

# MID-WESTERN REGIONAL COUNCIL

Regional Economic Development Strategy | 2018 – 2022

SUPPORTING ANALYSIS



## VISION

To create a prosperous and progressive community that we are proud to call home through the growth of the agricultural and mining industries, and a diversified tourism economy, that continues to attract new residents.

Developed with the support of the NSW Government as part of the Regional Economic Development Strategies program to assist local councils and their communities in regional NSW.



Balmoral Group Australia Pty Ltd  
Economics, Analytics and GIS Consultants

ABN 87 135 700 239  
ACN 135 700 239

Web - [www.balmoralgroup.com.au](http://www.balmoralgroup.com.au)  
Web - [www.balmoralgroup.us](http://www.balmoralgroup.us)  
Email – [info@balmoralgroup.com.au](mailto:info@balmoralgroup.com.au)

**Sydney Office**

Suite 1a, Level 5, 210 George St  
Sydney NSW 2000, Australia  
Phone +61 2 9051 2490

**Head Office**

165 Lincoln Avenue  
Winter Park  
Florida, 32789, USA  
Phone - +1 407 629 2185

**Tallahassee Office**

113 S Monroe Street  
Tallahassee  
Florida, 32301, USA  
Phone - +1 850 201 7165

Principal Report Authors – Valerie Seidel, Justin Pepito, Grant Leslie

**Contact**

Grant Leslie  
General Manager – Australia  
Balmoral Group  
+61 2 9247 8670 (Sydney Office)  
[gleslie@balmoralgroup.com.au](mailto:gleslie@balmoralgroup.com.au)

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# 1. Preface

The NSW Government has assisted local councils and their communities to develop 37 Regional Economic Development Strategies across regional NSW. Each strategy is designed around one or more local government areas that form a functional economic region as defined by economic data and community input. While the strategies have been developed using consistent methodology, each is a product of detailed data analysis and local community consultation to ensure ownership through a 'bottom-up' process: it sets out a vision for the region, as well as the strategies and early stage actions required to achieve the vision.

Each Regional Economic Development Strategy articulates a framework for identifying actions crucial to achieving the regional vision. Projects listed within this strategy should therefore be viewed as example projects that have emerged from the initial application of the framework. Adoption of these projects would be subject to further evaluative processes.

The power of the strategy is its ability to be used on an ongoing basis to identify additional high value projects over time. By complementing existing funding processes, these strategies present new opportunities to strengthen and increase investment in regional development across NSW.

Importantly, the strategy should be viewed as the first stage of a process that will assist those with an interest in the economic development of the region in planning their future economic activities; particularly councils, communities and local businesses. It provides a vehicle for engaging the community in a 'conversation' about regional needs and priorities, assists in bringing together key stakeholders and mobilising resources, and in so doing, can facilitate faster access to dedicated NSW Government funding, such as the Growing Local Economies Fund, as well as helping to capitalise on other economic opportunities.

This Strategy was prepared by Balmoral Group Australia on behalf of the region. It was formed in collaboration with the Mid-Western Regional Council, key stakeholders and the broader regional community. It benefited from economic-analytical assistance from the NSW Government's Centre for Economic and Regional Development (CERD).

The Strategy presented in two documents: the Mid-Western Regional Economic Development Strategy 2018–2022, which allows the reader to quickly and easily determine key content; while the accompanying Mid-Western Regional Economic Development Strategy – Supporting Analysis 2018–2022 details the Strategy methodology, evidence and the strategy development process.

For further information about the Regional Economic Development Strategies program please contact the CERD on 02 6391 3025 or [CERD@dpc.nsw.gov.au](mailto:CERD@dpc.nsw.gov.au)

## 2. Executive Summary



Regional economic development strategies assist those with an interest in the economic development of the region- particularly councils and local businesses - in planning their future economic activities. They enable faster access to dedicated NSW Government funding - such as the Growing Local Economies Fund - and they can also be used to support other types of government grant applications.

The following document provides supporting analysis for the Mid-Western Regional Economic Development Strategy, which is based on the Mid-Western LGA - a cohesive functional economic region. Each strategy is a product of the local community: it sets out a vision for the region and the strategies and actions required to achieve the vision.

**The vision: to create a prosperous and progressive community that we are proud to call home through the growth of the agricultural and mining industries, and a diversified tourism economy, that continues to attract new residents.**

The endowments and specialisations as established in the Mid-Western Regional Economic Development Strategy Document were identified through the data analysis below and were subsequently used along with the community consultation process in forming the strategy and its' aims.

This strategy aims to:



A mature and diversified tourism economy provides a buffer against downturns in the agricultural or mining sectors, while continuing to attract new residents and their knowledge. A well-endowed training, incubation and co-operative network solidifies the region's reputation for excellence in viticulture, ensures a steady stream of skilled labour, and offers solid support for innovation and new business ideas. Upgraded road networks support efficient transport of goods and workers for the important mining, agriculture and tourism sectors. Expanded offerings in quality of life amenities for health support young families and their parents and grandparents, who value the high quality aged care offerings. Well-staffed education and health care facilities, bolstered by improved recruitment ability and active business support, increase the region's draw for residents and their professional advisors – such as accountants, financial advisors and lawyers. Additionally, a fully developed supply chain includes processing facilities for agriculture, product distribution networks for manufacturing firms and ample opportunities for local businesses to expand their offerings and increase employment. Ltd.

This strategy is the culmination of collaboration between the Mid-Western Regional Council and Mudgee Chamber of Commerce; and was facilitated by Balmoral Group Australia Pty Ltd.

The Regional Economic Development Strategy (REDS) process described in this document successfully identified several core strategies to achieve a prosperous economic future for the Mid-Western Region. A concerted focus and effort will be required to achieve all of the outcomes described in the Strategy. At the same time, considerable vetting of each aspect of the recommended strategies has determined that they are viable, compatible with available resources and are promising opportunities to leverage Mid-Western Region's strengths.

### 3. Introduction



The economic development strategy for the Mid-Western region is presented in the 'Mid-Western Regional Economic Development Strategy 2018–2022' (the Strategy). This document, the 'Mid-Western Regional Economic Development Strategy 2018-2022: Supporting Analysis' (Supporting Analysis), prepared by Balmoral Group Australia, details the Strategy's methodology, evidence and development process. Both documents are publicly available at [dpc.nsw.gov.au/cerd](https://dpc.nsw.gov.au/cerd).

Both the Strategy and Supporting Analysis have been developed with the support of the NSW Government as part of the Regional Economic Development Strategies program to assist local councils and their communities in regional NSW.

For further information about the program please contact the Centre for Economic and Regional Development (CERD) on 02 6391 3025 or [CERD@dpc.nsw.gov.au](mailto:CERD@dpc.nsw.gov.au)

## 4. REDS Methodology

The 12 step methodology for the Regional Economic Development Strategies:

1. Establish a platform for change in the region through formal agreement from the region and its key actors to undertake the regional economic development process and the engagement of higher levels of government in a facilitating and support role.
2. Conduct regional audits:
  - a) A demographic and economic audit of the current state of the region, benchmarked against the State of NSW
  - b) An audit of regional institutions to reveal capacity and capability to undertake the development of a REDS and its implementation
3. Use the outputs from the regional audits to produce a Regional Information System and provide Market Intelligence, which will reveal regional strengths and weaknesses.
4. Mobilise key actors in the region from technology and market sectors, business leaders and industry sectors, the public sector and the community. Those are the Agents of Change that must be fully engaged in the REDS process.
5. Employ Industry Cluster Analysis using Location Quotients and Input-Output Analysis
6. Identify and appraise regional core competencies, risks, and opportunities, engaging the Agents of Change in the process, to produce a series of metrics / /indices to measure them.
7. Engage actors from outside the region to undertake an external analysis to ascertain the degree of concordance between the qualitative assessments of the Agents of Change from within the region.
8. Set the new strategic direction for the region by defining and formulating the REDS and specify the enabling infrastructure required.
9. Develop details of the Strategy and identify the enabling infrastructure required.
10. Prepare the Action Plan for implementing the REDS, including specifying implementation and facilitation mechanisms and their financing.
11. Undertake regular reviews of progress with implementation of the REDS and performance of the region; and re-engineer the strategy as needed.
12. To help with the review, undertake evaluation using indicators and benchmarking; and update Regional Information System and Market Intelligence.



