shift from the west to east and north to south

The powerhouses of the new world economy will be China and India

New export markets, trade relations, business models and cultural ties for WA will result

Asia's minerals and energy boom has had a significant impact to date

Asia's growing middle class is expected to drive demand for Australia's high quality food, healthcare, education, financial services and tourism experiences

Global businesses that can operate in and connect to Asian markets can gain from growing trade opportunities

IMPACT ON THE REGION

- By 2025 the real value of global food demand is expected to have grown by around 35% above 2007 levels - largely driven by China and India. The region's proximity to Asian markets, combined with a robust biosecurity system, skilled workforce and reputation as a reliable exporter of high quality food products places Mid West producers and manufacturers in a strong position to capture a share of this growth.
- The Mid West already has strong existing relationships with Asia, including sister city ties and the emergence of an Australian China Business Council Mid West chapter. There are already a number of major Asian investments in the Mid West mining industry.
- The Mid West has the highest level of economic diversity of all WA regions and already exports a range of commodities. As regional trade grows, the Mid West will focus on expanding the supply of food (particularly protein), resources, energy, tourism experiences and education to the greater region.
- The proximity of Geraldton's port to the Asian region will be a competitive advantage for expanding trade relations, particularly for grain related products. The proposed Oakajee port (deep water port proposed for the Mid West) would enhance this opportunity.
- Potential future reductions in Asian import tariffs on Australian products, particularly through a Free Trade Agreement (FTA) with China, would lower barriers to trade for Mid West exports. FTAs have also recently been signed with Japan and South Korea.
- China is already the dominant importer of Mid West minerals, particularly its iron ore (95%) and has heavily invested in a number of the region's major projects. The region has enormous untapped magnetite resources and realisation of proposed and potential resource projects will stimulate the mining, construction, manufacturing and logistics industries. Oakajee port is of interest to investors who have large iron ore resources in the region and wish to capitalise on their assets.
- Asia is the dominant importer of various Mid West food products (lobster, wheat, lupins, beef and sheep) and there is growing demand for product specialisation, for example noodle wheat and other food products. This creates an opportunity for tailored supply chains to develop and the possible creation of Mid West brand recognition, perhaps along the lines of the successful 'Brolos' rock lobster brand. The Mid West's strengths in growing food creates a possible comparative advantage in exporting 'commodity niches'.
- The trend to globalised supply chains will also be matched by a trend to localism and greater demand within the domestic market for "locally supplied" food products where the provenance and production are guaranteed, for example organic or free range. This has the potential to impact positively on the niche food producers within the region, and develop more self sustaining local communities that are more connected and healthy as a result.
- Globalisation will result in a growing opportunity to market the region as an option for experience based tourism and as a lifestyle alternative for migration. As international boundaries become more virtual and populations become more mobile, the flow of international residents and workforces to meet employment demands and needs is expected to increase.
- There are new opportunities for tertiary education, as well as exchange programs for teachers and talented athletes, with various education and research student exchanges already in place. Virtual learning will also become more prevalent and may present challenges and opportunities to Mid West higher education institutions. WA operates in the same time zone as East Asia, which offers opportunities for virtual lessons between Mid West and Chinese schools.

Digital age & changing expectations

OVERVIEW

We are increasingly moving online to connect, deliver and access services, obtain information and perform business and personal transactions

Online retail and workforce mobility in Australia are forecast to grow rapidly with impacts on labour markets, retail models, city design and transportation systems

There is growing demand for experiences over products

Consumers of the future will have expectations for more personalised, better and faster services

Social relationships will hold increased importance due to communication burn-out from social media

IMPACT ON THE REGION

- Parts of the Mid West have key comparative advantages with advanced telecommunications infrastructure already in place. Geraldton is the 'point of interconnect' for the north west and has dark fibre connections to Perth. However, there remains an urgent and ongoing need to enhance communications in many inland communities to achieve equity of provision and support business / industry growth and development. Many of the key employment drivers in the Mid West are based inland so reliable, high quality, mobile and high speed Internet connectivity is critical for the region.
- Technology will allow Mid West producers to link to consumers directly and develop tailored products to meet specific needs at higher profit margins. It also creates an opportunity for Mid West residents, businesses and visitors to access services without needing to travel to major centres.
- The digital age makes it possible for many people to work from almost anywhere in the world. The region's enviable lifestyle and advances in technology and innovation make it attractive for people seeking work in the knowledge economy. For example, people are already operating successful global technology businesses from the Mid West so they can also wind or kite surf during Geraldton's abundant "wind season". As the region becomes more digitally enabled and major projects such as SKA gain momentum, this megatrend is expected to emerge as a key comparative advantage for the Mid West.
- Mid West communities are increasingly focused on developing projects that support the desirability of the region as a place for young people to live and work. Investments in the liveability and sense of connection in urban centres are critical to the future as the vibe and "groovy-ness" of communities will help determine whether the region is attractive to young people. Young people are a key demographic for driving social change, supporting community digital connectedness and helping to grow experiences that define lifestyle.
- As society is increasingly drawn to new experiences, the region's tourism potential may be realised through its diverse range of unique experiences. Opportunities exist through Aboriginal heritage, culture and art, Abrolhos Islands, Kalbarri National Park, outback cultural experiences, wildflowers, fishing and marine activities such as kite and windsurfing.
- Growing demand for online education will be eagerly capitalised by the region's innovative education sector with entities such as the GUC, Durack and WACRH able to provide enhanced and tailored health, education and training products and services as well as meet demands of remote students. Digital 'platforming' of these service providers will support the growth of education and learning as an export service from the Mid West. This megatrend also presents challenges / threats to Mid West providers due to global competition for students.

GLOBAL / NATIONAL MEGATRENDS AND POTENTIAL IMPACTS ON THE MID WEST

Ageing populations

OVERVIEW

14% of Australia's population was aged 65 years and over in 2011, which will grow to an estimated 23-25% by 2056

Increasing life expectancies will create pressures on retirement savings and result in people needing to work longer, creating the need for different working arrangements and retirement models

Pressures on healthcare systems will be significant as lifestyle and chronic disease rates increase

The importance of fitness and physical activity will increase as a need to limit the pressures on health spending

IMPACT ON THE REGION

- Several Mid West communities face challenges retaining youth, as students and working age people continue a trend of movement toward larger population centres and coastal communities. Traditional industries such as farming and pastoralism have experienced workforce supply issues as a result.
- A dominant impact of this megatrend will be the relative proportion of people in the region's workforce that generate wealth, in relation to the retired cohort and their growing service and capital infrastructure needs. Currently there are three people in the workforce to every retiree in the Mid West, but by 2050 this will change to two workers to every retiree – meaning less working age people to support retirement population needs. The region therefore needs a strong attraction strategy for young families and younger people to fill its future workforce demands.
- Mid West communities with relatively large retirement populations, such as Kalbarri and Dongara, already experience significant pressures on services and infrastructure, with this pattern likely to grow in these attractive, temperate coastal locations. Inland communities also face significant demands from residents who wish to 'age in place' and face pressures of providing services and infrastructure. This also presents opportunities as it will necessitate growth in the service sectors to support delivery of services to this age cohort.
- Aged care accommodation is already a significant challenge in Mid West communities, with this trend expecting to increase pressure on housing stocks for older residents. Smaller configuration housing (1-2 bedroom) is especially difficult to provide due to development costs and inability to gain a return on investment, but are critical to free up the larger houses needed to support business and employment growth.
- Efforts to maximise the health, independent living arrangements and social connection of the region's ageing population may alleviate demands on social and community services. Initiatives to encourage active and healthy 'ageing in place' will help create a more sustainable retirement scenario for the Mid West.
- A larger number of 'grey nomads' and retirees will support the growing self-drive tourism market that the Mid West is largely reliant upon. This is the "bread and butter" market of regional tourism and efforts to enhance products, infrastructure and experiences for this market will be a priority.

Depleting natural resources

OVERVIEW

The earth has limited supplies of natural mineral, energy, water and food resources, with some resources being depleted at high rates

Science, technology, business processes, government policy, lifestyle patterns and cultural norms will all play a role in how we can ensure sustainability and share resources with future generations

Protection of critical biodiversity sites and species is critical

Many of the world's natural habitats, plant and animal species are in decline or at risk of extinction

Habitat damage, over exploitation, pollution, invasive species and climate change are placing significant pressures on our ecology and biodiversity

The impacts of climate change need to be considered in all future developments

Greater level of consciousness is required to continually adapt to climate change impacts

IMPACT ON THE REGION

- Industries in the Mid West such as agriculture, fishing and pastoralism are well placed to capitalise on the growing world demand for food. However, all these industries face challenges relating to sustainable practices and ensuring efficient production to meet price points in Asia. Sustainable agriculture and natural resource management investment to minimise loss of ecological function of the region will be a high priority.
- Global demand for seafood is increasing whilst wild catch fisheries decline, which signals potential for the region's emerging aquaculture sector. The Mid West has warm, clean waters enhanced by the Leeuwin current and a strong fishing base and history. It is also ideally placed to expand aquaculture research, development and commercial projects. The region is already engaged in the growth of a local industry and is developing some strengths and potential advantages in aquaculture research and development and into production of higher value niche products with high environmental standards of production.
- The Mid West is highly prospective for solar, wind, geothermal and biomass renewable energy projects and related technologies, with a number of projects already operating or in planning stages. Global energy demands and depletion of non renewable resources will necessitate innovation and further investment in renewable energy solutions (eg China currently obtains 25% of its energy from clean sources and will spend more than $1.5 trillion on clean energy products between 2011 and 2026).
- The region's comparative and competitive advantages place it in a strong position to capitalise on future demand for research and development or for direct supply of renewable energy. Growth of the region's renewable energy potential would benefit from the completion of the planned 330kV transmission line to Geraldton so that energy can be fed into the State's grid and potentially exported.
- The Mid West also has other existing and potential alternative energy resources, including uranium, thorium and unconventional gas, the exploitation of which is not well developed in the region but may be in the future.
- Mid West water supply currently exceeds demand. However, there are expected future water supply issues in the Batavia Coast, current supply and quality issues in the Murchison and competing requirements, especially in the North Midlands. Future growth and development may place the region in a position where demand starts to exceed sustainable supply. It is critical that the region develops further water resource understanding and undertakes steps to maximise efficiency to better manage the resource. This should include regional, subregional, local, industry and community involvement to understand future demands and drivers.
- In the future, pressure over resources is likely to create global unrest. There will be an emerging need for greater defence and security presence to protect the region's valuable assets and the State's trading lanes to Asia.
- The Mid West has sensitive natural ecosystems and is one of only five places in the world with globally recognised biodiversity hotspots in marine and terrestrial environments. A regional Biodiversity Links project is being developed to link, protect and sustainably manage biodiversity features of significance within the region.
- Weather variability (climate change) could impact the Mid West in a number of ways, including:
  - rising temperatures that affect climate sensitive industries (eg agriculture, fishing) and liveability, particularly away from the coast;
  - reduced winter rainfall, with possible increases in summer, which may overall result in reduced groundwater recharge;
  - rising ocean temperatures which might may impact local fish stocks, or cause southern migration of species;
  - rising sea levels which might risk development along parts of the region's coast;
  - further threatening regional biodiversity and important regional features and natural attractions such as its wildflowers; and
  - a possible increase in extreme weather events such as floods, cyclones and heatwaves.
- Climate change impacts will challenge the region's primary producers, and require ongoing adaptation and innovation. The Mid West has been successful in maximising crop yields in an environment with less growing season rainfall, but will need to continually move to production systems that are less reliant on current levels of annual rainfall. The region's fishing sector has reformed itself in recent years in response to declining fish stocks, and has been able to achieve profitability in a challenging resource environment. This resilience and capacity to innovate are critical for the region to adapt to changes in climate and to increase production to share in supplying the growing demand from Asia.

CHAPTER 4 - BLUEPRINT ASPIRATIONS

Future Mid West leaders, Dongara

In developing the Blueprint, 'scenario planning' has been undertaken to help define the region's 2050 vision. By blending what is known with what is considered possible through this Blueprint, the Aspirational Growth Challenge for the Mid West has been defined.

THE KNOWN...

The Mid West has a highly diverse economy underpinned by the mining, agriculture and the fishing industries. It exports the majority of what it produces to a variety of countries and has a high dependency upon countries in the Asian region. The region has a strong retail sector (representing 10% of all employment) and large and growing community services and government administration sectors (25%+). There is strong employment potential from both strategic (projects) and population (services) growth.

The most recent mining investment boom had a large impact on the region, with more than $5 billion invested in non-residential construction projects from 2008-09 to 2012-13. Strong growth occurred in key industry sectors linked with mining, including construction, manufacturing, transport and food and accommodation.

Significant benefit from the latest boom was captured by the region, which is demonstrated by business growth in the North Midlands' shires closest to the southern province mines. Only around one third of Mid West jobs in mining, manufacturing and construction were filled by workers from outside the region, which was relatively low compared to other regions with significant resource economies.

The mining investment stage is now contracting with key Mid West projects now in the production phase. This is creating a different 'post mining boom' dynamic in the region's economy.

The economic diversity of the Mid West is already the greatest of all regions in the State, but the region will work to build even greater diversity and depth going forward, with greater ability to capitalise on the next boom. The work to build the depth and diversity of the region's economy will also help it 'buffer' against cyclical contractions, which are inevitable in commodity based regions.

The Mid West sees the next five to seven years as an opportunity to prepare itself to capture maximum value and economic gain from the next boom.

GROWTH SCENARIOS MID WEST TO 2025 AND 2050

Three population scenarios have been developed to describe how the Mid West's growth trajectory to 2025 and 2050 may occur. A fourth, the WA Tomorrow (Band C) scenario, is also considered.

The three Blueprint scenarios are based on the recent population movements for the Mid West (as indicated in Figure 41). The region's population has grown by more than 2.3% per annum from 2010/11 to 2012/13. The growth scenarios reflect the region's key strategic drivers and are supported by the strategic directions and investment priorities of this Blueprint.

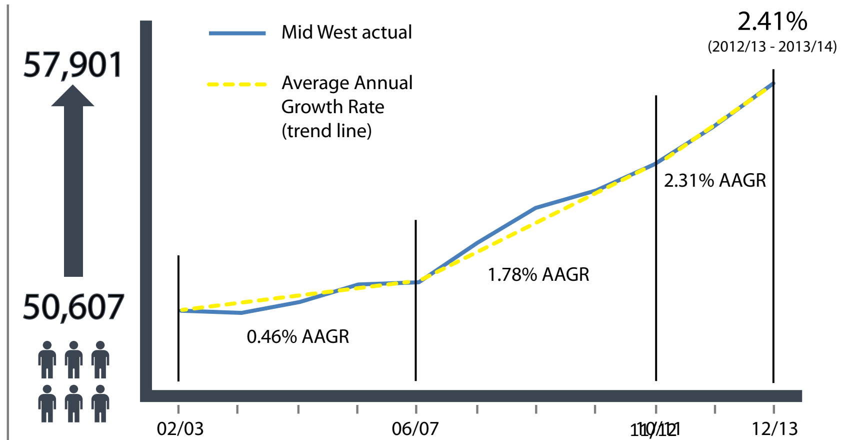


Figure 41. Mid West Estimated Resident Population (ERP) Average Annual Growth Rate (AAGR)

The scenarios are not independent, with each cascading upwards and building upon the one before it. The four scenarios from lowest to highest growth are as follows (summarised in Figure 42).

Scenario 1: WA Tomorrow – Band C (1.3 - 1.4%)

WA Tomorrow (DoP / WAPC) projections are based primarily on historical trends, with Band C generally considered the most relevant predictor of historical trends over the longer term. WA Tomorrow projections extend to 2026, so for the purposes of the Blueprint this Band C trend has been extrapolated to 2050. This scenario results in a regional population of around 97,500 by 2050.

Scenario 2: Current Mid West growth (1.9%)

This scenario uses the actual Mid West growth rate for the five years to 30 June 2013 (1.9%), which is higher than the Band C rate. This rate is extended out to 2050.

This is the Mid West Blueprint's business as usual (BAU) scenario. It indicates what growth may be reasonably expected if recent trajectories continue into the future. This scenario results in a regional population of approximately 115,000 by 2050.

Scenario 3: Organic growth

This is a scenario in which the benefits from the next boom are not fully captured by the region due to constraints on its existing key strategic infrastructure. However, the region is able to develop the full potential of its current industry base and capture higher value industry growth, with its average growth rate climbing to 3% by 2025 and remaining steady to 2050. This scenario results in a regional population of 165,000 by 2050.

Scenario 4: Transformational growth

This is the transformational growth scenario for the Mid West, based on it realising the full value of future mining booms and delivering various major projects. Under this scenario, to 2025 a growth rate of 5% is achieved, which steadies at 3% until 2050. This scenario results in a regional population of 190,000 by 2050.

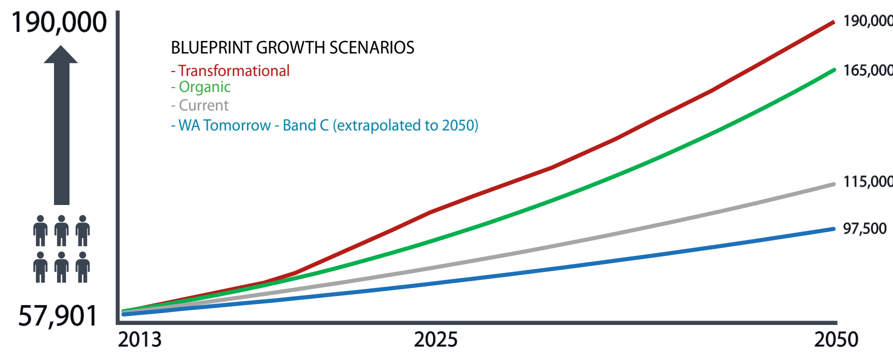


Figure 42. Blueprint growth scenarios to 2025 and 2050

ASPIRATIONAL GROWTH CHALLENGE

For the purposes of the Mid West Regional Blueprint neither scenarios one or two are considered. The express purpose of the Blueprint is to provide a context and define an aspirational vision that would support investments to expedite growth and development of the Mid West.

Scenario four (transformational) is the highest growth scenario for the Blueprint and represents the region's Aspirational Growth Challenge.

This scenario is predicated upon the realisation of the Oakajee deepwater port and its wide range of interdependent projects. Oakajee is expected to deliver up to 5% growth by 2025 through its eventual development, compared to a maximum of 3% annual growth under scenario three. Both scenarios level off at 3% from 2025 to 2050, which is seen as a potentially conservative yet sustainable growth rate for the region. Scenario three does not assume the development of Oakajee, leaving the majority of major economic development opportunities for the region (ore assets) stranded.

044 ECONOMIC DRIVERS - SPATIAL REPRESENTATION

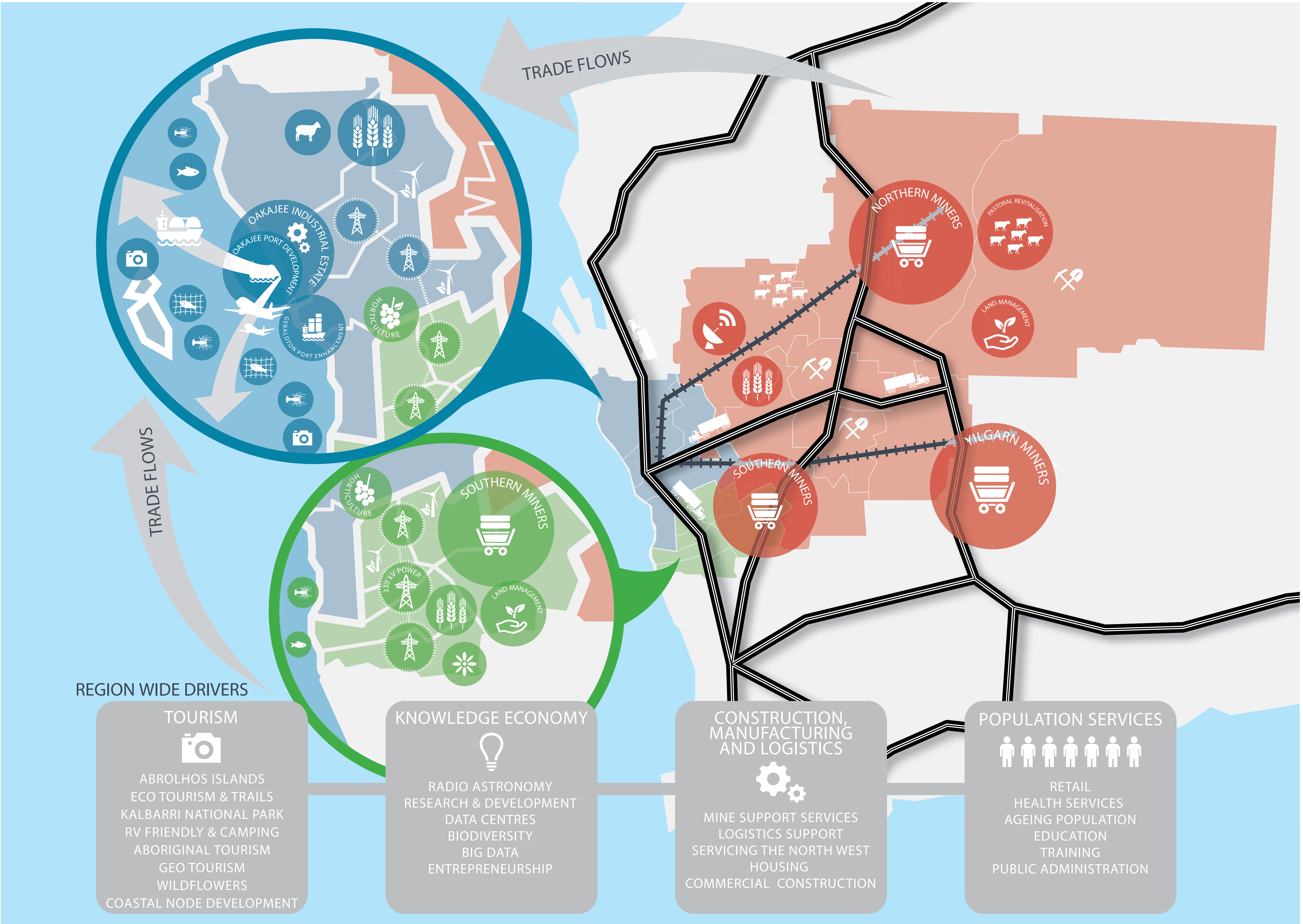


Figure 43. Spatial mapping - key economic drivers under the Blueprint transformational growth scenario

EMPLOYMENT ESTIMATES - TRANSFORMATIONAL GROWTH SCENARIO

A key to being able to deliver strong population growth will be the region's ability to grow its employment drivers. Some population growth can occur through natural increase (births) and through lifestyle and other non economic attractions. However, the principal motivation for relocation to the Mid West will be for employment. Theoretically, the Blueprint sees these employment trajectories as follows:

- **INDUSTRIAL - business as usual.** The majority of expected growth based on trends; mainly in existing industries eg mining, agriculture and fishing, retail, public sector.
- **KNOWLEDGE - building on strengths.** Diversifying primary industries; value adding and extracting more from existing supply chains; business expansions; new market investment and trade relationships.
- **NEW AGE / DIGITAL / TECHNOLOGY - uncertain future.** Growth and development in new and emerging industries; knowledge economies; smart industry sector development; new technologies.

The region must also create highly liveable and desirable communities with excellent infrastructure and services that can secure and support new industries / businesses and attract employees and families to the Mid West as permanent residents.

Employment in the 19 major industries in the Mid West (2011 Census) is shown in Table 14. The growth or decline of employment in these sectors from 2001-11 has been outlined further in the workforce profile section of the Blueprint (page 36). Based on these recent trends, and with assumptions made regarding future growth or decline, the Blueprint has created high level, aspirational job estimates to 2025 and 2050.

These estimates align to the Blueprint's transformational growth scenario and are therefore predicated on the delivery of a number of major projects including:

- Oakajee deepwater port and serviced industrial estate;
- road and rail corridors connecting the region's stranded southern and northern mining provinces to Geraldton / Oakajee, as well as potentially eastern (Yilgarn) miners;
- completion of the 330kv transmission line (stage 2 to Geraldton), which facilitates expansion of the region's renewable energy sector;
- establishment of a freight and logistics hub to service the region and the north west of WA;
- expansion of food production, including intensive horticulture and pastoral revitalisation;
- growth of telecommunications and digital networks; and
- growth of the knowledge economy and innovation sectors.

Servicing this population growth through housing, health, education, retail and other essential infrastructure and services is expected to create further work. The ageing population is expected to significantly drive growth in healthcare and related services. There is also an expectation that a growing number of people who work outside the region will choose the Mid West as their home ie FIFO / DIDO base.

	2001-11 growth	2011 jobs	2025 job estimates	2050 job estimates	Assumptions / logic
Agriculture, forestry and fishing	↓ 29%	2,223	2,625	4,550	Strong new job growth is projected from development of 4,000ha horticulture development primarily in the North Midlands, natural resource management growth, expansion of the region's growing aquaculture industry and revitalisation of the pastoral sector.
Mining	↓ 7%	2,151	3,325	5,850	Strong growth expected from unlocking the region's stranded resources via expanded Geraldton port and establishment of the Oakajee port and other strategic infrastructure.
Manufacturing	↑ 32%	1,351	2,425	4,575	Significant growth projected to support major project development. Local magnetitie production / processing is labour intensive (relative to direct shipping ore).
Electricity, gas, water and waste services	↑ 18%	245	350	650	Modest growth to service growing population. Some growth expected from expansion of renewable energy sector.
Construction	↑ 73%	2,737	4,025	7,150	Strong growth to support major project and housing development.
Wholesale trade	↓ 24%	687	875	1,300	Slight percentage decline projected but actual job growth expected to service project development and population growth.
Retail trade	↑ 20%	2,615	2,800	4,550	Pressures acknowledged from increase in online shopping but actual growth expected to service population growth. Current efforts of the region to restrict retail leakage and attract major retailers / district department stores are also expected to create some growth.
Accommodation and food services	↑ 16%	1,686	2,450	5,200	Significant increase projected to service growth in temporary workforces (FIFO / DIDO) and in response to the region's strong tourism focus and strategy.
Transport, postal and warehousing	↑ 89%	1,610	2,450	5,200	Strong continued growth to support major project development and the region's emergence as a freight and logistics hub for the north.
Information media and telecommunications	↓ 37%	146	350	975	Modest increase in line with expected growth in knowledge economy and related sectors.
Financial and insurance services	↑ 7%	358	350	390	Minimal actual growth projected with greater digital and virtual banking / finance services.
Rental, hiring and real estate services	↑ 42%	401	700	1,625	Continued growth to support major project development and house the region's growing workforce.
Professional, scientific and technical services	↑ 35%	823	1,225	2,600	Significant growth in knowledge economy / innovation / research projects as well as future expansion of regional radio astronomy projects.
Administrative and support services	↑ 11%	656	875	1,625	Steady increases to service population growth.
Public administration and safety	↑ 38%	1,721	2,650	5,500	Strong increase projected to service population growth and some defence industry growth.
Education and training	↑ 38%	2,187	3,500	7,800	Strong continued increases in employment projected to service growing regional population and prepare regional workforces through the region's sophisticated higher education and training systems.
Health care and social assistance	↑ 50%	2,309	3,850	9,100	Strong increases projected to continue to support growing region and meet higher care needs of ageing populations.
Arts and recreation services	↑ 5%	158	175	325	Modest growth to service population growth.
Other services	↑ 36%	1,019	1,400	2,600	Modest growth to service population growth.
Total jobs	**↑ 20%**	**25,083**	**36,400**	**71,565**	
Population		**57,901**	**84,580**	**189,443**	

Table 14. Job growth estimates - transformational growth scenario

046 REGIONAL POPULATION DISPERSAL

In numerical terms, the majority of the region's growth is expected to occur in the larger subregional population centres and mainly in the Batavia Coast. In the hinterland, proactive communities have significant opportunity to grow. Communities that choose not to intervene may experience negative growth.

Understanding how each community 'fits' within a subregional context will be important to create dynamics around achieving collective regional or subregional outcomes rather than towns competing with one another.

MWDC liaised with Mid West local governments to determine their growth estimates and the basis on which they expect growth to occur. These local government projections accord with MWDC's transformational growth scenarios resulting in a total regional population of around 190,000 by 2050. Table 15 represent the local government estimates (with AAGR and projected growth numerically) and indicate the anticipated drivers of growth in each municipality. Figure 44 below represents this indicative growth by subregion .

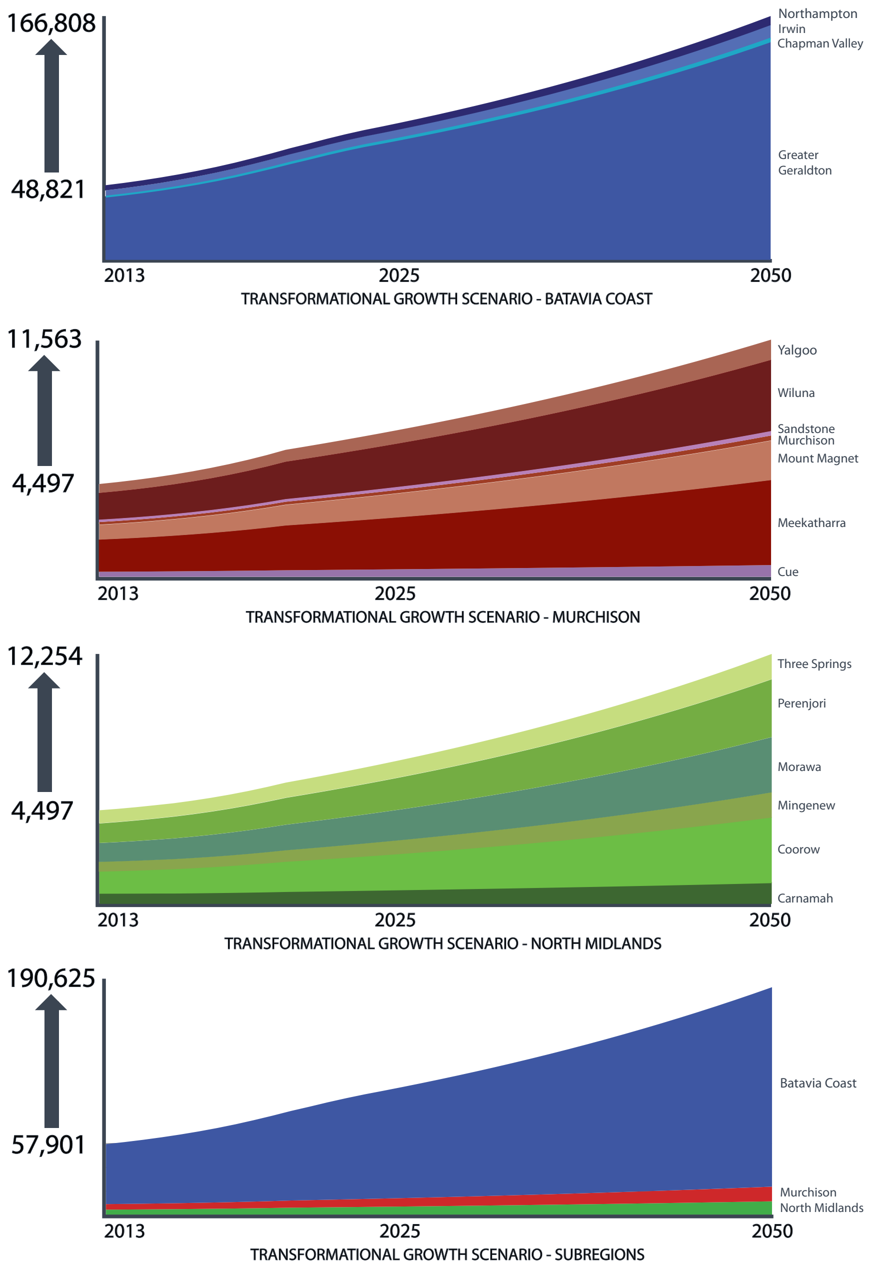


Figure 44. Population dispersal - subregional growth estimates

Local Government	2013 population (ERP) (no)	2008-13 AAGR (%)	2025 (no)	2013-25 AAGR (%)	2050 (no)	2025-50 AAGR (%)	Total 2013-50 increase	Rationale for growth
BATAVIA COAST - 48,821 to 166,808								
Chapman Valley	1,214	2.3	1,807	3.3	3,821	3.0	**2,607**	Oakajee; Geraldton population overflow; agriculture; tourism
Greater Geraldton	40,448	1.9	66,316	4.2	142,931	3.1	**102,483**	Oakajee; regional population service growth; industry servicing growth; technology / innovation etc
Irwin	3,780	2.1	5,627	3.4	11,896	3.0	**8,116**	Oakajee; Geraldton population overflow; retirement population / lifestyle; tourism
Northampton	3,379	0.4	4,402	2.2	8,160	2.5	**4,781**	Oakajee; Geraldton population overflow; agriculture; tourism
SUBREGIONAL TOTAL	**48,821**	**1.9**	**78,152**	**4.0**	**166,808**	**3.1**	**117,987**	
MURCHISON - 4,497 to 11,562								
Cue	298	-0.6	381	2.0	624	2.0	**326**	Mine worker retention; mining and related business growth; pastoral reform; land management; tourism
Meekatharra	1,521	3.7	2,216	3.2	4,108	2.5	**2,587**	Mine worker retention; mining and related business growth; pastoral reform; land management; tourism
Mount Magnet	711	1.3	1,036	3.2	1,920	2.5	**1,209**	Mine worker retention; mining and related business growth; pastoral reform; land management; tourism
Murchison	127	2.9	145	1.1	238	2.0	**111**	Mine worker retention; mining and related business growth; pastoral reform; land management; tourism
Sandstone	116	-0.2	132	1.1	217	2.0	**101**	Mine worker retention; mining and related business growth; pastoral reform; land management; tourism
Wiluna	1,279	7.4	1,863	3.2	3,454	2.5	**2,175**	Mine worker retention; mining and related business growth; pastoral reform; land management; tourism
Yalgoo	445	7.0	610	2.6	1,001	2.0	**556**	Mine worker retention; mining and related business growth; pastoral reform; land management; tourism
SUBREGIONAL TOTAL	**4,497**	**4.1**	**6,383**	**2.9**	**11,562**	**2.4**	**7,065**	
NORTH MIDLANDS - 4,583 to 12,254								
Carnamah	550	-4.8	650	1.4	1,066	2.0	**516**	Oil and gas; mineral sands
Coorow	1,085	-1.3	1,539	2.9	3,222	3.0	**2,137**	Coastal growth (Leeman / Green Head); land availability; proximity to Perth
Mingenew	486	0.1	591	1.6	1,238	3.0	**752**	Dongara overflow; intensive agriculture / horticulture development
Morawa	906	0.9	1,285	2.9	2,691	3.0	**1,785**	Karara / Tilly logistics hub; Karara stage 2; subregional education ; mining and related business growth
Perenjori	924	6.3	1,343	3.1	2,812	3.0	**1,888**	Karara stage 2; Asia Iron; mining and related business growth
Three Springs	632	-1.2	747	1.4	1,225	2.0	**593**	Subregional energy / power hub and related business growth
SUBREGIONAL TOTAL	**4,583**	**0.1**	**6,155**	**2.5**	**12,254**	**2.8**	**7,671**	
Mid West - 57,901 to 190,624								
REGIONAL TOTAL	**57,901**	**1.9**	**90,690**	**3.8**	**190,624**	**3.0**	**132,723**	

Table 15. Population dispersal - local government growth estimates

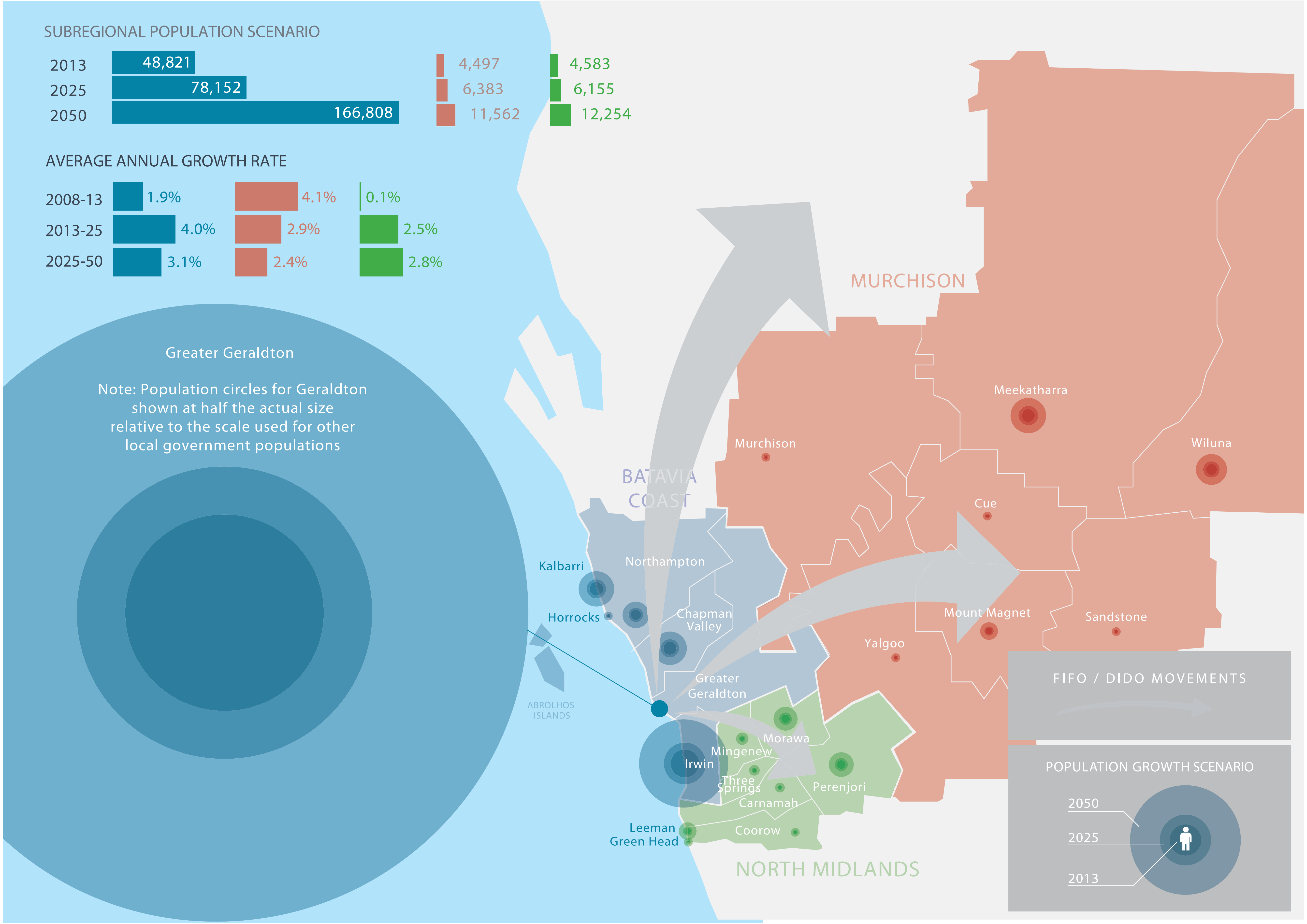


Figure 45. Spatial mapping - population growth mapping under the Blueprint transformational growth scenario

CAPACITY FOR GROWTH (REGIONAL ADVANTAGES)

Sophisticated training and education infrastructure well placed to address low education attainment

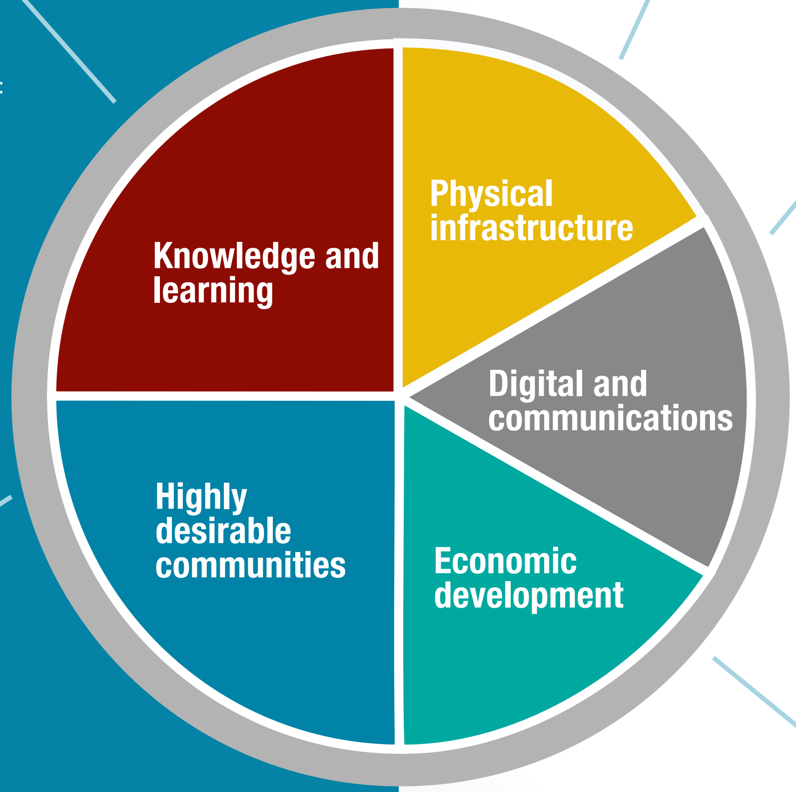
- Well established and high performing higher education, training and tertiary institutions including the Geraldton Universities Centre, Western Australia Centre for Rural Health, Durack Institute of Technology, Batavia Coast Maritime Institute and Rural Clinical School offering a range of diverse post secondary schooling options for the region.
- The region has a range of existing industries and natural advantages that place it in a strong position to attract various regional innovation initiatives for research and development, including:
  - radio astronomy and space research;
  - biodiversity and climate change;
  - natural history / archaeology;
  - renewable and remote energy solutions;
  - agriculture;
  - aquaculture; and
  - remote education and health.

Diverse region with populations, economies, attractions and challenges ranging significantly across its 17 local governments

- The Mid West region is home to two internationally recognised biodiversity hotspots offering unique opportunities for ecotourism, conservation and scientific analysis for issues associated with climate change and monitoring.
- The region has large areas of conservation reserves that provide opportunities for conservation, tourism and learning.
- The Abrolhos Islands is the world's southernmost coral reef system with significant fishing resources protected islands and coral atolls offering opportunities for world class tourism visitation, game fishing, ecotourism and heritage (including the Batavia and Zeewick wrecks).
- The region's Mediterranean climate attracts interest from established and new entrepreneurs. Warm summers and consistent wind patterns offer an excellent mix of lifestyle and work choices, particularly for wind surfing and sailboarding enthusiasts.
- Mid West is the most liveable region north of the Perth metropolitan area, offering an excellent work / life balance that has attracted miners to use Geraldton as a FIFO base for mines in the North West.