## 5. Timeframe



The timeframe for the REDS project is four years, from 2018 to end 2022. Timelines for each of the proposed strategies have been suggested, with some efforts actionable immediately and others requiring several years to implement. The strategies are intended to deliver economic benefits to the Mid-Western Region over the next 10–20 year period. This document includes strategies and actions that will be operated primarily by the Mid-Western Regional Council, but also by other organisations (such as business chambers in Gulgong, Rylstone and Mudgee), as well as private businesses.

Mid-Western Regional Council intends to appoint an Advisory Committee comprising representatives from Mid-Western Regional Council, other institutions and industry; so as to monitor the progress of the Regional Action Plan. This Advisory Committee will meet quarterly to track the progress of actions identified in the Action Plan.

After two years, the Advisory Committee will conduct a formal review of the Action Plan and produce a brief report card to be published as an addendum to the Regional Economic Development Strategy. This will also provide an opportunity to update the Action Plan for new or modified actions.

After four years, the Advisory Committee will also begin the process of updating or refreshing the Regional Economic Development Strategy.

## **6. Consultation**

### **6.1. Engagement Process**

The engagement process for the Mid-Western Regional Economic Development Strategy included the Mid-Western Regional Council, stakeholder groups, individual stakeholders and the NSW Government. Each organisation or individual played a different role. The Mid-Western Region Council served as a local guide for contacts, historical context and making reasonable assumptions. Local businesses provided input and feedback for assumptions and strategy development. State agencies such as DPC, Dept. of Planning, Regional Development Australia, OROC and Destination NSW provided state level policy context and guidance.

### **6.2. Consultation Methodology**

The project's methodology involved four main phases. In the first phase of the project, the project team consulted with Council about expectations and timing of the project. Stakeholder interviews and economic development surveys were conducted concurrently with data analysis. In the second phase of the project, survey results were used to guide focus groups. The third phase involved drafting a draft document and organising a group of 'Key Actors' to influence the prioritisation of the strategies. The project concluded with a Key Actor workshop that guided the adoption of the final Mid-Western Regional Economic Development Strategy.

### **6.3. Stakeholder Engagement**

Stakeholder engagement was a primary element in the development of the Strategy. Balmoral engaged in meetings, phone interviews, workshops and other discussions with the key stakeholders representing local business groups, community organisations and trade groups. Conversations with key stakeholders provided valuable insight in the underlying economic drivers in the Mid-Western regional economy.

Early on in the project schedule, key stakeholders were contacted for initial phone interviews. Council's Economic Development department provided a list of stakeholders which was augmented with individuals identified through consultant research. The initial 15 telephone interviews were carried out by Balmoral staff prior to distribution of the survey. Interviewed stakeholders represented a cross-section of industries located throughout the Mid-Western Region – agriculture, tourism, mining, retail, real estate, viticulture, trade services and automotive trade.

While a majority of phone respondents were located in Mudgee, others were based in Kandos and Rylstone. The geographic location of respondents influenced some of the conversation, especially for those not located in Mudgee. As Mudgee is often seen as the economic hub of the Mid-Western Region, respondents from the other towns often viewed their town's local economy in the context of the larger Mudgee economy. Steps were taken in the interview process to help guide respondents in thinking more "regionally" – outside the context of their local town's economy to reflect the larger Mid-Western Region's entire economy. Interviewees were asked a wide range of questions on the Mid-Western Region's business climate, successful and unsuccessful initiatives, opportunities for economic expansion and the impact of cultural amenities.

## 6.4. Survey

A survey was designed and administered online early in the project cycle. <sup>1</sup> A draft survey was prepared based on data analysis and interview results and provided to Council for review and approval. The final version of the survey included over 30 multiple choice, free form, sliding scale, and matrix-rank type questions.

The survey was open for participation for three weeks from Tuesday 22 August until Tuesday 12 September 2017. A total of 276 business owners completed the survey in the three week time frame. The survey was also used to recruit focus group participants, by asking respondents if they would be interested in participating in focus group sessions.

The survey was targeted at business owners (or directors / managers / investors / representatives of business owners) and covered topics ranging from business size and industry type to expectations of future sales and economic growth in the Mid-Western Region. The survey was composed of the following sections: Business Characteristics, Business Environment, Market and Supply Chain which are detailed below.

The survey analysis is used to help create strategies through consultation, for the future of the region by asking the community for their opinion.

The analysis of the survey data was to assess the past and recent years and see how the region/industries have gone, and how this can then affect/ shape the strategies for the future.

### 6.4.1. Business Characteristics

The Business Characteristics section of the survey asked questions about the number of employees, business locations and industry type; to better understand the size, scale and type of businesses in the Mid-Western Region.

A page of the Business Characteristics section was devoted to innovation and technology utilisation questions. One question asked if new internet and social media technologies such as Facebook, Twitter and You Tube were incorporated into their business models. Additionally, there were free-form comment responses to the internet technology question which provided insight into what type of technologies the business owners were using. For example, one respondent indicated that Airbnb and Stayz websites were used to advertise their business.

### 6.4.2. Business Environment

In the Business Environment section of the survey, business owners were asked questions on their perceptions of the business climate in the Mid-Western Region. Some questions were related to the general business environment in the Mid-Western Region, while other questions targeted the perceptions of working with Mid-Western Regional Council.

### 6.4.3. Market and Supply Chain

Finally, the Market and Supply Chain section of the survey asked questions about labour availability, accessibility of required infrastructure and market expectations. These questions assisted in understanding their customer base and opportunities or threats in the supply chain.

The results were analysed and incorporated into the design of the subsequent focus groups.

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<sup>1</sup> The online survey provider Survey Monkey was used as the platform for survey administration.

## 6.5. Focus Groups

Focus groups were held three weeks after the closure of the survey. Participants were recruited from the survey responses, additional key stakeholders were also invited to attend. Summary information from the surveys, interviews and data analysis was provided beforehand to participants to prepare for discussion, as a first step in a modified Delphi process.<sup>2</sup>

Two focus groups were held on Tuesday 10<sup>th</sup> October 2017 at the Glen Willow Sports Complex, with seven and eight participants each. The groups were generally representative of smaller and larger firms, but ranged across both sessions.

The sessions prompted successful and thoughtful discussions, participants carefully considered topics introduced both by the consultants and by each other. Several topics evolved during the sessions organically, through participants building on each other's comments and ideas. Data themes from various sources were provided, for stakeholders to critique. This step was important for two reasons: Allowing stakeholders to see patterns from quantitative analysis helped Balmoral Group Australia observe patterns from another perspective and also, allowing stakeholders to indirectly interpret quantitative analysis for strategy formation provided an opportunity to galvanise key actors to take ownership of their economic strategy.

FIGURE 1: BUSINESS COMMUNITY FOCUS GROUP



Photo Credit: Balmoral Group Australia (BGA) Work Product. AU

Following the focus groups, commonalities and differences between the groups were summarised and compared to the straw man strategies; an outline or draft copy that was circulated for comments or suggestions that had been prepared beforehand for critique. Results were used to further refine potential strategies uncovered by data analysis and identify aspects that required further vetting. It was recognised that some sectors were under-represented, for example agriculture. Efforts were made to connect with important stakeholders in these sectors directly, to ensure sufficient consideration by industry participants in strategies despite not having attended the focus group sessions.