Natural resources

- Diverse mineral deposits, including iron ore, gold, copper, lead and zinc
- Extensive land areas for residential growth, agriculture and other large scale industry
- Solar, wind, biomass and geothermal resources to support renewable energy generation
- Ample conventional and alternative energy resources
- Large quantities of good quality water
- Diverse coastline with clean warm waters supported by the Leeuwin current
- Largest wild catch fishery in WA with coastal conditions conducive to aquaculture



Leadership, collaboration and strategic alignment

- Geraldton serves as a regional centre for the Mid West and beyond, providing a range of supports and services
- Alignment and strong partnerships across key regional development bodies in the region including:
  - Mid West Development Commission;
  - City of Greater Geraldton and other local governments;
  - Regional Development Australia Mid West and Gascoyne; and
  - Mid West Chamber of Commerce and Industry.

Diverse strategic infrastructure and utility provision

- Geraldton port is the most diverse regional port in WA, which provides flexibility and capability to handle growth in a broad range of products.
- Geraldton port is the closest general cargo / agriculture port in Australia to the emerging South East Asian ('food bowl') marketplace offering significant economic freight rate benefits.
- Geraldton port is the second largest grain export terminal in Australia.
- Planned Oakajee Industrial Estate – would be the largest heavy industry site in WA.
- Significant planning for the proposed deepwater port at Oakajee, which has enormous potential and no obvious constraints from residential encroachment, depth of turning basin or number of berths.
- Geraldton Airport has runway, taxiway and apron infrastructure capacity for A320 / B737 aircraft.
- Meru Waste Disposal Facility is the only Class III landfill north of Perth.
- Extensive State and National transport infrastructure offers signficant potential to harvest benefits from the growing north / south movement of people and product.

Advanced telecommunications infrastructure to leverage greater uptake and innovation

- Geraldton is the first regional centre in WA to receive the National Broadband Network's (NBN) 'fibre to the node' platform and is a Point of Interconnect (POI) for the entire North West of WA offering servicing support options to a significant part of the State.
- As a direct result of the NBN connection, private investment involving a partnership with IBM is about to establish a regional data centre in Geraldton (at a new Technology Park) to offer amongst other things, cloud based support services to business for information storage and backups.
- Mid West is a joint host (with South Africa) of the international Square Kilometre Array (SKA) (stage 1) project at the Murchison Radio Astronomy Observatory placing the region on the world stage in terms of new science and astronomy discoveries.
- To service the significant data expected from the SKA, a new supercomputer is being designed for the Pawsey High Performance Computing Centre and an associated fibre link has been established between the MRO and Perth through Geraldton (at the CSIRO site). Combined with existing supercomputing capacity supporting the existing ASKAP and MWA projects, these facilities will offer scientists, GUC students and researchers opportunities to access infrastructure for science, astronomy and other scientific research.

The most diverse regional economy in WA

- The Mid West has the most diverse regional economy in WA (based on the Shannon and Equability Index) with diverse industry profiles and employment across all sectors, helping to buffer against economic fluctuations.
- Due to an ideal climate and offshore structures (ie Abrolhos Islands), the Mid West region is host to the largest fishing industry in the State with dominant rock lobster, significant finfish and mollusc production and an emerging aquaculture sector.
- The region has significant intensive and broadacre agriculture including livestock, cropping and horticulture production and due to excellent soil type is the number one region for the production of high end export noodle wheat in the State. The region is also renowned for its clean and green food quality.
- The Mid West has the most significant magnetite resource located in WA, which differentiates the region from others (ie hematite / iron ore). This positions the region for new exports and downstream processing to take advantage of the export market (ie China) change in focus to secure resources that have reduced environmental impacts from processing.
- Large areas of isolation and internationally signficant radio quietness, lending the region to advanced radio astronomy and various other projects requiring large areas of land eg agriculture, renewable energy.
- Diverse range of community and NGOs that drive growth and development across a range of sectors, including social innovation and entrepreneurship, agriculture, natural environment and biodiversity.

Government of Western Australia
Mid West Development Commission

Regional Development Australia
MIDWEST GASCOYNE

Figure 46. Perceived areas of Mid West regional advantage

REGIONAL ECONOMIC DEVELOPMENT FRAMEWORK

The focus of regional development economics theory has shifted in recent years from a focus on exogenous (external) forces as the drivers of regional growth to re-emphasise the importance of endogenous (internal) factors in facilitating growth.

Whilst exogenous market conditions are vital to the economic growth of a region, it is the endogenous processes and factors within a region, such as physical infrastructure, digital and communications infrastructure / capacity, natural resources, knowledge and learning institutions, entrepreneurship and leadership quality, that create a region's competitiveness. It is these processes and factors that enhance local capacity and capability to cope with rapid change in an increasingly competitive global environment.

Figure 47 draws on information in the Blueprint, in particular the global / national megatrends (page 38) and regional 'SCOR' card (Attachment A), which considers the region's Strengths, Challenges, Opportunities and Risks. It provides an overview of the region's potential for transformational growth based on the megatrends likely to drive the demand for the region's products and services.

MODEL FOR REGIONAL ECONOMIC DEVELOPMENT[1]

Regional economic development outcomes can be measured by the change in the 'regional shift component' of a shift share analysis. This looks at the change in employment of a region over a period of time and compares it to the State (or national) figures on three different levels (or components): State, Industry and Regional (or Differential).

The 'regional' component is regarded as an indicator of a region's competitive advantage, as it accounts for employment growth that is not explained by overall growth of the State (or national) economy or in specific industries. In other words, it reflects the unique 'region specific' conditions (eg supply chain efficiencies, liveability / ability to attract and retain a skilled workforce etc) that effect the competitiveness of the region's economy.

A shift share analysis was undertaken as part of the Blueprint process as discussed on page 35. The analysis showed that the regional shift component for the Mid West increased by over 40% for the period 2006-11, using 2001-06 as a baseline. This indicates that the region's competitive advantage improved significantly during this period, providing an excellent starting point for the Mid West to grow towards its aspirational 2050 scenario.

1 Stimson and Stough (2008). Changing approaches to regional economic development: Focusing on endogenous factors.

This ties in with the Blueprint analysis of the Mid West Regional Advantage (page 48), whereby natural resources, physical infrastructure, digital and communications infrastructure and highly desirable communities are the basis of the region's comparative advantage.

This comparative advantage is then turned into a competitive advantage though the functions and processes of the coordinated leadership, institutions and entrepreneurship factors created through collaboration of key stakeholders.

This collaborative approach will help the aspirational growth targets of the Mid West to be achieved. By building the region's entrepreneurial resources and capacity for innovation, the region can continue to adapt positively to changing market and resource conditions going forward. The ability of the region to anticipate and adapt to change will be a key factor in enabling regional industries to realise their full potential.

The Mid West Blueprint provides an aspirational vision for regional development with a number of strategies, plans and process to follow, based on its five priority pillars. It is anticipated that these subsequent steps will guide investment and institutional policy (where required) to enhance the capacity and capability of the Mid West.

Mid West GROWTH POTENTIAL

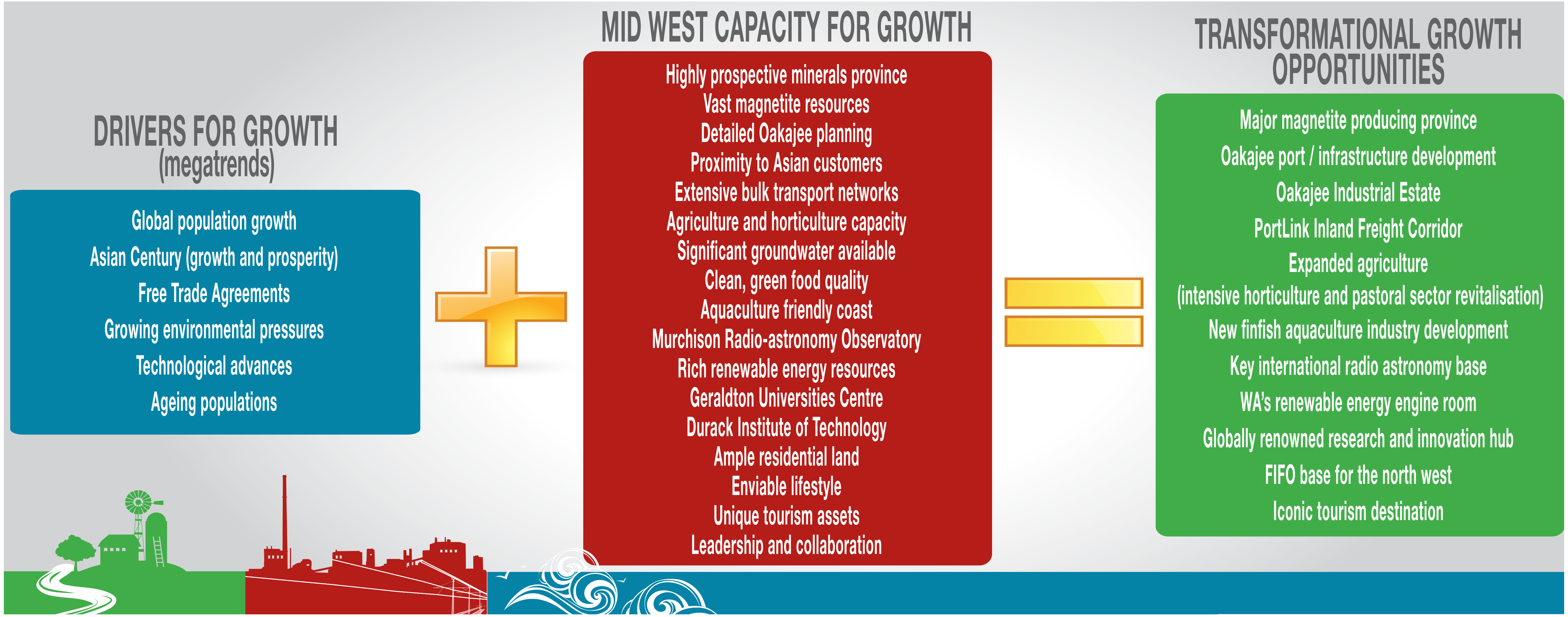


Figure 47. Transformational growth opportunities

CHAPTER 5 - 2050 VISION, PILLARS AND ELEMENTS

Blueprint consultation and analysis has resulted in a 2050 Vision for the Mid West (Figure 48).

The Blueprint acknowledges that the Mid West essentially 'faces outwards', recognising the critical importance of its trade relationships for future growth and development. The Blueprint also maintains that any future growth and development from industry and trade growth must benefit all Mid West communities in a variety of meaningful ways. The vision for the Mid West, therefore, focuses both outward and inward.

To deliver the 2050 Vision, five key pillars have been identified that are considered imperative for the strong growth and development of the Mid West region. The pillars includes a total of 22 focus areas (Elements) that are considered fundamental to delivering social and economic priorities of the Blueprint (Figure 49).

The following pages outline the Blueprint's five pillars ansd 22 element in some detail. Key challenges and opportunities are identified, with a series of strategies proposed to address the challenges and capitalise on the opportunities.

Each strategy has an indicative timeframe for implementation as per the key below (Figure 50).

Figure 50. Mid West 2050 Vision

STRATEGY TIMEFRAME KEY

TERM	IMMEDIATE	SHORT	MEDIUM	LONG
	BY 2015	BY 2020	BY 2025	AFTER 2025

Figure 49. Blueprint strategy timeframe key

PILLAR	ELEMENT
PHYSICAL INFRASTRUCTURE Create an integrated network of infrastructure to generate new industry opportunities for an annual economic GROWTH RATE OF 5% BY 2025	Movement of people and resources; Water; Energy; Waste
DIGITAL AND COMMUNICATIONS The Mid West will be a connected, digitally empowered and innovative region with competitive mobile and network infrastructure, creating opportunities for growth and development	Telecommunications infrastructure; Connected communities
ECONOMIC DEVELOPMENT GENERATE 10,000+ NEW JOBS in the Mid West by 2025 and an additional 35,000 by 2050	Resource Economy; Tourism; Agriculture and food; Land availability; Business and industry development; Trade development; Security
HIGHLY DESIRABLE COMMUNITIES Build communities with strong social capital and infrastructure that creates a REGIONAL POPULATION OF 80,000+ BY 2025 AND 190,000 BY 2050	Community development, leadership and collaboration; Spaces and places; Regional housing; Health and wellbeing; Remote communities; Environment
KNOWLEDGE AND LEARNING Create highly educated and skilled communities that meet the region's future workforce requirements	Education and training; Workforce development; Research and innovation

Figure 48. Blueprint pillars and Elements

PHYSICAL INFRASTRUCTURE

CREATE AN INTEGRATED NETWORK OF INFRASTRUCTURE TO GENERATE NEW INDUSTRY OPPORTUNITIES FOR AN ANNUAL ECONOMIC GROWTH RATE OF 5% BY 2025.

With an economy underpinned by traditional agriculture, fishing and the resources sectors, the Mid West requires extensive and efficient supply chain infrastructure and transport networks to facilitate access to its domestic and overseas markets. As global demand grows, the region will focus on expanding supply of its products and services to new and expanding domestic and global markets.

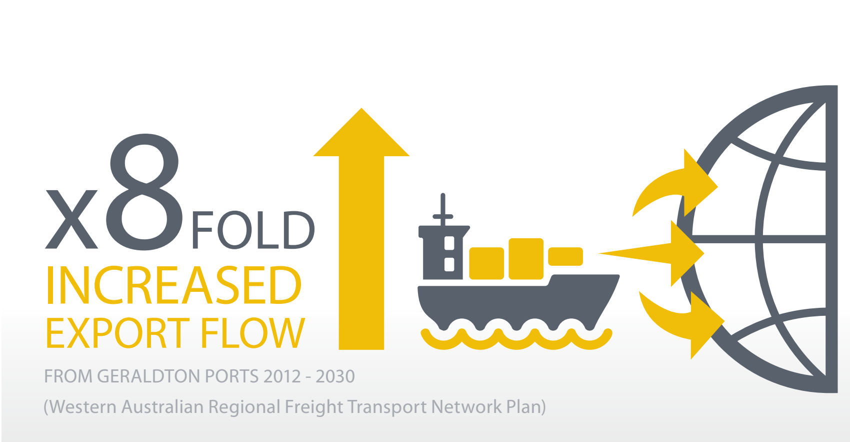
Many of the region’s natural resource assets are presently stranded by strategic infrastructure capacity constraints (eg port, power, roads, rail). These constraints will continue to impede regional productivity and substantial investment in physical infrastructure is essential to unlock the region’s significant future growth and development potential.

This chapter identifies the Blueprint's key Physical Infrastructure focus and priorities.

Geraldton port

MOVEMENT OF PEOPLE AND RESOURCES

STRATEGIC INFRASTRUCTURE



With an economy underpinned by agriculture, fishing and the resources sectors, the Mid West requires extensive and efficient supply chain infrastructure and transport networks to facilitate access to its domestic and overseas markets. As the region's main conduit to market, Geraldton is a terminus of road and rail infrastructure throughout the Mid West and is connected to external markets via its port, airport, rail and arterial road network.

The Mid West is strategically located half way between the Fremantle port and the country's leading direct shipping iron ore province, the Pilbara. To capitalise on its position, the region has a busy Panamax port in Geraldton with plans for a deepwater port at Oakajee. These exporting facilities are supported by an integrated network of dual gauge rail infrastructure, several major roads, the Dampier Bunbury Gas Pipeline, grid supplied power and access to groundwater.

The State has also developed a fully structure planned, 6,500ha greenfields industrial estate site adjacent to the planned deepwater port. This would be linked via the Geraldton heavy freight bypass and the Oakajee Narngulu Infrastructure Corridor (ONIC).

Global demand for various commodities (such as minerals and food) creates opportunities for commodity based economies like the Mid West to grow and diversify. However, infrastructure capacity constraints, particularly at its port, various major roads and the Geraldton airport, are impeding the region's growth potential.

Security of key infrastructure corridors is fundamental to effective strategic regional planning and the delivery of priority economic infrastructure. A focus on staged delivery of major infrastructure may help position the region for future growth and minimise future bottlenecks that inhibit growth opportunities.

A Mid West Strategic Infrastructure Group (MWSIG) exists to share agency information on infrastructure priorities within their relevant portfolios.

CHALLENGE: A shared vision and unified approach across agencies and the private sector is required to support the timely delivery of major regional infrastructure. This includes identifying and securing key infrastructure corridors to enable future development.

CHALLENGE: A strategic (and potentially staged) approach is needed to deliver key Mid West infrastructure to capture future economic opportunities.

CHALLENGE: Securing funding and the long lead times associated with major infrastructure items (investigations, approvals and development) present significant challenges to realising economic opportunities in a timely manner.

The WA Regional Freight Transport Network Plan (WARFTNP) prioritises "expansion of the region's freight network to link the emerging Mid West resources industry to existing and future Mid West ports, manage the Greater Geraldton area's increasing freight task and improve the area's northern and southern freight accesses to support future development".

The WARFTNP (p12) has a number of specific priorities relating to Mid West ports, rail and roads infrastructure. These projects are listed in the relevant sections of this Mid West Blueprint element - Movement of People and Resources.

OAKAJEE DEEPWATER PORT AND ASSOCIATED TRANSPORT INFRASTRUCTURE

Efficient / competitive port infrastructure is a key to driving regional growth. The proposed deepwater port at Oakajee would:

- provide the capacity needed to accommodate any significant growth in demand from current and proposed iron ore producers;
- support the region's resources sector by catering for larger and potentially more cost effective Capesize vessels;
- allow for the attraction and development of new businesses which require proximity to a deepwater port;
- potentially provide a direct export route for businesses located in the proposed adjacent 6,500ha Oakajee Industrial Estate; and
- assist in reducing congestion in Perth and other WA ports.

The WARFTNP identifies the following priority:

- Plan for and invest towards common-user port infrastructure to develop the Mid West resources industry - Oakajee Mid West Development Project.

The Department of State Development (DSD) has commissioned a range of studies that will better inform decision making regarding the Oakajee port project. This work aims to:

- reduce capital costs;
- provide options for a scaled, staged approach to development;
- encourage greater use of existing rail infrastructure; and
- provide flexibility with rail line planning and coordination.

OPPORTUNITY: A scaled or staged development of Oakajee may be viable.

Oakajee port and industrial estate site, looking south towards Geraldton

Oakajee Narngulu Infrastructure Corridor

The development of the ONIC is an essential component of the Oakajee port project. ONIC is expected to:

- provide access for the required rail and fit-for-purpose road connections to Oakajee from existing rail and road networks, which will also effectively provide links from Oakajee to the Geraldton port and Geraldton's current main industrial estate at Narngulu;
- accommodate the provision of key services (for example power, gas and water) to the Oakajee port and proposed adjacent industrial estate; and
- be a major portion of the route of the proposed Geraldton outer bypass road required to reduce congestion and heavy haulage on Geraldton's internal road systems.

Other complementary projects

The Oakajee project is highly complementary with other major projects such as the Oakajee industrial estate (OIE) (which includes heavy industry areas), the proposed 330kV transmission line from Three Springs to Geraldton (and potentially Oakajee), and the State's proposed PortLink project (refer Figure 51).

The proposed Oakajee deepwater port and associated infrastructure are seen as vital to the growth and development of the Mid West, with potential to create or enable thousands of new jobs and trigger more growth and development in the region than any other individual project.

CHALLENGE: The expansion potential of the Geraldton port is limited and will not meet all of the projected needs of the region's developing iron ore industry in terms of potential throughput or ship sizes.

PortLink Inland Freight Corridor

The development of Oakajee would create a new international gateway to Asia and given the proposed PortLink Inland Freight Corridor, could position the Mid West as a logistics hub for the State, linked to a national freight network.

The recent sealing of sections of the Goldfields Highway is consistent with the proposed State Government endorsed PortLink Inland Freight Corridor concept (Figure 51). This seeks to establish integrated infrastructure corridors linking major regional and State ports including Port Hedland, Geraldton / Oakajee, Esperance and Kwinana. It also provides the basis for a better connection between the Mid West and the eastern states via rail through Kalgoorlie.

There have been recent efforts to establish an inter-regional business and contract servicing link with the highly prospective Central Lands district in the eastern Goldfields. The focus has been on 'opening up assets' in the district and establishing a transport corridor that would facilitate future economic and social development. The connection of the Central Lands (including the Musgrave minerals province) to Mid West export infrastructure will be considered as part of the PortLink studies.

A north west bypass around Kalgoorlie and an intermodal hub at Kalgoorlie is part of the PortLink concept. A PortLink Steering Committee has been established by government to provide strategic advice in the planning and implementation process.

Figure 51. Portlink Inland Freight Corridor (concept)

Karara Mining Ltd, first magnetite export from Geraldton Port

054 MOVEMENT OF PEOPLE AND RESOURCES *CONT'D*

GERALDTON PORT EXPANSION AND OPTIMISATION

The Geraldton port has achieved its eighth consecutive annual import / export record in 2013-14 (18.5 million tonnes) and is nearing its current physical import / export capacity (around 20mtpa) (Figure 52).

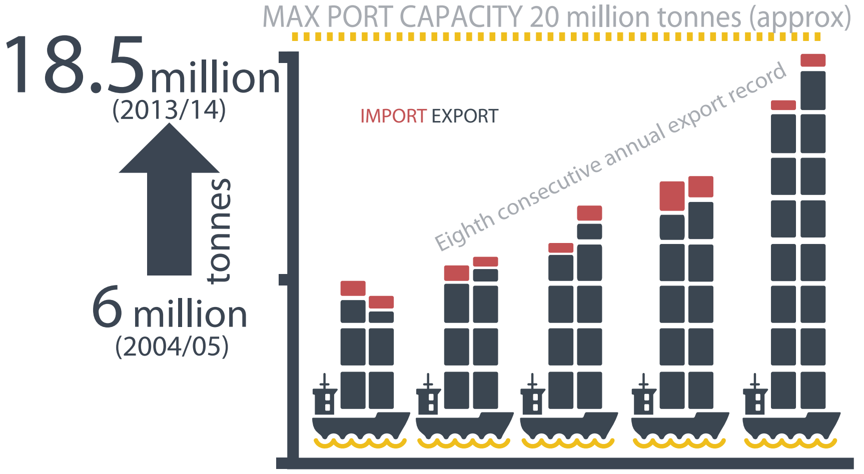


Figure 52. Geraldton Port import and export trade volumes - 2004/05 - 2013/14

Until the proposed deepwater port at Oakajee is developed, the ability to export products via the Geraldton port will be essential for unlocking some of the otherwise stranded Mid West mineral deposits. In addition the development of new or other existing industries may also be dependent upon importing / exporting through a nearby port. Increasing the capacity of the Geraldton port is therefore likely to be critical for region's economic growth and development in the short to medium term.

Assuming the development of Oakajee, the WARFTNP projects an eightfold increase in export flows from the Mid West (Geraldton and proposed Oakajee ports) between 2012 and 2030; by far the largest projected percentage increase of any of WA's port towns / cities.

In addition to berth capacity, there are other infrastructure bottlenecks at the port. Trucks hauling bulk freight into the port can experience significant queuing delays with the tunnel built to separate road and rail traffic unable to accommodate two-way traffic. The port is also currently only serviced with curtailable power, meaning its supply can be 'switched off' during peak local demand periods.

CHALLENGE: Throughput at the Geraldton port is approaching its current capacity of around 20mtpa. Further upgrades to power and road / rail access would be required to reach the port's practical capacity of around 30mtpa.

The WARFTNP identifies the following Mid West port priorities:

- Optimise existing berths at the port of Geraldton to service the surge in resources trade to take the port to 20-30mtpa until Oakajee is developed.
  - extend Berths 2 and 6; undertake harbour surge mitigation program; install advanced mooring systems.
  - upgrade shiploaders at Berths 4 and 5.

Decisions to upgrade of the Geraldton port will be undertaken on a commercial basis by the Mid West Port Authority, its clients and government at a time that best meets their corporate and commercial objectives.

The previous State Agreement with Mitsubishi (relating to the development of Oakajee) may have limited the throughput of the Geraldton port to 12mtpa of iron ore once Oakajee became operational. The contractual agreements with Mitsubishi in relation to Oakajee are now concluded, so the previous cap on iron ore exports through the Geraldton port is no longer applicable.

CHALLENGE: Further expansions of the Geraldton port may undermine the business case for the development of Oakajee ie the additional 10mtpa that could be exported via Geraldton would assist the business case for the development of Oakajee.

Sea container facilities at the Geraldton port could increase the export potential for value added services (such as food export) and enable import of other commodities currently delivered to the region via road.

CHALLENGE: The Geraldton port does not have container facilities, which results in additional transportation costs for Mid West businesses in the northern half of the State importing / exporting containerised goods via Fremantle.

A Fishing Boat Harbour is situated to the south of the commercial shipping harbour. With around 110 pens available to meet the needs of the local fishing fleet (around 105 vessels), the site offers mooring, re-fuelling and loading facilities for the fishing fleet and marine servicing businesses. A significant refurbishment and expansion of facilities are currently being planned through the potential establishment of a Marine Services Hub.

Geraldton Heavy Boat Lifter, taking Spirit of Australia out of the water for service

RAIL NETWORKS

The rail network in the Mid West region is owned by the WA State Government and is managed and operated on a long-term lease by private company, Brookfield Rail until 2049. Rail haulage in the Mid West primarily consists of iron ore, other minerals and grain and is critical to getting products to market and reducing the impact on the region's road network. Rail passenger services between Perth and Geraldton ceased in the 1970's and the region no longer has any rail passenger services.

With the emergence of the Mid West as a prominent iron ore province, there has been a significant increase in demand for capacity on the rail network to transport product to export markets through the Geraldton port.

Mid West rail volumes has more than tripled in recent years, from around 4.67 mt in 2009-10 to 15 mt in 2013-14.[1] Increase in minerals volumes accounted for most of this growth, representing 14.06 mt in 2013-14 (94% of total rail volumes) (Table 16).

NET TONNES (MTPA)	2009-10	2010-11	2011-12	2012-13	2013-14
Minerals	3.63	3.06	2.76	9.66	14.06
Grain	1.04	0.75	0.54	1.05	0.94
TOTAL	**4.67**	**3.81**	**3.29**	**10.71**	**15.00**

Table 16. Mid West Rail Volumes (net tonnes), 2009/10 - 2013/14

In 2013-14 there were 3,410 individual 'loaded' rail movements in the Mid West (principally to the Geraldton port), with 2,992 of these carrying minerals (88%) (Table 17).[2] These rail movements consisted of up to 104 wagons and three locomotives.

NUMBER OF MOVEMENTS	2009-10	2010-11	2011-12	2012-13	2013-14
Minerals	1,102	1,061	907	2,415	2,992
Grain	537	373	253	488	418
TOTAL	**1,639**	**1,434**	**1,160**	**2,903**	**3,410**

Table 17. Mid West Rail Movements (loaded), 2009-10 - 2013-14

Brookfield Rail's Mid West Rail Upgrade was completed in October 2012, transforming the region's rail infrastructure. More than 184km of the rail network and related infrastructure was replaced from Morawa north through Mullewa and west to Geraldton Port, increasing rail capacity from 3mtpa to 25mtpa, and with further investment, 75mtpa. The new rail line includes concrete dual gauge sleepers, up to 60kg / metre rail, with a minimum of 21 tonne axle load at narrow gauge.

The design enables extension of standard gauge infrastructure from Geraldton and its Narngulu Industrial Estate to the proposed deepwater port at Oakajee. Further extension to Yilgarn (Goldfields region) and other 'stranded' Mid West producers (and potential producers) warrants further consideration.

Karara Mining Ltd also completed an 85km dual gauge sleeper rail line (30mtpa capacity) from its mine site to the Tilley Siding in 2013, valued at more than $150 million. There may be potential for other local producers to access this rail (and road) infrastructure.

The line between Geraldton and Perth (Midland Rail Line) continues to operate safely and efficiently, primarily supporting grain haulage. This line is maintained at a 'fit for purpose' level for grain haulage and has limited axle load and track speed. It would require a significant upgrade to be useable for anything other than grain.

The main railway depot at Narngulu, 13km from the port of Geraldton, is the junction of the two railway lines that come from the south. Another line branches off at Dongara to service the currently idled mineral sand mine at Eneabba.

CHALLENGE: Potentially valuable mineral deposits are stranded without connection to rail infrastructure linked to the region's exporting infrastructure.

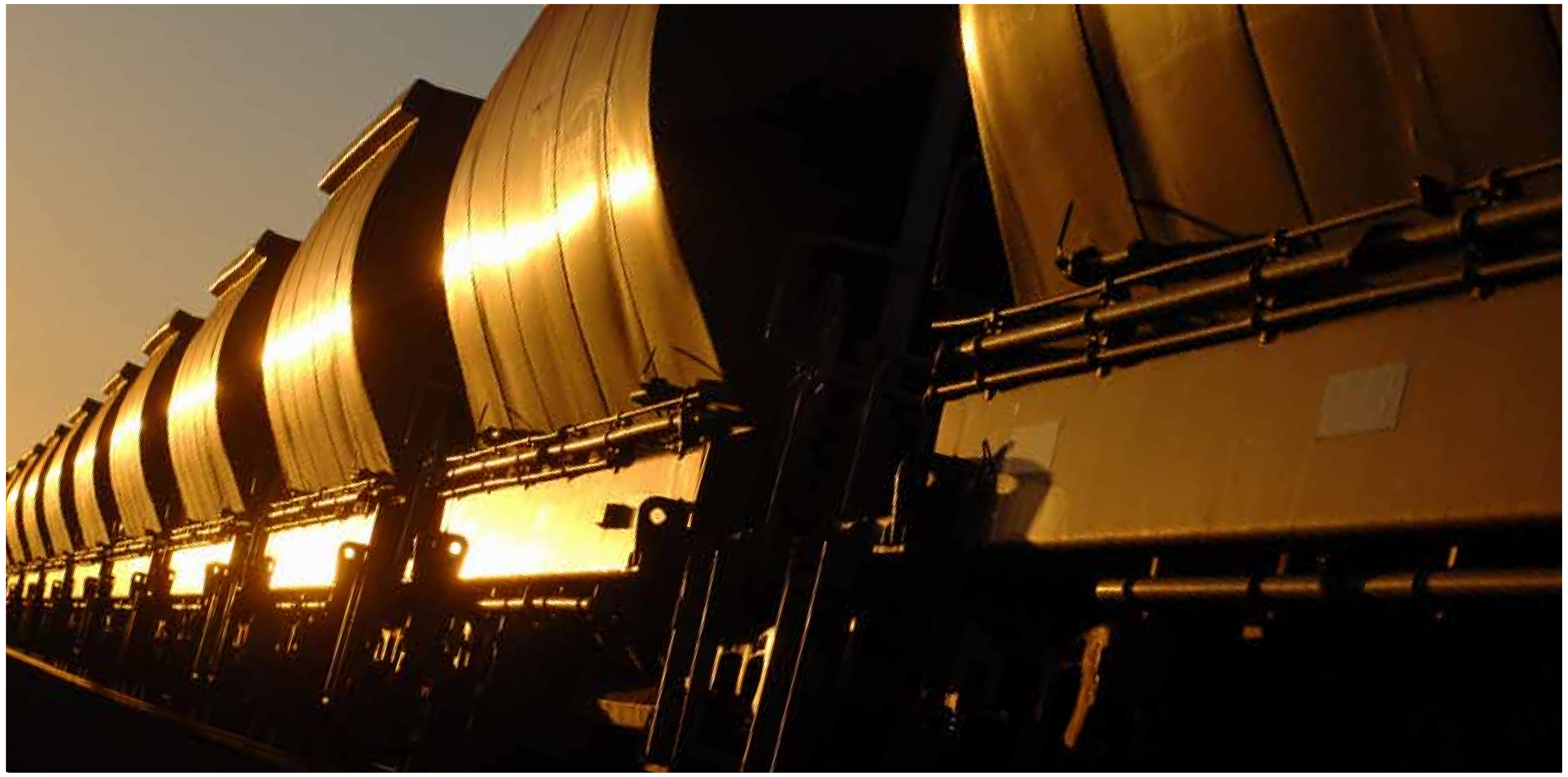
CHALLENGE: The Mid West does not have a rail passenger service. A high speed service between Geraldton and Perth would improve accessibility to the region and provide an alternative to driving or flying for tourists and residents. Although a service would not currently be viable it may become viable if there's a significant increase in the region's population and tourists.

The WARFTNP identifies the following Mid West rail priority:

1. Construct a potential dual guage extension to Brookfield Rail's southern Mid West rail network.

A logistics hub for the State

The Mid West is strategically located between the Fremantle port and the country's leading direct shipping iron ore province, the Pilbara. To capitalise on its position, the region has a busy Panamax port in Geraldton with plans for a deepwater port at Oakajee. These exporting facilities are supported by an integrated network of dual gauge rail infrastructure, 20,300km of roads, the Dampier Bunbury Gas pipeline, grid supplied power and access to groundwater. Future opportunities exist in the expansion of the rail infrastructure to connect the Yilgarn mineral producers to Mid West export infrastructure and ultimately the eastern states. The State has also developed a fully structure planned, 6,500ha greenfields industrial estate site adjacent to the planned deepwater port. This will be linked via the Geraldton heavy freight bypass and the Oakajee Narngulu Infrastructure Corridor.



Brookfield Rail, east - west line

1 Brookfield Rail. Data provided for Blueprint
2 Brookfield Rail. Data provided for Blueprint

056 MOVEMENT OF PEOPLE AND RESOURCES *CONT'D*

ROAD NETWORKS

Growth of the iron ore industry, as well as shut down of some grain receival points and sections of rail, are leading to increased tonnages on the road. Competition between iron ore and wheat haulage on rural roads is an ongoing issue for many Mid West towns and leads to local safety challenges.

As its regional centre, Geraldton is experiencing significant traffic pressures, particularly CBD access, which is problematic for residents and visitors. Traffic modelling is being undertaken to enhance networks and traffic management to accommodate expected growth.

Growth in the southwest of the Pilbara is resulting significant additional traffic on Mid West roads transporting equipment sourced from Perth. The number of road trains passing through the region is growing and expected to continue. Maintaining the standard of existing roads is equally important for Mid West communities and visitors as well as industry.

CHALLENGE: Continued investment is necessary to maintain existing road infrastructure to a reasonable standard as well as satisfying future traffic demands.

CHALLENGE: The WA Regional Freight Transport Network Plan (p44) has indicated potential in the future for High Wide Load and Restricted Access Vehicles (53m and longer) being permitted south of Carnarvon on the North West Coastal Highway. This would require significant investment, particularly around Mid West towns, to ensure safety and efficiency.

CHALLENGE: The region can reduce expense and generate local economic activity by using local capacity to undertake road projects.

Geraldton Outer Bypass (stage 1)

A bypass around Geraldton is a key strategic infrastructure project for the Mid West. Based on projected freight growth and congestion rates it is anticipated that a bypass will be required by 2018. The bypass consists of the road component of the ONIC (stage 1) and a connection south to Brand Highway (stage 2).

The Geraldton Outer Bypass would:

- provide a more efficient route for heavy and oversized vehicles to travel around Geraldton;
- improve safety and amenity of North West Coastal Highway through Geraldton on completion of the first stage (ONIC road);
- improve safety and amenity of Brand Highway through Geraldton on completion of the second stage;
- facilitate of the development of the fully structure planned Oakajee Industrial Estate; and
- deliver a fit for purpose connection of the Narngulu Industrial Estate with the proposed port and industrial estate at Oakajee.

A bypass was recently developed around the Morawa CBD, as part of its development as a Regional SuperTown. A number of other road bypasses are also proposed to divert traffic (particularly heavy freight) around the towns of Dongara (Irwin), Northampton and Mullewa.

Some Mid West road congestion issues have been eased with the completion of road sealing and public access onto Indian Ocean Drive. Large commercial vehicles are not permitted onto Indian Ocean Drive and are restricted to Brand Highway, although the two roads merge around 30km south of Dongara. A Dongara to Northampton Strategic Corridor Study has been commissioned to consider alternatives for an integrated bypass solution for heavy traffic between / around Dongara, Geraldton and Northampton (around 110km).

With several Mid West resource projects now in production and traffic from the Pilbarra steadily increasing, heavy freight haulage is compromising amenity and safety of several hinterland communities. It is also starting to create conflict with other heavy traffic such as grain and livestock, presenting issues for maintaining road standards and community safety. Several other Mid West communities are starting to express interest in bypass solutions as a result eg Carnamah, Meekatharra.

The WARFTNP identifies the following Mid West road priorities:

1. Construct Geraldton Outer Bypass stage 1: connect Oakajee Estate to Geraldton Mount Magnet Road creating an outer bypass of the City of [Greater] Geraldton.
2. Construct Geraldton Inner Bypass stage 1: southern section of a north-south link road for Geraldton.
3. Duplicate the North West Coastal Highway within the City of [Greater] Geraldton: Utakarra Road to Green Street.
4. Construct the Northampton heavy vehicle bypass.
5. Realign the Brand Highway at Bookarra and S-Bends: replace bridges at Pell's River, Greenough River and Irwin River.

Livestock truck, fuelling up in Meekatharra

AERODROMES

Located 12km east of the CBD, the Geraldton airport is a security-controlled and Civil Aviation Safety Authority (CASA) certified aerodrome. It has runway, taxiway and apron infrastructure capacity for A320/B737 operations and is serviced with multiple daily regular public transport (RPT) services.

Since the re-entry of a second airline into Geraldton, passenger movements have increased consistently to an average of 135,000 / annum over the last three years (up nearly 25-30% since 2010-11).[1] Its total of 138,398 in 2013-14 was its record throughput. With the RPT terminal operating near capacity of its security screening and departure lounge in 2013, terminal expansions and new departure lounges have been developed. The main runway (03/21) at Geraldton airport was last overlaid in 1998 and had a working life of approximately 15 years. Major refurbishment works in the form of a runway pavement overlay will shortly be required

Meekatharra, Mount Magnet and Wiluna also have CASA certified aerodromes that accommodate regulated RPT, charter and RFDS flights to and from Perth. Registered aerodromes are located in Kalbarri and Morawa. Other local government aerodromes served by charter and RFDS operations exist in Cue, Dongara, Murchison, Perenjori, Sandstone and Yalgoo. Various Mid West aerodromes may need upgrades to enable economic growth and accommodate future population and FIFO demands.

There are a number of private charter operators based in the Mid West that provide FIFO charter services to inland mine sites and support the Abrolhos fishing and regional tourism industries.

With the transition of several WA mines from construction to production phases, the number of passenger movements is expected to increase due to shorter operational roster cycles.[2] By 2020, CME forecasts that the number of resource sector workers using the Perth airport to fly to regional WA will increase by 313,000 over 2014 levels. A commensurate increase in Mid West air traffic might be expected.

There are limited direct flights from the Mid West into regions such as the Pilbara and Goldfields, requiring passengers to first travel to Perth to connect with their inter regional flights. This adds significant time and expense and constrains inter regional business.

CHALLENGE: Potential servicing of international capacity airlines should be a consideration in future growth of the Geraldton airport, coupled with efforts to maintain a competitive servicing environment.

CHALLENGE: Forecast increases in regional air traffic are expected to place additional pressure on Mid West aerodrome infrastructure, particularly in Geraldton.

CHALLENGE: The viability of certified and registered local government aerodromes is an ongoing priority for the Mid West, with many relying upon operating subsidises from their local government owners.

CHALLENGE: The lack of direct inter regional flights is a constraint to doing business in other regions.

1 Geraldton Airport passenger statistics. City of Greater Geraldton.
2 Chamber of Minerals and Energy of Western Australia. 2015-2025 Western Australian Resources Sector Outlook (November 2014).

PUBLIC TRANSPORT

There are limited public transport options outside of Geraldton. This largely affects people in the hinterland needing to access services in other communities (school, health, social services etc). A limited bus service operates in Geraldton, with community buses operating in some shires.

CHALLENGE: Meeting local public transport needs in many communities both within towns and links to other communities.

GOAL: Optimal transport linkages to facilitate movement of people and product to domestic and international markets

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
STRATEGIC INFRASTRUCTURE A coordinated cross agency approach (in partnership with industry and community) towards the development of essential strategic infrastructure.	A shared vision and unified approach across agencies and the private sector is required to support the timely delivery of major regional infrastructure. This includes identifying and securing key infrastructure corridors to enable future development.	Develop an overall Mid West Strategic Infrastructure Plan based on priorities identified in the Blueprint and designate key dependencies and efficiencies between projects. MWSIG will be refocused on driving the timely development of key components in the Plan.	!
	A strategic (and potentially staged) approach is needed to deliver key Mid West infrastructure to capture future economic opportunities.	Consider options for staged delivery of major infrastructure items to avoid future bottlenecks and urgent development pressures.	
	Securing funding and the long lead times associated with major infrastructure items (investigations, approvals and development) present significant challenges to realising economic opportunities in a timely manner.	Identify a number of investment models and opportunities for community, industry and investor partnerships for infrastructure.	
OAKAJEE PORT Development of Oakajee deepwater port and associated infrastructure.	A scaled or staged development of Oakajee may be viable. The expansion potential of the Geraldton port is limited and will not meet all of the projected needs of the region's developing iron ore industry in terms of potential throughput or ship sizes.	Support the development of Oakajee by investigating options and opportunities to improve its business case.	!
GERALDTON PORT Expansion of the Geraldton port to meet the demand of its current and prospective customers while minimising any negative impact (from its expansion) on the business case for the development of Oakajee.	Throughput at the Geraldton port is approaching its current capacity of around 20mtpa. In order to meet projected demand in the short to medium term the port needs further upgrades to power and road/rail access to be able to reach its practical capacity of around 30mtpa.	Optimise, and where appropriate, expand the Geraldton port to meet the demand of its current and prospective customers.	!
	Further expansions of the Geraldton port may undermine the business case for the development of Oakajee ie the additional 10mtpa that could be exported via Geraldton would assist the business case for the development of Oakajee.	Provide certainty ASAP regarding the timing of the development of a deepwater port at Oakajee so that the potential for "leakage" of tonnages needed for its business case is minimised.	!
	The Geraldton port does not have container facilities, which results in additional transportation costs for Mid West businesses in the northern half of the State importing/exporting containerised goods via Fremantle.	Investigate the viability of establishing container handling facilities at either the Geraldton port or the proposed Oakajee port. If positive, the latter should be considered in the business case for Oakajee's development.	