Follow up conversations with stakeholders yielded several key ideas that further shaped strategies.

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<sup>2</sup> A Delphi process is an approach to decision making that involves sharing the aggregated, anonymous results of questions with a group and revisiting questions with the group. In this case, the group is the survey respondents or focus group participants.

## 7. Survey Analysis

BGA conducted an online survey during September and October of 2017. Participants included business managers and owners; 276 responses were received. Respondents were asked a broad range of economic development questions, about topics ranging from incentives to future growth perceptions. The following section provides an overview of publicly available data summarising Mid-Western Regional Council’s business community; as well as the results of the survey, which reflect business owners’ perceptions.

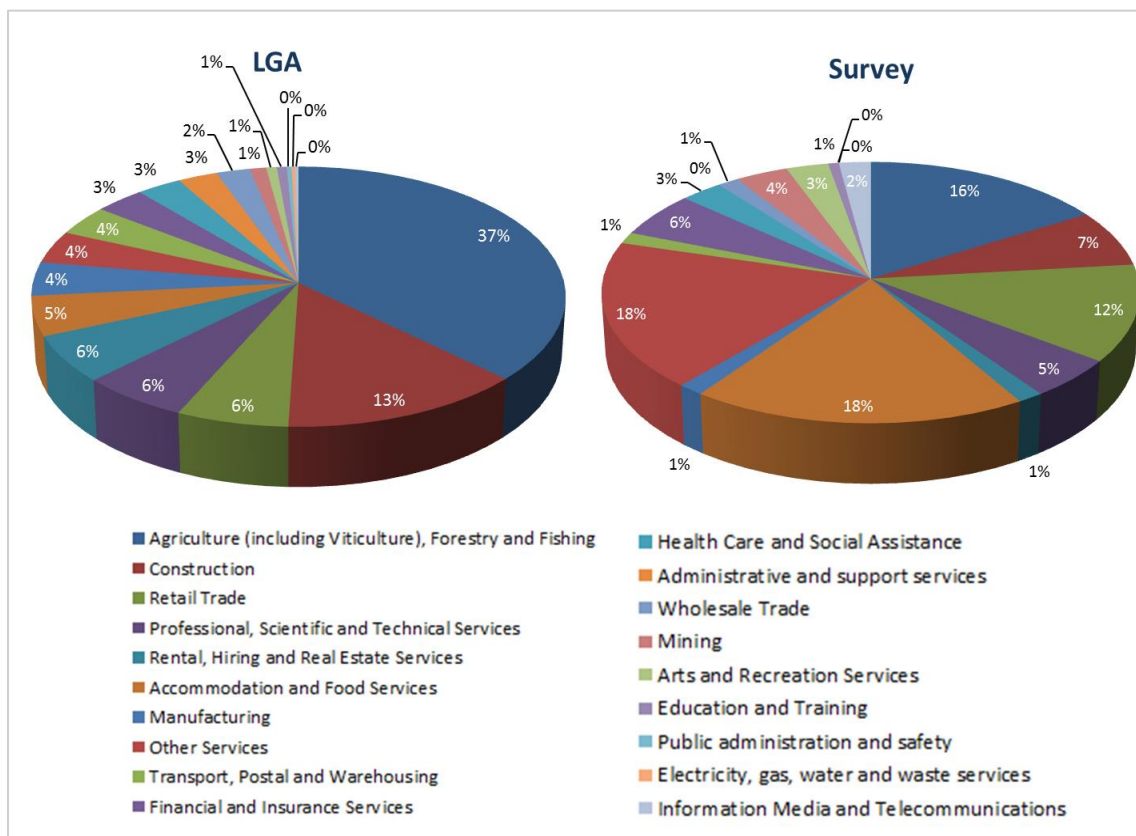
Contact lists were obtained from Council and sent out via electronic formats using the following methods:

1. Email invites using Australian Business Register data
2. Email distribution through local business organisations (Mudgee Wine and Grape Growers Association)
3. Advertisements on Council’s Facebook page

A question was asked in the beginning of the survey whether the respondent was a business owner / manager of a business or not. This question was used to identify non-business owners who may have completed the survey.

**Figure 2** contrasts the distribution of survey respondents with the mix of businesses in Mid-Western Regional Council: the survey captured fairly well the proportions and diversity among businesses, with a few exceptions in Agriculture, Forestry and Fishing; Accommodation and Food Services; and Other Services.

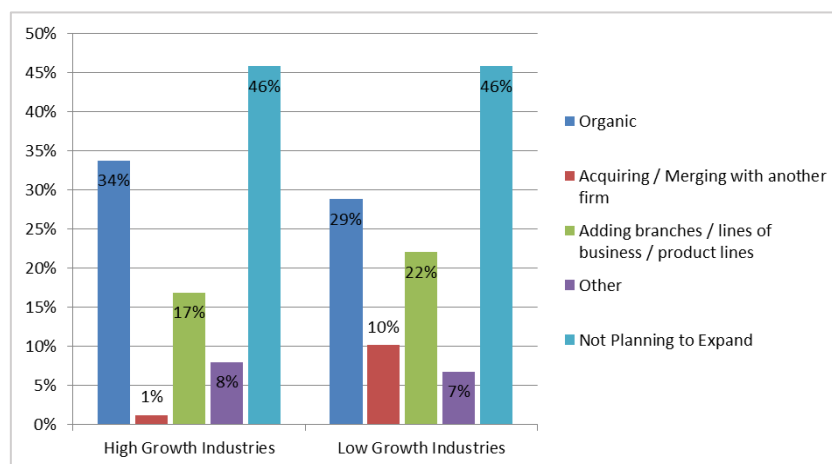
FIGURE 2: FIRMS BY INDUSTRY, ACTUAL VS. SURVEY



Source: BGA Work Product, AU

**Figure 3** depicts the plans for business growth by survey respondents, which are grouped into higher growth and lower growth industries. For the purposes of this study Victoria University provided Regional Employment Projections for the Mid-Western region. Over the report period the estimated growth is 2.7%. Those industries that are predicted to grow at a rate higher than 2.7% are described as High Growth Industries, while those that have an estimated growth below 2.7% are considered low growth. It was important to add this question in order to assess different attitudes between both types of businesses; understanding that low growth industries were likelier to value growth from acquisition and merger can suggest these businesses are likelier to grow through relatively external influences, all other factors held constant. In both cases, most of the expected growth is autonomous or organic in nature.

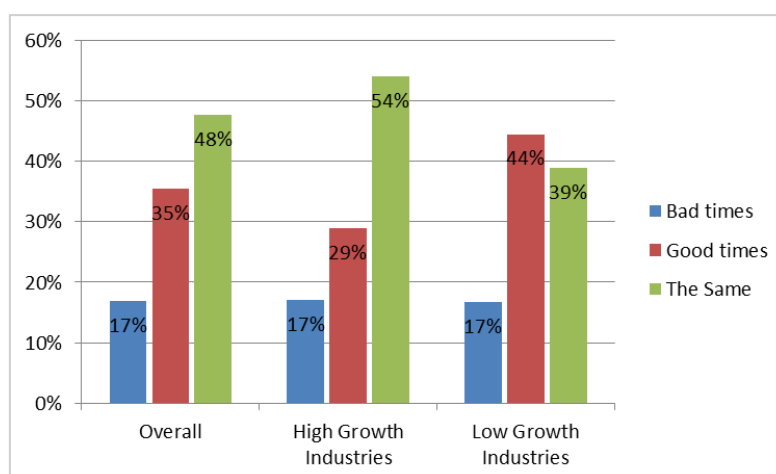
**FIGURE 3: BUSINESS EXPANSION BY INDUSTRY GROWTH**



Source: BGA Work Product, AU

**Figure 4** provides additional context, showing that although more businesses in both categories do not plan to expand, 83% of businesses expect to either be in the same financial position or better by this time next year. This could also be deemed as a key risk for the Mid-Western Economy as businesses that do not tend to expand often face a gradual decline. In the lower growth industries in particular, more businesses expect to experience financially good times rather than bad or similar financial times.