 MOVEMENT OF PEOPLE AND RESOURCES *CONT'D*

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
RAIL The region's existing rail networks are optimised and meet industry and community demands.	Potentially valuable mineral deposits are stranded without connection to rail infrastructure linked to the region's exporting infrastructure.	Optimise and expand existing rail networks to meet growing industry demands.	
		Construct new, and extend existing, rail networks to connect stranded mineral deposits to exporting facilities (with particular focus on the most advanced and prospective mineral deposits).	
	The Mid West does not have a rail passenger service. A high speed service between Geraldton and Perth would improve accessibility to the region and provide an alternative to driving or flying for tourists and residents. Although a service would not currently be viable it may become viable if there's a significant increase in the region's population and tourists.	Investigate high speed rail from Geraldton to Perth and potentially Bunbury (2050 project based on population demands).	
ROADS Continued investment in Mid West road infrastructure has enabled industry growth and relieved traffic congestion.	Continued investment is necessary to maintain existing road infrastructure to a reasonable standard as well as satisfying future traffic demands.	Advocate for continued investment in the region's major road arteries based on the agreed priorities of the State government, MWSIG and regional stakeholders.	
	The WA Regional Freight Transport Network Plan (p44) has indicated potential in the future for High Wide Load and Restricted Access Vehicles (53m and longer) being permitted south of Carnarvon on the North West Coastal Highway. This would require significant investment, particularly around Mid West towns, to ensure safety and efficiency.	Monitor the status of policy changes and their potential impact and integrate solutions into future regional planning.	
		Advocate for appropriate infrastructure investment around Mid West towns to ensure safety and efficiency of traffic movements.	
	The region can reduce expense and generate local economic activity by using local capacity to undertake road projects.	Support local government and community involvement in the development of local roads.	
AERODROMES The region's aerodrome network optimises the movement of people and products inter and intra regionally.	Further growth of Geraldton airport should consider the potential servicing of international standard airlines, coupled with efforts to maintain a competitive servicing environment.	Develop a business case for Geraldton airport expansion, including potential servicing of international A330 / B787 class aircrafts.	
	Forecast increases in regional air traffic is expected to place additional pressures on Mid West aerodrome infrastructure, particularly in Geraldton.	Mid West airport owners need to regularly review and update their Airport Master Plans and Asset Management Plans. This will ensure efficient planning and management of aeronautical infrastructure needs is completed in a timely and financially sustainable manner to meet possible future increases in regional air traffic.	
	The viability of certified and registered local government aerodromes is an ongoing priority for the Mid West, with many relying upon operating subsidises from their local government owners. The lack of direct inter regional flights is a constraint to doing business in other regions.	Attract carriers to create competitive networks for improved aerodrome viability.	
		Maintain viable strategic local aerodromes to ensure ongoing RPT and RFDS services and encourage economic and social development in the Mid West and with other regions.	
PUBLIC TRANSPORT Effective and "fit for purpose" inter and intra regional public transport solution operates in all Mid West communities.	Meeting local public transport needs in many communities both within towns and links to other communities.	Work with local governments and communities to develop tailored inter and intra regional public transport solutions to meet local community needs.	

MID WEST WATER

164GL/PY
LICENSED WATER ENTITLEMENTS
IN THE MID WEST REGION (2012)

The Mid West is almost entirely dependent on groundwater resources for its water needs, with land and water use closely aligned with the underlying hydrogeology. Groundwater in the Mid West is broadly divided into coastal sedimentary aquifer systems (within 100km of the coast) and irregular fractured rock areas further inland.

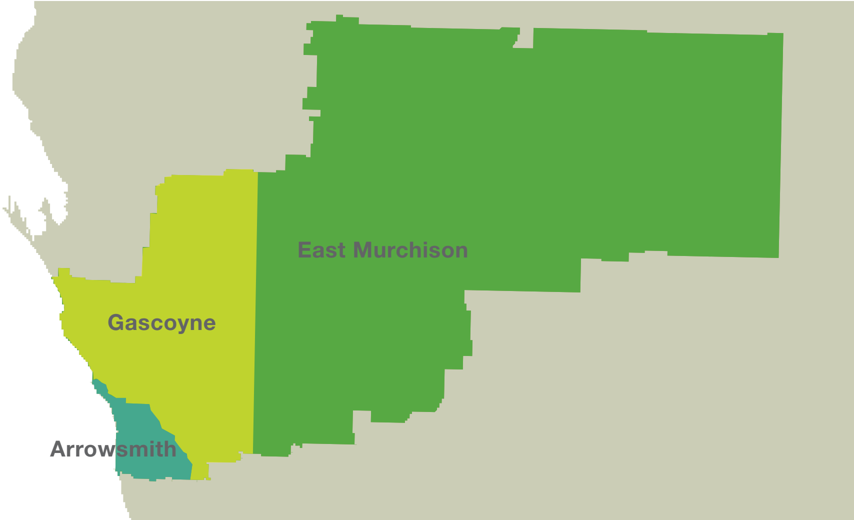


Figure 53. Mid West Groundwater Management Areas

The Department of Water (DoW) manages and defines groundwater management areas (GWAs), with three management systems occurring within the Mid West (Figure 53); namely the:

- Arrowsmith GWA (coastal), which provides large quantities of often good quality water from the North Perth Basin, primarily from the Parmelia and Yarragadee aquifers; and
- East Murchison and Gascoyne GWAs, which are dominated by fractured rock, alluvium, calcrete and paleochannel deposits making them more variable in quality and quantity.

According to DoW's Draft Water Supply Planning series (May 2013) licensed water entitlements in the Mid West in 2012 totalled 164 GL / annum, including 8 GL / annum of water used for stock and domestic (self supply) purposes. It is estimated that some licenses in the region use 50-60% of their licensed entitlement, which fluctuates annually due to variations in operating capacity of individual mining operations and variations annual crop demands. DoW manages these unused water entitlements through the application of its policy and legislative tools.

The Water Corporation operates 19 water supply schemes in the Mid West region (includes Gascoyne), with the largest being the Geraldton Regional Water Supply Scheme. Water for towns nearer to the coast is drawn from a variety of confined and unconfined sedimentary aquifers. Murchison towns are limited to use of fractured rock groundwater resources.

RESOURCE IDENTIFICATION

Although the region is positioned above significant underground aquifers, the availability of data on precise locations and exact quality and quantity of available water varies. This is particularly so in the Murchison subregion, which has significant fractured bedrock making it difficult to quantify water resources without extensive exploration at significant expense.

A recent investigation of Murchison paleochannels indicated potential to yield usable volumes of groundwater. Given the complexity of the systems and the preliminary nature of investigations, further work is being undertaken by DoW to better understand the paleochannels' water quantity and quality for economic development.

The impact of weather variations over time on available water supply in the region must be continually monitored and managed.

CHALLENGE: The precise locations, quality and quantity of Mid West water resources are not fully understood. Determining this information for a specific project can become relatively costly for proponents, particularly for smaller scale enterprises.

MINE DEWATERING

As at December 2013, Mid West mines were dewatering around 26 GL of water annually. There are increasing examples of mine water being used for nearby agriculture projects.

This warrants closer analysis in the Mid West given its large mining and agricultural interests, with the focus on mines with longer resource life. Opportunities may also exist to access water from disused mine pits.

OPPORTUNITY: Depending on water quality and cost of treatment and transport, there may be new opportunities to use excess mine water for agricultural growth and development.

WASTE WATER TREATMENT

The region has 12 Waste Water Treatment Plants (WWTPs) that recycled 465 ML of water for irrigation of public areas (eg sports fields, cemetery) in 2013-14.

Maximising recycling opportunities is about finding ways to reuse available wastewater outflows from existing WWTPs. These reuse opportunities are usually most viable close to the WWTP and reuse options within the WWTP buffers are often the most cost effective.

CHALLENGE: To increase waste water recycling from existing WWTPs.

WATER FOR INTENSIVE AGRICULTURE

Growth in Asia and other populous regions means the supply of food (protein) is emerging as a major opportunity. Expanding Mid West agriculture output to help address this emerging global food shortage may result in an increase in water demand.

Although the region has abundant natural water reserves, additional investment in water for food initiatives is needed to facilitate the sustainable development of additional agricultural outputs.

The horticulture potential of the region is also constrained by:

- proximity to markets;
- water availability;
- cost effective supply;
- power;
- land zoning and tenure; and
- available research into irrigated agriculture potential, including investigations into expanded use of high quality agricultural land.

Opportunities may include development of irrigation precincts with innovative land, water and power supply alternatives. For example, some of the region's more productive farming lands are relatively close to renewable energy sources. This may present opportunities for lower cost or more effective / efficient power for extraction and movement of water for horticulture.

CHALLENGE: Regional supply of additional food to meet domestic and global shortages will be constrained in part by the cost effective availability of water.

Mid West peaches

WATER *CONT'D*

ADDITIONAL SUPPLY AND EFFICIENCY

Agriculture and mining are dominant industry sectors in the Mid West and are also the two biggest users of water. Growth in either sector will mean commensurate growth in water demands. Increasingly there is competition for water between the sectors, particularly in the North Midlands, with emerging iron ore projects requiring large volumes of groundwater.

Availability of water may constrain some heavy industry opportunities at the proposed OIE. Several water and wastewater infrastructure alternatives for the Oakajee port and industrial estate have been considered and costed. Opportunities to establish water projects in the OIE buffer may warrant consideration.

As urban areas develop there may be a need for increased use of alternative water supply solutions to meet local demand. This may include sites with limited groundwater or where development occurs away from existing water infrastructure. Independent community or developer owned solutions may become more commonplace as pressures on scheme water create cost pressures.

With its primary industry base and various natural assets, including water, arable lands and renewable energy sources, the region is well placed to take a lead in water and energy management innovation for primary production. This could extend to domestic applications, with smart metering and other technological solutions to maximise water efficiency already being considered in various Mid West communities.

Secure quality water supply is a priority in all Murchison communities. Potable water supply is necessary for domestic purposes, with water availability also impeding the viability of pastoral areas. The Water Corporation has plans to progressively install water treatment plants in Murchison communities to improve water quality over the next 5-10 years, subject to funding. The Water Corporation is currently undertaking upgrades of the water treatment plants in Wiluna and Yalgoo.

The region can position itself as a potential leader in the development of innovative water management solutions for primary production and domestic consumption.

CHALLENGE: Innovative solutions are necessary to enable efficient supply and provision of additional water resources as industry and domestic demands increase.

GOAL: Sustainable regional water supply that enables the intensification of agriculture, establishment of new industries and supply of communities with quality water

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
RESOURCE IDENTIFICATION The location, quality and quantity of all Mid West water resources is clearly understood with information readily available.	The precise locations, quality and quantity of Mid West water resources are not fully understood. Determining this information for a specific project can become relatively costly for proponents, particularly for smaller scale enterprises.	Ensure Mid West water availability, quality and potential for domestic and economic development uses is properly understood.	
		Work with key organisations to ensure potential climate change impacts on regional water resources are understood.	
MINE DEWATERING Available mine dewater is reused for another purpose.	Depending on water quality and cost of treatment and transport, there may be new opportunities to use excess mine water for agricultural growth and development.	Determine location, quality and quantity of Mid West mine dewater.	
		Investigate options for the reuse of water from mine projects to develop new industry opportunities.	
WASTE WATER All Mid West waste water is viewed and utilised as a valuable resource.	To increase waste water recycling from existing WWTPs	Invest in infrastructure from existing WWTPs that maximises wastewater recycling and reuse in the region.	
		Develop new WWTPs throughout the region to maximise waste water reuse.	

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
WATER FOR AGRICULTURAL DIVERSIFICATION Water is available in all Mid West communities to expand agricultural production for domestic and possibly international supply.	Regional supply of additional food to meet domestic and global shortages will be constrained in part by the cost effective availability of water.	Work with growers and agencies to economically evaluate potential water for food projects in each subregion including: • Murchison – intensive cropping incorporating stock and / or horticulture; • North Midlands – intensive cropping and /or horticulture; and • Batavia Coast – horticulture expansion and alternative production eg algae (aquaculture).	
ADDITIONAL SUPPLY AND EFFICIENCY Appropriate quality water is available to support economic and population growth in all Mid West communities.	Innovative solutions are necessary to enable efficient supply and provision of additional water resources as industry and domestic demands increase.	Investigate new water sources for future regional development that focuses on innovation to maximise current and future efficiencies.	
		Investigate desalination opportunities for industry and domestic use, including the use of renewable energy sources.	
		Investigate the provision of community or developer owned water infrastructure for development.	
		Encourage initiatives that reduce, reuse and recycle water, such as smart metering and encourage community participation and engagement in basic water management practices such as native gardens and water tanks.	
		Work with communities and providers to ensure adequate supply of quality water that meets the needs of all communities.	

Yalgoo water park

REGIONAL ENERGY SOLUTIONS

The South West Interconnected System (SWIS) supplies grid power to the southern and coastal parts of the Mid West via dual 132kV lines from Bunbury, Muja and Kwinana power stations. The section from Neerabup to Three Springs has recently been upgraded with 330kV infrastructure. Much of the North Midlands and Murchison subregions are off grid and are serviced by a mixture of diesel, gas and renewable solutions.

The transmission capacity of the region's electricity network is severely constrained, which limits the opportunity to develop new power generation sources within the region. The ability to develop new projects in the region that need significant power is severely limited. Some existing major users are receiving only curtailable supply, which can be switched off during peak demand periods.

The rigorous New Facilities Investment Test (NFIT) makes Economic Regulation Authority of WA (ERA) approvals for new energy projects, including renewables, challenging, expensive and time consuming. Streamlining these processes may aid future renewable energy development. Access to the SWIS is also an issue given Western Power's queuing policy (first in first served) and technical requirements.

The energy requirements of prospective Oakajee Industrial Estate (OIE) tenants is not yet able to be determined. Localised generation and supply from the OIE warrants further analysis, particularly using available land in the OIE buffer. Additional power is also needed at the Geraldton port.

There are opportunities for localised renewable energy generation and / or independent off grid supply, particularly for large individual users or where agglomeration of smaller consumers exists, for example, industrial estates and small communities.

The CGG participated in the IBM Smarter Cities challenge in 2012, which resulted in a number of recommendations regarding smart metering, creation of a virtual power plant and integrated regional renewable energy solutions. Investment in innovations like these would capitalise on Mid West renewable energy prospectivity and realise regional advantages.

STRATEGIC ENERGY INFRASTRUCTURE

The first stage of a 330kV transmission line from Perth to Geraldton (Neerabup to the Karara mine via Eneabba and Three Springs) is now complete. The second stage from Three Springs to Moonyoonooka (Geraldton) and potentially Oakajee is subject to further funding.

There is consideration of a reinforced 132kV system from Three Springs to Geraldton based on 132kV lines on 330kV towers, which would reduce the financial barriers to a future upgrade to 330kV output.

CHALLENGE: The second stage of the 330kV transmission network may be required to support development in Geraldton (and potentially Oakajee) and allow new large-scale diversified generation sources in the Mid West to dispatch into the SWIS.

Completion of the 330kV transmission line will improve the reliability of power supply to Geraldton but the northern parts of the Mid West will still face capacity and reliability issues. A base load gas fired power station located in the region may improve outcomes for larger block loads. Industry is investigating a sustainable energy project for the Mid West that could deliver around 10MW of base load power. The first stage of this project would tap into the Dampier to Bunbury Natural Gas Pipeline and incorporate alternative energy sources at a later date.

OPPORTUNITY: A gas fired power station in the Mid West may improve the reliability and capacity of supply in the north of the region.

RENEWABLE ENERGY SOLUTIONS

As non-renewable energy sources are depleted and society moves to reduce Co2 emissions, the region's renewable energy potential can be further harnessed for domestic supply and possible export.

The Mid West region has abundant renewable energy resources such as solar, wind, wave, geothermal and biomass. A number of renewable energy projects operate in the region and several more are in planning. The region's renewable energy potential is constrained until the 330kV line (stage 2) is developed, enabling new projects to feed power into the SWIS. Storage and the commercial realities of renewable energy in comparison to conventional sources also constrains further development of the local industry.

Depletion of non renewable resources globally and global warming will necessitate innovation and further investment in new energy solutions. The region's natural advantages in the field, across a variety of renewable energy platforms, place it in a strong position to capitalise upon this global demand in terms of research and development and / or direct supply of energy (net export). "A clean interconnected grid can reliably provide base load supply to the region's mining sites through a mix of reliable, renewable and conventional sources".[1]

OPPORTUNITY: With depletion of non renewable energy sources and impacts of global warming, the region's renewable energy potential can be further harnessed for domestic supply and possible export (in the longer term).

CHALLENGE: Storage of renewable energy constrains the development of a viable renewable energy sector.

1 IBM Smarter Cities Challenge - City of Greater Geraldton report (2012)

ALTERNATIVE ENERGY SOLUTIONS

The Mid West needs to reduce its reliance on traditional fossil fuels. The region has a range of existing and prospective future energy resources, including uranium, thorium and unconventional gas. The use of some of these resources is contentious and the region's involvement with these is subject to further research and debate.

CHALLENGE: With depletion of non renewable energy sources and impacts of global warming, various alternatives need to be investigated, understood and progressed appropriately.

ENERGY MANAGEMENT INNOVATION

Technology exists that enables communities to aggregate data from multiple sources, generate analytics and develop learning systems that help consumers manage energy use and cost.

OPPORTUNITY: Technology exists to aggregate demand and produce virtual plants with local generation and storage networks developed to meet community demands.

Mumbida Wind Farm, Walkaway

GOAL: Energy infrastructure is in place to supply the growth needs of Mid West communities and industry and for the development of renewable energy as a key industry

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
STRATEGIC ENERGY INFRASTRUCTURE The 330kV transmission line is complete and a gas fired power station developed in the Mid West	The second stage of the 330kV transmission network may be required to support development in Geraldton (and potentially Oakajee) and allow new large-scale diversified generation sources in the Mid West to dispatch into the SWIS. A gas fired power station in the Mid West may improve the reliability and capacity of supply in the north of the region.	Examine long term regional energy needs and investigate delivery options; including but not limited to: • a 330kV transmission line from Three Springs to Geraldton; and • a base load gas fired power station in the region	!
RENEWABLE ENERGY SOLUTIONS The Mid West is a national leader in renewable energy generation, utilisation and knowledge.	With depletion of non renewable energy sources and impacts of global warming, the region's renewable energy potential can be further harnessed for domestic supply and possible export (in the longer term). Storage of renewable energy constrains the development of a viable renewable energy sector.	Investigate options for an integrated large scale, managed renewable energy solution (including storage and baseload technologies) for the Mid West to reduce reliance on carbon intensive power plants.	
		Work with local governments and communities on initiatives that provide small scale edge of grid solutions.	
		With local institutions, examine the creation of a research centre (research, development and extension) of excellence for renewable energy to capitalise on the region's advantages and prospectivity for solar, wind, wave, geothermal and bioenergy production.	
		Work with relevant agencies to determine the viability and infrastructure required to develop energy export opportunities for overseas markets.	
ALTERNATIVE ENERGY SOLUTIONS Energy alternatives in the Mid West are understood and where appropriate fully utilised.	With depletion of non renewable energy sources and impacts of global warming, various alternatives need to be investigated, understood and progressed appropriately.	Undertake independent analysis of the potential benefits and impacts of unconventional gas extraction in the Mid West.	
		Ensure baseline water and environmental data is available in the event of unconventional gas extraction commencing in the Mid West.	
		Work with potential proponents to establish a waste to energy project in the Mid West.	
		Monitor the progress of technology in other countries for extraction and utilisation of alternative energy sources (for example thorium) in the Mid West.	
ENERGY MANAGEMENT INNOVATION Available technologies are fully utilised to maximise regional energy efficiency.	Technology exists to aggregate demand and produce virtual plants with local generation and storage networks developed to meet community demands.	Investigate and invest in integrated technologies for the efficient management of regional energy (as well as water and waste).	

WASTE

REGIONAL WASTE SOLUTIONS

The Meru Waste Disposal Facility (MWDF) in Geraldton is the only Class III landfill north of Perth and services a number of Mid West local governments. The City of Greater Geraldton's proposed Community Reuse and Recycling Centre also supports Geraldton and parts of the wider region. Significant further investment in facilities such as the MWDF is required to meet State recycling targets.

Population and industry growth will continue to increase pressure on waste management across the region. The tyranny of distance is a challenge for centres such as the MWDF to serve as a regional waste facility due largely to transport costs, noting that the MWDF does support some communities outside Geraldton.

CHALLENGE: To develop an environmentally responsible waste management strategy that recognises the region's vast land mass and the needs of all Mid West communities.

OPPORTUNITY: Fit for purpose subregional solutions could yield economies and efficiencies of scale for hinterland communities, particularly if waste is managed on a regional or subregional basis.

WASTE MINIMISATION, REUSE AND RECYCLING

Kerbside recycling is not available in the Mid West. It has been considered several times in some local governments but has not progressed due mainly to financial reasons.

CHALLENGE: The regional focus should transition to waste minimisation, reuse and then recycling. Recycling needs a proper environmental and financial justification.

Container Deposit Legislation is being considered by the Federal government, which if actioned would encourage people to deliver some recyclables to specific collection depots.

WASTE MANAGEMENT INNOVATION

A priority for the region must be to optimise the use of regional waste as a resource, with a number of innovative solutions available. Achieving economies of scale remains a significant challenge for the region in regard to management of waste.

Innovation is essential to the effective management of regional waste and maximising its potential as a resource.

CHALLENGE: As non renewable energy sources are depleted, innovative waste management alternatives for the Mid West need to be investigated, understood and progressed appropriately.

GOAL: Optimal diversion of regional waste from landfill and inherent emissions by 2025 including strategies to maximise the use of regional waste (water, agricultural, industrial and domestic) as a resource

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
REGIONAL WASTE SOLUTIONS Mid West waste is managed at a regional / subregional level.	To develop an environmentally responsible waste management strategy that recognises the region's vast land mass and the needs of all Mid West communities. Fit for purpose subregional solutions could yield economies and efficiencies of scale for hinterland communities, particularly if waste is managed on a regional or subregional basis.	Support the development of an effective and adequately resourced, collaborative, regional waste management solutions for the Mid West.	
WASTE MINIMISATION, REUSE AND RECYCLING The Mid West has a strong waste minimisation, reuse and recycling culture where waste is viewed as a resource.	The regional focus should transition to waste minimisation, reuse and then recycling. Recycling needs a proper environmental and financial justification.	Create a waste minimisation, reuse and recycling culture in the region where residents and industry are proactive, innovative and take responsibility for their role in regional waste management.	
		Provide infrastructure and services that make it easier for households to recycle waste.	
		Advocate for legislative changes that have a positive impact on waste management in regional waste.	
WASTE MANAGEMENT INNOVATION Available technologies are fully utilised to efficiently manage regional waste.	As non renewable energy sources are depleted, innovative waste management alternatives for the Mid West need to be investigated, understood and progressed appropriately.	Invest in the development of alternative waste treatment technologies for the efficient management of regional waste.	
		Develop environmentally sound waste management solutions in strategic locations to meet specific industry needs.	

DIGITAL AND COMMUNICATIONS

THE MID WEST WILL BE A CONNECTED, DIGITALLY EMPOWERED AND INNOVATIVE REGION WITH COMPETITIVE MOBILE AND NETWORK INFRASTRUCTURE, CREATING OPPORTUNITIES FOR GROWTH AND DEVELOPMENT

The digital age is upon us and the Mid West needs to maximise its potential through a targeted partnership approach with communities, all levels of government, public, private and non-government sectors in order to develop a digital economy. A focus on digital literacy and optimising the use of available infrastructure and services will help connect Mid West communities and ensure they are digitally enabled.

Communications infrastructure will largely underpin the development of many proposed major projects in the region, all of which require varying levels of advanced telecommunications systems. Enhancing telecommunications infrastructure is necessary to achieve equity of provision in the region and help position Mid West business / industry on the global stage.

A thriving digital economy would give the Mid West powerful new tools to build a competitive and inclusive region with even greater productivity and innovation. It would also provide communities with access to new jobs, training and economic opportunities.

This chapter identifies the Blueprint's key Digital and Communications focus and priorities.

Meekatharra students using a small telescope as part of a visit from the International Centre for Radio Astronomy Research (ICRAR)

066 COMMUNICATIONS INFRASTRUCTURE

In today's world of fast-moving commerce, **mobile telecommunications and broadband** access can be just as **important to businesses** as electricity, water, roads and other physical infrastructure."

Digital technologies are having a profound impact on the way we conduct business, deliver education, experience entertainment and on life in general. Access to new digital tools can open doors to opportunities that bring significant economic and cultural benefits and can ultimately result in social advantage, higher incomes and a higher standard of living.

Access to reliable high speed broadband infrastructure has the potential to transform communities and all sectors of the economy, including but not limited to education, health, tourism, small business, professional services, construction, manufacturing, law and order, emergency services, public and social services and all forms of primary production.

Yet, because of the vast distances required to reach many of the Mid West communities and relatively small population bases, a reasonably significant percentage of the Mid West population lives and works in areas where the availability of digital tools and high-speed Internet connectivity is grossly inadequate by metropolitan standards or even absent altogether.

Of the 14 top issues raised during the recent Blueprint community consultation process, eight contained some reference to absent or inadequate communications infrastructure.

To overcome this "Digital Divide", the Mid West requires the strategic deployment of significant new communications infrastructure such as fibre optic cables, communication towers, wireless networks and satellite dishes. Although yet to be finalised, the current plan for rolling out the National Broadband Network (NBN) is unlikely to satisfactorily address all of the region's Internet access needs and wants. However, it is likely there will be opportunities to partner with NBN to produce better outcomes in some of the region's communities.

Technological advances will provide other options to rapidly and cost-effectively deploy new technology that could fundamentally reduce the Digital Divide and allow all Mid West residents to fully participate in the digital revolution. The Mid West must keep abreast of emerging technologies to ensure it makes the most of new opportunities on a timely basis.

Above all, a connected Mid West will enhance the region's appeal as a place to live, work, study and invest. In the process it will help retain existing residents and make it more attractive for new people to make the Mid West their home.

NBN and the Mid West

By "providing access to a minimum level of broadband services to homes and businesses across Australia" the NBN will play an important role in digitally connecting the Mid West. Though not all broadband users will ultimately connect to the Internet via the NBN, it will guarantee that all Mid West residents have an opportunity to have an affordable broadband Internet connection.

The NBN will enable connectivity via one of four types of connection, depending on the customer's location: Fibre to the Premise (FttP); Fibre to the Node (FttN), Fixed Wireless (FW) or the Long Term Satellite Solution (LTSS). All of urbanised Geraldton is expected to have access to the NBN by FttP by the end of 2016.

Fibre to the Premise (FttP). FttP connects a high-speed fibre directly between the customer premise and the nearest communications exchange. This is the fastest type of broadband connection. FttP will be rolled out to Geraldton's town centre and all urban suburbs. Geraldton FttP services will provide Internet download and upload speeds that are in the top 1% of Australian-connected premises. Geraldton was fortunate to be the first regional area in WA to receive the NBN FttP rollout and will be one of the few regional centres in Australia to receive full FttP services. This will further add to the town's appeal as a top-tier broadband-connected area.

Fibre to the Node (FttN). FttN uses fibre optic cables between the local communications exchanges and each neighbourhood, with the final leg of the journey from a neighbourhood node to the home or business being delivered by existing copper telephone cables. It is expected that NBN delivery in Dongara, Kalbarri, Leeman and Northampton will primarily be via FttN.

Fixed Wireless (FW). FW towers broadcast signals to many users' premises simultaneously over a dedicated wireless network, eliminating the need to connect each individual site to a fibre cable. While FW services provide less capacity and speed than a direct fibre connection, they can provide significantly better connectivity than existing telephone lines (ADSL2+). FW services are already available in most areas immediately surrounding Geraldton.

Long-Term Satellite Service (LTSS). In the remainder of areas not reached by FW services, NBN's new LTSS (available in early 2016) will provide all remote communities with high-speed satellite Internet services. LTSS uses orbiting satellites to connect users to the Internet. Signals from the satellite's 101 discreet "spot beams" can reach any location in Australia, including Abrolhos Islands communities.

Though satellite services do provide the option for ubiquitous connectivity, they are constrained by some notable limitations. These include contention for shared capacity amongst users and delays (latency) related to the signal transmission time from the ground to satellites. This can impede the ability to conduct real-time communication (eg, voice and video conferencing), making satellite services the last option of choice.

Murchison Radio-astronomy Observatory

BEYOND THE NBN

Mobile Broadband Services.

Although not an initiative of the NBN project, Internet connectivity via mobile telephone networks is the fastest-growing Internet access technology.

Mobile communications in parts of the region have been improved through provision of near-continuous coverage along major transport routes via the State Government's $40 million Regional Mobile Communications Project (RMCP). Of the 113 RMCP towers supported for funding, 13 are in the Mid West. All Mid West RMCP sites are now complete and operational.

"Royalties for Regions" provided $45 million in the 2014-15 State Budget for the Regional Telecommunications Project (RTP) to extend mobile broadband coverage with additional mobile base stations. Going beyond the RMCP, the RTP has a focus on improving coverage into communities (rather than along major transport routes), providing mobile access alternatives to NBN fixed services.

In addition, the Australian Government's Mobile Black Spot Program will provide $100 million over four years to improve mobile coverage in regional, rural and remote areas around Australia. This program is expected to establish around 250-300 additional mobile base stations nationally and attract substantial co contributions from community, industry and all tiers of governments.

Because significant areas of the Mid West region currently lack broadband infrastructure altogether or may not receive NBN services for some time, a move to delivering mobile broadband services may strategically be a high priority. These services would be supported by new and evolving mobile technologies, which are expected to deliver far better speeds than current or future satellite services.

Despite often being reasonably close to high-capacity infrastructure eg fibre optic cable, some Mid West communities may only have broadband access via NBN satellite services. This may prove insufficient for some customer needs. In some cases, it may be cost-effective to provide infrastructure that supports alternative technologies to supplement NBN satellite services to offer services similar to those available in larger regional centres. Accordingly, MWDC is exploring a range of alternative technologies and funding models for regional communication infrastructure. These could potentially deliver metropolitan-grade broadband into outlying communities and overcome many of the inherent limitations of satellite services.

OPPORTUNITY: For MWDC to work in partnership with relevant State and Commonwealth counterparts to leverage the most effective digital outcomes for the Mid West.

CHALLENGE: Incentivising innovative private sector investment to maximise the digital infrastructure and capabilities in the region

OPPORTUNITY: To provide cost effective connectivity to the region through alternative innovative telecommunication solutions and to leverage the opportunities afforded through the NBN.

IBM Smart Cities Challenge

The IBM Smarter Cities Challenge is a three-year, 100 cities, $50 million program through the company's philanthropic arm. The (in-kind) grants are valued at about US$400,000 using the expertise of IBM employees who research projects nominated by the chosen recipient. The City of Greater Geraldton (CGG) was selected to participate in the program in 2012, only the second Austrlian city to do so. Over a three week period, six IBM experts worked in Geraldton to investigate opportunities for the City, particularly in relation to:

- **smart digital services that leverage the increased availability of broadband; and**
- **smart energy strategies to enable the City's vision of becoming carbon neutral by 2029.**

The IBM conclusion was that CGG "has developed an exciting vision for its long term growth and has the economic opportunities to make this vision a reality. The community has the potential to become a model for cities that want to leverage technology to support sustainable, rapid growth, as well as those that want to leverage natural, renewable energy sources to become carbon neutral."

A set of receommendations in five key areas were developed for the City to drive this Smart Cities agenda.

GOAL: Internationally competitive communications networks exist throughout the region to enable high business productivity and community safety and amenity

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
COMMUNICATIONS INFRASTRUCTURE Internationally competitive telecommunications networks exist throughout the region to promote economic growth and community wellbeing.	For MWDC to work in partnership with relevant State and Commonwealth counterparts to leverage the best possible digital outcomes for the Mid West. Incentivising innovative private sector investment to maximise the digital infrastructure and capabilities in the region.	Through the allocation of co-invested funds, maximise the impact of different telecommunications rollouts to provide a reliable and stable supply of mobile telephone and broadband services to Mid West communities.	!
COST EFFECTIVE ACCESS All sectors in the Mid West have cost effective and reliable access to technology.	To provide cost effective connectivity to the region through alternative innovative telecommunication solutions and to leverage the opportunities afforded through the NBN.	Work with NBN Co and Mid West communities on opportunities to upgrade technology being rolled out / provided by the NBN.	
		Investigate in innovative mobile telephone and broadband communications technologies as options to provide access in sparsely populated and / or remote parts of the region.	

068 CONNECTED COMMUNITIES

DIGITAL PARTICIPATION

Digital technologies are critical enablers of innovation and creativity, which can underpin new economic development activity and create new jobs. The primary focus of the 'Digital and Communications' pillar is the provision of enabling infrastructure. However, broadband infrastructure alone isn't sufficient to create community connectivity or engagement. The Mid West can only open doors to new economic, social and cultural opportunities if its residents have the knowledge, competitive skills and the support necessary to take advantage of the new technologies.

Recognising this, a "Towards a Digital Geraldton and Mid West" strategy was commissioned late in 2012 by the CGG, MWDC, RDAMWG, Department of Commerce and Northern Agricultural Catchments Council. The strategy recommended 32 initiatives designed to take advantage of the region's new digital assets; particularly Geraldton's early participation in the rollout of the NBN.

A number of the strategy's recommendations have now been implemented; some have been trialled and some withdrawn; and some are yet to be considered. Of note, the majority of the strategy's recommendations were focussed on Geraldton, and to date, few benefits of the initiatives have flowed to Mid West communities outside Geraldton.

The next step will be to build on these successes and now focus on the unique needs of the challenging rural / remote environment.

An updated and revised regional strategy will need to be developed as part of this Blueprint's implementation. It will focus on identifying and launching new initiatives that can bring increasing prosperity and a better quality of life to all Mid West communities.

As applications in tourism, education, retail, health, small business, manufacturing, transportation, logistics and others bring the world to us, communities are no longer isolated by distance.

High capacity broadband will allow residents to create and share content. Cooperative infrastructure ownership models could see communities profit by owning a portion of their communications infrastructure.

Communities will transition from being exclusively content consumers to content creators, content owners and marketers. With digital connectivity, many locally created products and services can be marketed across the globe - creating new jobs, new sources of income and improving the social fabric of local communities.

This new found connectivity also brings new challenges. The same connectivity is available around the globe and allows marketers to target Mid West consumers from afar - potentially savaging regional economies.

Digital expertise is no longer an optional luxury. To compete, local organisations must adopt and deploy the latest digital tools. Increasing profitability and productive capacity will often depend upon an organisation's ability to identify opportunities and instantly deliver competitively priced products and services around the region and around the globe.

Mainstay primary industries will have no choice but to tackle the digital arena or risk being left behind by their more innovative and entrepreneurial competitors elsewhere. To thrive, communities must learn to embrace their local uniqueness and create high value products and services that can be sold locally and exported globally.

Tourism: Virtual reality immersive experiences using broadband-enabled technology can showcase to the rest of the world in high definition 3D the attractions of any remote location, motivating more tourists to visit the region in person.

Healthcare: Broadband-enabled healthcare providers can now draw on real-time expertise from leading medical professionals to diagnose and treat patients living in the most remote locations.

Emergency Services and Government: Digital tools can reduce the costs of public services, renew community engagement and improve emergency response times.

Business: Services enabled by improved infrastructure would allow some rural Mid West businesses to compete on near-equal footing with their metropolitan counterparts. A firm that markets products, services and knowledge to customers around the globe can be run from virtually any location convenient for its owner.

Local Government: Connected, cooperatively-owned networks can enable local governments to share the cost of ownership of digital infrastructure, providing better service at lower cost to ratepayers.

Education: With adequate communications technology and connectivity, students in regional communities can access educational content from the world's finest universities, obtain university degrees through distance learning programs, or learn new skills that prepare them for jobs in the region and beyond.

Innovation and Entrepreneurship: Spinoffs from innovations associated with the Square Kilometre Array (SKA) project will lead to opportunities for local entrepreneurship, creating an even more diverse local economy with access to associated technology from CSIRO / GUC and tertiary education facilities. Opportunities for local Aboriginal students to participate in the SKA via CSIRO cadetships will also no doubt lead to some young indigenous people entering careers in world leading astronomy science.

OPPORTUNITY: New digital infrastructure provides avenues to unlock significant socioeconomic potential in regional communities.

CHALLENGE: All Mid West Blueprint sections will depend heavily on digital technologies and digital services to be successful.

GOAL: Mid West communities are highly connected and the region is digitally empowered

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
DIGITAL ECONOMY Mid West communities are highly connected and the region is digitally empowered.	New digital infrastructure provides avenues to unlock significant socioeconomic potential in regional communities.	Deploy regional digital initiatives and equalise the Digital Divide by making high capacity/high quality tools and education available throughout the Mid West region.	
	All Mid West Blueprint sections will depend heavily on digital technologies and digital services to be successful.	A collaborative, multi-disciplinary approach that ensures all Blueprint strategies and plans adopt an appropriate digital perspective and use the available digital tools to drive socio-economic gains.	

ECONOMIC DEVELOPMENT

GENERATE 10,000+ NEW JOBS
IN THE MID WEST BY 2025,
AND AN ADDITIONAL 35,000 BY 2050

The Mid West has the highest level of economic diversity of all WA regions.

Global, national and regional trends are having a profound impact on the economic development and sustainability of regional Australia. In addition to new possibilities for growth, this also increases competition for investment between regions. This increase in competition has highlighted the need for the Mid West to capitalise on its strengths and identify new sources of future growth.

In order to achieve sustained growth and a goal of around 71,500 jobs by 2050, the region needs to enhance its global competitiveness and create resilience to changing economic conditions. The Blueprint proposes further economic diversification and an increase in innovation to drive productivity growth in existing areas of regional advantage.

This chapter identifies the Blueprint's key Economic Development focus and priorities.

Yellow Tail Kingfish, Mid West aquaculture pilot project off Geraldton

070 THE RESOURCES ECONOMY

MINING IN THE MID WEST

Given its significance in the region's economy, the resources sector features in several other elements of the Blueprint eg infrastructure, trade, business and industry, land development etc. As a result, a number of specific strategies that interconnect with the resources economy may be dealt with in those respective sections. In some cases these may be reiterated within this section.

Mining is a dominant industry in the Mid West economy.

- The Mid West is a diverse minerals province with 58 producing mines and three others proposed (December 2014).[1]
- The combined production value of Mid West minerals grew to a record of $3.46 billion in 2013-14.
- Around 38% of the region's estimated GRP was attributed to mining (2012-13).
- Mining dominates the Murchison subregion's economy, accounting for around 85% of its estimated GRP.
- Mining provided around 9% of direct jobs in 2011 (2,151) and is easily the largest employer in the Murchison subregion, directly providing 35% of local jobs (725 workers).[2]
- Mining also indirectly supports a large number of jobs in sectors such as manufacturing, construction and logistics.
- Of almost 2,700 FIFO / DIDO workers in the Mid West, around 51% were employed in mining.
- Of the 5,000 Mid West residents travelling outside the region to work, around 21% were employed in the mining sector.[3]

Iron ore; copper, lead and zinc; and gold are consistently the largest categories by production value in the Mid West. Most commodities saw notable increases in production value since 2009-10, particularly natural gas; iron ore; and copper, lead and zinc (Figure 54).[4] Natural gas saw the largest percentage growth (166%) during this time and despite small recent volumes is an area of significant regional potential. More detail on past Mid West resource values and growth trends is provided on page 29 of the Blueprint.

Significant growth in global iron ore supply and slowing economic growth in China are major causes of the steep decline in iron ore prices in recent times. The lower iron ore price has already resulted in some:

- higher cost producers cutting back or ceasing production; and
- existing or aspiring producers "shelving" plans for proposed new developments eg new mines.

This includes several operations and proposed developments in the Mid West.

1 Department of Mines and Petroleum (December 2014) - Minedex
2 ABS Census 2nd release 2012
3 Remplan 2014. Live in Mid West Region and Work Elsewhere
4 Department of Mines and Petroleum Statistics Digest 2013-14

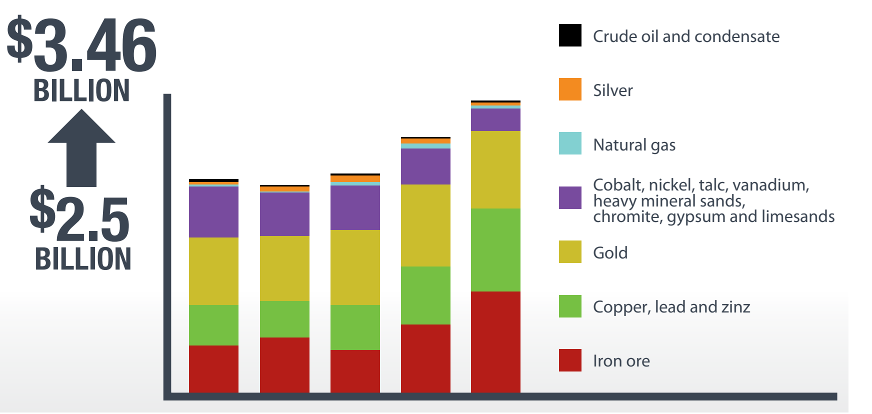


Figure 54. Combined Mid West minerals and petroleum production values (2009-10 - 2013-14)

MID WEST RESOURCES PROSPECTIVITY

According to the State Planning Strategy 2050, the Mid West region has more than $8 billion of prospective resource projects, focused mainly on magnetite, copper and uranium. The region continues to have strong resources prospectivity, which could result in further significant growth in the industry.

To the extent that Chinese steel mills favour magnetite as a feedstock, the Mid West may still hold a comparative advantage given its extensive magnetite reserves ie the Pilbara produces mainly hematite. Magnetite is typically more resource intensive by comparison to hematite, which presents both an opportunity (more jobs created) and challenge (servicing resource demands) for the Mid West.

The potential increase in global demand for uranium, given initiatives to reduce greenhouse gas emissions, presents both opportunities and challenges for the development of the Mid West's substantial uranium deposits. The region's thorium deposits may also present a new opportunity once technology is developed to process it as a safer alternative to uranium.

Recent gas discoveries (conventional and unconventional) in the northern section of the Perth Basin reinforces the region's potential to also maintain or grow its role as one of the State's oil and gas producing regions.

Karara Mining Ltd, Perenjori (magnetite core)

INFRASTRUCTURE

The Chamber of Minerals and Energy of WA (CME) has highlighted:

- the resources sector relies on a range of public and private infrastructure to deliver successful projects, including transport, power, water, accommodation and social infrastructure; and
- quality infrastructure built and operated efficiently can be a key driver of the financial viability of resources sector projects.

The latter is of particular relevance for transport infrastructure for bulk commodities such as iron ore – due to transportation costs being high relative to the commodity's sales value. This point was confirmed during Blueprint consultation, with some Mid West miners indicating that transportation represented more than 50% of their operating costs.

The region has reasonably well developed infrastructure, which largely meets current and near-term needs. However, the capacity and location of existing infrastructure, including port, road, rail and power, will not be adequate for the region to realise its aspirations for resources sector growth in the medium to longer term.

This was demonstrated in the most recent mining boom, where limited infrastructure capacity and availability negatively impacted plans to develop several Mid West resource projects.

Accordingly, if the Mid West is to become a major iron ore (magnetite and hematite) producing region it needs options to:

- significantly increase the capacity of the Geraldton port and / or the development of the proposed deepwater port at Oakajee and associated supporting infrastructure eg the Oakajee Narngulu Infrastructure Corridor;
- provide additional power capacity via local power generation and / or upgrade and / or extension of the SWIS; and
- expand the region's rail network to service the proposed development of remote iron ore deposits in areas such as the Murchison, North Midlands, Yilgarn and beyond.

Infrastructure is discussed more broadly in the Movement of People and Resources element (page 51), which also includes a number of strategies relating to infrastructure planning and development.

CHALLENGE: Strategic infrastructure planning, coordination and funding is critical to the financial viability and future development of Mid West resource projects.

CHALLENGE: Investment in multi-user transport infrastructure, including private sector investment, in response to increased transport loads.

CHALLENGE: Infrastructure bottlenecks need to be identified and resolved to optimise the flow of resources and enhance project viability.