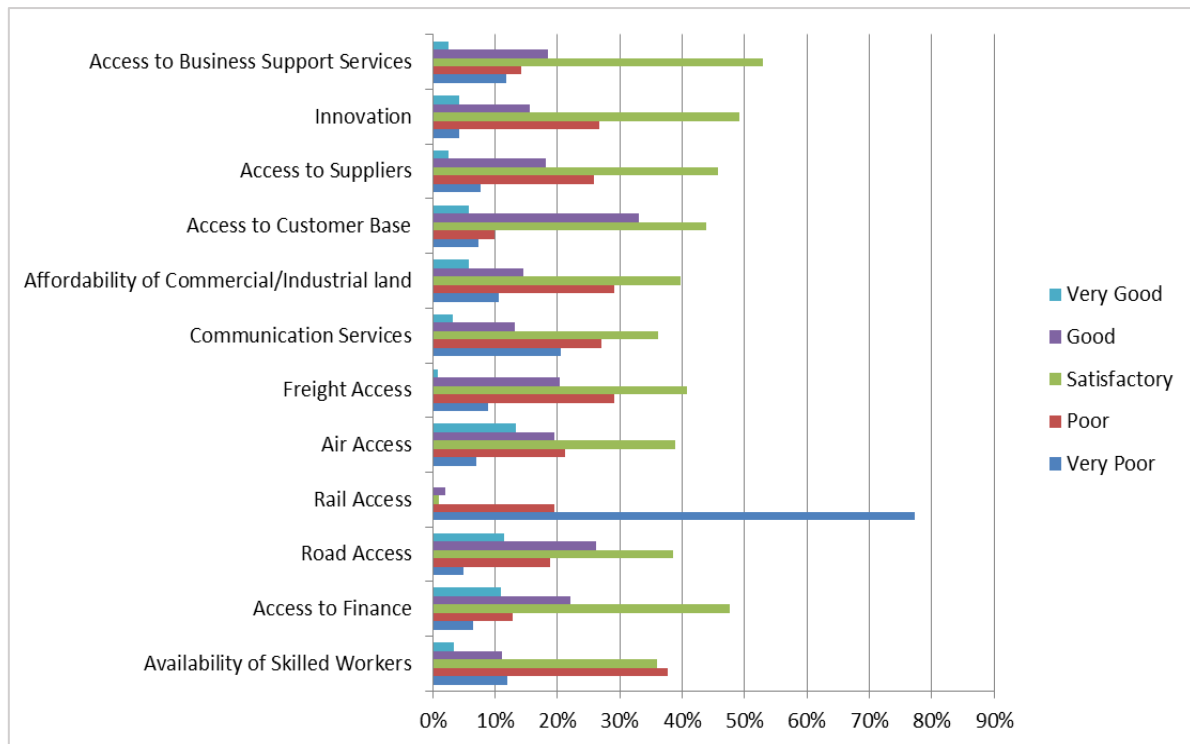
**FIGURE 4: BUSINESS OUTLOOK BY INDUSTRY GROWTH**



Source: BGA Work Product, AU

Survey respondents also rated the quality of infrastructure, services and amenities in Mid-Western Region (**Figure 5**). Overall, the availability of skilled workers, communication services and rail access were the lowest ranked. Around 50% of respondents ranked availability of skilled workers as less than satisfactory (i.e. poor or very poor); 47% of respondents ranked communication services as less than satisfactory; and most significantly, 97% of survey respondents ranked rail access as less than satisfactory, with 77% of respondents ranking it as 'very poor,' the lowest available option.

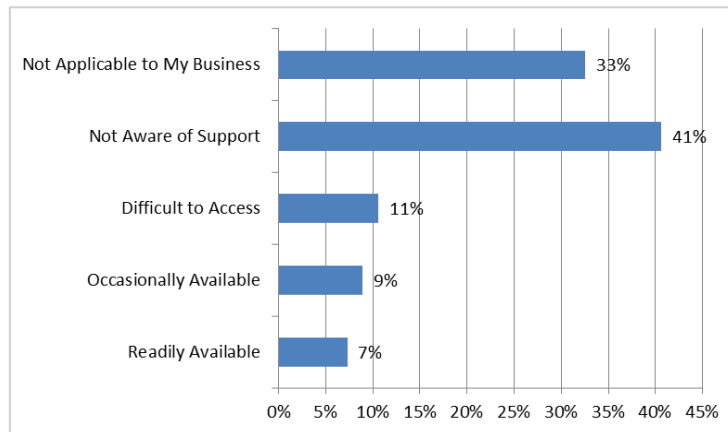
FIGURE 5: RATING OF INFRASTRUCTURE



Source: BGA Work Product, AU

Survey respondents also ranked the level of business start-up support in the region (**Figure 6**). 41% of respondents are not aware of support for business start-ups and 33% believe that the support that is available is not applicable to their business. Only 16% of respondents ranked support for business start-ups as readily or occasionally available; whereas 11% of respondents believe the support is difficult to access. This observation helped justify the formation of our third strategy regarding building depth in entrepreneurial and business support services. The question posed in the survey was designed to give an indication of the awareness of business start-up support, this is available through the office of the small business commissioner and the Business Enterprise Centre. The number of businesses that have accessed these funding mechanisms is not readily available for the Mid-Western region. However from the survey where 214 respondents answered this question 61 (28.5%) businesses indicated some level of awareness by indicating that they support was readily or occasionally available or difficult to access.

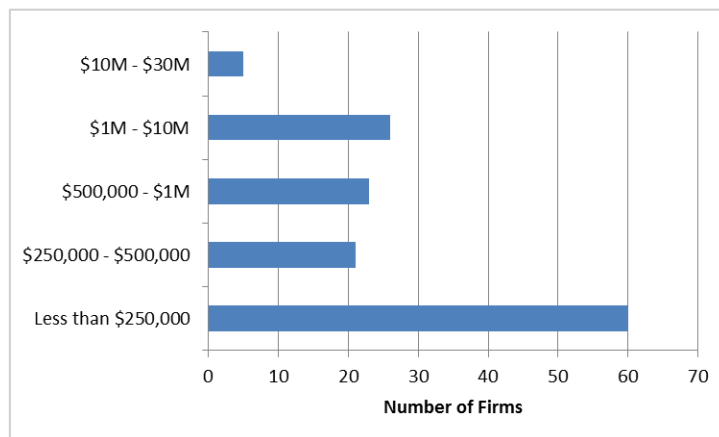
**FIGURE 6: PERCEIVED LEVEL OF BUSINESS START-UP SUPPORT**



Source: BGA Work Product, AU

Businesses were classified by revenue (**Figure 7**). There were 60 respondents that reported 2016-17 annual revenue of less than \$250,000, meaning that 80 businesses bring in less than \$500,000 in revenue (i.e. inclusive of the 60). Around 31 businesses each bring in over \$1,000,000 in revenue in the region, with around 5 bringing in over \$10 million each. The responses were well short of the total 276 respondents to the survey as not every business answered this question, limiting the size of total data collected for gross sales of the Mid-Western region to around 130 business responses. Business support is available from a number of sources, DPC, the Office of the Small Business Commissioner and the Business Enterprise Centre are the primary sources. Businesses with lower annual revenues may be more likely to benefit significantly from incentives and other forms of support, but high-revenue firms like mining businesses are also crucial for keeping spending flowing through a local economy as they tend to employ the most workers.