Port

The Geraldton port is the primary export facility for Mid West minerals. Of the 17.7mt of total exports from the port in 2013-14, around 15.6mt was in the form of minerals (88%). These included various mining concentrates, mineral sands, talc and iron ore, with iron ore being easily the largest at 14.4mt (92%). Iron ore exports in particular have increased significantly in recent years (up 170% in five years since 2008-09).

Export of minerals in 2013-14 represented an increase of 28% from 2012-13 and 145% in the last five years. As a result of the growth in resource exports, the Geraldton port was nearing its practical capacity in 2013-14 having exported 18.5mt. The port's current capacity is around 25mtpa with its existing infrastructure and potentially up to 30mt+ if Berth 6 was developed as a third iron ore berth.

Residual port capacity at Geraldton is inadequate to service the export needs of all of the proposed resource projects (particularly iron ore). For example, Asia Iron's Extension Hill project has environmental approvals to export 10mtpa from Geraldton and if commissioned, would require all of the port's remaining export capacity.

In addition to berth capacity, there are also other infrastructure bottlenecks at the port including:

- road trains hauling bulk freight into the port can experience significant queuing delays;
- the rail line approach to the port is mainly single line and even when it branches into additional lines it only provides limited capacity to accommodate two-way traffic into and out of the port; and
- the port is also only provided with curtailable power, meaning its supply can be 'switched off' during peak local demand periods.

The proposed deepwater port at Oakajee is principally intended for export of bulk products such as iron ore and is potentially a prerequisite for the development of some of the region's magnetite deposits. A series of studies were commissioned by the Department of State Development (DSD) to consider options for developing the Oakajee port project and to better inform future related decision making.

Geraldton port

Roads

Heavy haulage of minerals and mining consumables, as well as movements of freight for the North West, grain and livestock, places pressure on Mid West roads and creates challenges in some Mid West communities. Areas of recent focus and investment have included Wubin Mullewa, Meekatharra-Wiluna and Geraldton-Mount Magnet roads.

Movements of minerals on the road network around Geraldton primarily include:

- longer distance through traffic from outside the region moving north-south through the region along the Brand Highway – North West Coastal Highway; and
- trucks carrying bulk commodities to the Geraldton port, generally from the south via Midlands Road and from the east via Geraldton-Mount Magnet Road and the Southern Transport Corridor.

As at June 2014, Main Roads WA estimated around 155 net daily truck movements on the Geraldton road network that transported minerals, with trucks up to 53.5m in length.

A possible change of the Restricted Access Vehicle Regime is foreshadowed in the State Freight Network Plan, which would permit High Wide Load and Restricted Access Vehicles (53.5m and longer) south of Carnarvon on the North West Coastal Highway. If this eventuates, further Mid West road pressures would be expected through the allowance of longer vehicles.

Resource sector traffic between Mount Magnet and Cue

There have also been recent efforts to establish an east-west inter-regional business and contract servicing link between Mid West export infrastructure and the highly prospective Central Lands resources district (Musgrave area) in the eastern Goldfields.

CHALLENGE: Development of north-south and east-west freight and bypass solutions to support the development of stranded mineral deposits and help reduce congestion and risks between resource sector and other road users.

Rail

Mid West rail volumes have more than tripled in recent years, from around 4.67 mt in 2009-10 to 15 mt in 2013-14. Minerals represented 94% of rail volumes in 2013-14 (14.06 mt).

In 2013-14 there were 3,410 individual 'loaded' rail movements in the Mid West (principally to the Geraldton port), with 88% carrying minerals.

These recent traffic increases have been enabled by an extensive rail infrastructure upgrade in 2012, which increased capacity of the rail infrastructure from Morawa to the Geraldton Port (via Mullewa) to 25mtpa (upgradable to 75mtpa). Train movements are expected to increase further as Karara ramps up to full production.

Rail delivery to Geraldton port

Air

Most Mid West aerodromes are used to support FIFO services at various inland mine sites, some of which also have their own private airstrips.

Growth in resource sector activity has seen strong increases in passenger movements at several Mid West locations. CME expects that the transition of WA mines from construction to operational workforces will put continued pressure on regional aviation infrastructure. This is due to shorter operational roster cycles, which results in increased total passenger movements. By 2020, the number of resource sector workers using the Perth airport to fly to regional WA is expected to increase by more than 300,000 above 2014 levels. A proportionate increase in Mid West passenger movements might be expected.

Local governments often find it difficult to invest in the necessary aerodrome infrastructure to support variable increases in air traffic and aircraft size. CME has advocated for the consideration of private sector investment and management of regional aerodromes.

072 THE RESOURCES ECONOMY *CONT'D*

Utilities

Access to utilities infrastructure (eg water, power, communications) is also vital to the sector. As with transport infrastructure, this presents a particular challenge when the location of mineral deposits and utilities aren't aligned. Given the volumes often required (particularly water and power), this can create competition with other users.

CME has also forecast increases in the 2020 demand for electricity and water abstraction for mining from 2013 levels.[1] Meeting the growth in demand for these in a cost effective and sustainable manner is an important consideration for the Mid West.

Given the scale and cost of utilities for many projects (particularly where significant testing and /or capital contributions are required) some Mid West proponents have chosen to develop their own servicing infrastructure rather than pay commercial rates to utility providers. Karara mining funded a $270 million / 180km extension of the 330kV transmission line from Eneabba to its site.

The provision of localised water or energy solutions may require further development of public infrastructure networks, such as the extension of the 330kV transmission line that currently terminates at Three Springs.

CHALLENGE: Achieving cost effective and secure access to services and utilities to enhance the viability of new resource sector projects and expansions.

330kV transmission line, Three Springs

STRATEGIC LAND USE

Provision of project-ready industrial land to meet the needs of the resources sector is critical. The Mid West is fortunate to have large areas of industrial land available, including the active Narngulu and Webberton industrial estates and the fully structure planned 6,500ha OIE. However, headworks infrastructure and provision of services to some industrial lands are an impediment to development. Industrial lands (employment lands) are discussed further on page 83.

Potential growth in resource sector activity creates an ongoing need to define, plan and protect transport and service infrastructure corridors and buffers that provide access to export facilities and industrial areas.

Planning, development and future protection of alignments such as the Oakajee Narngulu Infrastructure Corridor (ONIC), Geraldton Outer Bypass, PortLink, Dongara to Northampton Strategic Corridor and the connection to the Central Lands remain important for the future of the region's resources economy.

CHALLENGE: Preservation of buffers / corridors and provision of serviced industrial lands to ensure the broader benefits from the resources sector (and other industries) can be realised through efficient future transport networks.

The Mid West has a range of important natural resources such as extensive land and water, radio quietness and unique biodiversity and environments. Balancing opportunities for mining and other land uses is vital to maintain the integrity of important natural assets while enabling growth and development.

The Australian and Western Australian Governments have established a Radio Quiet Zone (RQZ) in the Mid West to protect the Murchison Radio-astronomy Observatory (MRO) and its projects including the Square Kilometre Array and ASKAP, and to allow for coexistence with other activities in the region. A number of legislative, regulatory and policy instruments impact the RQZ, including instruments under the Radiocommunications Act 1992 and Mining Act 1978 (WA).

The RQZ comprises a 70km radius Inner Zone in which radio astronomy activities have primacy and coordination zones from 70km up to 260km (depending on frequency). Outside the 70km Inner Zone, a coexistence principle applies whereby a potential applicant for a radiocommunications transmitter must consult with the MRO manager with the purpose of ensuring that radio astronomy receivers are protected from harmful interference while maximising the opportunities for other spectrum use.

CHALLENGE: Radio quiet protection and coexistence are critical to the balanced development of the Mid West.

PROJECT FACILITATION

As with other industry sectors, regulation, compliance and approvals processes can create delays and significantly impede the timely progression of resource sector projects, as well as adding greatly to the cost of development ie red / green tape. This occurred during the recent mining boom while the iron ore price was at its peak, with a number of projects deferred due to regulatory / compliance delays.

Without diluting the importance of regulatory and administrative controls, minimising and streamlining existing red / green tape is a priority for future resource sector development to the region.

CHALLENGE: Effective, transparent and efficient administrative and regulatory systems are essential to the development of resource sector projects.

In addition to the diverse range of minerals already extracted in the Mid West, the region is also highly prospective for resources such as uranium, thorium and unconventional gas. Exploration and development of such resources can invoke negative public reaction and are subject to various regulatory processes and controls.

The resource endowment of the Mid West is a significant area of regional advantage. The Blueprint advocates for the responsible development of these resource opportunities, in keeping with broad community values and various social and environmental controls.

CHALLENGE: A delicate balance exists between the region's resource prospectivity and social and environmental expectations.

Golden Grove, Yalgoo

1 2015-2025 Western Australian Resources Sector Outlook, Chamber of Minerals and Energy (2014)

INVESTMENT AND INDUSTRY RELATIONSHIPS

The high capital cost of mining is a major consideration in the development of projects and places significant onus on producers to minimise expenses and maximise returns to investors / shareholders. A streamlined and cost effective resources sector environment (with efficient transport networks, access to workforce etc) will assist Mid West miners seeking further direct foreign investment.

Recent foreign direct investment resulted in significant improvements to Mid West infrastructure and enabled development of several important resource projects.

CHALLENGE: Many small and mid-tier miners do not have projects of sufficient operational scale or the financial strength needed to fully fund essential major transport and energy infrastructure on a standalone basis.

CHALLENGE: Government's capacity to fund major common user infrastructure (eg deepwater port and new inland rail networks) is constrained and flexible, innovative financing solutions may be required.

An Australia China Business Council (Mid West chapter) has been established in the region and a number of important relationships have been forged with China, including sister city relationships. China in particular places strong emphasis on trust and mutually beneficial business relationships. It is essential the region continues to foster these productive dialogues with trading and investment partners (including governments and companies).

CHALLENGE: A financially attractive, reliable, welcoming and cost effective resource sector environment is essential to build effective global relationships and attract investment to the region.

The ability of proponents to adjust operations in response to changing market conditions is also important. Downstream processing is an option for some resource proponents to increase returns from their commodities. Little downstream processing occurs in the Mid West and may be an area of further investigation and future expansion. Downstream processing is often capital intensive and can provide significant employment and other regional development benefits.

The region has significant undeveloped magnetite reserves of varying scale and quality. Magnetite is emerging as a preferable product to some overseas markets as it results in lower carbon emissions and a higher export sales price. As countries such as China look to reduce environmental impacts, this may present further opportunities for magnetite miners. Unlike traditional iron ore producing regions such as the Pilbara, the Mid West has extensive magnetite resources.

The Mid West also has significant direct Chinese investment in various iron ore and magnetite mining operations. This vertical integration along the ore supply chain creates further opportunities for development of additional mining interests in other locations throughout the region.

OPPORTUNITY: Identification of opportunities for additional downstream processing in the Mid West resources sector.

RESOURCE SECTOR DEVELOPMENT

Mining workforces in the Mid West are expected to remain fairly constant through to 2020.

Although Mid West residents fill a relatively high proportion of the region's mining and related jobs, it is a priority for the region to:

- minimise reliance on external labour forces;
- reduce negative FIFO / DIDO impacts; and
- potentially offer the Mid West as a FIFO / DIDO service hub for other mining regions.

This places a strong emphasis on local workforce development, which responds to industry needs and engaging with mining companies to employ locals as a preference.

Initiatives such as the Durack Institute of Technology's Centre for Resources Sector Workforce Training (CRSWT) (which commenced construction in 2014) will help the region increase its skilled and flexible labour pool and create a strong regional labour supply.

Based at the City of Greater Geraldton's Airport Technology Park, the CRSWT is a "Centre of Excellence" for the oil, gas and mining sector training in the Mid West and Gascoyne regions. The CRSWT will enable Durack to build on its expertise established at its existing facilities at Fitzgerald Street Geraldton in the areas of Heavy Duty Automotive training, Civil Construction, Mining, Occupational Health and Safety, Transport and Logistics.

Ultimately, mining companies will recruit in a manner that is most financially viable and provides them with the necessary workforce controls. Working with the sector to provide a regional labour force and environment that supports industry's needs is important.

Technology and innovation is fundamental to the resource sector. Embracing technology / innovation and investing in the development of regional human capital through education, training and development is important to position Mid West workers for future opportunities in mining.

OPPORTUNITY: The region is well placed to provide leading resource based education and training infrastructure and programs.

OPPORTUNITY: Utilising the region's strong mining, construction, manufacturing and logistics sectors, education and training system and lifestyle advantages to become a residential base for FIFO / DIDO workers in the Mid West and to other regional areas.

CORPORATE SOCIAL RESPONSIBILITY

Given their significant impact on regional areas mining companies have an important corporate social responsibility that affords them a 'social licence' to operate. This is particularly important in smaller Mid West communities where a strong and supportive mining presence can provide significant local business benefits and population stability.

Equally, mining may also bring challenges to regional communities. Mining presence can drive local prices up and attract workers away from lower paid yet essential positions. A sudden influx of mine workers can also place increased pressures on available social infrastructure and services, presenting challenges for local providers eg local governments. This emphasises the importance of proactive planning and timely communication and collaboration between resource companies and nearby communities.

Some Mid West communities have been able to negotiate mutually beneficial relationships with mining companies regarding local purchasing, residential workforces and local training opportunities. These relationships can also deliver important community development and engagement outcomes.

OPPORTUNITY: Enhancing relationships between mining companies and communities throughout the region is vitally important and can deliver significant mutual benefits.

Karara Mining Ltd, Perenjori

THE RESOURCES ECONOMY *CONT'D*

GOAL: To realise the growth and development potential of the region's minerals and energy resources and extract maximum regional value from resource sector activity

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
INFRASTRUCTURE Regional supply chains provide all Mid West producers with cost effective access to domestic and overseas markets	Strategic infrastructure planning, coordination and funding is critical to the financial viability and future development of Mid West resource projects.	Ensure Mid West resources sector's needs are considered in the preparation of relevant Mid West infrastructure development strategies and / or specific infrastructure developments eg rail, energy, water.	
	Investment in multi-user transport infrastructure, including private sector investment, in response to increased transport loads.	Engage miners with an interest in the Mid West (ie resources or infrastructure) to strategically plan for infrastructure provision to meet future needs of multiple users.	
	Infrastructure bottlenecks need to be identified and resolved to optimise the flow of resources and enhance project viability.	Support collaborative industry and government planning efforts to resolve priority bottlenecks eg port access and capacity.	
	Development of north-south and east-west freight and bypass solutions to support the development of stranded mineral deposits and help reduce congestion and risks between resource sector and other road users.	Support collaborative industry and government planning efforts to determine the viability of cross-regional business and contract servicing links eg proposed Musgrave corridor initiative.	
	Achieving cost effective and secure access to services and utilities to enhance the viability of new resource sector projects and expansions.	Work with stakeholders to examine ways of lowering the cost of power access, generation and transmission eg the Electricity Market Review Stage 2.	
STRATEGIC LAND Land is well planned and developed for present and future resource sector needs and opportunities	Preservation of buffers / corridors and provision of serviced industrial lands to ensure the broader benefits from the resources sector (and other industries) can be realised through efficient future transport networks.	Advocate for the formal designation of corridors and buffers to provide certainty to industry, landowners, decision makers and other stakeholders.	
	Radio quiet protection and coexistence are critical to the balanced development of the Mid West.	Advocate for a consultative and cooperative approach to radio quiet protection and coexistence that supports continued economic growth and development in the Mid West.	

2050 OUTCOMES Regional Aspirations	**CHALLENGES / OPPORTUNITIES**	**STRATEGIES**	**TERM**
PROJECT FACILITATION Regulatory and administrative controls are streamlined to encourage future resource sector development	Effective, transparent and efficient administrative and regulatory systems are essential to the development of resource sector projects.	Work with relevant authorities, developers and local governments to reduce the lead times and costs of regulatory requirements.	
	A delicate balance exists between the region's resource prospectivity and social and environmental expectations.	Encourage development in line with community and sustainability values.	
INVESTMENT AND RELATIONSHIPS The Mid West is a region of choice for resource sector investment	Many small and mid-tier miners do not have projects of sufficient operational scale or the financial strength needed to fully fund essential major transport and energy infrastructure on a standalone basis. Government's capacity to fund major common user infrastructure (e.g. deepwater port and new inland rail networks) is constrained and flexible, innovative financing solutions may be required.	Encourage collaboration between resource companies and government to identify effective financing solutions for Mid West infrastructure that facilitates the development of what would otherwise be stranded mineral deposits.	
	A financially attractive, reliable, welcoming and cost effective resource sector environment is essential to build effective global relationships and attract investment to the region.	Continue to develop and strengthen effective relationships with global business interests and build investor confidence in the Mid West resources sector.	
	Identification of opportunities for additional downstream processing in the Mid West resources sector.	Investigate potential opportunities for downstream processing of resources in the Mid West.	
RESOURCE SECTOR DEVELOPMENT The Mid West is a region of choice for resource sector workers and their families	The region is well placed to provide leading resource based education and training infrastructure and programs. Utilising the region's strong mining, construction, manufacturing and logistics sectors, education and training system and lifestyle advantages to become a residential base for FIFO / DIDO workers in the Mid West and to other regional areas..	Continue to promote the Mid West as a region of choice for resource sector workers and families due to its location, lifestyle, affordability and other benefits	
CORPORATE SOCIAL RESPONSIBILITY All Mid West miners have mutually beneficial relationships with their local communities	Enhancing relationships between mining companies and communities throughout the region is vitally important and can deliver significant mutual benefits.	Work with local governments and communities to consider the basis for 'cooperation agreements' to be negotiated with mining companies that align with collective interests and focus on shared outcomes and priorities.	

MID WEST TOURISM POTENTIAL

The world economy will significantly change over coming decades. Rapid income growth within emerging economies will grow the number of tourists but also create new tourism markets and new sources of competition. Major growth opportunities are associated with attracting new tourists from Asia and other developing nations, as well as attracting greater domestic tourist numbers to the Mid West. The latter includes the recreational vehicle (RV), caravan and camping visitor market, which continues to grow in Australia and represents an ideal opportunity for increased visitation to the region.

Recent and ongoing upgrades to the Geraldton foreshore, Wildflower Way Kalbarri National Park, and Dongara-Port Denison have potential to increase visitation. Similarly, several Mid West local governments are working towards becoming recreational vehicle friendly towns in anticipation of this growing visitor market. The City of Greater Geraldton is keen to position itself as a major events and sporting destination and has sought advice from professional sports marketing consultants in a bid to move towards this aim.

The Mid West forms part of the Australia's Coral Coast (ACC) and Australia's Golden Outback (AGO) tourism regions. The ACC includes the Batavia Coast and coastal area of the North Midlands, with the balance of the North Midlands and Murchison forming part of the AGO region. A Mid West Tourism Alliance was established in 2013 to drive a collaborative approach to tourism development throughout the region.

The long term aspiration of this Blueprint is for the Mid West to attract one million overnight visitors (annually) by 2050. The Mid West would be highly developed as an inspiring nature based destination, that offers a wide range of high quality, year round experiences.

Houtman Abrolhos Islands

ICONIC ATTRACTION AND DESTINATION DEVELOPMENT

The region's tourism has evolved unevenly and irregularly as a result of human resource constraints and haphazard approaches to infrastructure development, marketing and visitor servicing. Although the Mid West has popular destinations that bring seasonal holidaymakers, many travellers transit through the Mid West en route to farther destinations, thus reducing tourism impacts in the region.

The Mid West's unique natural, cultural and heritage assets are its competitive advantages and present opportunities for iconic tourism experiences and attractions, including the following:

- The Houtman Abrolhos Islands, with world class fishing experiences, protected islands and coral atolls, significant heritage and interpretation potential and under utilised infrastructure;
- Expansive coastline (340km) including protected beaches, dramatic cliffs, surf coast, reef lined shores, ports, safe anchorages, untouched coastal scrub, dunes and stretches of isolated beaches and shoreline;
- Geological diversity including world scale mineralisation (eg mining, prospecting, fossicking), unique landforms, significant gorges and ranges and the oldest rocks on earth;
- Extensive land area including large swathes rich in seasonal wildflowers, native flora and fauna, extensive river and creek systems and large areas of conservation reserves. These areas are well linked by road network and a variety of airports. Sound management of these assets and their values is essential, with various agencies playing an important role to facilitate access to, and use of, these areas;
- A network of large and small communities spread throughout the region. This facilitates a 'hub and spoke' approach to travelling across the region all year round. The region's central geographic location makes it accessible from practically all points on the compass; and
- Established tourism destinations include coastal locations of Kalbarri, Dongara-Port Denison and Geraldton, with capacity to host significant additional visitation year round.

Seal rocks, off Geraldton foreshore

OPPORTUNITY: The Mid West region does not have a critical mass of tourism product and needs to focus on developing the areas in which it has a competitive advantage. In time this development would increase visitation to the region and build demand for infrastructure and service eg accommodation, air services.

PRODUCT AND EXPERIENCE DEVELOPMENT

As incomes grow, discretionary expenditure will shift towards experiences as opposed to products. The experiences that future tourists will seek will be authentic, personalised and often involve social interaction.

Tourism products in the Mid West are uniquely challenged with its main towns at a mature phase of the tourism lifecycle and seeking renewal and rejuvenation, whilst smaller towns are generally at early development phases and seeking initial investment, awareness and visitation.

The Mid West also lacks the numbers and variety of tourism operations and accommodation and a tourism culture that translates into a suitable level of customer service experiences for visitors.

CHALLENGE: Gaps in the region's tourism product and experiences that need attention include:

- **varied approaches to visitor servicing and mixed standards of information for way finding (ie navigating to places of interest);**
- **accommodation, which is generally aged, of mixed standards and at times below visitor expectations, with supply limitations during peak seasons;**
- **limited recreational vehicle and traveller amenities and accommodation options, such as low cost / freedom camping for travellers transiting or stopping overnight;**
- **the potential Batavia experience is not fully developed;**
- **regional produce is not highly promoted in hospitality venues; and**
- **food, wine and culinary experiences are under represented.**

INVESTMENT READY ATTRACTION

Increased investment in tourism infrastructure to exploit the region's unique opportunities is necessary to deliver positive visitor experiences, resulting in longer stays, higher visitation and increased expenditure.

Compared to many other wealthy countries, Australia and the Mid West are expensive destinations. However, the high price tag may also come with the perception of boutique and exotic status, which is something the Mid West can build on through increased investment in its iconic assets.

CHALLENGE: Targeted investment strategies are needed to support tourism development in the region. There is role for MWDC to play in attracting investment to generate a wider range of affordable and accessible tourism and cultural experiences.

50%
OF TRAVELLERS
UPLOAD COMMENTS & PHOTOS
USING SMART PHONES

CONNECTIVITY

Models of human communication and decision making are changing over time. Information flows much more rapidly and via widely distributed channels and the perceived credibility of information sources is also changing. Growth in connectivity and the use of technology presents opportunity for tourism businesses development.

The tourism industry is witnessing significant growth in visitor use of the Internet, with social media playing an intrinsic role in every aspect. Tourism Research Australia indicates that 46% of total holiday travellers to Australia are booking some aspect of their trip online prior to arrival. During their holiday, some 50% of travellers upload comments and photos on social media outlets using smart phones.[1] Furthermore, 53% of travellers upload photos and post comments regarding their experience on either social media or a blog. This feeds into the desires of people around them and the process of 'E-word of mouth' begins.

Concurrently, smart phones have advanced significantly with 'apps' that greatly expand their functionality whilst smart phones and GPS in cars are commonplace and widespread. There are naturally gaps in the Mid West with large areas without phone coverage, reliant on satellite. Physical signage is not always reliable or extensive, although the use of preloaded apps and GPS systems driven largely by satellites can support wayfinding.

Regional information on places of interest and routes are presented across a range of platforms by visitor centres, two regional tourism organisations and local Governments. There are distinct opportunities to improve technology supported way finding through the region whilst promoting a connected Mid West.

OPPORTUNITY: Digital information for tourists is variable across the region, with promotions by several tourism organisations, visitor centres and local governments. Opportunity exists for technology collaboration to ensure marketing across the whole Mid West while retaining individual community identities.

CHALLENGE: Most towns in the Mid West have access to mobile broadband, but coverage between towns continues to be an issue with black spots throughout the region. There are also limited public WiFi hotspots, which are generally expected in a modern (digital) world.

DIVERSIFICATION AND AUTHENTIC CONNECTION

There are a number of growing trends in niche tourism markets that could be developed, or further developed in the Mid West, including farm and country stays, game based tours / safaris, backpacking, education / research, bird watching, cycle tours as well as geo, eco, food and Aboriginal based tourism.

Aboriginal tourism is a growing niche market for Australia. It can provide significant economic development and social benefits for regional and remote communities and provide opportunities for unique and tangible cultural experiences.

Tourism Western Australia has indicated that 59% of WA visitors are interested in Aboriginal tourism experiences, but only 26% actually participate.[2] Aboriginal tourism is underdeveloped in the Mid West.

Some of the oldest rocks on the planet have been found in the Murchison and as a result, the Mid West has significant potential to develop geo sites and geo-tourism as a new niche market.

The Mid West has a unique natural environment and is one of only five places in the world with both marine and terrestrial biodiversity hotspots of international significance. Through targeted promotion to students worldwide an opportunity exists for the development of research / educational tourism in the region.

OPPORTUNITY: By diversifying through niche opportunities such as Aboriginal tourism, geo-sites, geo-tourism and research tourism, the Mid West has potential to create authentic connections with visitors and increase visitation to and across the region.

1 Tourism Research Australia, IVS June 2014

2 Tourism Western Australia, Industry Briefing 2014

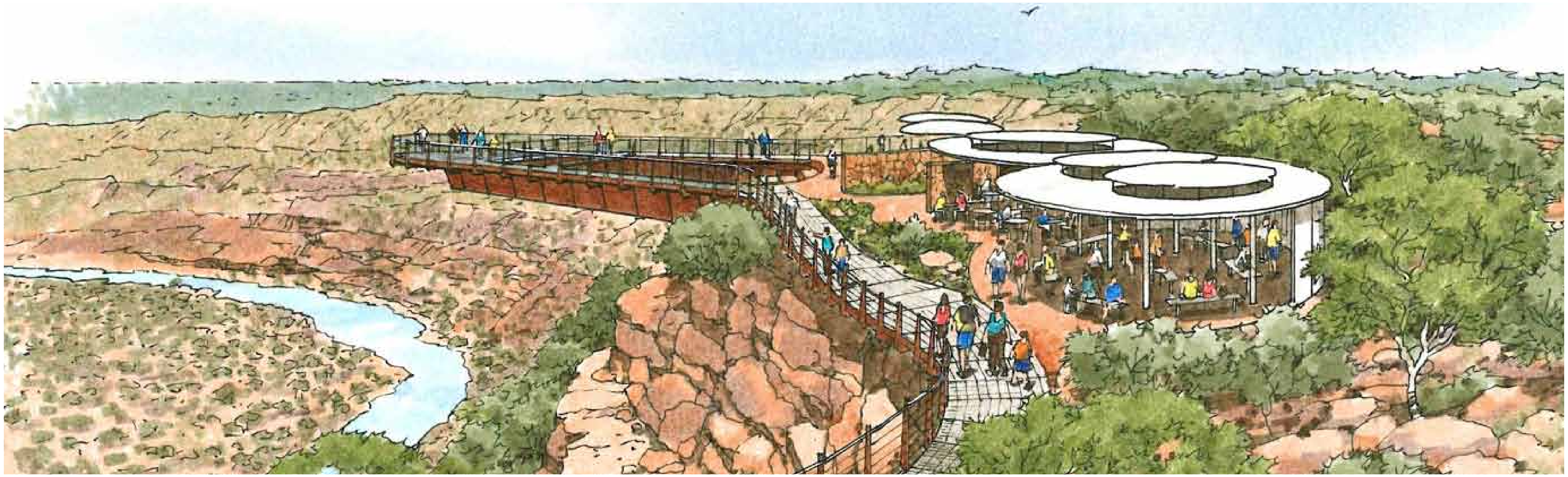
Meekatharra sunset

078 TOURISM *CONT'D*

GOAL: The Mid West attracts one million visitors each year that stay in and enjoy the region for longer

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
ICONIC ATTRACTION AND DESTINATION DEVELOPMENT The Mid West is world renowned for its unique and iconic attractions and destinations.	The Mid West region does not have a critical mass of tourism product and needs to focus on developing the areas in which it has a competitive advantage. In time this development would increase visitation to the region and build demand for infrastructure and service eg accommodation, air services.	Invest and support in the establishment of iconic tourist attractions and destinations in order to grow the visitor market and build a stronger profile for the region eg the Houtman Abrolhos Islands, Kalbarri skywalk and conservation estates.	
PRODUCT AND EXPERIENCE DEVELOPMENT The Mid West region is a highly accessible tourism and major events destination offering unique and quality visitor experiences.	Gaps in the region's tourism product and experiences that need attention include: • varied approaches to visitor servicing and mixed standards of information for way finding (ie navigating to places of interest); • lack of distinctive 'iconic' activities, events and experiences compared to neighbouring regions; • accommodation, which is generally aged, of mixed standards and at times below visitor expectations, with supply limitations during peak seasons; • the potential Batavia experience is not fully developed; • limited recreational vehicle and traveller amenities and accommodation options, such as low cost / freedom camping for travellers transiting or stopping overnight; and • regional produce is not highly promoted in hospitality venues and food tourism is under developed.	Support initiatives for tourism operators and associated service providers to enhance the quality, value and appeal of experiences for visitors to the region ie skills and workforce development and product to cater for the specific needs of visitors.	
INVESTMENT READY ATTRACTION The Mid West is a competitive region in attracting investment from community, private and public sources.	Targeted investment and strategies are needed to support tourism development in the region. With much of the region's natural assets dependent on the nature and conditions of land tenure, there is role for MWDC to play in enabling and attracting investment to generate a wider range of affordable and accessible tourism and cultural experiences.	Advocate for and facilitate the de-risking of investment opportunities such as ensuring planning and zoning are in place, streamlining approval processes, provision of investment ready sites and projects, provision of headworks funding to enable investment attraction.	

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
CONNECTIVITY Telecommunications and Internet services are accessible to tourists throughout the region.	Digital information for tourists is variable across the region, with promotions by several tourism organisations, visitor centres and local governments. Opportunity exists for technology collaboration to ensure marketing across the whole Mid West while retaining individual community identities. Most towns in the Mid West have access to mobile broadband, but coverage between towns continues to be an issue with black spots throughout the region. There are also limited public WiFi hotspots, which are generally expected in a modern (digital) world.	Support consistent and collaborative promotion of Mid West tourism on a common technology platform.	
		Encourage innovative, targeted communication to improve visitor experiences, including WiFi zones, push marketing and regional apps.	
		Encourage the promotion of sites and places of interest on Google Maps, powered largely by satellites rather than mobile phone networks.	
		Facilitate the rollout of digital communications infrastructure and services throughout the region to maximise the potential of the growing trend towards using online information distribution channels for research, bookings, marketing and social networking.	
DIVERSIFICATION AND AUTHENTIC CONNECTION The Mid West product is diverse and attracts new visitors and promotes repeat visitation.	By diversifying through niche opportunities such as Aboriginal tourism, geo-sites and geo-tourism and research tourism, the Mid West has the potential to create authentic connections with visitors and increase visitation to and across the region.	Strengthen and diversify the region's tourism and destination appeal by supporting the development and promotion of niche tourism opportunities unique to each subregion's authentic brand.	



Proposed Kalbarri Skywalk (concept plan)

MARKET DEVELOPMENT

The Mid West is a significant agricultural region supplying 22% of the State's wheat production, 10% of the State's canola and 83% of the State's lupins. Almost all Mid West crop production is exported, which highlights the importance of global trading relationships to the region.

The Mid West is strategically placed for exporting grain as the closest agricultural port zone in Australia to major Asian and other markets. This gives the Mid West a potential geographic advantage that could be further leveraged in the long-term. The Mid West could become the key grain export logistics point for WA in the future (noting the region already has the largest receival point for grain in the southern hemisphere). The Mid West should therefore continue to strategically modernise all grain export facilities and maintain highly competitive transport links for agriculture.

The China-Australia Free Trade Agreement (FTA) announced in November 2014 presents significant opportunities for Mid West agriculture and food producers.

The CGG has a several formal relationships with various Chinese provinces (details in the Trade element on page 88). The region also has a Mid West chapter of the Australia China Business Council (ACBC) and an International Relations Development Advisory Committee. There may be opportunities to leverage off these relationships to grow / create new markets.

OPPORTUNITY: There is an opportunity to lever the existing relationships to a greater degree. The region can develop products for specific price points in developing markets, and hence will be undertaking a "market pull" approach in its agricultural development.

End users with religious or ethical values, or with various medical conditions, may demand greater segmentation of the foods they eat. Equally as more food is processed, manufacturers seek food ingredients with specific properties that carry out functions in the manufacturing process eg that coagulate, separate, thicken, solidify or liquidise.

As the market segments grow, there may be opportunity for Mid West producers to target them individually. The ability to capitalise on some of these opportunities may require a sophisticated understanding of food science.

OPPORTUNITY: There may be an opportunity for small food producers to develop local niche opportunities.

Mid West producers already have a reputation for producing high quality foodstuffs, such as protein quality of wheat, oil content of canola and western rock lobster. There may be opportunities to leverage off this reputation and expand the region's profile as a quality food producer.

OPPORTUNITY: Opportunities may exist to build the Mid West's profile as a producer of high quality food products and commodities.

INTENSIVE AGRICULTURE / HORTICULTURE

Horticulture production value in the region is currently $25 million / annum, with 80% derived from vegetables and 20% from fruit. Further development in this area holds great potential for the region.

Globally there are strong demand pressures for food, water and energy (due to double by 2050). Hence, sustainable water use is critical. The Mid West region is believed to have significant groundwater, particularly through sedimentary aquifers within 100km of the coast. However, according to the Department of Water there is a 'low understanding of the groundwater resources in the north of the region' and in some areas, water quality is declining. It is also assumed that climate change will have a long term impact on groundwater aquifers within the region, and this needs to be monitored.

A mix of large and smaller developments in intensive agriculture is possible in the region. To achieve this, it could be necessary to develop community or regional water infrastructure to share the cost of water development over users and time.

OPPORTUNITY: The opportunity to develop more intensive agriculture or horticulture is of interest to the region. Future development requires appropriate land allocation and maximising the use of water through available technologies.

CHALLENGE: Climate change may reduce the availability of water and industry needs to investigate and invest in more water efficient production processes including hydroponics.

PASTORAL INDUSTRY REVITALISATION

The Murchison subregion currently has a pastoral industry that has experienced low profitability and is badly impacted by wild dog incursions. There is an opportunity to potentially combine water availability and vermin control to regenerate the pastoral industry and develop intensive agriculture. Pastoralists need to be able to intensify operations on a rotational basis, destock where necessary, and need flexibility in their leases to diversify.

CHALLENGE: The key constraints include the process of pastoral lease reform and vermin control. It is critical to advocate for the opportunity to diversify leases, making businesses scalable, and developing different business models or aggregation in the southern rangelands.

SMART FARMING

Telecommunications access is critical to farming as production and management efficiencies can be gained from new technologies. Digital communications are essential in a business operating environment where commodity price spikes last only hours and complicated risk products need to be factored in.

CHALLENGE: Mobile telephone and terrestrial based Internet access is poor across the majority of the region. This is a major constraint for applying some new farming technologies. Innovative mobile / Internet solutions are required for parts of the region.

LAND TENURE REFORM IN AGRICULTURE

Optimal use of existing high quality agricultural land (HQAL) for high yield food production may bring a range of benefits to the region, including employment. This has the potential to diversify existing food production away from broad acre crops to more intensive horticulture and other high value activities.

DAFWA research in the North Midlands has indicated that for every hectare of HQAL developed or converted for this use (as opposed to broad acre cropping) could realise an additional $10,300 of economic value per annum. Whilst protecting HQAL, there is also a need to continue to support smaller cottage type industry development.

CHALLENGE: Conflicts over land use need to be identified and resolved at a local level.

RESEARCH AND DEVELOPMENT DRIVES INNOVATION

Research and development investment has been trending down over many decades in Australia. It is critical that industry continues to invest in opportunities that enable improvements in productivity and profitability. Pressure on Mid West farmers is unlikely to decrease in coming decades so it is essential that investment in the region's innovation processes, including grower, production and marketing groups is maintained or increased. Whilst Mid West farming communities already have a high level of human and social capital, this should still be considered a resource to grow and develop.

OPPORTUNITY: Innovation is driven by research and development investment, with overall levels in Australia falling. The region needs to continue to invest in research and development and support industry to contribute funds to this area of need.

FISHERIES AND AQUACULTURE

The Mid West is the State's most important single region for fisheries production, with 17% of total production. The production value varied from $89 million in 2011-12 to $176 million in 1999-2000. The rock lobster fishery comprises much of that value, with tuna, mackerel, snapper, swordfish and other fisheries also present.

The region's clean, warm ocean waters provide a potential competitive advantage in the production of temperate finfish such as Yellow Tail Kingfish (YTK) via aquaculture.

OPPORTUNITY: There is an opportunity to establish a strong finfish aquaculture industry at the Abrolhos Islands based on YTK.

DERISK INVESTMENT OPPORTUNITIES

To ensure the process of attracting capital to the industry occurs, there is a need to derisk projects or develop the business model to ensure the appropriate scale within projects can be reached. A separate section on MWDC's approach to derisking and attracting capital is provided in this Blueprint on page 125.

GOAL: A region built on a diverse, innovative, profitable and productive agriculture and food sector that services local and global markets

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
MARKETS DEVELOPMENT AND VALUE ADDING The Mid West has extracted optimal value from its supply chains and has developed new markets through niche commodity products.	There is an opportunity to leverage the existing relationships to a greater degree. The region can develop products for specific price points in developing markets, and hence will be undertaking a "market pull" approach in its agricultural development. There may be an opportunity for small food producers to develop local niche opportunities. Opportunities may exist to build the Mid West's profile as a producer of high quality food products and commodities.	Develop trading relationships by leveraging off existing investments in the region and identify market opportunities for Mid West products for which a competitive advantage can be exploited.	
		Support initiatives for the development and marketing of niche food and alternative products.	
		Develop and support local food product and markets (including niche branding) by supporting local growers and retailers.	
		Develop and maintain efficient infrastructure to ensure the competitiveness of agriculture in global markets.	
		Build the region's profile as a leading producer of high quality food, with a Mid West Food Brand linked to other regional branding activities.	
INTENSIVE AGRICULTURE / HORTICULTURE The Mid West optimises the use of available water and land for intensive agriculture / horticulture projects.	The opportunity to develop more intensive agriculture or horticulture is of interest to the region. Future development requires appropriate land allocation and maximising the use of water through available technologies. Climate change may reduce the availability of water and industry needs to investigate and invest in more water efficient production processes including hydroponics.	Maximise the use of available water by adopting sustainable technologies and production processes for intensive agriculture / horticulture, such as hydroponics.	
		Support the development of water infrastructure for food in inland communities.	
		Investigate potential intensive agriculture / horticulture models.	
PASTORAL INDUSTRY REVITALISATION The pastoral sector is a competitive and profitable industry in the Mid West.	The key constraints include the process of pastoral lease reform and vermin control. It is critical to advocate for the opportunity to diversify leases, making businesses scalable, and developing different business models or aggregation in the southern rangelands.	Advocate for key changes in the reform process that will support the Mid West pastoralism industry to diversify and become sustainable.	
		Promote diversification of the industry through projects such as vermin control, utilising water from dewatering mines, business practices and working with Aboriginal land managers to build economic development.	

AGRICULTURE AND FOOD *CONT'D*

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
SMART FARMING Digital infrastructure is used to its fullest to optimise productivity and efficiencies gains in farming.	Mobile telephone and terrestrial based Internet access is poor across the majority of the region. This is a major constraint for applying some new farming technologies. Innovative mobile / Internet solutions are required for parts of the region.	Ensure appropriate mobile telephone and Internet access is provided to support primary production.	!
		Create linkage to the E-connect grainbelt project and support other technology adoption to drive productivity and profitability of farming in the Mid West.	
LAND TENURE REFORM IN AGRICULTURE The Mid West protects and enhances its high quality land and ensures its availability for food production.	Conflicts over land use need to be identified and resolved at a local level.	Identify and protect land for current and future food production under local planning schemes.	
		Ensure optimal land utilisation and tenure to drive economic development.	
		Ensure land tenure enables all desirable land uses and titles.	
INNOVATION The Mid West is renowned for its sustainable innovative practices in agriculture, aquaculture and horticulture with industry high levels of private investment in research and development.	Innovation is driven by research and development investment, with overall levels in Australia falling. The region needs to continue to invest in research and development and support industry to contribute funds to this area of need.	Create a supportive environment for further research, development and extension in agriculture, with greater domestic and international collaboration.	
		Support sustainable agricultural practices and innovations and support environmental groups to continue investment in good practices, knowledge and learning.	
		Support ongoing innovation to address emerging market needs and positively profile agriculture within the region.	
		Support industry innovators and develop young industry leaders and entrepreneurs through ongoing training, mentoring, capacity building and sharing knowledge.	
AQUACULTURE The Mid West is a major area for aquaculture.	There is an opportunity to establish a strong finfish aquaculture industry at the Abrolhos Islands based on YTK.	Confirm, and where viable, promote the region's potential as an attractive investment opportunity for large scale aquaculture projects eg YTK.	!
		Further develop local expertise in fish health and husbandry in finfish aquaculture.	!

LAND DEVELOPMENT

Entities such as LandCorp work with local governments to release residential and employment lands to meet demand. Development proposals are currently being considered in a number of smaller Mid West towns.

There are no significant current residential or light industrial land availability issues constraining regional growth and development. However in the timeframe of this Blueprint (2025 and 2050) there will be issues in some communities and specific locations within the region that experience above average growth.

EMPLOYMENT LAND

'Employment land' consist of land zoned for industrial, commercial and community purposes.

The Mid West currently has around 2,653ha of employment lands. An additional 2,333ha have been earmarked for the proposed Oakajee Industrial Estate (OIE), making a total 4,987ha. OIE also has a large buffer zone (4,071ha).

Around 28% of existing employment land in the Mid West is vacant (excluding OIE), with each subregion having similar percentages of vacant land (between 27-29%).

The region's largest industrial areas are located in the Batavia Coast, including:

- the undeveloped OIE: 6,404ha (includes heavy industry component and buffer area);
- Narngulu Industrial Estate: 705ha (not fully developed); and
- Webberton Industrial Estate: 287ha (not fully developed).

Geraldton airport freehold land comprises 532ha, which includes 67ha of landside area that has been formally structure-planned and designed for staged development as a Technology Park. The park is intended to accommodate a range of light industrial, technology, professional service and commercial activities that are compatible with continuing aviation operations on the airport-proper. There is capacity for airport land to also be used for a freight and logistics hub, including for storage and inwards / outwards movement of goods.

Several private land developments also provide industrial land within the region.

CHALLENGE: High development costs constrain the development of employment land in some Mid West communities.

HEAVY INDUSTRY DEVELOPMENT

The OIE includes a 1,134ha Strategic Industry Area (heavy industry) component. The OIE lacks headworks infrastructure and servicing. Planning for development of the OIE with alternatives (including staging scenarios) and cost estimates needs to be completed.