**FIGURE 7: GROSS SALES 2016-17**



Source: BGA Work Product, AU



## 8. Economic Audit



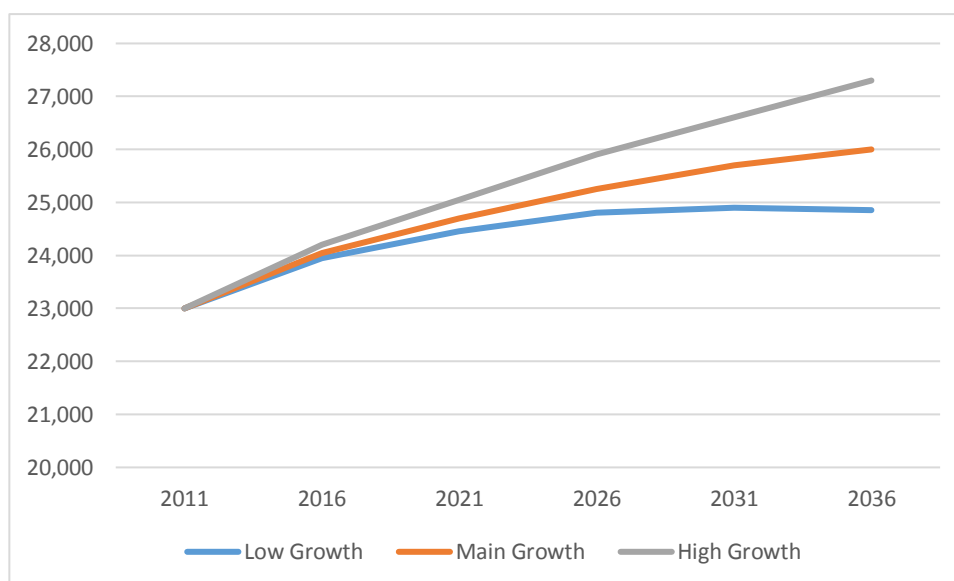
In 2015-2016, the Mid-Western Region had a total gross regional product (GRP) of \$1.941 billion, with \$1.7 billion of final output across all industries. Most of the demand for goods produced in the region came from household consumption. However, other components of the GRP – like government spending – also contributed greatly to the region’s output. Of note, exports are the strongest contributor to final output within the region, making up 27.6% of all final output. The economic audit included assessment of major aspects of the Mid-Western Region market, including the following, which are addressed in turn:

- Demographics
- Macroeconomic indicators
- Labour force
- Input-Output analysis
- Industry cluster analysis
- Location Quotients
- Shift-share analysis

## 9. Demographics

In 2016, the Mid-Western Region's total population was 24,076, a 12% increase from 2005. The NSW Department of Planning and Environment (DPE) produced population projection figures to 2036 by LGA. The low, main and high population projection estimates for the Mid-Western Region are depicted in **Figure 8**. Between 2016 and 2021, the population of the Mid-Western Region is expected to grow by 2% (to 24,450) under the low estimate, by 3% (to 24,700) under the main estimate, and by 5% under the high estimate. Over the next 20 years, the Mid-Western Region's population will grow 7.8% (0.5% per annum) under the main estimate, to 26,000.

FIGURE 8: MID-WESTERN REGION LGA POPULATION PROJECTIONS (2011 – 2036)



Source: NSW Department of Planning and Environment (DPE)

There are a number of projects that are influencing the expected growth rate in the Mid-Western Region that could mean that a high growth rate scenario is most likely. The Moolarben and Ulan mines are currently undergoing an expansion which will add an estimated 450 new jobs to the region. Additionally the Bylong Coal and Bowden's Silver mine projects if they proceed are likely to add some 670 new jobs to the region when in full operation. At this rate, the Mid-Western Region LGA is expected to grow faster than some other regional LGAs. While the historical growth data indicates growth that is slower than Regional NSW overall and that of NSW (see **Table 1**). We estimate that the likely growth scenario will be High Growth.

TABLE 1: POPULATION PROJECTIONS (MAIN ESTIMATE)

	2011 - 2036 Growth	Annual Growth
New South Wales	37.5%	1.3%
Regional NSW	19.5%	1.0%
Mid-Western Region	12.8%	0.5%

Source: NSW Department of Planning and Environment (DPE)

Although the population is growing, the Mid-Western Region LGA is comprised of a slightly older population than that of the entire state (Table 2). Older populations are typical of rural / regional communities, as the lure of a big city – in this case Sydney – tends to pull younger residents away for educational and training purposes and early career experience. In terms of economic development, this will require focus; it will be essential to building the younger skilled workforce, and in keeping

them employed locally whilst also providing adequate health care services for the larger, older and ageing population. Both pressing challenges have been acknowledge and referred to in the strategies. From a regional economic development perspective they are both of importance as a growth driver for the economy and vision of the region.

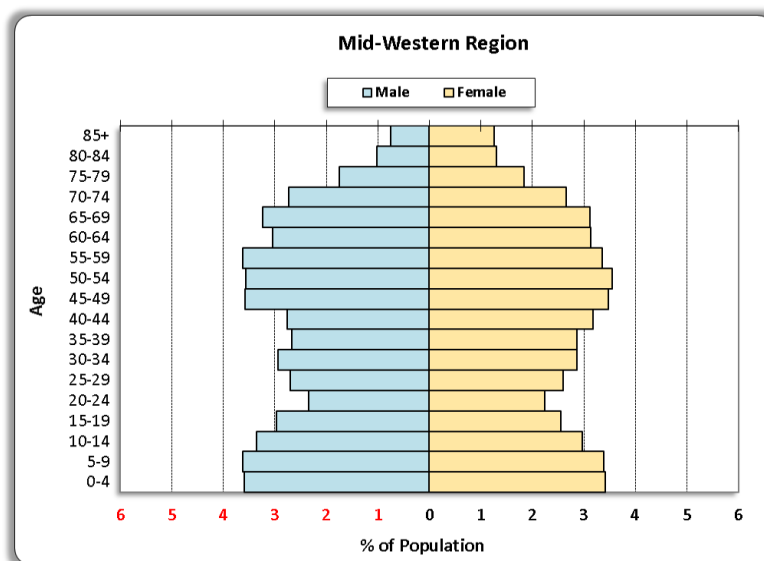
TABLE 2: DEMOGRAPHIC PROFILE FOR MID-WESTERN REGION LGA (2016)

Demographic	Mid-Western Region	NSW
Median Age of Persons	42	38
Male to Female Ratio	1.01	0.97
Over 60 as a Proportion of Total Population	25.8%	21.9%
Average Household Size	2.4	3.1

Source: DPC Data

To further illustrate this aspect of the population distribution, **Figure 9** shows the 2016 Age / Sex distribution for the Mid-Western Region. There is a lower proportion of residents in the 20–44 age groups. From 2011 to 2016 there was little change in the distribution of age across genders. However, the Mid-Western Region saw a small increase in the share of younger males, particularly in the 25–34 age group. The increase in the mining sector in the Mid-Western Region, and by extension the supply of mining jobs, has likely attracted this cohort and resulted in higher retention.

FIGURE 9: POPULATION DISTRIBUTION BY AGE AND SEX (2016)



Source: DPC Data, AU

Note that the demographic data and graph show a large older population. There is a marked increase between 2006 and 2011 in the number of residents over the age of 65, particularly in the 75–85 year old age group. Due to this shift in demographics, there is an opportunity and need for aged care services in the area. Conversations with stakeholders confirmed this, a corresponding strategy is detailed further in the Regional Action Plan section.

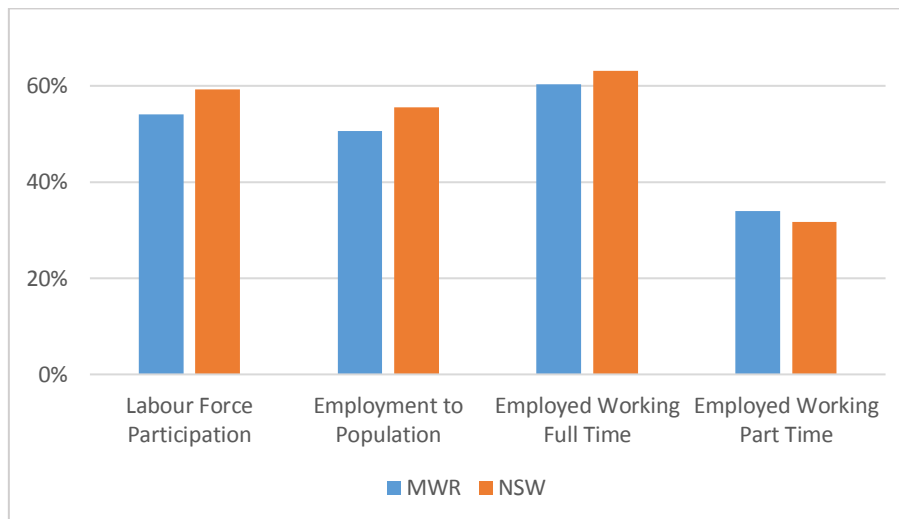
The older population of the Mid-Western LGA partially comes from an influx of ‘tree changers’ moving to the Mid-Western Region<sup>3</sup>.

<sup>3</sup> *Sea Change*, Burnley and Murphy (2004)

## 10. Labour Force

**Figure 0** displays employment figures for the Mid-Western Region in 2016. Unemployment in the Mid-Western Region was 5.7% in 2011 and increased to 6.5% in 2016. However, overall New South Wales unemployment increased from 5.9% in 2011 to 6.3% in 2016. The amount of full-time versus part-time workers in the region is comparable to the state level. Roughly two-thirds of both the Mid-Western Region and NSW workers are employed full-time versus one third of workers employed part-time.

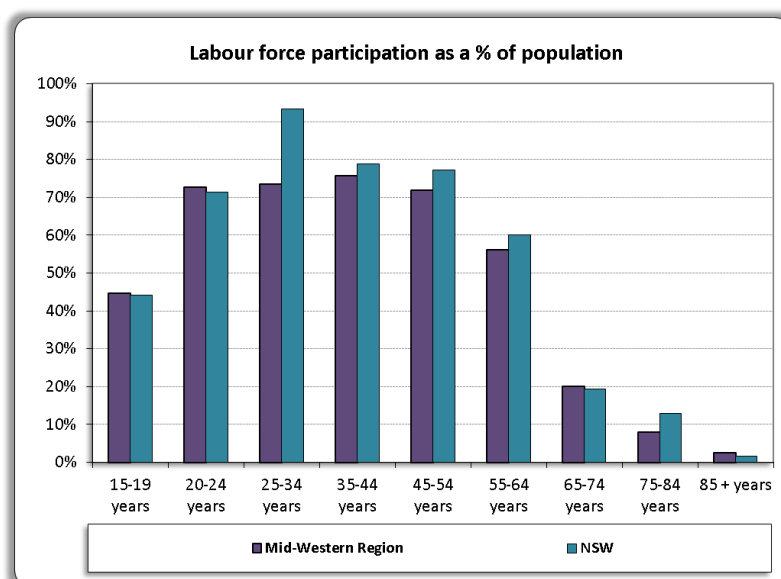
FIGURE 10: 2016 LABOUR FORCE – MID-WESTERN REGION AND NSW



Source: ABS BGA Work Product

The graph in 1 displays the percentage of the population that is participating in the labour force, broken down by age bracket. Overall, the labour force participation rate, or the portion of the population that is either employed or actively looking for work, was 54.1% in the Mid-Western Region, which was lower than the NSW participation rate of 59.2%.

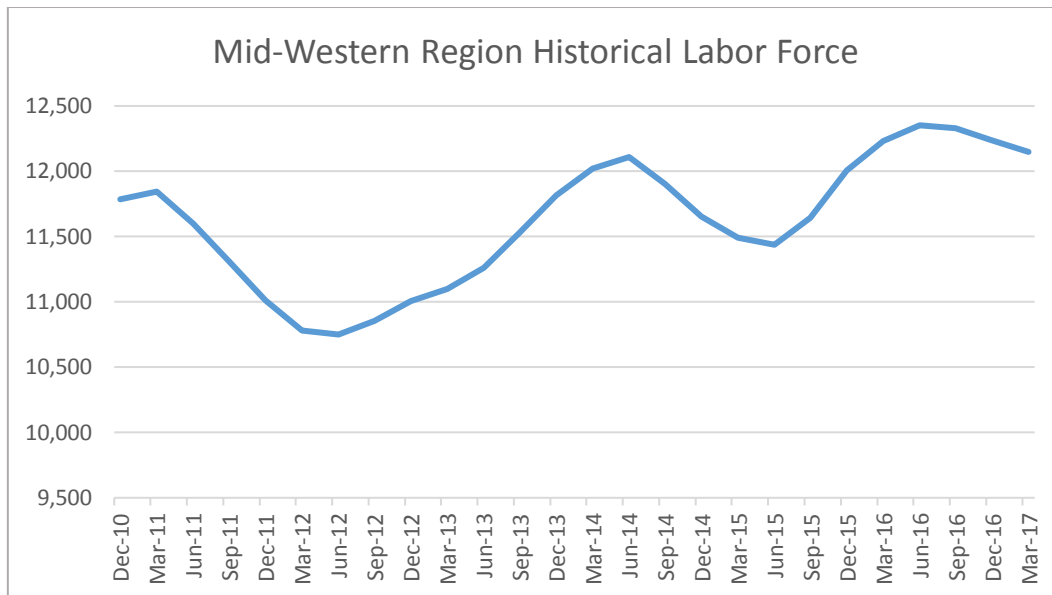
FIGURE 11: LABOUR FORCE PARTICIPATION



Source: ABS 2016 Census of Population and Housing, Basic Community Profile, BGA Work Product, AU

**Figure 102** below, taken from the Department of Jobs and Small Business' Small Area Labour Market (SALM) data series, shows the recent overall employment trend in the Mid-Western Region from December 2010 through March of 2017.

**FIGURE 102: DEC 2010 – MAR 2017 MID-WESTERN REGION LABOUR FORCE**



Source: Department of Jobs and Small Business, Small Area Labour Markets (March Quarter 2017), BGA Work Product, AU

According to employment projections prepared by Victoria University, employment in the Central West region is predicted to increase by 1.5% by 2036, with fluctuations in employment throughout that time period. While the Central West region and the Mid-Western Region are not the same area, broader economic trends are often useful as a backdrop upon which to assess local opportunities.

**Table 3** shows employment projections by industry from 2016 to 2036 in the Central West. Industry sectors that outpace the projected population and employment growth are considered higher growth; those that keep pace are considered average growth; and those that lag are considered lower growth or mature industries. All are important to the economic development of the Mid-Western Region, but will have different needs and contribute differently to the marketplace. Understanding overall growth trends can help maximise benefits from both local and regional settings. The industries with a growth rate above 0.7% in Table 3 are projected to grow faster than total employment and total population in the Central West and are therefore considered to be higher growth industries.