Land acquisition is required to enable the development of Oakajee Narngulu Infrastructure Corridor (ONIC). A parcel of land 34km long and around 250m wide would need to be acquired to enable the development of the ONIC, which is necessary to activate the proposed Oakajee port and industrial estate and would also facilitate development of a proposed Geraldton heavy freight bypass.

CHALLENGE: Demand for industrial land needs to be established to confirm the viability of OIE and enable its timely development.

CHALLENGE: The OIE lacks headworks infrastructure and servicing, which is a disincentive for heavy industry to develop there.

RESIDENTIAL LAND

There is little evidence that there is insufficient residential land in the region to meet demand, although servicing costs are a significant constraint to its development. There may be areas where land demand outpaces supply and this should be monitored at a subregional level.

In 2008, there were around 6,254 ha of residential land in the Mid West, of which only around 33% had been developed.[1] Although dated, this indicates large amounts of undeveloped residential land available in the region (particularly in Greater Geraldton).

The Greater Geraldton Structure Plan (2011) contains a broad analysis of the potential population capacity of the City of Greater Geraldton and Shire of Chapman Valley, under a range of scenarios. The Plan indicated a land 'footprint' that could under certain circumstances accommodate more than 190,000 people. These local governments currently house approximately 42,000 people.

CHALLENGE: In the event of strong population growth, development of additional residential land is likely to be necessary in key growth areas.

CHALLENGE: The cost of residential land development is a key constraint across the region (especially in the North Midlands and Murchison), which often inflates the cost of land to beyond market value. New and innovative ways of developing land will be required in these areas along with low cost housing options.

1 Mid West Infrastructure Analysis (2008)

LAND USE OPTIMISATION

In some instances opportunities exist to rezone unused land for other purposes, rather than release new land and incur significant development / headworks costs. For example, unused commercial land could be rezoned for housing. Often referred to as 'lazy land' this option can be significantly cheaper than developing new land.

OPPORTUNITY: Reuse of 'lazy land' is a solution for reducing development costs in some communities with surplus vacant land.

OPPORTUNITY: Infill opportunities and higher density developments can help activate communities and improve vibrancy and liveability.

CROWN LAND OPPORTUNITY

The Department of Lands (DoL) is responsible for administration of Crown land within WA (92% of the State's land area). Much of the Mid West is located on Crown land. A sound understanding of the applicable administrative processes involved in converting Unallocated Crown Land and other existing Crown land tenures to alternative, "higher order" forms, will be particularly important to maximise the development potential of the region. These processes are complex and can involve lead-times of 2-3 years to successfully complete. Early consideration of and engagement with these processes is therefore critical to ensure timely completion of development proposals.

CHALLENGE: Pathways to convert Crown land to tenures more appropriate for development purposes are complex and can be time-consuming to complete in practice.

ABORIGINAL LAND AND ECONOMIC DEVELOPMENT

A significant component of Mid West Crown land is held by Aboriginal pastoralists and by the Aboriginal Lands Trust (ALT). The Trust currently holds approximately 32,480Ha (32,000Ha as Crown Reserves and 480 as Freehold) and is keen to transfer these landholdings to the direct control of Aboriginal people in appropriate circumstances. The collaborative development of suitable land-related initiatives therefore represents a particular opportunity to improve social and economic outcomes for Aboriginal people throughout the Mid West.

OPPORTUNITY: There are significant opportunities to improve social and economic outcomes for Aboriginal people through initiatives that support effective management and better utilisation of Aboriginal held land throughout the Mid West region.

GOAL: Sustainable (available and affordable) supply of zoned land for future growth and development

084 LAND AVAILABILITY *CONT'D*

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
EMPLOYMENT LAND [*] The timely, sustainable supply of employment land has enabled strong economic growth. * Employment Land - land zoned for industrial, commercial and community purposes	High development costs constrain the development of employment land in some Mid West communities.	Work with relevant agencies to release additional residential and light industrial land on a timely basis to facilitate regional growth as demand occurs.	
		Create innovative servicing options to lower the cost of land development and pursue policy changes to reduce barriers to development.	
		Develop an industry attraction program to build demand for employment land.	
		Investigate the feasibility of a business relocation scheme for the region.	
		Advocate for the re-establishment of a headworks scheme for the region to lower the cost of entry for developers of employment land.	
HEAVY INDUSTRY DEVELOPMENT The heavy industrial component of the Oakajee Industrial Estate (OIE) is fully serviced and operating to its optimum.	Demand for industrial land needs to be established to confirm the viability of OIE and enable its timely development. The OIE lacks headworks infrastructure and servicing, which is a disincentive for heavy industry to develop there.	Evaluate business case and funding model options for the OIE.	!
		Work with prospective industry proponents to drive the installation of headworks and services at the OIE.	
RESIDENTIAL LAND Residential land supply supports the growth needs of the region and a new model for land development has been created.	In the event of strong population growth, development of additional residential land is likely to be necessary in key growth areas. The cost of residential land development is a key constraint across the region (especially in the North Midlands and Murchison), which often inflates the cost of land to beyond market value. New and innovative ways of developing land will be required in these areas along with low cost housing options.	Work with stakeholders and proponents (including the building industry) to develop residential land to meet demand using innovative land development models.	
LAND USE OPTIMISATION Available land is used or reused to its optimum for new developments throughout the region.	Reuse of 'lazy land' is a solution for reducing development costs in some communities with surplus vacant land. Infill opportunities and higher density developments can help activate communities and improve vibrancy and liveability.	Advocate for reduced development costs by maximising the reuse of vacant land, including land originally developed for other purposes.	
		Advocate for appropriate higher density development in communities to reduce servicing costs, maximise land use and create vibrancy.	
CROWN LAND OPPORTUNITY The potential of undeveloped Crown land is maximised throughout the region.	Pathways to convert Crown land to tenures more appropriate for development purposes are complex and can be time-consuming to complete in practice.	Work with DoL to broaden understanding across the region of (1) the applicable administrative processes involved in converting Unallocated Crown Land and other existing Crown land tenures to alternative, "higher order" forms; and (2) the need for early engagement with these processes.	
		Map aspirations, issues and opportunities for land development across the region.	
ABORIGINAL LAND AND ECONOMIC DEVELOPMENT Aboriginal land use is optimised for social and economic outcomes.	To improve social and economic outcomes for Aboriginal people through initiatives that support effective management and better utilisation of Aboriginal held land throughout the region.	Work with the Department of Aboriginal Affairs, ALT and Aboriginal stakeholders within the region, to identify and further develop land-related initiatives that will improve social and economic outcomes for Aboriginal residents of the Mid West.	

MID WEST SMALL BUSINESS

At the heart of the region's economy are more than 5,000 small businesses. They represent over 96% of Mid West businesses and employ approximately 45% of all private sector workers.[1] Small businesses are the vehicle through which many people enter the workforce, with many having the potential to develop into the larger businesses of the future.

Small businesses operate in most Mid West communities and deliver a diverse range of goods and services across all industry sectors. They often complement the activities of larger organisations and are a key part of the supply chains of many larger regional projects. With a focus through this Blueprint on the development of key industries like tourism, agriculture, aquaculture and resources, there are significant future opportunities for small Mid West businesses.

Small businesses face a range of challenges including globalisation and a new digital business environment, increases in the cost of doing business, skills and labour supply issues and access to finance. These challenges impact on productivity and business survival, which in turn impacts on families and communities. To meet these challenges and capitalise on new opportunities, small businesses need to become more efficient, innovative, productive and competitive. A program of initiatives that help create and sustain the right business environment is required.

MAXIMISE BUSINESS POTENTIAL

Respondents in the State of Small Business Survey undertaken in 2012 indicated that the delivery and access to the following training would be of most benefit to them and their businesses:

- online marketing;
- business planning;
- employing staff;
- finance; and
- business processes.

A number of entities in the region are involved in the delivery of support services to business. This creates some duplication of effort and could be streamlined to provide a clearer pathway for businesses seeking to access services. Businesses located in the North Midlands and Murchison face additional challenges to access these support services, which are generally based in Geraldton.

CHALLENGE: A targeted approach is required to ensure that small businesses throughout the region have equitable access to the relevant capacity building programs.

INCREASE OPPORTUNITIES

Over the past decade a number of major construction projects were undertaken in the Mid West. Whilst it can be assumed that small businesses in the region would have reaped significant benefits, the REMPLAN Regional Imports Report (Jan 2014) showed that there was significant expenditure leakage out of the local economy.

The report estimated intermediate goods and services imported into Greater Geraldton totalled almost $1.2 billion. This indicates significant purchasing from suppliers outside the region resulting in business lost to local suppliers. Sectors in which the regional imports were highest included manufacturing, construction and mining.

OPPORTUNITY For a range of initiatives to be put into place to help small businesses compete more effectively for opportunities in the region and maximise the benefit from future major projects planned for the Mid West.

ENCOURAGE INNOVATION AND ENTREPRENEURSHIP

Innovation is the way people and organisations generate new ideas and put them into practice. This often results in economic growth through the emergence of new businesses and new ways of doing business. Innovation is critical to growing world class businesses, particularly in regional areas.

According to the Department of Industry, Innovation, Science and Research (2011), innovative businesses are:

- twice as likely to increase productivity;
- 41% more likely to increase profitability;
- twice as likely to export, and
- up to four times more likely to increase employment.

Research indicates that highly digitally-engaged small businesses are:

- two times more likely to be growing revenue;
- likely to earn two times more revenue per employee than those with low engagement; and
- four times more likely to be hiring than those with low digital engagement.

In order for innovation to occur, a culture of entrepreneurship and preparedness to take on risk is required. Entrepreneurial activity is found in all communities across the Mid West, with notable examples found in the innovation and new technology space, including:

- major Internet provider Westnet was established in Geraldton and became one of Australia's leading Internet service providers; and
- Pollinators, a Geraldton based NGO that nurtures people and innovations, particularly those likely to result in community benefit.

OPPORTUNITY: The region is well placed to foster more innovative businesses, product development and employment growth and should capitalise on these opportunities.

ABORIGINAL OWNED ENTERPRISE

Strong links have been developed with industry to gain better employment and training outcomes for Aboriginal people eg the Mid West Aboriginal Workforce Development Centre (MWAWDC) and Midwest Aboriginal Organisations Alliance (MAOA). However, much of the focus has been on solutions to overcome barriers to employment rather than the development of an enterprise culture within Aboriginal communities.

OPPORTUNITY: An opportunity exists to work with the representative groups, including native title claimants, to support and encourage the establishment of local / regional Aboriginal enterprises.

COLLABORATIVE INDUSTRY DEVELOPMENT

The Mid West has a dynamic and diverse economy based on its traditional industries mining, agriculture and fishing. However, the region is faced with increased international competition and challenges to boost productivity and ensure continued economic growth.

Many regionally based industries have competitors with lower environmental, labour and safety costs. Strategies that create market pull or reduce costs or barriers to entry can help create a more attractive environment for industry.

Building upon existing natural and competitive advantages and areas of regional specialisation can encourage industry attraction and development. Industries already experiencing growth are likely to have existing or evolving supply chains, established demand, specialised labour requirements, appropriate infrastructure and a competitive business environment. Creating this environment across industries can be highly attractive to new businesses.

Some Mid West resource companies are adopting a collaborative approach to leverage their supply chains to get their products to market more cost effectively.

OPPORTUNITY: To create a platform for collaboration in strategic growth industries.

ATTRACT HIGH VALUE INDUSTRIES

High value industries have the potential to generate a range of employment opportunities for the community and also attract a workforce with high levels of knowledge and skills. Potential targets for the Mid West include mine servicing and value adding, education and research, renewable energy and digital technology.

Highly anticipated major projects in the Mid West will require considerable investment. A well planned infrastructure framework and industry and business development focus will provide the opportunity to expand the region's industry base.

The region has a strong need (and opportunity) for continued support of its food based industries (agriculture and fishing / aquaculture). Although the resources sector has been a key driver of recent Mid West growth, agriculture remains a dominant industry with significant upside potential (particularly in the North Midlands subregion). Tourism is another industry earmarked as a potential source of economic growth for the region with investment into niche and iconic visitor attractions expected to yield benefits for regional businesses.

Value adding mining and resource activities and developing minerals processing are high value opportunities in which this region may have some comparative advantages.

OPPORTUNITY: Attracting and developing high value industries presents a potential opportunity to expand and further diversify the region's economic base.

1 Small Business Commissioner, information provided for Blueprint

086 BUSINESS AND INDUSTRY DEVELOPMENT *CONT'D*

GOAL: An economically diverse and dynamic business sector that captures the productive capacity of the region and converts opportunity into employment

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
MAXIMISE BUSINESS POTENTIAL A dynamic, globally competitive and connected small business sector.	A targeted approach is required to ensure that small businesses throughout the region have equitable access to the relevant capacity building programs.	Work in partnership with key stakeholders to support and promote initiatives that assist business to grow.	
		Advocate for broadband communications access in all Mid West communities to enable all businesses to compete on the global digital business stage.	
INCREASE OPPORTUNITIES Mid West small business is the "FIRST CHOICE" for major projects.	For a range of initiatives to be put into place to help small businesses compete more effectively for opportunities in the region and maximise the benefit from future major projects planned for the Mid West.	Maximise local procurement opportunities through the development of partnerships with key stakeholders and industry.	
		Conduct supply chain analyses on key industries with growth potential and work with key stakeholders to identify and progress opportunities for local businesses.	
ENCOURAGE INNOVATION AND ENTREPRENEURSHIP A region built on an entrepreneurial culture and innovation.	The region is well placed to foster more innovative business to encourage product development and employment growth.	Establish and strengthen linkages between businesses, university research institutions and government to drive innovation.	
		Develop regional industry and business hubs and precincts to increase collaboration, identify and build on areas of comparative advantage.	
ABORIGINAL ENTERPRISE A diverse and profitable range of Aboriginal enterprises and investment.	An opportunity exists to work with the representative groups, including native title claimants, to support and encourage the establishment of local / regional Aboriginal enterprises.	Drive collaboration of private and other non-government sectors to encourage and facilitate Mid West Aboriginal business development.	
		Investigate the Native Title landscape in the Mid West and work with claimant groups to utilise funds on an economic base for Corporations to achieve financial independence and community outcomes.	
COLLABORATIVE INDUSTRY DEVELOPMENT New and existing industry development is enabled to ensure a strong future industry base.	To create a platform for collaboration in strategic growth industries.	Establish joint round tables between relevant government agencies and industry leaders to scope priorities, solutions and options for industry development in the region.	
		Support industry development through programs and projects that leverage the competitive advantages of the region eg clustering.	
HIGH VALUE INDUSTRIES The Mid West has an expanded and diversified economic and productive base.	Attracting and developing high value industries presents a potential opportunity to expand and further diversify the region's economic base.	Develop an investment and attraction prospectus for the region and follow up with active identification and attraction activities.	

KEY TRADE OPPORTUNITIES

The Mid West is a commodity based region with heavy reliance on export markets and trade relations.

The region is an important producer and supplier of high quality agriculture and seafood for international markets, already engaging positively with a range of global trading partners (as indicated by Figure 36 on page 33). As outlined in the 'Trade Profile' section of the Blueprint, the region exports almost all of its rock lobster, wool and grains (wheat, canola and lupins) and more than half of the cattle and sheep it produces.

EMERGING TRENDS

Some of the emerging trends in key regional markets are indicated below, which may present additional opportunities.

Agriculture

South Korea is emerging as a large buyer of feed grade wheat, with South East Asia (Indonesia, Philippines, and Thailand) buying increasing volumes of milling grade wheat.

European buyers (Netherlands, Belgium, and Germany) have traditionally dominated the buy side of the canola market; however China entered the market in 2012/13 and has the potential to take up to 3mtpa of canola.

Market forces, trade relations and compliance with the Australian Government's Exporter Supply Chain Assurance System (ESCAS) are integral to the future of Mid West livestock exports. The region's live sheep export market is particularly susceptible to international pressures given its extensive reliance on the volatile Middle East market.

The lifting of trade quotas in Indonesia is having a bearing on the future of the region's cattle industry (particularly live trade), with increasing demand but limited supply.

The WA government signed a memorandum of understanding with China early in 2013-14, which may facilitate live cattle exports to the country for the first time ever. This has the potential to provide significant new opportunities for the region's cattle market.

Minerals

Economic growth in China has been extremely strong but is starting to slow slightly, which may see decline in demand for Mid West resources going forward. With China buying 95% of the region's iron ore for its extensive construction program, this commodity appears most likely to be effected by any decline. However, China's GDP maintains very high levels with consistent annual growth of around 7% projected.

Recent up scaling of operations in the Pilbara may place pressure on the emerging Mid West iron ore market as it works to further increase its market share. To the extent that Chinese steel mills favour magnetite as a feedstock, the Mid West may still hold a comparative advantage given its extensive magnetite reserves, whereas the Pilbara produces mainly hematite.

Fluctuating commodity prices is a consistent challenge for the resources sector and creates uncertainty for decision makers regarding investment.

The use of uranium as potential energy source presents both opportunities and challenges for the Mid West, which has substantial uranium deposits with some mines proposed for development. The region's thorium deposits may also present an opportunity once technology is available to process it as a safer alternative to uranium.

Aquaculture

Decline in wild catch fisheries combined with a dramatic increase in demand for seafood presents significant potential for aquaculture. Research, knowledge and industry development has been a focus for the Mid West in recent years and given its natural advantages (fishing culture, expertise, warm clean waters etc) the region is well placed for growth in this sector. The establishment of a dedicated marine aquaculture zone in the Mid West will also support further development of the industry.

The decline in the wild fish catch compounded by increased regulation to preserve fish populations are challenges for the region's significant fishing industry. Diversification into aquaculture, offshore oil and gas and other parallel industries may become more prevalent.

Input controls such as quotas imposed to support sustainability of the valuable rock lobster industry, along with rising demand for lobster from the growing middle class in countries like China, has seen markedly increased prices and returns to local fishers.

GROW AND DIVERSIFY TRADE MARKETS

To meet the food demands of a growing world population, global agricultural production will need to double by 2050.[1] As a strong food growing region this presents some trade opportunities for the Mid West. Similarly, fish farming is anticipated to dominate the world seafood market as demand for fish increases by 37 million tonnes between 2009 and 2030.[2] The Mid West has a potential comparative advantage in aquaculture that it may be able to leverage.

While agriculture, mining and rock lobster dominate Mid West exports, other niche trade opportunities exist and may emerge as areas of regional advantage. These could be explored for their export potential to further diversify the export base for the region.

OPPORTUNITY: Focussing on Mid West comparative / competitive advantages to further diversify its economic base can open up new trade relationships that help buffer the region against fluctuations in demand from its traditional markets.

1 State Planning Strategy, p52
2 State Planning Strategy, p52

Mid West wheat

Karara magnetite core sample

Mid West aquaculture - Yellow Tail Kingfish sushimi style

088 TRADE DEVELOPMENT *CONT'D*

It is important to note that trade has both export and import functions. Exports offer the greatest potential impact in terms of local economic activity and job creation, but understanding the regional import profile may help identify local supply opportunities and potential cost savings.

OPPORTUNITY: Understanding the regional import profile may help identify self supply opportunities and cost efficiencies.

The Mid West is also well placed to take advantage of emerging free trade agreements (FTA) or trade zone developments with Asian countries, in particular the recently announced China-Australia FTA (November 2014).

Importantly, the 'rules of engagement' for domestic trade are likely to change significantly as a result of FTAs. Supply of products into international markets that may have once been uneconomical due to trade restrictions or costs, may soon become viable and warrant closer investigation.

Most Mid West food products are exported in raw form ie grain, animals etc and typically attract lower market price. A reduction in import tariffs for processed food products presents significant opportunities for Mid West food producers, particularly in highly mechanised industries. This may enable the region to diversify into higher value processed goods, which in turn has potential to create additional local processing activity and new employment.

OPPORTUNITY: Assessment of the impacts of recent and proposed FTAs and tariff reductions may help identify global market opportunities that are now economically viable.

BUILD STRATEGIC TRADE PARTNERSHIPS

As a region that exports most of what it produces, positioning of the Mid West as an internationally-engaged region is important. The Mid West has a variety of key assets, perceived strengths and regional advantages that include:

- proximity to markets;
- the closest general cargo / agriculture port to the emerging South East Asian 'food bowl';
- extensive road and rail infrastructure;
- airport with infrastructure capacity for A330 / B737 operations;
- diverse minerals deposits;
- extensive land areas and large quantities of groundwater for agriculture;
- clean and warm coastal waters conducive to quality fisheries production;
- a Mid West chapter of the Australia China Business Council (ACBC);
- clean and green reputation; and
- innovative qualities and capacity to supply to niche specifications and requirements.

The region is also well placed to gain leverage from WA / Australia's good trade standing, sharing a strong reputation for quality assurance, governance, safety and compliance standards.

Establishing strong business relationships and networks in regional, national and international markets helps businesses to expand trade, access new technologies and provides opportunities for foreign investment. Existing trade relationships will be strengthened through implementation of the Blueprint, with new opportunities also likely to be created.

The CGG has a formal sister city relationship with Zhanjiang in Guangdong Province, strategic partner relationship with Zhoushan in Zhejiang Province and a strategic partner City candidate Linfen in Shanxi Province. As well as the aforementioned Mid West ACBC, there is also an International Relations Development Advisory Committee.

OPPORTUNITY: Fostering 'community to community' and 'region to region' relationships can assist the development of long-term business and trade partnerships.

TRADE FACILITATION

Amongst other things, successful trade facilitation requires cost effective access to markets as well as effective business relationships and networks. It also requires a welcoming and supportive local business environment that assists external buyers and investors and provide them with the confidence to do business.

As indicated the region has a range of transport infrastructure advantages that support trade. However, transport costs represent a significant and growing proportion of the cost base of primary producers; particularly with bulk commodities such as iron ore and grain. Improving infrastructure provision and lowering the cost of doing business in the region can improve the competitiveness and / or profitability of Mid West businesses as trade partners.

It is essential that such initiatives look past the needs of individual projects or industries to focus on the overall productivity and investment requirements of regional supply chains.

CHALLENGE: A range of obstacles need to be overcome including the development of targeted, efficient infrastructure that supports the export of commodities and products (such as a deepwater port), by assisting producers to lower marginal export costs.

Geraldton Fisherman's Co-operative - Chinese delegation, Zhejiang province (2012)

Controlling costs and improving efficiencies are not enough to ensure profitability, particularly in an increasingly competitive global market. There is more to be done to grow the region's competitive advantages and increase its appeal to international buyers or investors.

There appears to be a gap in the region around the development and facilitation of trade relationships at an investor and business level. Increasing the level and type of support offered to potential trade partners may link buyers to suppliers and help them navigate the dynamics of the regional economy.

Development of networks and international relationships with buyers in key markets through the collaboration between government departments (such as DAFWA, which is increasing its market development focus), chambers of commerce, business associations and key businesses will assist the region in gaining international recognition providing a strong platform for trade.

OPPORTUNITY: To establish a regional trade and inward bound capital investment function to explore, develop and facilitate Mid West trade opportunities.

Globally, branding can be used to draw a positive connection between a product or experience and the identity of a geographical region. The Mid West has minimal global product or destination recognition, with minimal traction in global (or domestic) markets as a result.

With industries working together through combined marketing efforts, the region can build a positive reputation for its products and experiences and reinforce its unique qualities to attract and build consumer loyalty.

OPPORTUNITY: To positively position the Mid West based on its regional advantages by leveraging successful domestic branding.

GOAL: The Mid West will be a major trade link to a rapidly growing middle class in Asia and other developing nations

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
GROW AND DIVERSIFY TRADE MARKETS The Mid West has a diverse and profitable trade portfolio and is resilient to global market fluctuations.	Focussing on Mid West comparative / competitive advantages to further diversify its economic base can open up new trade relationships that help buffer the region against fluctuations in demand from its traditional markets.	Support the development of industries in which the Mid West has a comparative advantage to diversify its economic base and expand its export markets.	
	Understanding the regional import profile may help identify self supply opportunities and cost efficiencies.	Analyse regional import data and trends to help identify opportunities for self supply and savings.	
	Assessment of the impacts of recent and proposed FTAs and tariff reductions may help identify global market opportunities that are now economically viable.	Investigate new trade opportunities resulting from FTAs.	
BUILD STRATEGIC PARTNERSHIPS High level global connections on a 'region to province' basis with key countries.	Fostering 'community to community' and 'region to region' relationships can assist the development of long-term business and trade partnerships.	Review, develop and expand programs, processes and relationships to improve the region's trade performance and competitiveness with major global markets.	
TRADE FACILITATION Efficient strategic infrastructure networks have enabled strong and resilient global trade and investment partnerships.	A range of obstacles need to be overcome including the development of targeted, efficient infrastructure that supports the export of commodities and products (such as a deepwater port), assisting producers to lower marginal export costs.	Continue to develop efficient transport infrastructure to enable competitive trade to key markets.	
	To establish a regional trade and inward bound capital investment function to explore, develop and facilitate Mid West trade opportunities.	Establish a trade and investment office in the Mid West as a connection point for all opportunities relating to trade, investment and development.	
	To positively position the Mid West based on its regional advantages by leveraging successful domestic branding.	Build the region's profile as a provider of quality products and experiences through an integrated marketing approach.	

090 SECURITY

STATE SECURITY

The development of WA, particularly the northern Pilbara and the Kimberley, is accompanied with an increased sense of vulnerability to existing, as well as emerging security threats. The Mid West has the business and industry capacity to support Australian Defence Force (ADF) operations in the northwest to protect WA's people and strategic assets.

As WA's northwest becomes increasingly important to the nation's economy, the focus of the ADF and the WA government has turned to potentially bolstering the security of this area. The recently released State Planning Strategy 2050, prioritises the security of WA's strategic economic, ecological and social assets.

In its 2011 submission to the Defence Force Posture Review, the WA government reaffirmed its commitment to the nation's strategic priorities. The WA government has offered support through its policies and programs, existing and projected facilities, infrastructure and skills base to foster greater synergies between the State and ADF.

WA has stressed the importance of developing a greater ADF presence in the State to meet potential security challenges and ensure ongoing national security and prosperity. It is suggested that the strategic location of supportive industry and infrastructure in the northwest of WA provides the opportunities for the ADF to consider the Mid West for basing, sustainment and servicing strategies.

Through the Mid West Regional Blueprint consultation process, it was suggested that the region lobbies for the potential ADF basing of land, sea and air capabilities in the region. However, the State's submission to the ADF Posture Review indicated that WA is focused on opportunities for the ADF expanding current WA facilities. The ADF has also confirmed its policy on bases with the Mid West not featured as a location for a new base.

The recently released the Anketell Port Master Plan proposes a major, multi-user and multi-commodity deepwater port in the Pilbara. The Master Plan includes provisions for a substantial infrastructure corridor and more than 800ha of industrial land to support port activities and future mining operations. This project would most likely also support the presence of the ADF in the northwest.

Together with increased infrastructure development as a result of the "Pilbara Cities" initiative, this provides Mid West businesses with a expanding market for the provision of goods and services. By contributing to the development of the Pilbara, the Mid West can play its part in supporting the State Government in its bid to attract ADF operations in the northwest.

Supporting the growth of the Pilbara

Situated south of the tropical cyclone zone, Geraldton is the largest regional centre north of Perth and is proximal between the ADF's Fleet Base West at Garden Island and the State's northwest. It is the services and logistics hub for the Mid West region and is supported by a diverse regional economy. There is sufficient critical mass to underpin the established health and education facilities and services, social and recreational amenities and affordable housing options. Unlike the Pilbara, it has significant stocks of affordable land for housing and industry.

Geraldton is the multi-modal transport hub for the region, located on primary coastal highway from Perth and being the northern-most limit of the State rail system. Geraldton has an established multi commodity sea port, with substantial mineral and wheat exports.

The city also houses the region's primary airport, which is local government owned. It has land exceeding 500ha and full security facilities in place for jet aircraft passenger services and is currently serviced by both Virgin and Qantas Airlines. Significant landside and airside areas for defence purposes exist onsite with marshalling yards nearby.

A 2,600m Code 4E runway is in detailed design planning, with ultimate plans to 3,300m. This offers access potential for fixed and rotary winged ADF aircraft, as well as a heavy-lift logistics and fuel hub. Aircraft from the Royal Australia Air Force Base Pearce already use Geraldton Airport on a regular basis for training exercises and navy patrol vessels have been occasional visitors to the Geraldton port.

The Mid West coastline is monitored by the Australian Customs and Border Protection Service (ACBPS). The Mid West region has a defence presence that includes the joint satellite communications base at Kojarena 30km east of Geraldton.

The city is also home to the HMAS Sydney II Memorial, which commemorates Australia's most tragic loss of life at sea and is the burial site for the "Unknown Sailor".

Over the past decade there has been an increase in Geraldton based companies providing services into the Pilbara and beyond. There are indications that more are gearing up to provide additional services to the mining and natural gas industries in the northwest (eg catering, transport, work boats, steel fabrication).

It is recognised that in the northwest the ports of Broome and Dampier support both the ADF and ACBPS operations.

OPPORTUNITY: For the Mid West to build its business and industry capacity to support the ADF and ACBPS operations in the northwest to better manage disparate border security threats and increasing threat of biosecurity.

GOAL: The Mid West has the business and industry capacity to support Australian Defence Force operations in the North West to protect WA's people and strategic assets

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
STRATEGIC DEFENCE SUPPORT The Mid West has infrastructure and services to support ADF operations in the north west of WA.	For the Mid West to build its business and industry capacity to support the ADF and ACBPS operations in the northwest to better manage disparate border security threats and increasing threat of biosecurity.	Build local business and industry capacity to service the north-west to support the ADF and ACBPS.	

HIGHLY DESIRABLE COMMUNITIES

BUILD COMMUNITIES WITH STRONG SOCIAL CAPITAL AND INFRASTRUCTURE THAT CREATES A

REGIONAL POPULATION OF 80,000 BY 2025 and 190,000 by 2050.

The Mid West is extremely diverse, with populations, economies, attractions and challenges ranging significantly across the region's 17 local governments.

To facilitate growth, communities must be vibrant and inclusive with appropriate infrastructure and services that support social fabric and wellbeing. Urbanisation and the ageing of regional populations, also present both challenges and opportunities to developing the Mid West as a region of choice to live in.

Desirable communities with appropriate human capital help create thriving economies and exciting, vibrant local communities with a strong sense of belonging, are proactive, connected and welcoming. This supports communities to attract and retain workers and families and encourage young people to 'come home' after their studies.

This chapter identifies the Blueprint's key Highly Desirable Communities focus and priorities.

Port Denison foreshore

092 COMMUNITY DEVELOPMENT, LEADERSHIP, COLLABORATION AND IDENTITY

COMMUNITY DEVELOPMENT

2050
POPULATION
190,000
TRANSFORMATIONAL GROWTH SCENARIO

COMMUNITY CAPACITY

Most Mid West communities have a strong social fabric with a high degree of community collaboration to achieve local outcomes. Community groups deliver an enormous range of social services across a diverse range of fields eg sport, arts, tourism and events.

The 'rise and fall' of large resource projects and the impact of FIFO / DIDO workforces complicates the determination and provision of appropriate infrastructure and services. To a lesser extent the impact of fluctuating tourist populations can also challenge the provision of spaces and places in communities. There is often a need for investment in building community capacity and assisting communities to manage and adapt to these fluctuating circumstances.

In combination, development of diverse spaces and places with appropriate human capital contributes to the regional goal of creating exciting, thriving and vibrant local communities with a strong sense of belonging, are proactive, connected and welcoming. In turn this helps communities attract and retain workers and families, encourage young people to 'come home' after their studies and attract new residents, which supports their ability to absorb some of the impacts of economic dips.

A large proportion of community services are undertaken or supported by volunteers and the growing pressures on unpaid workers are a significant barrier to future delivery.

Ageing populations are a factor with few young people taking on voluntary roles in community. Added pressure is being placed on volunteers in some communities that also need to support neighbouring communities due to their lack of basic services eg ambulance drivers, health and community care and meals on wheels.

In all communities it is recognised that providers can't simply invest in social infrastructure - they also need to invest in people.

CHALLENGE: A strong focus is needed to develop human capital throughout the region to help manage community facilities and provide valued local services.

LEADERSHIP

CHALLENGE: Delivering the transformational change for the Mid West requires the commitment, leadership and collaborative efforts of regional businesses, industry, community organisations and all levels of government working in partnership with a shared vision for the future.

Regional leaders need to play a key role in building the perception and understanding about the region's competitive advantages. By showcasing the strengths and competitiveness of the region and working together proactively, impediments to delivering the 2050 vision can be addressed. This role includes ensuring the region's planning frameworks and regulatory regimes support the Blueprint's goals and priorities.

Collaboration and partnerships between MWDC and its network of other RDCs is critical to the cross regional initiatives that will benefit the development and growth of WA.

Partnerships and synergies will be pursued between the region and all levels of government – local, state, federal and other local stakeholders.

Priority actions in the Blueprint will be led by partnership groups working with clear responsibilities and timelines for action.

NON GOVERNMENT SECTOR

MWDC had an external review of the non-government human services sector undertaken in September 2013, which revealed that:

- excluding sport and recreation, arts and culture and general service clubs, there are around 80 non government organisations (NGO) in the Mid West that provide human services to people managing social issues or experiencing some form of disadvantage or hardship;
- two thirds are locally governed, with the balance managed by State or Federal government (but have a Mid West presence);
- almost all NGOs in the region are small to medium in terms of local staff / presence;
- NGOs could benefit by working more collaboratively in attempt to enhance their viability and better meet sectoral challenges; and
- there is a growing trend towards larger (often multinational) NGOs being contracted to undertake government contracts.

CHALLENGE: Regionally, gaps exist across the NGO sector with little coordination across the respective networks resulting in isolation of service providers and duplication of effort.

CHALLENGE: There are recurrent sectoral challenges in terms of continuity of funding, capacity building, use of technology and remote community service provision.

CHALLENGE: The prevalence of larger NGOs being contracted to deliver regional services is resulting in reduced local employment and potentially reduced local knowledge / understanding and human capital.

Future leaders, Kalbarri

LOCAL GOVERNMENT

There is evidence in most communities of collaboration between local governments and community groups towards sharing facilities and running activities. This is particularly so in smaller communities where collaboration and resource sharing has become the norm by necessity over time. Larger Mid West populations have developed more tailored infrastructure and services for specific uses and users, with collaboration often less prevalent and facing greater opposition.

Murchison communities have a scarcity of structured community groups, which is a major challenge for delivery of sport and community activities and limits community ownership. The need for such activity in these communities is significant, generally placing the onus for delivery on local governments.

CHALLENGE: Hinterland communities have particular human capital constraints creating added pressures for local governments to deliver community infrastructure and services.

GOAL: Enhance the capacity of communities and empower people to better manage change at a local level, supporting communities to be resilient, adaptable and self-reliant

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
COMMUNITY CAPACITY Community capacity is enhanced and people are empowered to better manage change at a local level, be more resilient, adaptable and self-reliant.	A strong focus is needed to develop human capital throughout the region to help manage community facilities and provide valued local services.	Enhance local community capacity by working with local governments to develop programs that encourage volunteerism, leadership and capacity building across a range of sectors to create empowered and locally driven Mid West communities.	
LEADERSHIP The Mid West region is built on the foundation of a shared vision and culture of strong leadership, and collaboration by government, business, industry and the Mid West community.	Delivering the transformational change for the Mid West requires the commitment, leadership and collaborative efforts of regional businesses, industry, community organisations and all levels of government working in partnership with a shared vision for the future.	Engage all levels of government, business, industry and the broader Mid West community to develop strong leadership and collaboration to deliver the agreed regional priorities.	!
		Encourage collaboration with leaders outside the region who influence decision making within the Mid West.	
NON GOVERNMENT SECTOR All Mid West residents have equitable access to social services.	Regionally, gaps exist across the NGO sector with little coordination across the respective networks resulting in isolation of service providers and duplication of effort. There are recurrent sectoral challenges in terms of continuity of funding, capacity building, use of technology and remote community service provision. The prevalence of larger NGOs being contracted to deliver regional services is resulting in reduced local employment and potentially reduced local knowledge / understanding and human capital.	Lead a coordinated, innovative approach to analyse and develop options for sustainable organisation models for the region.	!
LOCAL GOVERNMENT Regional and subregional local governments are integral to delivery and decision making in the region.	Hinterland communities have particular human capital constraints creating added pressures for local governments to deliver community infrastructure and services.	Work with key regional and subregional local government groups to implement the Mid West Regional Blueprint.	!
		Support hinterland communities and local governments with development of human capital, resource sharing and continued investment in priority social infrastructure and services to attract and retain populations.	

COMMUNITY INFRASTRUCTURE

The Mid West is extremely diverse, with populations, economies, attractions and challenges ranging significantly across the region's 17 local governments. This creates challenges for provision of appropriate infrastructure and services, which are essential to the social fabric of communities and the wellbeing of residents.

A hierarchy of provision typically exists across the region's communities, with different scales of infrastructure servicing the varying sized catchments. For example local community halls and childcare facilities generally service local catchments; youth centres and libraries generally service district catchments; and regional art galleries and major sporting and cultural facilities will generally service a subregional or regional catchment.

Not discounting the importance of local and district infrastructure, the growth and development focus of the Mid West Regional Blueprint is primarily on spaces and places of a subregional or regional scale. Projects of a local nature would be applicable if they offered higher level (subregional or regional) benefits.

Housing the region's main population centres, most 'major' social infrastructure and associated services are located in Batavia Coast communities, and principally Geraldton. There are extreme needs for social infrastructure in hinterland communities but provision is often constrained by smaller population demands, cost pressures and the availability of human capital for development and sustainable delivery.

CHALLENGE: Smaller communities and local governments sometimes lack human resources for project planning and development of social infrastructure, as well as raising the required funding for implementation.

Mid West consultations confirmed significant community and regional pride and a desire to celebrate the uniqueness of communities. There was also consistent support for growth and development, provided this doesn't result in a loss of their unique signatures and the creation of homogenised communities. There was also recognition that provision of services must match any population growth so that liveability is at least maintained.

The region also aspires for minority groups to be well represented and visible in communities ie seen by agencies and local businesses, rather than being 'out of sight out of mind'.

Planning for social infrastructure in communities with specific population cohorts (for example Aboriginal people, seniors and youth) requires a strong understanding of how these people use and access these services and facilities.

The development, maintenance and replacement of social infrastructure in most hinterland communities in the region is largely the responsibility of local government. Some of these are legacy assets from 'different times' eg larger populations, greater tyranny of distance, fewer entertainment options etc. This is a significant challenge in some communities resulting in infrastructure decline.

CHALLENGE: The 'whole of life' cost implications of social infrastructure is an important consideration, particularly in smaller communities that often incur higher development costs and may face financial pressures sustaining, maintaining and replacing facilities.

During Blueprint consultation, stakeholders expressed collective aspiration for Mid West communities that are:

- liveable;
- clean and green;
- retain their current feel;
- safe (physical and financial);
- collaborative and well connected;
- welcoming and have a sense of belonging;
- exciting, thriving and vibrant;
- innovative and dynamic;
- proud of their cultural difference;
- attractive to people from all cultures;
- universally accessible;
- age friendly;
- flexible, resilient and adaptive;
- proactive, aspirational and empowered to enable and drive growth; and
- supportive internally – 'buy local' focus.

SPORT AND RECREATION

The Mid West has a strong sporting culture and a significant range of sporting infrastructure. Communities outside Geraldton generally have facilities that support multiple activities and groups, with most having multi purpose recreation centres or the like.

Geraldton infrastructure has developed in a more 'sport by sport' single use basis and as facilities near the end of their usable life there are extreme cost pressures impeding their replacement. Compounding this is an expectation that Geraldton provides the region's larger scale facilities for regional competition and major events. The City's most recent master plan for sporting infrastructure was costed at more than $100 million.

CHALLENGE: Rationalising facilities and trending towards more collocation of sports is one strategy of local government to reduce construction and recurrent cost, although the preference or stance of many sports to retain single use infrastructure remains strong.

The same challenges constrain many of the region's sporting programs, although sports with a larger membership are generally more self reliant. Sports in remote communities or that cater for smaller target markets often experience further financial and human capacity constraints.

CHALLENGE: Recurrent funding is a major constraint for the provision of regional sport and recreation. This is particularly so in remote communities or with programs that have limited capacity to generate income (small membership), specific user groups (such as people with disabilities) or activities that support people experiencing disadvantage.

CHALLENGE: Sport is essential to the social fabric of small regional communities. Human and financial capacity constraints present extreme challenges in these communities, often resulting in local governments needing to take responsibility for delivery.

The region has a recently established Mid West Academy of Sport (MWAS) to enhance the development of talented athletes from within their home environment and provide access to services comparable to athletes living in Perth. This serves to reduce travel to access services and delay the need to leave the region to pursue excellence.

CHALLENGE: Talented regional athlete development is human resource intensive and expensive, placing pressures on recurrent funding for the MWAS, which is itself difficult to secure.

Nature based recreation is emerging as a prominent physical activity pursuit, with participants generally able to participate in their own time in an unstructured manner. A strong and growing cohort of boating / fishing and coastal recreation enthusiasts (including tourists) also enjoys the region's enviable climate and coastline, requiring provision of appropriate waterfront recreation infrastructure.

CHALLENGE: Provision of quality infrastructure to support the growth in nature based recreation.

CULTURE, ARTS AND HERITAGE

The Mid West is one of two WA regions identified by Department of Culture and Arts (DCA) as a 'creative industry hub'.

With its strong and diverse cultural links many of the region's communities have, or are developing, an increasing focus on infrastructure for arts, culture and heritage purposes. Linking arts, culture and heritage across communities creates the basis for regional or subregional strategies.

Geraldton offers regional level facilities including the Queens Park Theatre, Western Australian Museum Geraldton, a regional library, a multi-screen cinema, an "A Class" regional art gallery and the Yamatji Art Gallery. The City also houses the Geraldton Foreshore and Batavia Coast Marina (Stage 1), with the imminent development of the Beresford Foreshore, The Esplanade, Batavia Coast Marina (stage 2) and the revitalisation of the West End Recreation and Entertainment Precinct expected to deliver additional cultural, arts and entertainment opportunities for the region and its visitors.

The availability and quality of culture, arts and entertainment facilities vary greatly across Mid West communities from town halls, museums, art centres, picture theatres, libraries and the like. Prominent assets outside of Geraldton include but are not limited to the Wirnda Barna Art Centre in Mount Magnet, Tjukurba Art Gallery in Wiluna, Mullewa Women's Indigenous Art Centre, Billeranga Cultural Arts Centre in Morawa and the Mount Magnet Mining and Pastoral Heritage Museum.

OPPORTUNITY: Infrastructure and services for arts, culture and heritage serve to create community vibrancy, help celebrate their uniqueness and bring opportunities for local story telling and potential tourism and events.

INDIGENOUS CULTURE

Communities with large Aboriginal populations have unique requirements and it is often difficult and inappropriate to generalise the needs of these communities. Planning for social infrastructure in these communities requires a strong understanding of how Aboriginal people use and access these services.

There is a scarcity of dedicated spaces and places for acknowledging the region's strong Aboriginal heritage and unique culture. Where many of the region's diverse cultural groups have their own "club" type facility for events, functions and weddings, there is no such facility for its Aboriginal people.