TABLE 3: CENTRAL WEST EMPLOYMENT PROJECTIONS

Central West Employment Projections			
	2016	2036	Change per Year
Total Population	203,650	223,900	0.50%
Total Employment	93,645	95,039	0.7%
Industry			
Information, Media, and Telecommunications	854	1,098	1.43%
Financial and Insurance Services	1,370	1,753	1.40%
Professional, Scientific, and Technical Services	4,075	5,115	1.28%
Rental, Hiring, and Real Estate Services	1,211	1,425	0.88%
Transport, Postal, and Warehousing	4,435	5,199	0.86%
Manufacturing	6,675	7,755	0.81%
Health Care and Social Assistance	12,384	13,758	0.55%
Agriculture, Forestry, and Fishing	8,823	9,587	0.43%
Administrative and Support Services	2,627	2,796	0.32%
Education and Training	8,257	8,337	0.05%
Accommodation and Food Services	6,485	6,306	-0.14%
Mining	5,029	4,811	-0.22%
Public Administration and Safety	5,984	5,588	-0.33%
Retail Trade	9,851	8,946	-0.46%
Other Services	3,875	3,484	-0.50%
Wholesale Trade	2,089	1,839	-0.60%
Arts and Recreation Services	999	871	-0.64%
Electricity, Gas, Water, and Waste Services	1,887	1,552	-0.89%
Construction	6,733	4,819	-1.42%

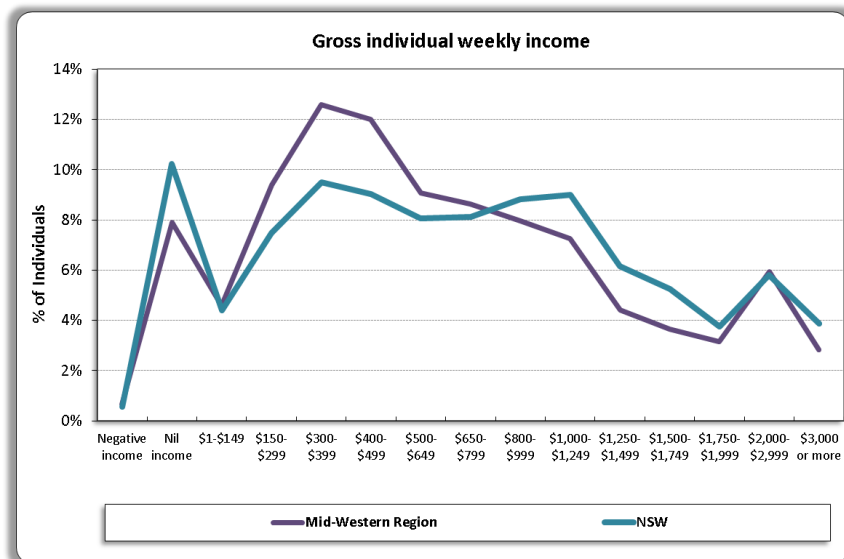
Source: Victoria University Employment Projections, AU



## 10.1. Income Distribution

Figure 13 displays the income distribution across income brackets for both the Mid-Western Region and NSW. The graph shows that residents of the Mid-Western Region earn less than NSW as a whole, which corresponds to lower costs of living than urban areas. What is somewhat atypical for a rural area is the relatively high share of high income earners; Mid-Western Region's cohort of earners in the \$1,750 and up bracket, relative to the state as a whole, is notable.

FIGURE 113: GROSS INDIVIDUAL WEEKLY INCOME, MID-WESTERN REGION (2016)



Source: ABS 2016 Census of Population and Housing, Basic Community Profile, BGA Work Product, AU



## 11. Input-Output Analysis

Input-output modelling consistent with ABS I-O framework was completed for the Mid-Western Region.

An Input-Output model also reveals how much an industry produces and consumes of intermediate goods. Analysing this data identifies which industries provide critical support to other industries in the region. For example, 99% of the lime / ready-mix cement manufacturing industry's output is consumed by other industries within the Mid-Western Region as intermediate goods for further use. This fact implies that the lime and cement industry is critical to the entire Mid-Western Region economy; without it, local industry would need to import the material from outside the region, likely at a higher cost and with longer lead times, reducing efficiency and profits. Accordingly this data will be critical in further developing actions within the Industry cluster – Manufacturing strategy. It is important to note that metrics derived from this analysis helped in the formation of business clusters that this report's strategies mention, as economic interactions between industries can yield the potential of how likely a strategy can support a community of other industries and businesses. This section can yield insight into the justification for this report's second strategy - Grow Industry Clusters around Mining, Manufacturing & Agriculture.

A few key statistics include:

- Sheep, grains, beef and dairy cattle used \$138.5 million worth of intermediary inputs across all sectors;
- Wine, spirits and tobacco industry used \$19.5 million worth of intermediary inputs across all sectors;
- Coal mining used \$855.1 million worth of intermediary inputs from all other sectors;
- Cement, lime and ready-mix concrete manufacturing used \$55.44 million worth of intermediary inputs from all sectors; and,
- Residential building construction required \$45.8 million worth of intermediary inputs across all other sectors.

Other industries with high proportions of output consumed as intermediary goods are displayed below. Five of the top ten industries that produce intermediate goods are manufacturing industries. Lacking local production by the Manufacturing industry, local downstream firms would need to import the products, which typically entails higher cost and less control over delivery times and quality; Manufacturing is very important to the Mid-Western Region's economy. Also, Agriculture, the Agriculture, Forestry and Fishing Services sector is included in the top ten producers of intermediate goods. This makes sense given that a large portion of the Mid-Western Region's economy is made up of the Agriculture, Forestry and Fishing industry.



TABLE 4: SHARE OF INDUSTRY OUTPUT FOR INTERMEDIARY CONSUMPTION, TOP 10 (2016)

Rank	Industry	Share of Output For Intermediate Goods
1	Cement, Lime and Ready-Mixed Concrete Manufacturing	99%
2	Iron and Steel Manufacturing	94%
3	Other Repair and Maintenance	94%
4	Ceramic Product Manufacturing	93%
5	Non Metallic Mineral Mining	92%
6	Other Wood Product Manufacturing	88%
7	Agriculture, Forestry and Fishing Support Services	88%
8	Structural Metal Product Manufacturing	86%
9	Building Cleaning, Pest Control and Other Support Services	85%
10	Non-Residential Property Operators and Real Estate Services	85%

Source: Input Output Table, DPC Data, AU

There are also industries within the Mid-Western Region local economy that do not supply significant output to other industries in the economy. **Table 5** shows the bottom ten industries ranked by share of output for intermediate goods. Although these industries do not provide support to industries within the region, this does not mean they are not critical to the economy. The low ranking means more of their output is devoted to final consumption within the economy – either to households, government, or for exports. For example, Iron Ore Mining is a large supplier of products as final goods and services, but provides only 8% of its output to industries within the local economy as intermediary goods.

TABLE 5: SHARE OF INDUSTRY OUTPUT FOR INTERMEDIARY CONSUMPTION, BOTTOM 10 (2016)

Rank	Industry	Share of Output For Intermediate Goods
68	Iron Ore Mining	8%
69	Insurance and Superannuation Funds	6%
70	Other Services	6%
71	Arts, Sports, Adult and Other Education Services	5%
72	Technical, Vocational and Tertiary Education Services	3%
73	Public Administration and Regulatory Services	2%
74	Health Care Services	0%
75	Residential Care and Social Assistance Services	0%
76	Primary and Secondary Education Services	0%
77	Ownership of Dwellings	0%

Source: Input Output Table, DPC Data, AU

An important component of analysis for the Input-Output table is the share of final goods and services exported by each industry. Exporting industries are good for an economy because they bring in new, additional wealth. Table 6 provides a list of the industries with the highest share of final goods as exports. The Mining, Manufacturing and Agriculture, Forestry and Fishing industries are large exporters of final goods and services.