CHALLENGE: Places of cultural significance to Aboriginal people and issues related to this (eg access, protection etc) are not widely understood.

CHALLENGE: There is a scarcity of dedicated spaces and places to acknowledge the region's strong Aboriginal heritage and unique culture.

Ilgarijjiri eggs on the Geraldton Foreshore
~ Yamaji artist interpretation of the night sky

ACCESS, INCLUSION AND UNIVERSAL DESIGN

The region has a number of programs that support people with disabilities and other populations with specific needs and appears well placed to pursue a future of best practice in universal design and inclusion, where enhanced standard become the norm / benchmark. However, universal access to facilities in the region varies significantly within and between communities.

CHALLENGE: The region's infrastructure is not universally accessible to all people.

YOUNG PEOPLE

It is a well established trend in the region that young people leave regional areas for secondary and tertiary education, experiences or employment. Making communities appealing to young people may encourage them to return to the region, engage in community life and pursue a career and establish a family in the Mid West.

OPPORTUNITY: The Mid West aspires to be a region of choice for young people.

People aged between 25 and 50 are the demographic with the greatest economic impact and spend, so attracting younger populations provides added economic benefit for the region. The demographic will also include a large proportion of first and second home buyers, small business entrepreneurs and parents of kids in school. Attracting and retaining young people in their child rearing years also has a compounding effect on population growth.

As our population ages, there will be greater pressure on the workforce to support people in retirement.

Dongara sand dunes

SpinOut wheelchair basketball

GOAL: Infrastructure and services that help create exciting, healthy and vibrant local communities with a strong sense of belonging

HIGHLY DESIRABLE COMMUNITIES

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
COMMUNITIES Highly liveable communities that are attractive to families and better placed to retain populations during economic decline.	Smaller communities and local governments sometimes lack human resources for project planning and development of social infrastructure, as well as raising the required funding for implementation. The 'whole of life' cost implications of social infrastructure is an important consideration, particularly in smaller communities that often incur higher development costs and may face financial pressures sustaining, maintaining and replacing facilities.	Support the implementation of local government Corporate Business Plan strategic priorities that support the provision of infrastructure and services in their communities.	
		Develop a transparent process for prioritising and decision making for local and regional projects.	
		Work with local governments and relevant agencies to prioritise and in some cases rationalise social infrastructure and services.	
		Support the implementation of the State's Regional Centres Development Plan in Phase 1 (Morawa SuperTowns Growth and Development Plan) and Phase 2 (Geraldton Regional Centres Growth Plan). Promote the development of a subregional centre for the Murchison.	
SPORT AND RECREATION An active region with sport and recreation facilities and services comparable to those offered in Perth (relevant to the needs of the region).	Rationalising facilities and trending towards more collocation of sports is one strategy of local government to reduce construction and recurrent cost, although the stance of many sports to retain single use infrastructure remains strong.	Pursue the development of regional scale, multi purpose sporting facilities for the region.	
		Prioritise the development of multi purpose infrastructure as the norm throughout the region to reduce recurrent costs pressures and realise other benefits from having multiple users / contributors.	
	Recurrent funding is a major constraint for the provision of regional sport and recreation. This is particularly so in remote communities or with programs that have limited capacity to generate income (eg small membership, specific user groups such as people with disabilities or activities that support people experiencing disadvantage).	Work with the Department of Sport and Recreation (DSR), local governments and proponents to develop funding solutions for priority Mid West sport and recreation initiatives.	
	Sport is essential to the social fabric of small regional communities. Human and financial capacity constraints present extreme challenges in these communities, often resulting in local governments needing to take responsibility for delivery.	Work with the DSR, local governments and existing groups to develop tailored sport and recreation models in Mid West communities.	
	Talented regional athlete development is human resource intensive and expensive, placing pressures on recurrent funding for the MWAS, which is itself difficult to secure.	Work to ensure sustainability of the Mid West Academy of Sport (MWAS) as a mechanism to enhance development of talented regional athletes.	
		Support efforts of the MWAS to expand operations. Initiatives may include exporting services to other regions or collaborating (eg with educational institutions) to attract inter / intra national athletes to experience sport in the region.	
	Provision of quality infrastructure to support the growth in nature based recreation.	Ensure a range of appropriate scale nature based and coastal recreation areas exist throughout the region with appropriate infrastructure and services.	

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
CULTURE, ARTS AND HERITAGE A healthy, visible, lively culture that embraces all people and enables them to get to know their culture and that of others.	Infrastructure and services for arts, culture and heritage serve to create community vibrancy, help celebrate their uniqueness and bring opportunities for local story telling and potential tourism and events.	Investigate the development of a multi user convention facility for the region as part of a regional network of arts and entertainment infrastructure (supported by appropriate human resources).	
		Work with WA Museum (Geraldton) and DCA to investigate and support the development of arts and culture infrastructure and exhibitions in Geraldton and the broader Mid West.	
		Support DCA to develop opportunities for creative industries in Mid West communities, including Aboriginal art.	
ABORIGINAL CULTURE The region's traditional ownership is acknowledged in communities with appropriate cultural facilities to celebrate Aboriginal heritage and develop new Aboriginal enterprise.	Places of cultural significance to Aboriginal people and issues related to this (eg access, protection etc) are not widely understood. There is a scarcity of dedicated spaces and places for acknowledging the region's strong Aboriginal heritage and unique culture.	Acknowledge the region's traditional owner groups through appropriate signage and visual recognition.	
		Investigate the development of an Aboriginal operated cultural centre in Geraldton to celebrate local Aboriginal heritage and provide opportunities for cultural exchange, tourism, storytelling, Aboriginal enterprise development and community events.	
		Preserve local Aboriginal culture by protecting sites of cultural significance and developing programs that preserve Aboriginal language, music and art.	
ACCESS, INCLUSION AND UNIVERSAL DESIGN The region celebrates and values its diversity and aspires for greater inclusivity.	The region's infrastructure is not universally accessible to all people.	Advocate for the adoption of enhanced design standards by all Mid West stakeholders to create a region of world best practice in universal design.	
YOUNG PEOPLE Create highly attractive communities for young people.	The Mid West aspires to be a region of choice for young people.	Make the region a place of choice for young people by creating highly liveable communities with an attractive blend of lifestyle, technology, education and affordable living eg CBD revitalisation.	

REGIONAL HOUSING DEMAND

Development and construction costs have created affordability issues across several local governments, resulting in shortages in lower priced housing and large public housing waitlists (around eight years in Geraldton). Given the tendency for developers to build larger homes due to market demand and profitability there is generally a shortage in 1-2 bedroom residences across the region, which represents up to 50% of Department of Housing (DoH) demand. Rental accommodation is also limited in several Mid West communities.

Affordable housing is a priority for most Mid West local governments, although the specific focus often varies between communities. Some communities need additional aged care accommodation with others facing shortages in housing for Aboriginal people, youth or key workers[1] and temporary (FIFO / DIDO) workforces. There is also an identified scarcity of short term accommodation for students, teachers, doctors, nurses and visiting specialists in Geraldton.

DoH works with the public, private and NGO sectors to deliver a range of affordable housing opportunities for low to moderate income earners. DoH also plays a pivotal role in providing government and key workers housing.

The present affordable housing shortages have followed a period of modest population growth and any escalated regional growth will result in commensurate pressures on affordable housing. There are risks increasing housing supply (and other infrastructure and services) for boom populations, which can result in oversupply when the economy cools. Maintaining affordability during boom periods is important to avoid further housing gaps for local populations and also helps to retain working populations during decline.

The 2008 Mid West Infrastructure Analysis (2008) reported that only one third of the region's available residential land had been developed. The majority of undeveloped land is in Greater Geraldton. Several housing developments are underway in the region, with the Karloo-Wandina development to create up to 1,500 new lots on a staged basis.

Mining tenements close to townsites are understood to constrain development / expansion in some Murchison communities, although current population pressures to do so are not strong.

1 Key workers defined by the Department of Housing as "modestly paid workers in the non-resource economy who provide many of the basic and essential services in local communities." This also includes local government staff. Department of Housing. Affordable Housing Strategy (2014)

DoH has increased its focus on generating income from land developments, often in partnerships with developers / local government, based on commercial demand.

STRATEGIC REGIONAL HOUSING DELIVERY

A Mid West Housing Needs Analysis[2] was recently completed to quantify existing housing gaps and priorities. The analysis identified the top 20 gaps in the region being low cost general housing in:

- Meekatharra, Green Head, Northampton, Leeman, Eneabba and Geraldton (1-2 bedroom);
- Northampton, Leeman, Wiluna, Green Head, South Murchison, Geraldton, Yalgoo and Kalbarri (3 bedroom); and
- Wiluna, Mount Magnet, Northampton, Leeman, Green Head and Kalbarri (4+ bedroom).

Through its consultation process the Analysis revealed that:

- many Mid West towns could cater for the housing needs of residents in the medium to high price brackets;
- the high cost of construction in several parts of the Mid West makes it unviable for low-cost dwellings to be provided; and
- there is a shortage of affordable dwellings in most Mid West towns.

Each of the Blueprint's growth scenarios would require provision of significant additional dwellings across the Mid West, particularly along the coast. To ensure housing supply into the market at a steady rate with no unnecessary shortfalls or oversupply, a number of factors must be addressed through collaborative effort.

CHALLENGE: A coordinated and strategic approach to delivering housing to meet the region's growth needs on a timely basis is required.

REGIONAL HOUSING DYSFUNCTION

Regional housing markets, including that of the Mid West, often don't function in a way that provides optimal dwelling allocation in communities. The lack of market scale and long distances between towns prevent the development of a competitive construction market. This raises the costs of construction and puts a 'floor' on the price of all new developments that may be out of reach for many residents.

High construction costs in the Mid West are a significant constraint to the efficient operation of the region's housing market and represent a barrier to both private investment and home ownership.

DoH, LandCorp, local governments and developers face extreme cost pressures providing housing in remote parts of the region. Subdivision costs (kerbing, roads, water, sewerage, power) all significantly impede new housing developments.

2 Mid West Housing Needs Analysis (2013). Pracsys Economics.

Other constraints include regulatory requirements, native title (heritage and rights) and presence of cultural sites or valuable flora and fauna. As a result, land suppliers such as LandCorp increasingly look to urban in fill, development of 'lazy land' (zoned for other uses but surplus to demand) and alternative supply of utilities to keep their development costs down.

Building 1-2 bedroom premises (largest gap) is also generally less viable for developers, with development costs and sales value often disproportionate. Further, the sale value of houses in many remote towns can be substantially less than the costs of construction, which can also make it difficult for people to gain bank finance to purchase a home (bank risk issue).

Additional 1-2 bedroom premises would enable many large home occupiers to scale down, releasing the larger homes for new workers and families.

Housing in hinterland communities is further constrained by a scarcity of local tradespeople to construct as well as perform maintenance and basic repairs. Some communities must wait significant periods and incur inflated costs to have relatively minor works performed by visiting tradespeople. Initiatives to develop or attract the required trade skills to communities are needed to make them more sustainable. Such strategies might include a commitment of government housing contracts up to a certain scale and partnerships with resources companies and training and employment providers. Significant benefits may exist for Aboriginal communities (education, training, employment, local engagement, sustainability).

Collectively, these issues create a dysfunctional market and means that government has a significant role to play in ensuring housing development can occur in these towns.

CHALLENGE: Market failures and housing shortages exist in many Mid West communities.

CHALLENGE: There is a scarcity of housing and trade services in most Mid West hinterland communities.

CHALLENGE: Regulatory requirements and development costs are impeding development in many Mid West communities.

CHALLENGE: Disproportionate housing development costs and sales values are impeding the ability of some Mid West residents to access bank finance to enter the housing market.

CHALLENGE: Around 50% of DoH demand for housing is for 1-2 bedrooms premises but there is a scarcity in supply due to market constraints and commercial realities.

HOUSING THE REGION'S WORKFORCE

Mid West communities generally seek to attract a share of FIFO / DIDO workforces as a means of retaining and growing populations, enhancing social capital and attracting investment. Housing in most hinterland communities in the Mid West is affordable by comparison to Perth and regional centres, but employment for partners and availability of some essential services (for example health, education and communications) can counter this affordability advantage.

Housing for key workers in hinterland communities is a priority for Mid West local governments and a 'Flagship' priority of the MWDC's Mid West Investment Plan.

CHALLENGE: Housing temporary workforces creates both challenges and opportunities for regional communities.

CHALLENGE: There is a shortage of key worker housing in several Mid West communities which constrains their ability to attract and retain essential local workforces.

Perenjori flat pack housing pilot project

HOMELESSNESS, SHORT STAY AND TRANSITIONAL HOUSING

Homelessness and crisis accommodation has emerged as a major social challenge in the Mid West and is a priority for a number of human service and non profit providers. Anecdotally, the prevalence of 'couch surfing' and 'kids on the street' is also significant, with many young people in this situation understood to be escaping social issues in their homes.

CHALLENGE: There is a growing demand for low cost accommodation for people facing homelessness.

CHALLENGE: There is a significant need for short term and crisis accommodation for disengaged people, linked to support services.

STUDENT ACCOMMODATION

As the regional centre, Geraldton houses significant numbers of students engaged in secondary school, or pursuing specific tertiary / vocational education or training. Limited student accommodation is available at the Geraldton Residential College and Durack Institute of Technology. Boarding facilities at Nagle Catholic College are being closed down in 2015.

The Geraldton Health, Education and Training Accommodation Project (GHETAP) aims to provide affordable and appropriate quality accommodation for students studying in institutions within the Geraldton Health, Education and Training Precinct including nurses on short term work practice. GHETAP is expected to help Geraldton and the broader Mid West attract and retain higher education students and health professionals.

CHALLENGE: There is a shortage of diverse student accommodation to meet current and anticipated future needs of the region.

ACCESSIBLE ACCOMMODATION / INDEPENDENT LIVING

In part, the relative scarcity of 1-2 bedroom homes has contributed to a lack of affordable and appropriate housing for seniors and people with disabilities. This explains why up to 14% of the public housing shortage is for seniors.

Strategic directions in housing need to recognise changing housing characteristics, dwelling preferences and impacts of strategic demand drivers. The unmet demand for Independent Living Units (1-2 bedroom) was recognised in the Mid West Housing Needs analysis and is a focus of several proposed projects led by not for profit organisations.

Mid West communities such as Kalbarri and Irwin have particularly large retiree cohorts. Nevertheless, recent efforts by the private sector to develop housing in these communities have failed due to a lack of market scale, which defers the onus for provision back the public sector.

Affordable and accessible housing for people with disabilities has also been revealed as a priority for the Disability Services Commission.

CHALLENGE: Provision of accessible accommodation options is important to most Mid West communities and will continue to grow as an issue as the population ages.

ABORIGINAL HOUSING

Aboriginal housing is a priority in a number of Mid West communities, particularly short term accommodation in Geraldton for people visiting to access services. Short term accommodation facilities for Aboriginal people, linked to local services, are in planning.

A lack of appropriate housing diversity in the region means that some Aboriginal households, that would otherwise live independently, are forced to share with another household. By providing greater housing diversity in the Mid West, stock can be better aligned with current and emerging needs, reduce overcrowding and better satisfy the ethnic and demographic characteristics of Aboriginal households.

Whilst the rate of Aboriginal home ownership in the Mid West is low by comparison to non-Aboriginal residents, it is consistent with the State level for all Aboriginal people.

CHALLENGE: Provision of appropriate housing for Aboriginal people and families is an ongoing priority for the region.

Yugunga–Nya People's trust

The Yugunga–Nya People's Trust gathers and invests native title funds to a range of projects and initiatives that benefit the Yugunga–Nya people of the Mid West. It principally seeks to advance educational, cultural and religious outcomes of the Yugunga-Nya people by helping to relieve poverty, sickness, homelessness and misfortune. Its recent focus has been on establishing business, employment and training interests that promote economic self sustainability of the Yugunga-Nya people. Projects being examined include a motel / restaurant complex in Geraldton, a commercial laundry complex incorporating a child minding centre and plant nursery in Meekatharra and a modular house building company in the Mid West.

REGIONAL HOUSING *CONT'D*

GOAL: Sufficient regional housing stock of suitable configuration to meet growth and development needs of each local community

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
STRATEGIC REGIONAL HOUSING DELIVERY Housing is addressed as a strategic regional issue with a diversity of successful community, private and public delivery models.	A coordinated and strategic approach to delivering housing to meet the region's growth needs on a timely basis is required.	Work with DoH, LandCorp, local governments and other housing stakeholders to develop and implement tailored housing models of delivery in line with emerging trends.	
		Work with local and State government to continually build new housing stock in communities and recycle old housing to keep stock fresh and ensure affordability for new buyers.	
REGIONAL HOUSING DYSFUNCTION Competitive housing markets exist in all communities that encourage private investment.	Market failures and housing shortages exist in most Mid West communities.	Work with local governments, community groups and housing providers to develop viable, locally driven housing solutions in communities with market failure.	
	There is a scarcity of housing and trade services in most Mid West hinterland communities.	Work with stakeholders to develop skills and workforces in hinterland communities capable of providing local housing and trade services.	
	Regulatory requirements and development costs are impeding development in many Mid West communities.	Work with authorities, developers and local governments to develop strategies that reduce housing development cost pressures created by regulatory constraints.	
	Disproportionate housing development costs and sales values are impeding the ability of some Mid West residents to access bank finance to enter the housing market.	Address existing housing and financing legislation and policies that constrain development and home ownership.	
		Work with industry to reduce construction costs where possible and raise industry capacity across the region.	
	Around 50% of Department of Housing demand for housing is for 1-2 bedroom premises but there is a scarcity in supply due to market constraints and commercial realities.	Encourage the prioritised development of 1-2 bedroom residential accommodation in Mid West communities to meet latent demand.	

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
HOUSING THE REGION'S WORKFORCE There is an adequate stock of key worker housing throughout the region.	Housing temporary workforces creates both challenges and opportunities for regional communities. There is a shortage of key worker housing in several Mid West communities which constrains their ability to attract and retain essential local workforces.	Work with local governments and major project proponents to maximise local housing provision for workers and their families.	
		Work with all local governments to ensure adequate key worker housing availability in each community.	
HOMELESSNESS, SHORT STAY AND TRANSITIONAL HOUSING There is adequate crisis or short stay accommodation in the region.	There is a growing demand for low cost accommodation for people facing homelessness.	Work with the not for profit sector, local and State government agencies to develop a strategy and advocate for appropriate resources to support people experiencing homelessness in the region.	
	There is a significant need for short term and crisis accommodation for disengaged people, linked to support services.	Support projects that deliver appropriate short stay and transitional accommodation facilities for Aboriginal people, disengaged people (specifically youth) and people receiving health services, all linked to appropriate support services.	
STUDENT ACCOMMODATION Student accommodation is provided to keep young people in the region for educational offerings.	There is a scarcity of diverse student accommodation to meet current and anticipated future needs of the region.	Complete a comprehensive plan for the provision of affordable student accommodation for all schools as well as training and higher education institutions.	
		Implement the Geraldton Health, Education and Training Accommodation Project (GHETAP).	
ACCESSIBLE ACCOMMODATION Sufficient stock of accessible accommodation is available in all Mid West communities to meet the needs of people with disabilities and enable residents to age in place.	Provision of accessible accommodation options is important to most Mid West communities and will continue to grow as an issue as the population ages.	Work in partnership with relevant government agencies and local government to define aged care needs and develop and implement a collaborative subregional housing model for investment eg the Ageing in the Bush strategy.	
		Advocate for the adoption of enhanced design standards to provide for the current and future housing needs of people with disabilities.	
ABORIGINAL HOUSING Aboriginal home ownership in the region matches that of the broader community.	Provision of appropriate housing for Aboriginal people and families is an ongoing priority for the region.	Investigate the opportunity to partner with DoH and Aboriginal peak bodies to develop a pilot housing project to meet the needs of Aboriginal communities.	
		Work with DoH and other key agencies to develop strategies to facilitate increased Aboriginal home ownership in the region.	

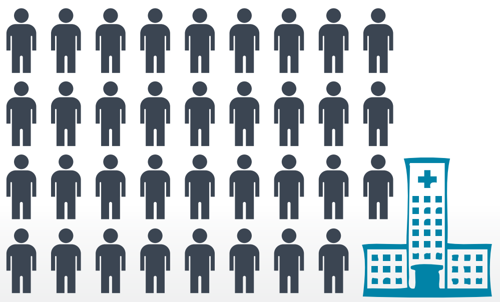
HEALTH AND WELLBEING

HEALTH WORKFORCE

2,309 Employees

9% REGIONAL WORK FORCE

WORK IN THE HEALTH CARE SECTOR



Further information on the region's health profile is included in the Blueprint's social profile from page 24. Some of the more pertinent points are reiterated here.

HEALTH SERVICES INFRASTRUCTURE

Geraldton is one of two non-metropolitan centres in WA with both public and private hospitals, which provide a range of general and specialist health services. The St John of God and Geraldton hospitals are serviced by both resident and visiting medical specialists, however complex cases are normally referred to tertiary hospitals in Perth.

The Geraldton Hospital faces significant capacity constraints and federal funding has been sought for several years for an extension (estimated value $100 million+).

The WA Country Health Service (WACHS) is the largest health service provider in the region. The Geraldton Hospital, regional executive and corporate services, regional health service teams and other clinical and non-clinical support services based at the Geraldton Health Campus.

WACHS operates smaller hospitals, nursing posts and health centres at a number of locations including Cue, Dongara, Kalbarri, Meekatharra, Morawa, Mount Magnet, Mullewa, North Midlands (Three Springs), Northampton, Sandstone and Yalgoo.

Major primary health care organisations within the region include Geraldton Regional Aboriginal Medical Service, Goldfields-Midwest Medicare Local (GMML), Ngangganawili Aboriginal Health Service (Wiluna), Silver Chain and the Royal Flying Doctors Service. Collectively these organisations provide a wide range of health services, including Aboriginal and community health services, health centres, aged care, after hours General Practice (GP) services and coordination, allied health and mental health services, chronic disease management, emergency services, general practice support, nursing posts and workforce development and support.

There were more than 50 GPs based in Geraldton (as at July 2014), with a number of small practice, solo and visiting GPs providing services across the region. Public and privately funded allied health professionals deliver community based and outreach services across a wide range of communities within the Mid West.

There is understood to be reasonable spare capacity in most smaller hospitals, health centres and nursing posts outside of Geraldton, although several are ageing / deteriorating and require significant upgrades. There is a recognised need to redevelop the Meekatharra Hospital.

A dentist operates out of Three Springs with a mobile health service recently established in the North Midlands as a partnership between the RFDS and Karara Mining Ltd.

CHALLENGE: Deteriorating health buildings and infrastructure are impeding capacity to deliver quality essential health services in the region.

HEALTH WORKFORCE

Health care and social assistance is the region's third largest individual employment sector with 2,309 workers (2011). This represents 9% of the regional workforce; a two percentage point increase from 2001 to 2011.

Sustainability of the health workforce is a challenge for the sector. The average age of nurses in the Mid West is 48.

In 2011, there were 107.3 GPs per 100,000 persons and 78.2 medical specialists (resident and / or visiting) per 100,000 persons in the Department of Health's Mid West Health Region. These rates are 30% and 40% lower respectively compared with the WA per capita rates for GPs and medical specialists.[1]

These findings accord with consumer feedback obtained by GMML (2012), which indicated that GPs and specialists were the two most common service providers that residents are unable to access.

Provision of health workers is generally market driven, with communities or service providers typically able to attract personnel if the right conditions are met. In some cases, while professionals may be present in communities, they may not be available full time, after hours or equipped to meet all community needs.

In some smaller Mid West communities, local governments have taken on a role of attracting and retaining medical professionals, often at considerable local expense to subsidise provision.

Despite having strong higher education and training providers, the region can also face challenges providing more advanced professional development opportunities for its health professionals. Those seeking particular qualifications or experiences may need to leave the Mid West to pursue their aspirations, which impacts continuity of provision.

A Mid West Health Education and Training Alliance operates to strategically address health education and training needs of the region from the perspectives of:

1. encouraging rural uptake and support of local pathways into health careers;
2. providing coordination, support and access for medical, nursing and allied health clinical placements across the Mid West that add value to the student learning;
3. effective (and cost effective) delivery of localised education for clinicians' upskilling and skill maintenance; and
4. looking to the future and providing opportunities for undergraduate, post graduate health career opportunities within the Mid West, including the support of localised research capacity and outcomes.

CHALLENGE: The region faces some ongoing challenges attracting, retaining and educating / upskilling health sector workers (including allied health workers and specialists), particularly in remote areas.

HEALTHY COMMUNITIES / PREVENTATIVE HEALTHCARE

Many residents within the Mid West area are socioeconomically disadvantaged compared with WA residents overall. In 2011, the shires of Meekatharra, Mount Magnet, Murchison and Wiluna were ranked in the top 10% of the most socioeconomically disadvantaged areas within WA and Geraldton was ranked within the top 20%.[2] The region's Australian Early Childhood Development Census (AEDC) results also indicate similar disadvantage and needs of children in these areas.

There is value in creating community partnerships to support the delivery of basic health and community support services, especially in hinterland communities with limited resources. Community engagement and participation in decision making can enhance local buy in and commitment to addressing health and wellbeing challenges.

Positive community attributes include those that stimulate social cohesion and facilitate economic security by enabling access to social, sporting and recreational amenities, ensuring access to health and other essential services, increasing employment opportunities and supporting the provision of safe neighbourhoods.[3]

Locally driven initiatives may include more training for health providers, creating temporary housing near health facilities, providing transportation for patients, developing inclusive community projects to promote healthy living and creating a system of social bonds to encourage community investment in health and wellbeing outcomes.

The use of native title funds in Aboriginal communities to support local health and wellbeing priorities (as well as education and community capacity) should be examined, especially for initiatives unlikely to attract significant public investments. Examples of this approach are occurring with some Mid West claimant groups.

CHALLENGE: A constraint in many communities, particularly in the Murchison, is the local capacity to deliver community services (eg fitness, social, inclusive community projects, health campaigns etc) that can positively impact health and wellbeing.

1 ABS 2011 Census of Population and Housing

2 ABS, Socio-economic Indexes for Areas (20033.0.55.011)

3 Australian Institute of Health and Welfare 2012. Australia's health series no.13. Cat. no. AUS 156. Canberra: AIHW.

HEALTH INNOVATION AND DIGITAL SOLUTIONS

Innovation and technology provides significant opportunity for health service provision throughout the region (telemedicine), with most communities currently having ADSL grade infrastructure.

The Geraldton Health, Education and Training Accommodation Project (GHETAP) aims to provide affordable and appropriate quality accommodation for students (including nurses on short term work practice) studying in institutions within the Geraldton Health, Education and Training Precinct as well as some visiting health professionals. GHETAP is expected to help Geraldton and the broader Mid West attract and retain higher education students and health professionals.

Sophisticated digital health solutions are emerging throughout regional WA, including the new Emergency Telehealth Service that connects patients at regional and remote hospitals with specialist emergency physicians. WACRH's new Education and Simulation Learning (EdSiM) Centre also provides innovative education and training space with three human like simulation mannequins and patients, two clinical demonstration areas and five customisable consultation rooms. This centre is the first in rural WA.

OPPORTUNITY: With further investment in ICT to leverage off existing regional infrastructure capabilities, innovative and high quality health service delivery would be possible in all Mid West communities, coupled with various other applications and benefits.

MENTAL HEALTH AND DRUG AND ALCOHOL ISSUES

Government and non-government organisations, as well as private practitioners deliver mental health services across the Mid West area. GPs play a critical role for supporting residents and arranging referrals to appropriate community and hospital based services.

The Mental Health Services Rural and Remote Areas Program is an important initiative which targets people with mild to moderate mental illness living in rural and remote areas by increasing access to mental health services.

The Access to Allied Psychological Services program is another initiative, which facilitates access to 6-12 free or low cost individual or group counselling programs per calendar year.

Partners In Recovery is a new initiative which aims to increase support for people with severe and persistent mental illness with complex needs, and their carers and families, by getting services and supports from multiple sectors that they may come into contact with (and could benefit from) to work in a more collaborative, coordinated, and integrated way.

WACHS provides community drug services across the Mid West and the Ngangganawili Aboriginal Health Service is working collaboratively with a number of community partners to address substance misuse issues in the Wiluna area.

Outreach mental health services are provided to the vast majority of towns across the Mid West area. WACHS has identified a strong need for an acute psychiatric facility in Geraldton.

CHALLENGE: Provision of mental health, clinical and community support services and facilities for people battling mental health problems and associated issues, such as drug and alcohol addiction, depression, social and emotional wellbeing and homelessness.

ABORIGINAL HEALTH

Aboriginal people experience poorer outcomes across a broad range of health issues, and have a lower life expectancy compared with non-Aboriginal people.[1]

Aboriginal people aged 50+ are included in the Department of Health and Ageing's planning benchmarks that apply to people 70+.

With the proportion of Aboriginal people residing in the Mid West (12%) being four times higher than for the WA population (3%) this is an important consideration for health planning in the region.

There are two Aboriginal Medical Services in the Mid West, namely the Geraldton Regional Aboriginal Medical Service (GRAMS), which has medical centres in Geraldton and Mount Magnet, and the Ngangganawili Aboriginal Health Service in Wiluna. A number of other organisations provide services that specifically target Aboriginal people, such as WACHS's Aboriginal Health Team and GMML's Care Coordination and Supplementary Services program for Indigenous Australians.

CHALLENGE: Provision of chronic illness, maternal , child and mental health services for Aboriginal people throughout the Mid West.

Although a significant proportion of Aboriginal people in the Mid West reside in Geraldton there are significant challenges providing services for Aboriginal people with complex health issues residing in outlying communities.

AGED CARE

Older members of our community have a significantly higher likelihood of chronic illness, disability and risk of hospitalisation compared with younger persons. In Australia, hospitalisation rates have been shown to increase nine fold across the lifespan, with rates increasing greatly after 65 years of age. For the Aboriginal population, chronic illness and related disease burden occur up to two decades earlier compared with non-Aboriginal people.

The preliminary Statewide Ageing in the Bush findings[2] highlighted that:

- a total of 2,455 people aged 55+ in the Mid West indicated a need for assistance in daily living in the 2011 Census, with 1,928 carers in the region providing unpaid work for people over 55;
- there were 782 Aboriginal people in the Mid West aged 50-59, which are included in the same Department of Health and Ageing benchmarks as general population aged over 70; and
- the Commonwealth reported 354 operational residential care places and 237 Home Care places in the Mid West.

The Australian Government recognises that many older Australians want to stay in their own homes as long as they can. By 2050, more than 3.5 million Australians will access aged care each year, with around 80% of the services being delivered in the community.[3]

There are a number of specialist aged care facilities and services across the Mid West including social and domiciliary services. Some services are limited for those residing in smaller and remote communities.

An important task for health and community services is to increase awareness of the availability and limitations of community and residential health care services for older persons.

CHALLENGE: Enabling all Mid West residents to age in place will be a significant challenge for the future.

Goo Fest, Yalgoo

1 Australian Institute of Health and Welfare 2011. The health and welfare of Australia's Aboriginal and Torres Strait Islander people, an overview 2011. Cat. no. IHW 42. Canberra: AIHW.

2 Statewide Ageing in the Bush Mid West preliminary findings. Verso Consulting (2014)
3 Goldfields Midwest Medicare Local. Information supplied for the Blueprint.

HEALTH AND WELLBEING *CONT'D*

GOAL: Sophisticated health services and infrastructure provision to support improved health and quality of life within communities

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
HEALTH SERVICES INFRASTRUCTURE Mid West health infrastructure enables the highest possible standard of health service provision in all communities.	Deteriorating health buildings and infrastructure are impeding capacity to deliver quality essential health services in the region.	Establish world class regional health infrastructure by redeveloping the Geraldton Hospital to meet current and anticipated future demands.	!
		Grow the region's 'hub and spoke' health delivery model with the Geraldton Hospital supporting Multi Purpose Centres and regional health providers in smaller communities.	
		Establish and maintain modern regional health service provision through timely investment in regional and subregional health facilities.	!
HEALTH WORKFORCE The region attracts and retains high quality health care workers throughout.	The region faces some ongoing challenges attracting, retaining and educating / upskilling health sector workers (including allied health workers and specialists), particularly in remote areas.	Incentivise placement of health sector workers (particularly in remote locations in the Mid West), with strategies to optimise experiences in the region and maximise retention.	
		Work with regional training providers to facilitate further professional development support for health workers, including those wishing to specialise.	
		Advocate for the establishment of a Mid West Health Initiative.	
HEALTHY COMMUNITIES / PREVENTATIVE HEALTHCARE Healthy communities and preventative healthcare models are prioritised and invested in throughout the region.	A constraint in many communities, particularly in the Murchison, is the local capacity to deliver community services (eg fitness, social, education, health campaigns etc) that can positively impact health and wellbeing.	Prioritise primary and preventative health care to build healthy communities by engaging the public in the "healthier communities" approach. This includes the provision of diverse social infrastructure and services throughout the region.	
HEALTH INNOVATION AND DIGITAL SOLUTIONS Innovative approaches to health service delivery are in effect throughout the Mid West by working with and through community.	With further investment in ICT to leverage off existing regional infrastructure capabilities, innovative and high quality health service delivery would be possible in all Mid West communities, coupled with various other applications and benefits.	Advocate for the expedient rollout of ICT infrastructure to facilitate improved health outcomes at all levels, particularly in hinterland communities.	
		Optimise primary and allied health services delivery in the hinterland by supporting greater subregional cooperative health servicing options through partnership development at a local government / community level.	

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
MENTAL HEALTH AND DRUG AND ALCOHOL ISSUES Best practice mental health services and supports are available throughout the region.	Provision of mental health, clinical and community support services and facilities for people battling mental health problems and associated issues, such as drug and alcohol addiction, homelessness, depression and social and emotional wellbeing.	Improve mental health services throughout the Mid West by working with on ground community groups and government agencies to develop innovative and engaging delivery modes.	
		Investigate demand for an acute psychiatric facility in the Mid West.	!
ABORIGINAL HEALTH Health indicators for Aboriginal people in the Mid West parallel the region's non Aboriginal population.	Provision of chronic illness, maternal , child and mental health services for Aboriginal people throughout the Mid West.	Address Aboriginal health outcomes by working with Mid West Aboriginal Organisations Alliance (MAOA) and peak health agencies to provide culturally and geographically appropriate health services.	
		Enhance health services in high Aboriginal population settlement areas through further expansion of the GRAMS model.	
AGED CARE All Mid West residents have opportunity to age in place.	Enabling all Mid West residents to age in place will be a significant challenge for the future.	Pursue the timely delivery of aged care packages to enable 'well living' and ageing in homes in Mid West communities.	
		Encourage 'well living' fitness and health programs to aged persons at a local level to ensure key health determinants.	

Tarcoola Beach, Geraldton

REMOTE SETTLEMENTS

REMOTE MID WEST COMMUNITIES

The WA State Planning Strategy 2050 identified remote settlements as informal towns, remote road houses, Aboriginal communities, workers' camps, tourist camps and remote aerodromes.

There are also a number of small and informal towns in the remote regions that are recognised as towns, but have characteristics that tend more towards being remote settlements. These include tourist camps, pastoral centres, declined mining towns and small isolated towns.

These small and informal towns are unique places which have grown in response to economic and social need. The Murchison settlement is characteristic of the Western Australian experience, and has developed in spite of the lack of formal structures such as appropriate land tenure and regulated essential services. Supporting the survival of some of these places also provides a cultural and social dividend to the State.

There are up to 150 Aboriginal settlements in WA with up to a dozen in the Mid West. Aboriginal settlements have generally developed without regulated essential, municipal or social services. Supporting Aboriginal settlements also provides a cultural and social dividend to the State.

The region's remote settlements are continuously challenged through tyranny of distance, cost pressures to access goods and services, accessing workers, access to infrastructure and services and social isolation.

SERVICES AND INFRASTRUCTURE

In November 2014 the WA Premier flagged the possible closure of some remote settlements due to the State's inability to service them.

Essential services and infrastructure provision to remote settlements is usually discrete and unregulated.

CHALLENGE: Cost to deliver services and infrastructure is often at a premium due to remoteness and is difficult to justify on economic grounds for limited population benefits.

OPPORTUNITY: Some native title claimant groups in the region may be in a position to leverage economic and social opportunities for local outcomes.

LAND TENURE AND NATIVE TITLE

Remote settlements present opportunities for economic and / or cultural outcomes. Land tenure arrangements and native title in some Mid West remote settlements remain unresolved. This uncertainty may present challenges to regional development efforts and the sustainability of remote settlements.

CHALLENGE: Most remote settlements are on Crown land and are subject to native title claim or determination, which may create uncertainty for stakeholders.

Murchison Settlement

GOAL: Remote communities have equal opportunity to create desirable, productive and healthy places, spaces and economic opportunities

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
SERVICES AND INFRASTRUCTURE Mid West remote settlements have appropriate access to essential services and infrastructure.	Cost to deliver services and infrastructure is often at a premium due to remoteness and is difficult to justify on economic grounds for limited population benefits.	Deliver a united approach together with local, State and Federal agencies to plan for appropriate and timely investment of infrastructure and services for remote communities in the Mid West.	
	Some native title claimant groups in the region may be in a position to leverage economic and social opportunities for local outcomes.	Work with and support groups that wish to explore investment of native title funding to achieve social and economic outcomes.	
LAND TENURE AND NATIVE TITLE The remote settlements across the Mid West are on appropriate land tenure.	Most remote settlements are on Crown land and are subject to native title claim or determination, which may create uncertainty for stakeholders.	Work with affected stakeholders to attempt to remove land tenure uncertainties.	

BIODIVERSITY

The Mid West has sensitive natural ecosystems and is one of only five places in the world with globally recognised biodiversity hotspots in marine and terrestrial environments. These 'hotspots' not only contain large numbers of species, but their biodiversity is also under significant threat. Given the region's growth potential and range of development opportunities, there is a clear need to balance growth and prosperity with environmental and lifestyle values and long-term sustainability.

A rich store of natural assets in the region provides opportunities for nature-based and eco-tourism activities, which are likely to expand with the region's focus on tourism. A significant green corridor is planned through the middle of the region from Perenjori to the Murchison Shire boundaries to increase habitat and to allow flora and fauna species to migrate as climate conditions gradually change. To the north the green corridor would connect with another corridor to the World Heritage listed Shark Bay, and in the south with Gondwana Link through to the South Coast of WA. Large areas within this planned corridor are already managed by agencies such as the Department of Parks and Wildlife.

Local communities such as Perenjori are keen to develop environmental education as part of the network of land being managed for conservation purposes in their and adjacent shires (450,000ha of land managed by four different environmental entities). The region can use key opportunities such as these to research and educate the community about environmental challenges and their impacts.

CHALLENGE: The region's unique natural biodiversity assets need to be maintained.

Houtman Abrolhos Islands

CLIMATE CHANGE

Recent work by the CSIRO and the Climate Commission (Steffen, 2011) suggests that temperature, rainfall and storm event patterns have significantly changed in WA in recent decades, and this has had substantial impacts on biodiversity, water resources, agriculture and marine and coastal environments. More specifically, that average temperatures have increased, rainfall patterns have become more variable with a drying climate trend, and storm events have become more frequent and intense. This has serious implications for increasing risks associated with sea level rise, coastal erosion and inundation hazard, soil and wind erosion, land degradation and declining agricultural productivity, and declining biodiversity.

The projections indicate that the following changes might occur, which are relevant to the Mid West:

- the annual temperature in the region is projected to be 4.2°C higher than 1995 levels by 2090;
- there could be a decline in winter rainfall of between 5-40%;
- there could be an increase in natural rainfall variability;
- rainfall extremes are expected to increase in frequency and intensity;
- an increase in intense heat waves, bushfires, droughts, flooding and storm surges; and
- sea level rise of up to 55cm by 2070.

CHALLENGE: Given the complex nature and extent of climate change impacts across the region, it is clear there needs to be integrated and strategic adaptation planning across multiple sectors.

The Northern Agricultural Catchment Council has developed several online tools to help the region manage climate change and other impacts. These tools / system include:

- "LiDAR", which shows climate change impact on coastlines; and
- "NARVIS", a data system that can show potential impacts of climate change overlays and scenarios.

Applying a climate adaptation lens to planning in the region highlights four key challenges:

- making decisions for multiple possible futures;
- employing flexible and adaptive planning processes;
- explicitly identifying and preparing for likely future decisions; and,
- strengthening the adaptive capacity of key stakeholders, organisations and community groups.

A coordinated approach is required to research and assess the impacts of the region's environmental challenges and their potential social and economic impacts. A set of priority actions need to be established around the region's challenges of:

- climate change;
- biodiversity;
- coastal management;
- waterways;
- eco efficiency (energy, waste);
- natural resource conservation (water, agricultural land, basic raw materials); and
- land management.

Given the complex nature and extent of the predicted climate change impacts across a very large, diverse region, it is clear that there needs to be integrated and strategic adaptation planning across multiple sectors and geographic areas.

PRIMARY PRODUCTION

Further decline in rainfall could make marginal lands unviable and presents the need for further innovation in production practices and accessing alternative water supplies for agriculture. This is particularly true for intensive agriculture and any strategies to significantly increase the region's food production would require substantial water for food solutions.

The region's primary producers are adaptable and resilient and they will need to continue to innovate in response to environmental changes. The Mid West agriculture sector is strong in land management practices for environmental benefit and has become extremely efficient in maximising yields in an environment with less reliable winter rainfall and potentially higher summer rainfall. The fishing sector has also restructured itself in response to declining fish stocks and has maintained its profitability in a challenging environment.

Sustainable agriculture will continue to be a key investment area for the NRM sector, agricultural sector and grower groups of the region. The Mid West has been a focus of research to create a planning framework that enables carbon and intensive (horticulture) farming to be titled separately to normal broad acre production systems.

With agricultural and pastoral production accounting for a significant proportion of the region's land use and economic stability, integrated multidisciplinary planning is required to protect areas of existing production as well as areas for future development.

CHALLENGE: Climate impacts will continue to challenge the region's primary production economies.

Up to date, system wide technical information into local planning strategies and schemes is required to protect areas of existing production as well as areas for future development.

ENVIRONMENT *CONT'D*

GOAL: The region's diverse natural assets are protected and managed for current and future use

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
BIODIVERSITY The region's unique biodiversity is recognised and protected as a regional economic, social and cultural asset.	The region's unique natural biodiversity assets need to be maintained.	Protect the region's unique biodiversity by investing in a range of initiatives to increase habitat and allow flora and fauna species to migrate and expand.	
		Develop initiatives to make environments more resilient by reducing threats and conserving values on existing reserves.	
		Investigate economic and other opportunities that help to educate and raise awareness of the region's unique biodiversity.	
CLIMATE CHANGE The region is recognised as a leader in climate change adaption practices, behaviours and technologies.	Given the complex nature and extent of the predicted climate change impacts across the region, it is clear that there needs to be integrated and strategic adaptation planning across multiple sectors.	Drive a collaborative approach to the identification of climate change adaptation priorities and develop agreed regional interventions.	!
PRIMARY PRODUCTION Sustainable primary production practices within the region are the norm.	Climate impacts will continue to challenge the region's primary production economies.	Support Mid West primary producers to adapt to climate change through investment in sustainable practices, natural resource management, research and innovation, and projects that support adaptation.	

Ellendale Pool, Walkaway

KNOWLEDGE AND LEARNING

CREATE HIGHLY EDUCATED AND SKILLED COMMUNITIES THAT MEET THE REGION'S FUTURE WORKFORCE REQUIREMENTS

A well-educated, trained and skilled Mid West population is fundamental to its social and economic development. Quality education and training are key drivers of economic growth, a higher standard of living and a socially cohesive community.

The region has a range of quality education, training and tertiary institutions that offer diverse secondary and post high schooling options. Nevertheless, the Mid West faces a number of education and training challenges and further investment is critical for regional growth and development.

Low education outcomes impact on the future life options of the region's young people and correlates with poor childhood development and health and wellbeing outcomes generally. They are also unlikely to result in a highly skilled workforce of the future.

A growing body of work confirms the importance of pre-compulsory learning and early education, which is acknowledged in the Blueprint.

This chapter identifies the Blueprint's key Knowledge and Learning focus and priorities.

Geraldton Universities Centre graduation

MID WEST SCHOOLS

Additional education and training information is presented in the Blueprint's social profile section from page 25.

Given the limited availability of data for private schools, the majority of the Blueprint findings relate to the public school system. Gaining a better understanding of private school outcomes is needed to complete the regional education profile.

EDUCATION REFORM

A well-educated, trained and skilled Mid West population is fundamental to the development of the region. Effective and quality education and training are key drivers of economic growth, a higher standard of living and a socially cohesive community.

Low education outcomes impact on the future life options of the region's young people and correlates with poor childhood development and health and wellbeing outcomes generally. They are also unlikely to result in a highly skilled workforce of the future.

Growing interest has been expressed by education and training providers in working collaboratively to optimise regional education outcomes and promote a more seamless transition at all levels of the education pathway.

OPPORTUNITY: To foster stronger relationships between all relevant stakeholders including community, education and training providers.

PRE COMPULSORY LEARNING AND DEVELOPMENT

There is significant evidence that a child's early years (age 0-4) are critical to lifelong learning, as they lay the foundations for future development. There is an interwoven and cumulative period of developmental vulnerability and potential in early childhood, emphasising the importance of family involvement in pre compulsory learning and development.

Where children grow up, and the families they grow up in, create their experiences before school. Early childhood experiences affect brain development, with positive experiences important for optimal development and negative experiences capable of damaging a child's social, emotional, physical and intellectual capabilities. Pre compulsory learning and development is therefore critical to a student's educational pathway.

Price Waterhouse Coopers (2014)[1] attempted to quantify the 'hidden value of childhood education and care' and concluded the following:

- children receiving quality early childhood education and care (that either meets or exceeds National Quality Standards), would generate up to $10.3 billion in cumulative benefits to GDP by 2050;
- engaging children from families in the lowest income brackets who presently receive no formal early childhood education and care would boost Australia's GDP a further $13.3 billion by 2050; and
- reforms that reduce the net cost of childcare by five per cent would increase female participation in the workforce and generate a $6 billion lift to national GDP by 2050.

A National Quality Framework has been introduced to ensure quality education and care services (kindergarten and pre-primary), with all primary schools to adopt the Framework by 2016.

As indicated in the Blueprint's Social Profile, 31% of the region's young children were considered developmentally vulnerable in one or more Australian Early Development Census (AEDC) domain, compared to 23% of WA children and 22% nationally. Some Mid West zones have 65% of children considered developmentally vulnerable in one or more domain.

The Australian Research Alliance for Children and Youth's "The Nest" initiative has been established as a collaborative effort to reduce the percentage of children identified as developmentally vulnerable (AEDC).

A number of early learning and parenting centres are being established to improve access to a range of early learning, school readiness, parenting, child and maternal health and wellbeing programs and services that support families with young children. Parental and community involvement is important to the success of such centres, with evidence supporting their collocation with schools. Sixteen (16) new Child and Parent Centres to be operational in WA by 2016, one of which will be in Geraldton (Rangeway).

The Bidi Bidi Early Childhood and Parenting Centre has operated in Mount Magnet for several years as an independent entity and the Perenjori Early Childhood Centre commences operations in late 2014.

A Mid West Regional Children's Service Plan is being developed by Child Australia to develop strategies and inform investments in the region's Early Childhood Education and Care (ECEC) service sector.

CHALLENGE: Ongoing and expanded investment is needed to support facilities and programs that deliver successful early education and parenting outcomes across the region.

PRIMARY AND SECONDARY EDUCATION

The Mid West has a range of public, private, independent, remote and specialist schools. In 2013 the Mid West had 50 schools with almost 11,000 enrolments from kindergarten to year 12. Maintaining choice in public and private education at all levels is important for many Mid West families.

1 Putting a value on Early Childhood Education and Care in Australia (2014). Price Waterhouse Coopers

As indicated in the Blueprint's Social Profile on page 25:

- severe absenteeism in the Mid West (9%) is significantly higher than the WA average (3.6%);
- NAPLAN results for Mid West public schools also confirm that Mid West students (years 3, 5, 7 and 9) are up to twice as likely not to meet National Minimum Standard (NMS) levels across all categories (numeracy, reading and writing);
- Mid West NAPLAN results reflect two statewide characteristics:
    1. NAPLAN results for Aboriginal students are markedly lower than those of non Aboriginal students; and
    2. the further students live from a major / regional centre, the lower their results tend to be than results of students from that major / regional centre.
- 37.8% of the region's adult population (15-64) has completed year 12, compared to 38.7% in regional Australia, 50.9% in WA and 52% nationally;
- 17% of Mid West Aboriginal residents completed year 12; compared to 38% of non-Aboriginal residents;
- in 2013, 86.9% of year 12 students in Mid West public schools attained year 12 or equivalent qualifications, only slightly below the national target of 90%. Of the 328 year 12 public school students, only 64 applied for an ATAR in pursuit of tertiary entrance after year 12. Of those 64 students, 40 (62.5%) achieved an ATAR of 55+, with only six (9%) achieving an ATAR of 75+;
- 86% of year 12 students are based in the Batavia Coast, with particularly low numbers in the Murchison; and
- retention of year 8 students through to year 12 has improved from 51% in 2004 to 69% in 2013, with retention of Aboriginal students improving from 18% to 54% during the same period.

The region has a number of district high schools in locations with lower populations, often in more remote inland areas. Many families in these areas send their children away to boarding schools, reducing student numbers in local schools. This naturally reduces the diversity and range of subjects taught and can result in reduced teacher quality, disadvantaging the reduced cohort of students in their senior years. This creates a challenging environment for education service providers seeking to provide equitable education. The NAPLAN statistics of schools in more remote areas is indicative of this challenge.

CHALLENGE: Build strong viable schools with a hub and spoke model that combines boarding away from home and transport options to ensure sustainable student populations at all district high schools.

Factors including isolation, disengagement from schooling and limited local education pathways have resulted in a group of students who need to be reengaged with education. This will require innovative approaches to schooling that re-motivates student and family.

CHALLENGE: To build strong, viable and seamless primary to secondary education opportunities that meet the needs of every Mid West student.

A focus of the Department of Education (DoE) is to increasingly support public schools to mould their service delivery to reflect their local context and better address individual student needs. Through various policy changes, such as the Independent Public Schools (IPS) initiative, there is increased capacity for WA schools to innovate and implement flexible education, learning and teaching models.

CHALLENGE: The region's educational attainment rates are poor across most primary and secondary education cohorts.

Recent policy changes will see year 7 students being based at secondary schools from 2015. The impact of student increases on resources at secondary campuses will need to be closely monitored and managed. The loss of year 7 students from existing primary schools will also have an impact on those schools and may in some cases result in population losses in communities that don't offer secondary schooling. Student movements / relocations at earlier ages may also place additional pressures on the limited existing regional boarding facilities.

If the Mid West Regional Blueprint's higher growth scenarios are realised there will be strong population increases in many Mid West communities. This would create pressures on existing schools throughout the region requiring further investment.

The majority of the region's year 11 and 12 students are based in Geraldton at the Geraldton Secondary College (GSC), Nagle Catholic College (NCC) and in smaller numbers Geraldton Grammar School (GGS) and Strathalbyn Christian College (SCC). The standard of upper secondary education in Geraldton is therefore very important regionally, as is the availability of boarding facilities.

John Willcock College (JWC) has approximately 600 students (year 8-9). GSC has around 800 students (year 10-12) with capacity for up 2,000 students. NCC has around 1,200 enrolments (year 7-12), GGS 700 and SCC 500.

Challenges facing public secondary education in Geraldton include:

- the additional transition point from year 9 to year 10 (between JWC and GSC) while students are in 'vulnerable' teenage years;
- challenges resourcing two campuses, which dilutes resource provision; and
- the location of JWC away from the CBD where other education support opportunities are available.

A range of models are available for DoE to address these challenges, including bringing the two campuses together into one 'super campus' or reverting to having two separate year 7-12 campuses, perhaps with their own specialty focus areas that offer choice. Regardless of the model selected, strong regional population growth will necessitate further capital investment in secondary schools at some point in the future.

Monitoring and replicating success from other regional schools will help deliver higher quality outcomes in new and expanded education facilities.

CHALLENGE: Continued planning and investment in priority education infrastructure is necessary to meet future regional education, training and workforce development needs throughout the Mid West.

HIGHER EDUCATION AND TRAINING

The region's higher education and training institutions provide an excellent platform on which to enhance higher education and training outcomes for regional students.

There are a variety of agencies and institutions in the Mid West that support the delivery of higher education, research and tertiary attainment. These include the Durack Institute of Technology, Geraldton Universities Centre (GUC), WA Centre for Rural Health (WACRH) and Rural Clinical School (RCS), Geraldton. Significant recent investment has taken place in the sector, providing the Mid West with state of the art higher education and training facilities and infrastructure.

Anecdotally, the region's poor primary and secondary attainment outcomes are translating into some students entering the higher education and training arena with lower than optimal literacy, language, numeracy and analytical abilities. This can divert the focus of providers away from delivery of higher education and training outcomes.

Structural and policy changes have seen significant recent growth in the Vocational Education and Training (VET) sector, including VET in Schools, which make it an integral part of the articulated pathway between secondary and tertiary education.

Recent curriculum policy changes suggest even greater numbers of secondary students will transition through VET, calling for greater synergies and collaboration between sectors to create a more seamless education pathway.

The region's relatively poor early childhood, primary and secondary education outcomes appear to extend into subpar tertiary attainment. While the percentage of Mid West residents with Certificate level (23.3%) and Diploma / Advanced Diploma (6.5%) qualifications closely reflect the regional Australia measures, the percentage with Bachelor and higher level degrees is significantly lower. Bachelor Degree attainment of Mid West residents (7.6%) is half the national rate (15%) and lower than regional Australia (9.5%). Post Graduate attainment (1%) is half that of regional Australia (2%) and one quarter of the national average (4%).

CHALLENGE: Despite having excellent higher education and training providers the region's tertiary attainment rates are well below the broader norms.

OPPORTUNITY: To leverage off the region's state of the art higher learning providers to improve higher education and training outcomes.

Durack Institute of Technology - manual arts studies

Durack Institute of Technology - hospitality studies

112 EDUCATION AND TRAINING *CONT'D*

TECHNOLOGY AND VIRTUAL LEARNING

Advances in technology offers educators dynamic virtual alternatives that can improve education delivery and inspire and assist students through customised learning programs. The use of technology creates opportunities for more equitable outcomes for students throughout the region, most importantly in its remote areas.

The uptake and utilisation of technology to support education delivery and outcomes varies significantly across the region. Some providers are extremely proactive in this space while others have not fully engaged with technology and e-learning platforms, noting that not all parts of the region have access to appropriate telecommunications infrastructure or Internet services.

CHALLENGE: The potential of technology and virtual learning is not being fully utilised to optimise education delivery throughout the region.

OPPORTUNITY: To utilise technology and virtual learning platforms to link education and training delivery with a range of innovative Mid West projects in areas such things as radio-astronomy, renewable energy and remote services.

Batavia Coast Maritime Institute simulators

ABORIGINAL EDUCATION

The delivery of quality Aboriginal education is an important regional issue. Aboriginal people represent around 12% of the region's population but more than 20% of the students in Mid West primary and secondary schools. Some remote schools support Aboriginal students almost exclusively.

Aboriginal attainment levels in the region are significantly lower than non Aboriginal students, with very low year 12 enrolments in the Murchison subregion (around 36% of the applicable Aboriginal population).

Approximately 17% of Durack's 6,500+ students are Aboriginal, with around 40% enrolled in Certificate IV and Diploma courses. Durack also undertakes specialised training in a number of Murchison communities with high Aboriginal populations, with its new Wiluna Campus an important development for servicing the subregion.

A range of scholarships and targeted support services are offered for Aboriginal students are offered by a variety of educational institutions.

The transition of disengaged young Aboriginal people back into education and training, and from training to employment and lifelong learning requires particular focus. A key challenge for the education sector is improving the rate at which Aboriginal students progress through compulsory education and transition to higher qualifications, university and employment, as a pathway to an economic opportunity and success.

CHALLENGE: Attendance, attainment and retention levels of Aboriginal students are low in comparison with non-Aboriginal students in the Mid West.

Management and leadership excellence for Aboriginal professionals

In late 2013 ten Aboriginal people from a variety of professional backgrounds completed the Diploma of Management at Durack. The qualification had been delivered for a number of years but this was the first time it had been tailored for the needs of local Aboriginal professionals. The program recognised the existing skills of participants, many of whom had worked in professions such as education, health, legal services and local government for a number of years. This well regarded qualification provides opportunity for participants to advance their careers or take on further higher level study. The success of the program has led to it being offered again.

Durack Institute of Technology Aboriginal student of the year

BUILDING A DYNAMIC EDUCATION WORKFORCE

Approximately 9% of the region's workforce is in the education and training sector. Quality teachers and leaders in education are fundamental to the enhancement of education, health and life outcomes for students.

A significant proportion of teachers in remote communities are recent graduates who have often had little or no experience living / working remotely or teaching students from an Aboriginal background. Challenges with the recruitment and retention of teachers, lecturers and trainers is experienced across the region in all education and training sectors, particularly in skill shortage or skill priority areas.

A large proportion of Durack and GUC graduates seek employment in the region, proving that a model which encourages regional connection can be a key process to improve attraction of professional staff. Increasing the numbers of graduates that work in the region's hinterland may be an area of further development.

CHALLENGE: Regional and remote schools face particular challenges with teacher recruitment and retention, which can significantly impede the standard of education received by students.

Geraldton Universities Centre teaching graduates

EDUCATIONAL ASPIRATIONS

The Future Directions for the role of the State in Higher Education (p35) revealed that regional higher education differs from metropolitan areas in a number of ways, including that:

- higher education participation rates are lower in regional areas;
- regional secondary-school completers are much less likely to plan to undertake higher education;
- potential students face greater disincentives to study because of costs and distance to campuses; and
- students are more likely to be enrolled in enabling courses and less likely to be enrolled in research doctorates or masters by coursework.

This supports anecdotal findings that suggest regional and remote students often either have lower educational aspirations and awareness of educational opportunities than their urban counterparts, or are less able to identify and pursue a pathway for attaining their aspirations.

This is seen as being a factor of location issues, quality of schooling received, access to higher education facilities and travel and cost constraints to undertake higher education. It is also argued that regional students often have lower inclination for higher status careers and higher paid positions and place greater emphasis on staying close to home and being near their families.

A range of initiatives is in place to enhance regional student aspirations for higher education. These typically focus on systems approaches, mentoring, pathway identification, family support and exposure to new opportunities.

CHALLENGE: To enhance Mid West student aspirations and awareness of educational pathways.

GOAL: Equitable and accessible world class education and training is available to all Mid West residents

Geraldton Foreshore

EDUCATION AND TRAINING *CONT'D*

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
EDUCATION REFORM The Mid West has a modern and high performing education system for all phases of the education lifecycle. Educational attainment rates equal or are higher than State and National Averages.	To foster stronger relationships between all relevant stakeholders including community, education and training providers.	Gain a full and accurate understanding of the region's educational profile, including the variances between public and private education and community or subregional differences.	
		With lead agency support establish a Mid West Education Alliance to target opportunities to further prepare its young people for a dynamic future.	
PRE COMPULSORY LEARNING AND DEVELOPMENT Diverse and effective early learning programs improve the region's AEDC results and provide an excellent platform for primary education entry. abc	Ongoing and expanded investment is needed to support facilities and programs that deliver successful early education and parenting outcomes across the region.	Support investment in early childhood education and parenting facilities across the region, including long term funding for the existing centres, as well as long term monitoring of their impacts.	
		Support the implementation of the Mid West Regional Children's Service Plan and actions to address quality provision of Early Childhood Education and Care services and improvement of Mid West AEDC results.	
PRIMARY AND SECONDARY EDUCATION A seamless primary and secondary education system with NAPLAN, year 12 completion and ATAR rates at or above WA levels.	Build strong viable schools with a hub and spoke model that combines boarding away from home and transport options to ensure sustainable student populations at all district high schools. To build strong, viable and seamless primary to secondary education opportunities that meet the needs of every Mid West student. The region's educational attainment rates are poor across most primary and secondary education cohorts. Continued planning and investment in priority education infrastructure is necessary to meet future regional education, training and workforce development needs throughout the Mid West.	Through the Mid West Education Alliance, develop and trial innovative and transformational learning models in the Mid West.	
		Support investment in infrastructure and human capital in secondary schools in Geraldton and regional centres to improve secondary education outcomes for the region.	
HIGHER EDUCATION AND TRAINING The region's higher education and training facilities cater to a significant proportion of the region's tertiary qualification needs as well as facilitating education export opportunities..	Despite having excellent higher education and training providers the region's tertiary attainment rates are well below the broader norms. To leverage off the region's state of the art higher learning providers to improve higher education and training outcomes.	Support further collaboration and integration of regional school, VET and university pathways to deliver more effective and seamless transition into tertiary education for Mid West students.	
		Support continued enhancements of the region's tertiary institutions and their facilities to cater for growing student numbers.	
TECHNOLOGY / VIRTUAL LEARNING Optimal education and training delivery across the region is achieved through technology, overcoming remoteness.	The potential of technology and virtual learning is not being fully utilised to optimise education delivery throughout the region. To utilise technology and virtual learning platforms to link education and training delivery with a range of innovative Mid West projects in areas such things as radio-astronomy, renewable energy and remote services.	Advocate for the expedient rollout of ICT infrastructure to facilitate improved education and training outcomes at all levels, particularly in hinterland communities.	

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
ABORIGINAL EDUCATION Education indicators parallel the region's non Aboriginal population.	Attendance, attainment and retention levels of Aboriginal students are low in comparison with non-Aboriginal students in the Mid West.	Work with stakeholders to provide tailored and relevant education and support services for Aboriginal students and their families.	!
		Engage Aboriginal people to determine and help deliver solutions to the region's Aboriginal education challenges.	!
EDUCATION WORKFORCE The Mid West is a region of choice for high quality teachers and lecture staff.	Regional and remote schools face particular challenges with teacher recruitment and retention, which can significantly impede the standard of education received by students.	Investigate the potential for a centre of regional and remote education and learning excellence in the Mid West involving student (teacher) placements in remote schools as part of their training.	
		Attract and retain high quality teaching staff by providing appropriate incentives and by working closely with communities to develop a highly supportive environment, particularly in remote communities.	
		Promote the DoE rollout of leadership and teacher attraction and retention projects, particularly in remote communities.	
		Provide pathways to teaching careers for Aboriginal people from regional and remote communities.	
EDUCATIONAL ASPIRATIONS Mid West students have educational aspirations equal to those in the metropolitan area.	To enhance Mid West student aspirations and awareness of educational pathways.	Enhance Mid West student aspirations by promoting initiatives that support them to pursue training and higher education, as well as awareness of subject choices, pathways and opportunities.	

Geraldton Universities Centre graduation

WORKFORCE DEVELOPMENT PLAN

In WA, the Department of Training and Workforce Development (DTWD) is lead agency for the State's workforce planning and development agenda. In collaboration with government, industry and community stakeholders, DTWD has developed a suite of plans and resources that articulate the State's vision and commitment to building a skilled workforce to meet WA's future needs. These plans and resources include:

- the Western Australian workforce planning and development model;
- Skilling WA – A workforce development plan for WA (second edition);
- industry workforce development plans;
- regional workforce development plans;
- State Training Plan;
- Training together – Working together, an Aboriginal workforce development strategy;
- Workplace essentials; and
- Skilled migration.

Within this context, a number of regional workforce development plans are underway. With stakeholders through the Mid West Workforce Development Alliance, DTWD is developing a Mid West Workforce Development Plan. This plan will outline key local challenges to workforce development and provide strategies at the local and State level to address them. These strategies will be aligned to the strategic goals of Skilling WA:

- workforce participation;
- attraction and retention of a skilled workforce;
- a flexible and innovative education and training system;
- targeted skilled migration; and
- planning and coordination between government, industry and community stakeholders.

The Plan will also be closely aligned to, and fully support, the long term focus of this Blueprint. The growth envisaged in each Blueprint pillar will need a training and workforce development response. The Mid West Workforce Development Alliance will work closely with the Commission as Blueprint 'game changing' projects are developed, to ensure the Mid West's workforce can best support the vision for the region's future.

MID WEST WORKFORCE PROFILE

The region's diverse employment mix reflects its broad economic base, with no dominant employment sector (typical of some regional areas).

All 19 major industry sectors are represented in the Mid West, although construction; retail trade; health care; agriculture, forestry and fishing; education and training represent almost half (47%) of Mid West jobs.[1]

Despite being the region's largest contributor to its GRP, mining provides only 8% of jobs in the Mid West. It is expected that a large proportion of jobs in construction, manufacturing and logistics directly support the region's key primary industry sectors, in particular mining.

1 ABS Census 2nd release 2012.

The three Mid West subregions have very different employment profiles. One third of jobs in the North Midlands are in agriculture, forestry and fishing (33%), with a similar proportion of people in the Murchison employed in mining (35%). The Batavia Coast is more diverse with one third of jobs spread relatively equally across retail trade (12%), construction (11%) and health care and social assistance (10%).

More detail regarding the region's workforce profile is provided from page 35.

Cooperative Bulk Handling (CBH) trainees

LABOUR FORCE PARTICIPATION

According to the 2011 Census, 59% of adults in the Mid West (15 years+) in the Mid West were employed. The labour force participation rate (those aged 15+ in the workforce or looking for work) was 62%, slightly below the State participation rate of around 64%.

Historically, the region has enjoyed relatively low unemployment rates, but there has been an upward trend from 2012. The December 2013 estimated rate of 6.3% was the region's highest in a decade. Unemployment in all three subregions has trended upwards, with the Murchison's estimated rate up significantly at just under 15%. NB due to small population size, employment estimates in some areas can be volatile

CHALLENGE: Ensuring an ongoing supply of skilled labour to support regional growth and development.

BUILDING THE REGION'S FUTURE WORKFORCE

Vocational Education and Training (VET), including Apprenticeships and Traineeships, is critical to supporting workforce development in the region. These programs, as well as school based Apprenticeships and Traineeships, provide significant opportunities for youth engagement, which will be critical in servicing future economic growth.

Training delivery

DTWD's VET Enrolment Data Collection indicates that in 2013 there were almost 4,000 students enrolled in VET courses in the Mid West region, predominantly studying Certificate III and II level qualifications.

Males dominate the Certificate I, II and III enrolments, while female VET students dominate Certificate IV and diploma level enrolments. This is possibly reflected by male students engaging in trades traditionally offered at Certificate III level.

Apprenticeships and traineeships

As at 31 December 2013, there were 988 apprentices and trainees 'in training' in the Mid West, representing a 13% decrease from 2012.[2] The decline was predominantly in traineeships. The majority of apprentices and trainees living in the Mid West and 'in training' were males (74%; 26% females).

Of the apprentices and trainees, only fourteen were school based with all but one of these undertaking training in Certificate II.

The top four trade related industries were building and construction (160 students); automotive (123); metals, manufacturing and services (111); and electrical (101).

Durack Institute of Technology Nursing students

2 Department of Workforce Training and Development. TRS data, 2014

Youth engagement

The Mid West has a higher than State average proportion of youth population, with 27.9% (15,008) of the population aged 0–19 compared to 26.3% of WA. While this presents challenges for the region, it also provides opportunity for workforce development programs to service future economic growth.

Consistent with other WA regional areas, the Mid West had a lower than State average year 12 attainment rate. Senior school retention is an identified challenge for the region and an increase in retention will likely contribute to workforce participation and regional skills development.

Labour force participation of youth (15–19 years) (53.5%) was slightly higher than the State (52.8%), but the unemployment rate was notably lower at 12.1% (compared to 13.5% for WA).

Conversely, the participation rate for the broader youth cohort of 15-24 years (62.8%) was lower than the State's rate (64.5%). Both the Mid West and WA had a 10% unemployment rate for the cohort based on place of usual residence.

Retail, construction and hospitality industry sectors are dominant sectors in terms of youth employment.

CHALLENGE: To ensure local residents are provided with every opportunity to secure Mid West jobs first.

FIFO / DIDO WORKFORCES

Almost three quarters (74%) of people working in the Mid West region but living elsewhere were employed in the mining (51%), construction (13%) and manufacturing (10%) industries.[1] Mid West residents occupy a large percentage of jobs in these three sectors with high external workforces.

Several communities are actively engaged in the process of attracting new residents through innovative local programs. In the Mid West only 53% of the 2,769 mining jobs were occupied by people from outside the region. Similarly, 83% of construction jobs and 75% of manufacturing jobs were occupied by Mid West usual residents. Therefore, a challenge for the region will be to attract a larger share of the higher income positions, of which a larger proportion is typically sourced from outside the region.

OPPORTUNITY: Given its relative housing affordability, other lifestyle advantages and transport networks, Geraldton is well placed to become a FIFO / DIDO base for the resources sector. Various hinterland communities are also possible locations for permanent FIFO / DIDO bases due to proximity to key employment drivers.

CHALLENGE: The resources sector offers significant employment and servicing opportunities but local skills availability can result in higher FIFO / DIDO levels.

1 Remplan 2014. Work in the Mid West region and live elsewhere

ABORIGINAL EMPLOYMENT

Approximately 17% of Aboriginal people aged 15+ in the Mid West are employed full time, compared to 42% of non-Aboriginal people.

Aboriginal employment strategies must provide sustainable career development pathways to enable continued career progression and professional development for our Aboriginal workforce.

CHALLENGE: Mid West Aboriginal people are under represented in terms of labour market participation compared to non Aboriginal people.

Batavia Coast Maritime Institute student, at Indian Ocean Fresh Australia

Geraldton Universities Centre engineering students

Durack graduating student address

GOAL: A dynamic and skilled workforce that matches regional economic growth and development

118 WORKFORCE DEVELOPMENT *CONT'D*

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
LABOUR FORCE PARTICIPATION A planned and coordinated approach to workforce development across the region results in labour force participation at or above the WA rate.	Ensuring an ongoing supply of skilled labour to support regional growth and development.	Support the Mid West Workforce Development Alliance to drive the region's workforce development agenda and ensure the region has an appropriately skilled workforce to meet current and future needs.	
BUILDING THE REGION'S FUTURE WORKFORCE The majority of the Mid West region's labour requirements are sourced locally.	To ensure local residents are provided with every opportunity to secure Mid West jobs first.	Support the development of a 'choose Mid West first' campaign to encourage the regional business community to consider hiring locally as a first option.	
		Provide a welcoming and attractive regional environment to attract and retain workers to the region (in preference to FIFO / DIDO).	
		Actively promote the region's attributes prospective new residents via a coordinated marketing campaign.	
FIFO / DIDO WORKFORCES Convert 70% of the region's temporary workers to permanent residents living within the region.	Given its relative housing affordability, other lifestyle advantages and transport networks, Geraldton is well placed to become a FIFO / DIDO base for the resources sector. Various hinterland communities are also possible locations for FIFO / DIDO permanent bases due to proximity to key employment drivers. The resources sector offers significant employment and servicing opportunities but local skills availability can result in higher FIFO / DIDO levels.	Work with local governments to provide highly liveable communities with quality amenity, services and facilities to service a growing proportion of the regional workforce.	
		Investigate models and investments required to expand the Mid West's role as a FIFO / DIDO hub for the State's resource sector operations.	
		Develop MOUs between resource sector proponents and local communities around the provision of local training and employment, housing and broader community benefits.	
		Work with resources sector to maximise workforce relocation opportunities in the Mid West.	
ABORIGINAL EMPLOYMENT Aboriginal employment and participation rates reflect the broader regional population.	Mid West Aboriginal people are under represented in terms of labour market participation compared to non Aboriginal people.	Target Aboriginal employment programs in industries with growth opportunities.	
		Promote employment and career development opportunities for Aboriginal people in the public sector.	
		Support the Mid West Aboriginal Workforce Development Centre and MAOA to broker local employment opportunities with Mid West businesses, government and major project proponents.	
		Advocate for Aboriginal employment strategies that provide sustainable 'career development pathways' for continued career progression and professional development rather than consistent turnover through short term employment programs.	

KNOWLEDGE ECONOMY

Education services and the higher education sector are major components in the dynamics of a knowledge economy. Global demand for higher education has accelerated and the sector is becoming increasingly global and competitive as a tradeable service with the Asian economies making it a top priority area for development.

In seeking to build new export and services industries to grow and diversify to the region's economy, the Mid West aims to build a knowledge economy through innovation for economic growth.

RESEARCH AND INNOVATION ACTIVITY

'SMART Mid West' is an MWDC policy. It involves a holistic approach to the development and integration of education, training and research institutions within the Mid West, together with the technology, processes and infrastructure through which they operate, and the transfer and assimilation of this learning across industry and community. SMART Mid West involves:

- further developing the region's human capacity
- encouraging innovation and creativity across all sectors to:
  - value add and diversify;
  - identify and pursue new opportunities;
  - establish new enterprises; and
  - remain internationally competitive.
- encouraging entrepreneurship;
- developing collaborative advantage through clusters;
- embracing research and development and education / training;
- supporting business retention and expansion; and
- using our natural assets wisely - for now and future generations.

Square Kilometre Array antenna

Leveraging off this policy the region has made strong progress as an innovation hub, with a range of institutions and initiatives driving its innovation agenda. Some of these are indicated in Table 18:

Institutions / collaborators	Innovation categories / projects
• Commonwealth Scientific and Industrial Research Organisation • Australian Square Kilometre Array Pathfinder (ASKAP) • International Square Kilometre Array (SKA) • Murchison Radio-astronomy Observatory (MRO) • Murchison Radio-Astronomy Support Facility • Murchison Wide field Array (MWA) • WA Space Centre • Durack Institute of Technology • Batavia Coast Maritime Institute • Separation Point Marine Precinct and Abrolhos Island Research Institute • Geraldton Universities Centre • Rural Clinical School • Geraldton Regional Community Education Centre • Department of Agriculture and Food • Department of Fisheries • Western Australia Centre for Rural Health • Australian Defence Satellite • Northern Agricultural Catchments Council	• Radio astronomy • Renewable and remote energy solutions (solar, wind, geothermal and biomass) • Research, development and extension to strengthen international competitiveness, add value to, and diversify the region's economic base • Science, technology and telecommunications • Regional and remote community servicing (eg education, training and health etc) • Educational aspirations • Natural environment and biodiversity • Climate change impacts • Micro business development and social entrepreneurship • Geraldton Health, Education and Training precinct

Table 18. Mid West innovation institutions and initiatives

OPPORTUNITY: To drive further innovation and entrepreneurship in the pursuit of a sustainable future and increasing international competitiveness within an ever increasing global environment.

REGIONAL INNOVATION AND RESEARCH

The SMART Mid West agenda and range of advanced projects will enable the region to continue to attract world class expertise across a range of fields. The Mid West is well placed to agglomerate future WA regional innovation activities for research and development, and continue to attract and develop new expertise and advance the region's knowledge economy.

Areas of possible further investment, based on existing projects and regional advantages, include:

- radio astronomy and space research;
- biodiversity;
- water use and efficiency;
- renewable energy;
- agriculture;
- hydroponics;
- aquaculture; and
- regional health and education.

Such efforts can also create indirect benefits for the region by stimulating innovation and associated learnings in other sectors within the region, such as mainstay primary industries.

OPPORTUNITY: With its SMART Mid West strategy and variety of related projects there is a unique opportunity to pursue an innovation and research agenda to grow the region's international competitiveness, value add to our predominantly primary commodity base and further diversify the economy.

OPPORTUNITY: Innovation and research and development will assist Mid West producers retain and grow their competitive advantage.

The best place on earth to observe the universe

With Southern Africa, Australia will co host the International SKA Stage1. Australia's SKA1 involves two components:

- **SKA1-low, a low-frequency aperture array comprising some 250,000 dipole antennae; and**
- **SKA1-survey, a mid-frequency array of 96x12m diameter dish antennae equipped with phased-array feeds.**

These two components will build on precursor instruments including the 36 dish ASKAP and the MWA, both of which are operational. This exciting project will be based in the MRO whose exceptional radio quietness will ensure it continues to develop as a pre-eminent site, world-wide, for radio astronomy. The SKA has already brought the NBN to Geraldton and a potential link to the Pawsey supercomputer in Perth, advancing the region towards its SMART Mid West aspiration.

GOAL: Investment in innovation and knowledge management supports growth and productivity in all economic and social sectors of the region

2050 OUTCOMES Regional Aspirations	CHALLENGES / OPPORTUNITIES	STRATEGIES	TERM
SMART MID WEST The region's SMART Mid West agenda drives further collaboration and innovation across the region to create further economic growth and diversity.	To drive further innovation and entrepreneurship in the pursuit of a sustainable future and increasing international competitiveness within an ever increasing global environment.	Establish a support network for innovators to provide advocacy and leadership, training and mentoring.	
REGIONAL INNOVATION AND RESEARCH The Mid West is globally renowned in a diverse range of regional innovation and research initiatives.	With its SMART Mid West strategy and variety of related projects there is a unique opportunity to pursue an innovation and research agenda to grow the region's international competitiveness, value add to our predominantly primary commodity base and further diversify the economy.	Encourage further regional innovation by identifying and supporting new research and development initiatives in key fields, that support sustainable regional development outcomes.	
	Innovation and research and development will assist Mid West producers retain and grow their competitive advantage.	Investigate opportunities to establish a research and development centre in the Mid West, focussed on areas of current and potential regional advantage.	

Greenough River Solar Farm, Walkaway

ADAPTIVE GOVERNANCE FRAMEWORK

The Blueprint is a high level transformative agenda that will be used as the strategic platform to drive growth and development in the region. This section seeks to answer the question - how do we effectively govern the implementation of a growth and development strategy for the region?

A 'SCOR' analysis was conducted to summarise the region's strengths and opportunities and help identify key risks and challenges that need to be responded to (Attachment A). The SCOR that relates to 'Implementation' is illustrated below in Table 19.

STRENGTHS	OPPORTUNITIES
Aspirational and cooperative effort by region Mid West Investment Plan providing investment foundation for the region and buy-in by the community Strong sense of community and activism by community leaders Subregions with governance frameworks in place Proactive and entrepreneurial leadership Bottom up push for growth and development and high level of engagement in Blueprint process	Blueprint strategy provides an ongoing planning and implementation process for guiding growth and development, and intervening where there are capacity constraints to growth Formation of governance framework and alliances to lead regional vision Build relationships within the region and leverage social connections via social media platforms Opportunity to work with the region at the front end of the business case process (and throughout) rather than at the due diligence end
CHALLENGES	**RISKS**
Lack of strong and cohesive regional brand leading to multiple competing and marketing messages Data quality access and connections to make good decisions Level of resourcing to manage a governance framework Ability to develop sound business cases (opportunities exist to build capacity and skills in this area)	Lack of a shared Mid West vision Developing the necessary investment vehicles to create Community Private Public Partnerships (CPPPs) Centralisation of decision making in Perth leading to erosion of leadership and capacity in regions Adequate resourcing for Blueprint management and implementation

Table 19. Blueprint SCOR - Implementation

As indicated in Table 19, regional collaboration was seen as a key **strength** of the Mid West, as was its broad 'ground up' engagement and strong regional leadership. Being able to leverage off these strengths to implement the Blueprint's vision in a unified and collaborative manner was the core of the **opportunities** identified in the SCOR analysis.

As a result, Blueprint Implementation will require a collaborative approach that works across boundaries and in close partnership with key stakeholders to deliver successful outcomes for the region.

To respond to the risks and challenges, the Mid West will need a systemic and adaptive implementation system that includes practices for governing uncertainty.

HOW WILL MDWC RESPOND?

The Blueprint will become the strategic and core focus of the Commission going forward. MWDC is undertaking a strategic review of its organisational resources and operational processes to align with the Blueprint and ensure its successful implementation.

The Blueprint has intentionally landed at a very high strategic level and has prioritised five key pillars as the strategic direction for the growth of the region. Under these pillars sit 22 elements that are subject to further analysis in the form of development strategies to identify priority project opportunities and key actions. Key regional stakeholders will be actively engaged in the process and the development of each 'themed' strategy. This engagement is discussed further on page 123.

Further analysis of the identified project opportunities will be undertaken to assess / confirm their potential. This 'filter' will help refine the list of project opportunities and produce a 'pipeline' of potential 'game changing' and other priority projects for targeted action by MWDC and Blueprint stakeholders / partners.

The explicit focus of all development strategies and resultant game changers will be to progress the achievement of the Blueprint vision. The principles underpinning the Blueprint vision and its five pillars and 22 elements are consistent with the regional development portfolio's high level Blueprint objectives, namely:

- attracting population to the region;
- growing and diversifying the economy;
- growing private investment;
- addressing priority community amenity needs; and
- innovative approaches to delivering service effectiveness to communities and efficiencies to government.

A simplified Blueprint 'development strategy' rollout is illustrated in Figure 55, with tourism shown as an exemplar. A Tourism Development Strategy was commenced in 2014, with six resultant game changing tourism projects now being progressed.

Point Moore lighthouse, Geraldton

Mid West REGIONAL BLUEPRINT Implementation

TOURISM EXEMPLAR

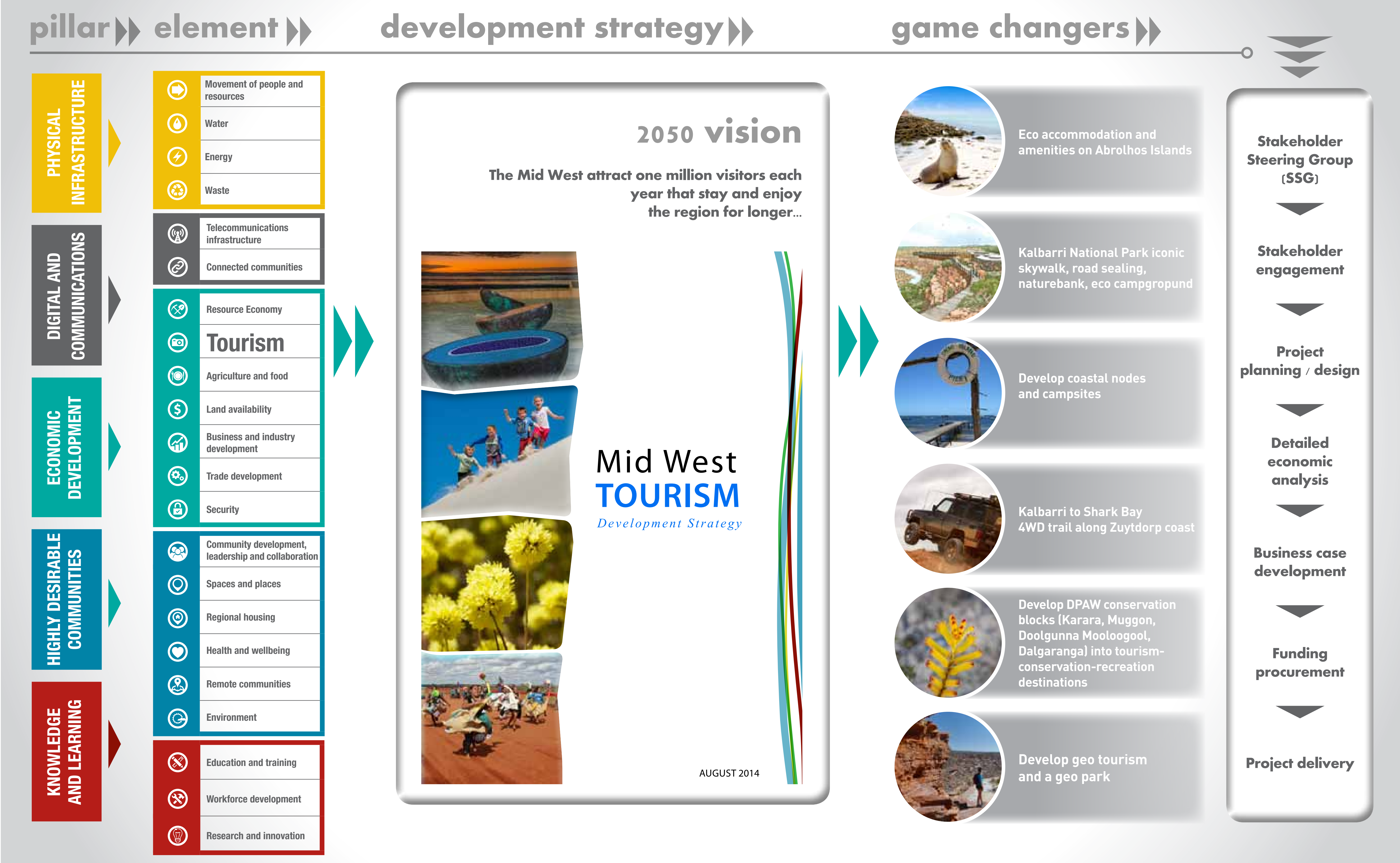


Figure 55. Blueprint implementation process - tourism exemplar

MWDC has proposed an implementation and governance structure that includes key stakeholder groups. Together with the Commission as "custodian of the vision", these Strategy Stakeholder Groups (SSGs) would have responsibility for overseeing the progression of Blueprint priorities, based on their respective expertise and available resources. In most cases, the SSGs must have a broad regional, or at least subregional, focus.

The core of some of these SSGs is already active (eg Mid West Strategic Infrastructure Group) and will be invited to oversee their respective development strategy. Where an appropriate regionally focused group doesn't exist, new groups may need to be convened to progress Blueprint strategies. These groups may choose to remain active after the completion of their respective strategies to support the roll out of game changing projects and provide an ongoing strategic focus on delivery of new Blueprint priorities.

An example of the proposed Blueprint Implementation Framework is illustrated in Figure 56. Some of the existing stakeholder groups are shown on the left and examples of those that may need to be formed, on the right. The Framework would not be restrictive and development strategy mechanisms can and will vary based on circumstances.

All Blueprint SSGs will be able to 'draw in' relevant expertise as required. They will engage relevant stakeholders from Federal, State and local government agencies, peak industry bodies, the private sector and community and non government organisations. This broad engagement and 'buy in' is fundamental to the Blueprint's Implementation Framework and is essential to the development and delivery of subsequent strategies and projects.

Resourcing of these SSGs is an important consideration. Capacity building of some SSGs, particularly those convened for this purpose, will also be important.

Engaging stakeholders early in the Blueprint's strategy development process will encourage shared ownership of each Blueprint priority and the resultant development strategies. It will also encourage stakeholder support for the activation of identified game changing projects. This collaborative process is expected to garner more extensive support for the Blueprint's implementation than could be achieved if MWDC sought to manage the process independently.

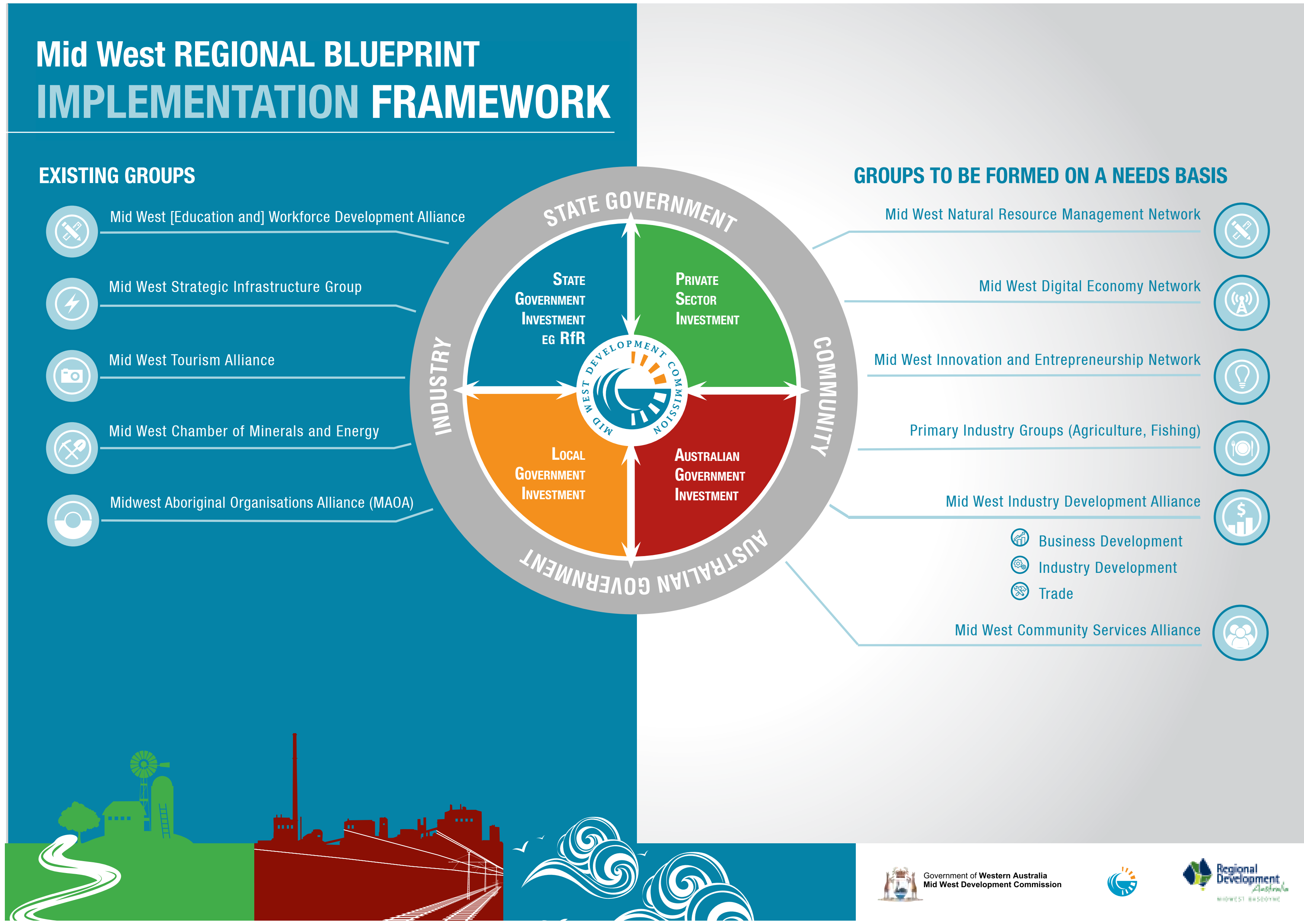


Figure 56. **Blueprint Implementation Framework**

124 PRIORITY SETTING AND PROJECT DEVELOPMENT PROCESS

As indicated, each development strategy will result in the identification of a number of potential projects. The priority setting process for the Blueprint and the selection and progression of the 'best' projects will occur via two main methods. They are:

a) Multi Criteria Analysis

A quantifiable Multi Criteria Analysis (MCA) process will be established to help assess the potential economic and social dimensions of each project opportunity identified during the development strategy processes ie the project's potential to assist in the delivery of Blueprint objectives.

b) Business Case Development

All projects seeking government investment will require a full business case. MWDC will work with proponents and stakeholders in the Implementation Framework to develop quality project proposals and robust business cases for investment. MWDC resources will be increasingly focused early in the project development phase to help stakeholders navigate the business case assessment and project prioritisation processes.

Enhancing stakeholder abilities to develop robust business cases will help build the base social capital of the region. This in turn will help the region compete for investment, including from sources outside of the typical government funding programs.

All business cases will need to demonstrate that strong economic and social assessment rigour has been applied to each initiative. Only quality projects that provide confidence around producing transformational growth and development outcomes will be prioritised for regional support and investment.

This 'priority setting' process is indicated in Figure 57 and discussed further below.

As indicated, SSGs will oversee strategy development and the determination of projects to be submitted to the MWDC Board as 'concept proposals'. This will be based largely on outcomes of the MCA, which would assess a project's commercial / economic viability at a high level and provide some confidence in the project's capacity to deliver Blueprint outcomes.

The Board will determine which projects MWDC will support for business case development. MWDC will determine the additional work / analysis required to enhance the project's readiness and increase its appeal to potential investors (public and private). This may involve completing necessary regulatory / compliance processes, fine tuning cost estimates, economic analyses, financial modelling, legal services, confirmation of available services (eg water, power etc) and other processes necessary to 'prove up' a project.

In some instances, projects might enter into a pre commercialisation or project proofing stage where a pilot or demonstration is funded to determine proof of concept. Within this stage, commercial projects could be analysed and assessed by a network of key business investors and entrepreneurs (regional and external) who would provide critical feedback on projects to ensure they have commercial credentials and are likely to attract private investment. This process would also help raise local awareness of investment opportunities and potentially help SSGs shape projects to suit regional investors and market conditions.

When priority projects are considered ready they would be invited to proceed to full business case. Projects would then be fully developed to a stage where they can be directed to available capital sources (public and private).

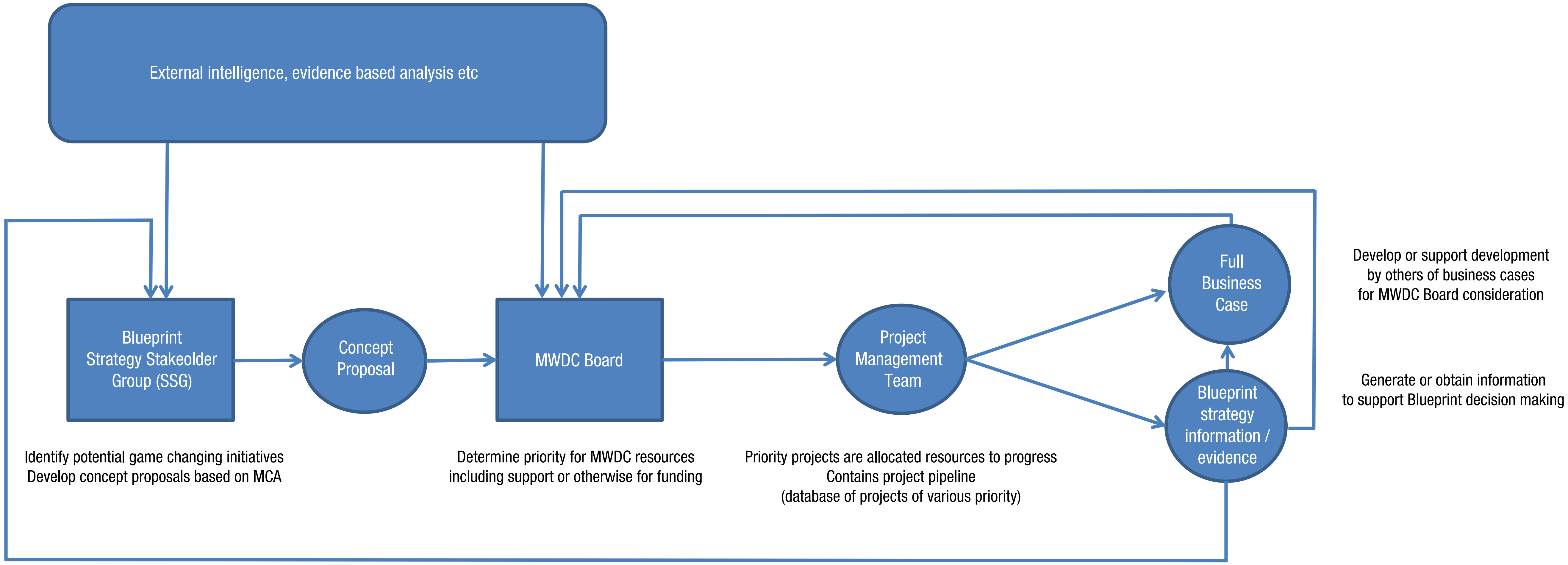


Figure 57. Simplified Blueprint implementation, decision making and prioritisation process

One of the biggest challenges for development in regional areas is attracting sufficient investment for key infrastructure and service projects in a timely manner. This is particularly so in the current economic climate with reduced government funding and increased competition for finite resources.

Regional areas often face further disadvantage as they lack the 'critical mass' of population or industry to compete with larger communities for limited public sector funding. Regional projects are often further hindered by such factors as higher development costs, population instability (due to fluctuating employment levels) and regional capacity constraints.

The Mid West has several key economic and social opportunities that can only be developed through more innovative financing models than those currently employed. Linking a pipeline of priority projects with different sources of potential capital will become increasingly necessary for the Mid West and is a key area of future regional capacity building.

The Blueprint's implementation model is focused on converting the strongest strategic ideas into business cases with appropriate funding models that can successfully attract resources for development. Alternative models may need to be developed as part of a project's development and might include:

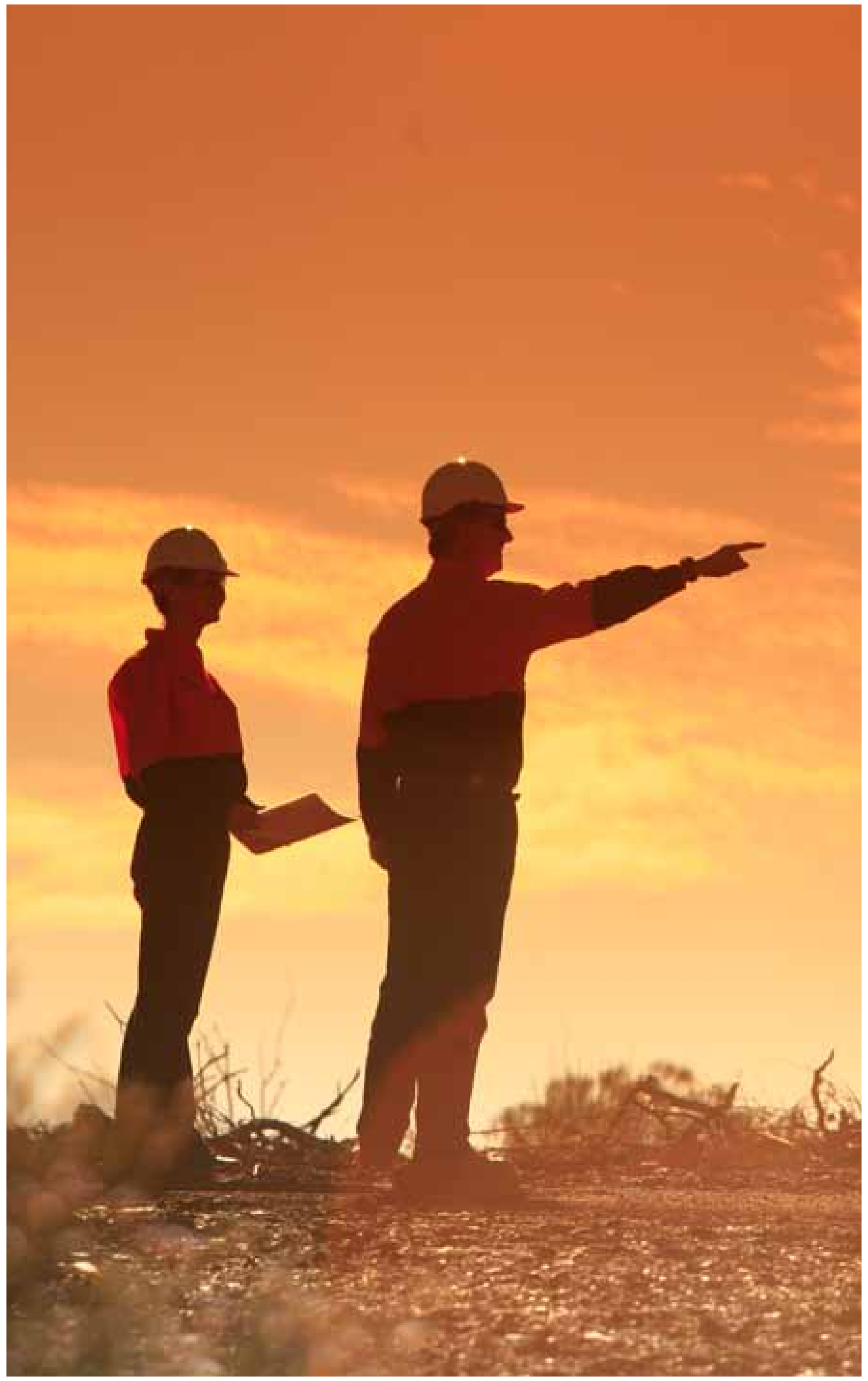
- community public private partnerships (CPPP's) – using hybrid and alternative solutions where financial viability could otherwise hold back a project's development;
- capital recycling – recycling funding from the sale of existing assets; and
- user capital contributions through alternative commercial solutions with potential tax benefits.

The private sector has played a major role in the recent growth of the Mid West, having invested billions of dollars in a range of major projects and facilitated the employment of thousands of people. The private sector will therefore be a vital partner in the development of various Blueprint initiatives.

Private sector proponents are able to initiate projects that address Blueprint outcomes, or may choose to engage during the relevant Blueprint development strategy process. The Blueprint's 22 elements confirm its strategic focus and provide some guidance to investors on potential opportunities going forward.

All investors (whether public, private or corporate) would prefer to be presented with a range of "shovel ready" project opportunities that have been fully developed, received all necessary approvals and are ready to be progressed once funding has been secured. This presents a challenge for Blueprint stakeholders to develop projects as far as is practicable in order to maximise 'investor' appeal, minimise risk and provide confidence around commercial viability. Further resources will often be needed to procure additional expertise or meet the costs of necessary approvals etc in order to further reduce any perceived hurdles to investors.

There will be a number of Blueprint initiatives that require leadership and advocacy, rather than investment or other resources. These initiatives will be pursued through the Implementation Framework or through the normal advocacy mechanisms employed by the MWDC Board.



Karara Mining Ltd, Perenjori

INVESTMENT PROMOTION AND FACILITATION

The Mid West has key strengths or areas of regional advantage in a number of sectors, including resources, agribusiness, education, sport and renewable energy. It is expected that a range of new investment opportunities will be identified in these sectors (and others) as a result of the Blueprint development strategy roll out.

Investment promotion and facilitation efforts for the region need to be realigned and must articulate the value proposition for potential investors. These opportunities and value propositions needs to be promoted to key targets such as:

- the Mid West itself through a shared view of the region and stronger buy / sell local focus and self reliance;
- international stakeholders and investors already operating in the region;
- international and national stakeholders that are interested in operating in the Mid West in potential new industry areas such as global education, new forms of health and community service delivery, research and development and commercialisation of regional intellectual property (IP);
- technology providers who can support Mid West businesses to capture new market opportunities through investment partnerships;
- banking, finance and superannuation bodies;
- key government agencies including but not limited to Infrastructure Australia, DSD, DRD and RDAMWG;
- regional industry groups and organisations that influence investment environments for their sector eg CME, MWCCI, CBH and GFC;
- regional community members who have a stake in the region's future and are interested in investing in key opportunities; and
- other key target markets that relate to project areas such as housing and private developers.

This work is a high priority for Blueprint implementation. Ultimately, the provision of information and assistance would help build investor confidence in the Mid West and assist them make informed investment decisions. Strategies would also link potential investors with brokers in key regional industries and organisations.

COLLABORATIVE CROSS REGIONAL BLUEPRINT IMPLEMENTATION FRAMEWORK

MODEL FOR CONSIDERATION

There are some priority Blueprint themes that are common across most regions such as education, Aboriginal affairs, health, environment and agriculture. By developing a State level strategic position for these common regional priorities, there is opportunity to progress them more efficiently and effectively through Statewide programs.

It is suggested that this State level focus be coordinated centrally by an agency such as DRD or RDCo, in close collaboration and partnership with RDCs. This approach may also involve each RDC playing a key role in particular areas, which has been tested recently with RDCs supporting Statewide initiatives involving Regional Buy Local, Seizing the Opportunity in Agriculture and Ageing in the Bush projects.

The approach would require RDC's to work jointly and cooperatively, whilst still progressing their own regional interests. The value proposition for regional development is enhanced by creating a working model where State based regional priorities are focused and advanced, whilst building cooperative structures across RDCs and DRD / RDCo.

The remaining piece in the strategic puzzle relates to engagement of key government agencies with a regional interest. It is important that these agencies embrace and partner with RDCs on the Blueprint journey.

During development of the Blueprint, MWDC engaged extensively with key agencies such as DoP, DSD and DRD. As a result, key frameworks like the State Planning Strategy were incorporated into the structure of the Blueprint. Having more senior level agency personnel based in the regions, or at least visiting and liaising regularly, would aid the progress of the Blueprints and provide better alignment between regions and key decision makers in Perth. This would also help establish a required level of strategic ownership and cooperation on the new regional development paradigm for the future, including allocation of RfR.

A potential Cross Regional Blueprint Implementation Framework is illustrated in Figure 58.

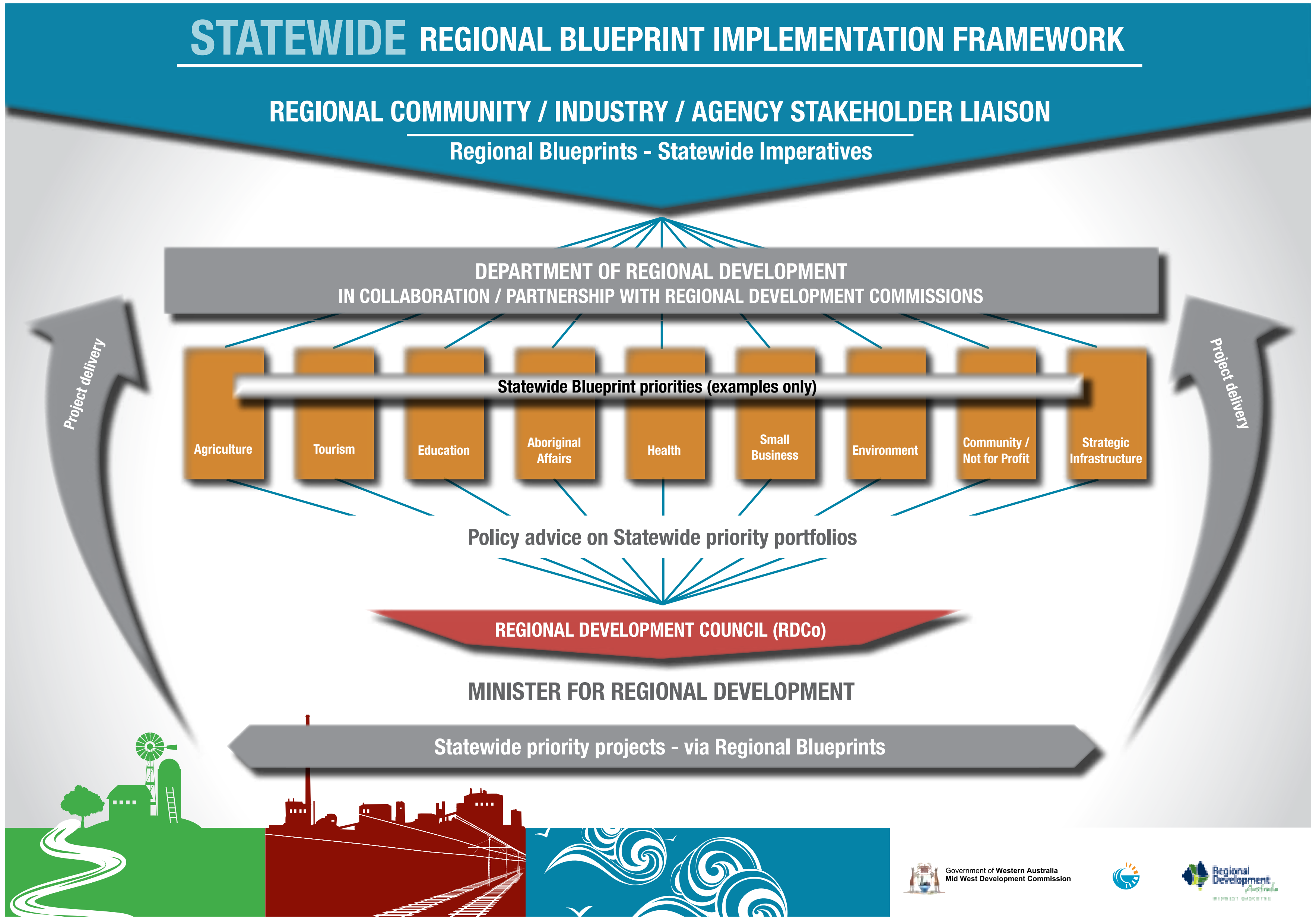


Figure 58.   Proposed Statewide Regional Blueprint Implementation Framework

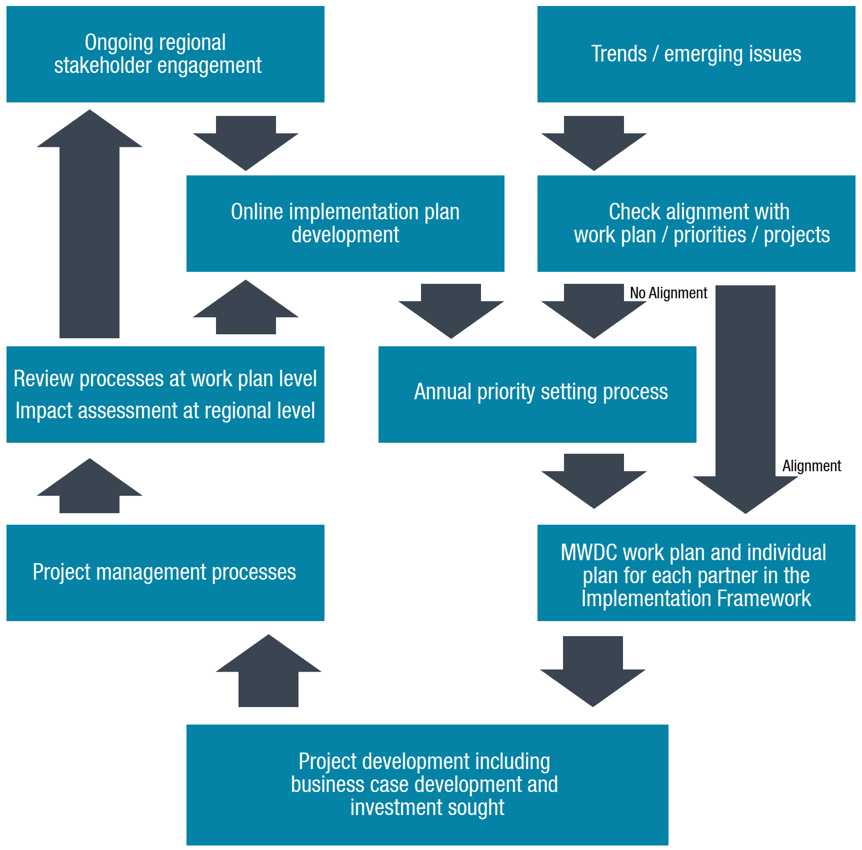
Houtman Abrolhos Islands, Big Pigeon Island

The implementation of the Mid West Regional Blueprint and its priorities will be monitored, reviewed and updated periodically to ensure it remains current, relevant and effective.

It is anticipated that there would be three levels of performance monitoring within Blueprint implementation.

- Strategy implementation achievements (mixture of outputs and outcomes) and learnings (reflective process informing us how to do it better in future).
- Implementation impacts. If we consider the outcomes being generated, what is the impact on the growth and development trajectory of the region?
- Resourcing efficiency. Given what we are learning from strategy implementation, can we organise ourselves and our relationships more effectively?

The results from these three levels of performance monitoring would also feed back into the organisational review and planning processes to help MWDC operate as an efficient and flexible 'best practice' organisation.



Source: Investment in Resources Sector Infrastructure, Chamber of Minerals and Energy, Price Waterhouse Coopers, January 2014

Strategy Implementation – what is it achieving? EXAMPLE

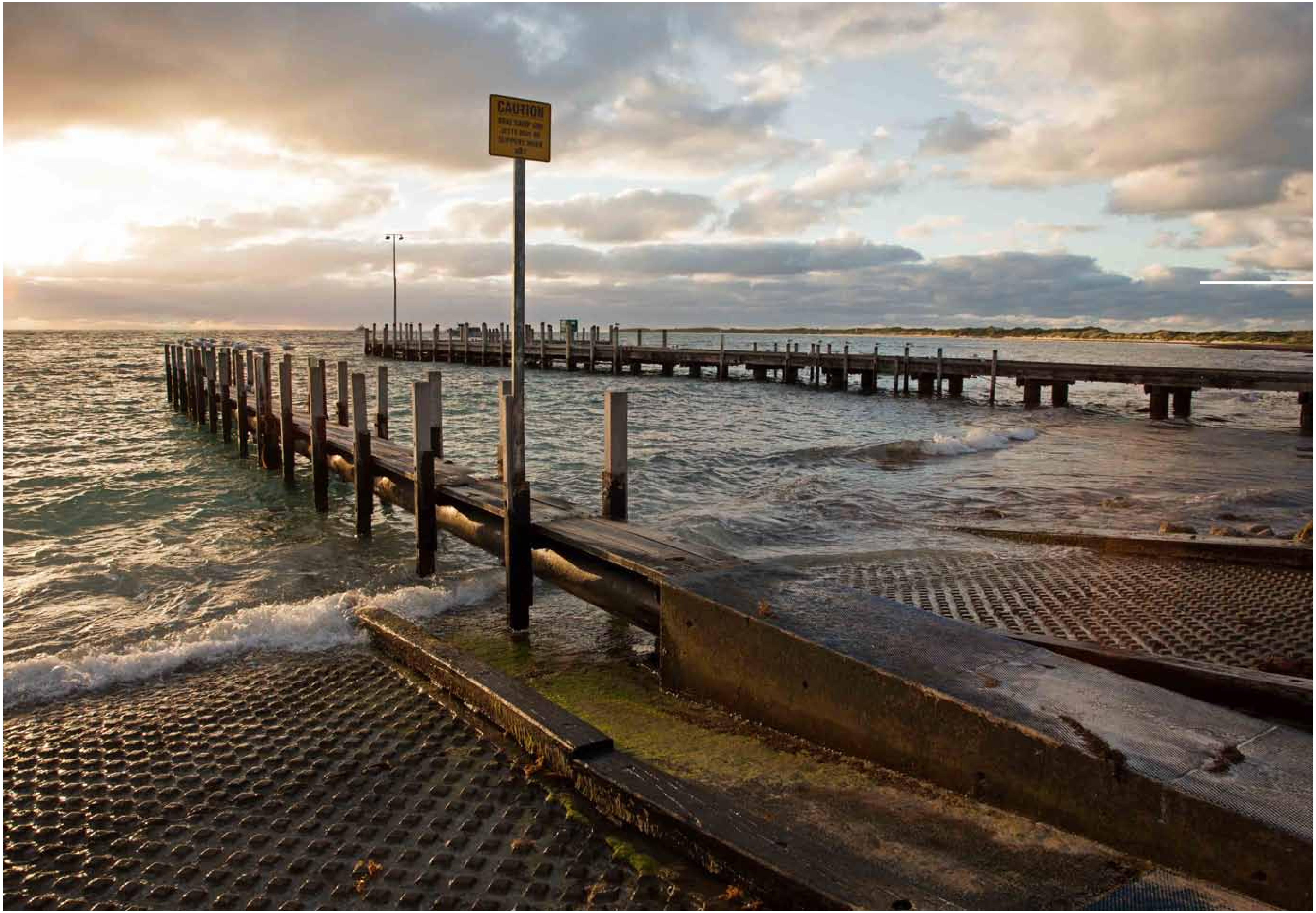
Output	Outcome	Learnings
Port expansion	Four extra mining operations are now scheduled to start construction to export through port	Port could be further expanded if planning consent could be gained
Investment Brand development	Online investment portal established and has led to six new investment relationships for region	Relationship building process is much more time consuming that expected – need to put more resources into this
Business development program	120 regional businesses have participated which has led to 56 new jobs being created in the last quarter in eight different sectors	Focusing on medium size businesses has real employment outcomes, but they need more support to do x,y,z
Digital Infrastructure	Digital infrastructure plan fully funded and being installed in x communities	Community involvement has been high – still their top issue

Resources – are they in the right place? EXAMPLE

- Review effectiveness of implementation of strategies and projects
- In what areas do we need more / less or different resources / talent?
- Debrief implementation framework partners to assess relationship management effectiveness. Realign resources?
- Survey stakeholders to assess organisational effectiveness (annual survey)

What impact are we having? EXAMPLE

Area	Measures	Score	Direction	Comments
Employment	• Employment participation rate • Unemployment by sector	Red, green or amber score	Arrow indicating in what direction it is moving	• What are influencing factors? • What is improving? • Constraints?
Industry growth	• Resources sector development • Agricultural productivity • Retail sector profitability • Community services growth • New industry growth	As above	As above	As above
Economic impact on the State	• GRP growth delivered			
Housing	• Functioning housing market in region • New home ownership rate			
Infrastructure	• Industry rating of regional infrastructure and impact on their productivity			
Energy	• New energy projects developed			
Water	• Water supplies sustainably managed			
Digital	• Coverage of region • Community satisfaction			
Education	• Secondary attainment rates by location			
Workforce	• Post secondary qualifications			
Social infrastructure	• Cultural, sporting and other infrastructure investment			
Community spirit	• Community volunteer rates at or above 20% in urban, 35% in rural			



Morphett Park Boat Launching facility, Green head

Mid West REGIONAL BLUEPRINT

ATTACHMENT A: ‘SCOR’ CARD (STRENGTHS, CHALLENGES, OPPORTUNITIES AND RISKS)

130 'SCOR' CARD (STRENGTHS, CHALLENGES, OPPORTUNITIES AND RISKS)

The Mid West has unique strengths and opportunities that make this region competitive in a range of comparative areas. This comparative advantage has been identified to develop the strategic directions and key pillars for development for the region. Strategy development has been driven through close reference to the comparative advantage of the region, and through consideration of key drivers resulting from megatrends.

This section outlines the results of a SCOR analysis (Strengths, Challenges, Opportunities, and Risks) which has been conducted using consultation results from over 140 interviews and workshops, detailed data analysis, informing external research reports, and 'ground truthing' workshops with MWDC staff and Board Members. This analysis has been used to identify the strengths, challenges (capacity constraints), opportunities and risks to the region under four themes.

Natural **Social** **Economic** **Implementation**

Natural

STRENGTHS

- The Murchison remoteness and radio quietness, with only one person to every 96km^2 is home to the SKA - tagging the Mid West 'the best place on earth to see the universe'.
- Diverse mineral deposits, including iron ore, gold, mineral sands, base metals, nickel and copper (among others).
- Ample resources for energy generation, including second grade coal, oil and gas (including unconventional gas) and uranium.
- An abundant rare earth deposits and thorium resources.
- The coast's ocean winds make it one of the world's top windsurfing and kitesurfing destinations.
- Renowned for its climate advantage the region is highly prospective for renewable energy options including wind, solar, geothermal and biomass.
- Ample water reserves via underground aquifers and paleochannels.
- The Mid West is situated below the WA cyclone zone.
- One of five places with both marine and terrestrial biodiversity hotspots of international significance.
- Has the world's southern-most coral reef at the Houtman Abrolhos Islands.
- Diverse coastline with clean warm waters supported by the Leeuwin current.
- Largest wild catch fishery in WA with coastal conditions conducive to aquaculture.
- Mediterranean climate - relatively reliable rainfall along with consistent sunshine, wind and a high percentage of cloud free days (up to 80%).
- Unique position – bottom of the North and top of the South of the State.

OPPORTUNITIES

- Further work to quantify water available for food and development is necessary.
- Abundant rare earth deposits and thorium reserves.
- Ample resources for energy generation, including second grade coal, oil and gas, unconventional gas and uranium.
- Highly prospective for wind, wave, geothermal and biomass energy production.
- Located below the WA cyclone zone highly prospective for expanding Australia's defence solutions and marine servicing.
- Geraldton as a port city positions it to be a key freight and logistics hub for the State and the nation.
- Adapting to climate change.
- Attracting academics to relocate for research projects around the biodiversity hotspots and impacts of climate change on the environment.
- Investigation of potential water supplies from paleochannels.
- Adaption of farming practices in response to climate change.
- Attraction of major water sports events including kite surfing, wind surfing and sailing.
- Iconic natural features such as the Abrolhos Islands, extreme environmental biodiversity and rich cultural heritage throughout the region provide opportunities for authentic niche and experiential tourism.

CHALLENGES

- Future management of water resources.
- The main constraint to further development of renewable energy projects in the Mid West is the availability of a 330kV transmission line to enable projects to feed energy back into the State's energy grid.
- Adapting to the impacts of climate change.
- Population pressures both increasing and declining.
- The Murchison subregion of the Mid West represents around 17% of WA landmass but is very sparsely populated with only around one person to every 96km^2.
- For more Mid West communities to be seen as legitimate stop over tourist destinations.

RISKS

- Depletion of non-renewable natural resources.
- Impacts of climate change.
- The depletion of, and impact on, natural resources from mining and Industry.
- Radio quiet zone can prevent other industry development in that zone. Conflicting Land uses need to be negotiated.
- Further loss of biodiversity could "tip over" the ecological health of the region.

Social

STRENGTHS

- Australia's first community and university partnership based education model - Geraldton Universities Centre (GUC).
- The Durack Institute of Technology Durack offers around 250 qualifications (across 30 sectors) from Certificate 1 to Advanced Diploma level.
- Full spectrum of public, private, independent, remote and specialist schools.
- Aboriginal year 12 attainment rate has increased from 9% to 12%.
- Diversity of employment across all 19 major industry sectors, with 47% of Mid West jobs in construction; retail trade; health care; agriculture, forestry and fishing; and education and training.
- Liveability, amenity and lifestyle are rated highly.
- Flexibility in the labour force enables redeployment between industry sectors (agriculture, fishing and mining).
- The region has a 'SMART Mid West strategy' that has helped to drive innovation in the region through building local capacity and the use of technology.
- Social and cultural diversity.
- Volunteering levels in the North Midlands and Batavia Coast subregions are above the State average.
- Strong sporting culture and a significant and diverse range of sporting infrastructure.
- Sub regional spirit of collaboration and working in partnership.
- Increased participation in creative industries.
- Cultural diverse region and attractive to overseas migrants.
- The "groovy-ness" of Geraldton has been improving and is considered to be a strong attractor for young people looking to get into entrepreneurial activities.

OPPORTUNITIES

- Opportunity to attract talent and skills for high value positions.
- The higher education / research sector has a high employment multiplier and acts as an economic stabiliser to balance the volatility of the region's commodity driven economy. It also supports innovation across all industry sectors eg agriculture, fishing etc.
- Expansion of early childhood educations programs and centres throughout the region.
- Mining companies using the region as FIFO / DIDO worker hub.
- Cost of living index slightly above the WA average making Geraldton a relatively affordable place to live.
- Investment in knowledge intensive community and business development.
- Subregional spirit of collaboration and working in partnership.
- Increased delivery of remote services through technological advances.
- Engaging ageing population in volunteer activity to harness their knowledge and experience.
- Volunteering rates are high but there is an ongoing need to invest in leadership development and capacity building for emerging leaders at all levels across the region.

CHALLENGES

- 31% of Mid West children are considered developmentally vulnerable (WA average 11.2%).
- Murchison children are three times more developmentally vulnerable than the State average.
- Tertiary attainment levels are half the national average.
- Mid West secondary attainment rate is 15% below the WA average (51% compared to 36%).
- Only 12% of Mid West Aboriginal students complete year 12.
- Filling high value positions from the local labour pool.
- Ongoing net inward migration.
- Aboriginal equity.
- Scarcity of dedicated spaces and places for acknowledging the region's strong heritage and unique Aboriginal culture.
- Gaps in services in mental and chronic health and aged care facilities.
- Crime and antisocial behaviour is relatively high in some Mid West communities.
- Service delivery to the region's hinterland.
- Lack of 1-2 bedroom key worker, aged care housing and purpose built Aboriginal housing.
- Murchison volunteering rates are significantly lower than the State average.

RISKS

- Lack of shared vision for the region.
- Boom and bust commodity cycle.
- Decline in population in some inland communities.
- Rise in unemployment.
- Ageing population and a loss of youth from the region.
- Workforce skills development remains an ongoing risk for the region as year 12 and higher education attainment rates restrict the development of highly skilled workers from within the region.
- With Aboriginal people representing more than 20% of students in Mid West schools, further growth in the young Aboriginal population will impact education delivery and may place further pressures on associated social support services.

Economic

STRENGTHS

- Most economically diverse and economically self-contained region as a trading unit.
- The region produces:
  - around 80% of WA's lupin exports;
  - almost 30% of WA's renewable energy;
  - approximately one third of the State's fishery (by export value); and
  - around one quarter of the State's wheat exports, with WA being Australia's largest producer).
- The region is home to the world's largest rock lobster processing factory (exporting around 50% of the State's rock lobster catch each year).
- The Geraldton port is the second largest grain export terminal in Australia.
- The grain receival point in Mingenew is the largest inland facility in the southern hemisphere.
- Resilient and adaptive traditional base industries of agriculture and fishing in the face of significant weather variability.
- Geraldton port positions the region well in relation to trade links to Asia.
- The region has made significant recent investments in projects that support the development of a knowledge economy, including telecommunications, education and research infrastructure.
- Mining is the dominant contributor to GRP and generates employment in several other sectors. In the last boom, the region provided a high percentage of mining and related jobs (around 70%).
- When opened in October 2012, the 10MW Greenough River Solar Farm was Australia's largest utility scale solar farm, with potential for further expansion to 40MW.
- Geraldton was the first regional location in WA to access the National Broadband Network.
- Three distinct subregions with diverse authentic potential, products and experiences.
- Approximately 25% of Mid West jobs are in the government sector, providing economic stability.

OPPORTUNITIES

- Development of Oakajee Deepwater port would reduce transport costs for regional mining developments, making magnetite extraction and processing more competitive.
- At 12% of the region's population (36% of the Murchison subregion), the Aboriginal community's involvement in business ownership, sustainable employment and home ownerships is critical.
- There is significant potential to increase visitor numbers and expenditure, but the key is to cater to specific market needs and deliver value, quality and appeal.
- Grow the government sector presence in the region.
- Capitalise on the CGG's Sister City relationships with Zhanjiang City in the Guangdong province of China for trade.
- The development of the proposed Oakajee Industrial Estate (6,400ha) would be the largest industrial estate in WA providing ample scope to attract a range of heavy industries.
- Dramatic increase in global demand for renewable energy creates significant new opportunities for the Mid West.
- Situated below the WA cyclone zone making it a viable alternative for marine servicing for the north west.
- Asian demand for protein.
- Utilisation of new knowledge and technologies to extract more value from regional mainstay industries.
- Innovation and diversification into new emerging sectors as they develop.
- Further value adding in agriculture.
- Aligning Regional Development Commission and State government agency boundaries.

CHALLENGES

- Strategic Infrastructure is required to bring on line production of stranded assets and key employment generating industry.
- Strategic infrastructure is required to increase the region's access to markets.
- The region's tourism industry is relatively undeveloped and has significant potential.
- The Mid West requires extensive supply chain infrastructure and transport networks to facilitate access to its domestic and overseas markets.
- A large number of mobile coverage black spots between towns and in some communities.
- Availability of technology outside Geraldton is an impediment to innovation and diversification.
- High development costs and restrictive policies are barriers to growth.
- Regional branding is confused and needs improvement for enhanced international trade promotion.
- There is no "vehicle" for investment attraction in the region. A governance framework for the Blueprint has been formed to start to address this gap.
- Innovation is happening across the region but in pockets with key people not networked. Industry clustering is a new concept in the region and not fully developed in key sectors.
- Business needs access to workers with suitable skills. More proactive workforce development that is linked to major industries is required.
- Policy changes are necessary to attract new industry and business development.

RISKS

- Lack of strategic infrastructure to enable the region to achieve its growth potential.
- Centralisation of government sector back to Perth and centralist decision making, which reduces local innovation and empowerment.
- Downturn in demand for iron ore from China.
- Increase usage of the virtual world for online purchasing is a risk to the retail sector.
- Aggressive investment attraction campaigning by other WA and Australian regions.
- Depletion of natural resources.
- Impact of climate change on agriculture and fishing.
- Lack of the development of a comprehensive, cost effective and reliable telecommunications and digital network in a timely manner.
- Inability to handle containers at the port.

Implementation

STRENGTHS

- Aspirational and cooperative effort by region.
- The Mid West Investment Plan providing investment foundation for the region and buy in by the community.
- Strong sense of community and activism by community leaders.
- Subregions with governance frameworks in place.
- Proactive and entrepreneurial leadership.
- Bottom up push for growth and development and high level of engagement in Blueprint process.

OPPORTUNITIES

- Blueprint strategy provides an ongoing planning and implementation process for guiding growth and development, and intervening where there are capacity constraints to growth.
- Formation of governance framework and alliances to lead regional vision.
- Build relationships with region and leverage social connections via social media platforms.
- Opportunity to work at the front end of the business case process with the region rather than the due diligence end.

CHALLENGES

- Lack of strong and cohesive regional brand leading to multiple competing and marketing messages.
- Data quality access and connections to make good decisions.
- Level of resourcing to manage a governance framework.
- Ability to develop sounds business cases. An opportunity to build capacity and skills in this area exist within the region.

RISKS

- Lack of a shared vision for the region.
- Developing the necessary investment vehicles to create Community Private Public Partnerships (CPPPs).
- Centralisation of decision making in Perth leading to erosion of leadership and capacity in regions.
- Adequate resourcing for Blueprint management and implementation.

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