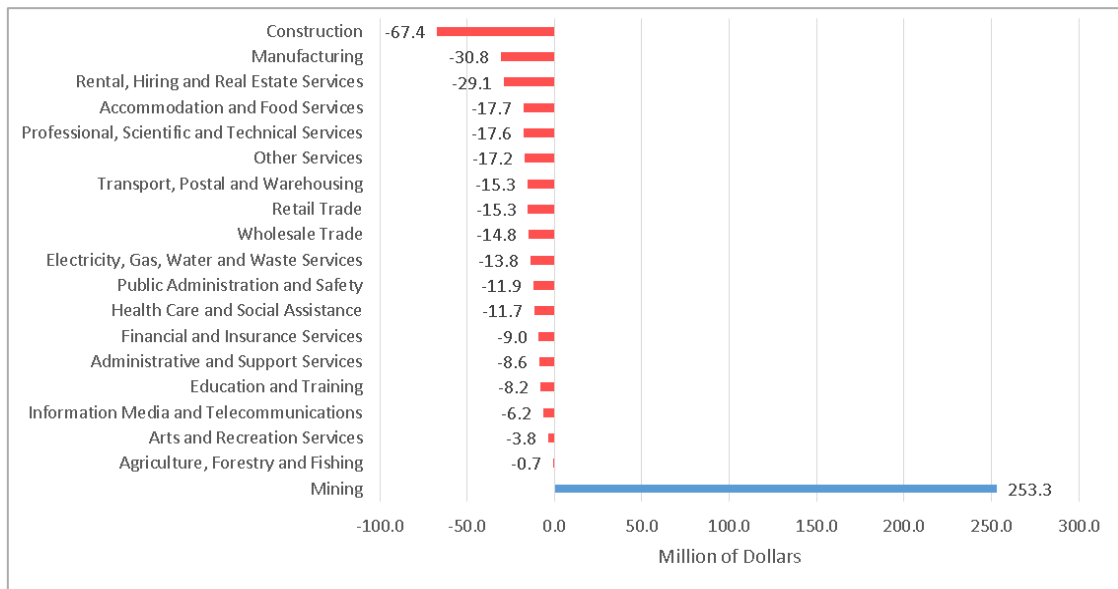
TABLE 6: SHARE OF FINAL GOODS AND SERVICES EXPORTED (TOP 10) (2016)

Rank	Industry	Share
1	Coal mining	89%
2	Iron Ore Mining	86%
3	Basic Non-Ferrous Metal Manufacturing	81%
4	Non Ferrous Metal Ore Mining	69%
5	Iron and Steel Manufacturing	52%
6	Sheep, Grains, Beef and Dairy Cattle	51%
7	Basic Chemical Manufacturing	47%
8	Agriculture, Forestry and Fishing Support Services	33%
9	Non Metallic Mineral Mining	29%
10	Cement, Lime and Ready-Mixed Concrete Manufacturing	25%

Source: Input Output Table, DPC Data, AU

Figure 123 shows the Mid-Western Region’s industries by their net exports (exports – imports). Mining is the only net exporting industry within the region. It net exports \$253.3 million worth of goods.

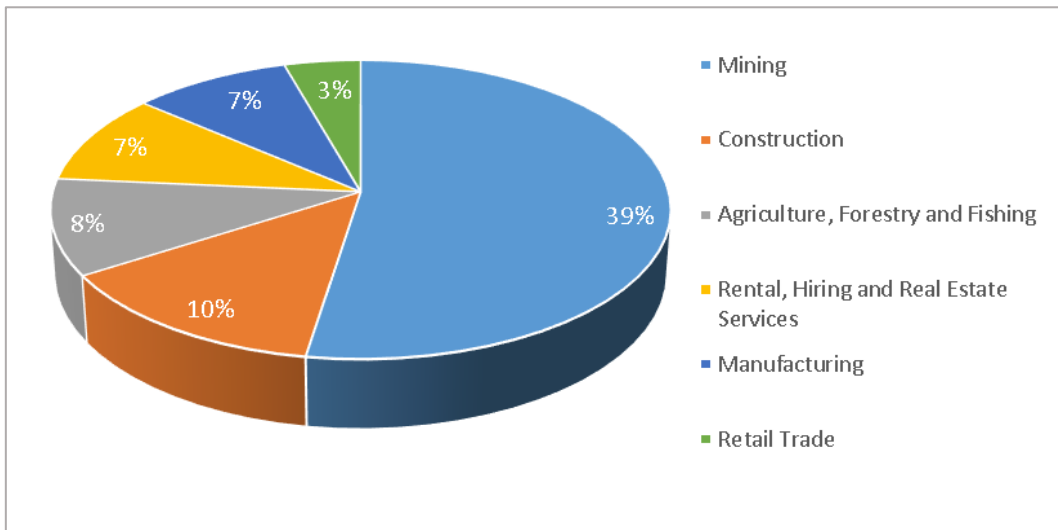
FIGURE 123: MID-WESTERN REGION NET EXPORTS (2016)



Source: DPC Data, BGA Work Product, AU

The Input-Output table also describes industries by their value-add. Figure 134 shows the breakdown of industries by their percentage of total output in the Mid-Western Region. Of note, the Mining industry alone produces 39% of the total output produced in Mid-Western region. This data shows the importance of the industry to the region in terms of net exports. While much of the REDS is dedicated to supporting tourism and diversifying the economy, mining will be strong for some years to come.

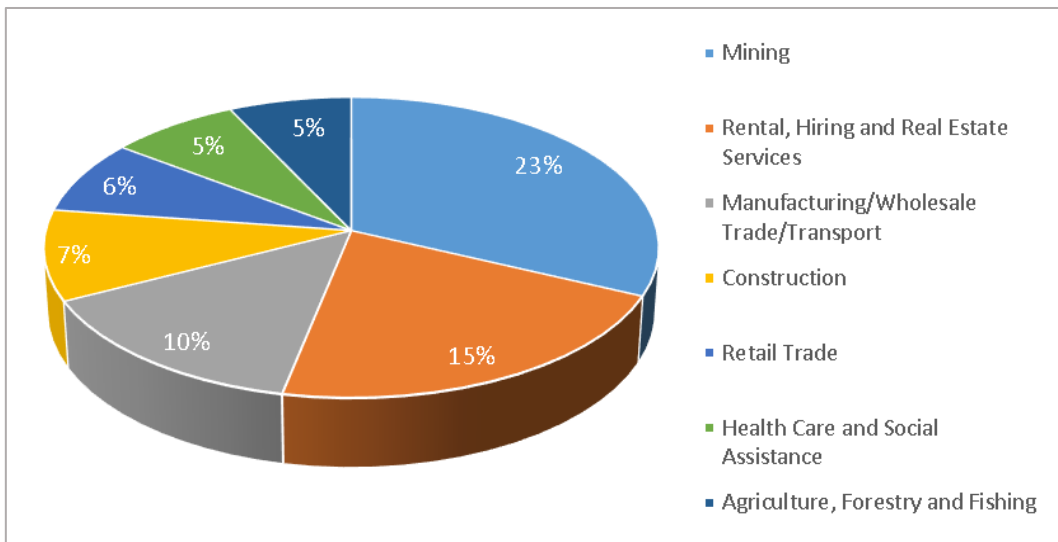
FIGURE 134: MID-WESTERN REGION OUTPUT BY INDUSTRY (2016)



Source: DPC Data, BGA Work Product, AU

Mid-Western’s main industries by value add are depicted in **Figure 145**. The value added created by an industry is calculated as the sum of the compensation of employees, gross operating surplus and taxes on products and production (minus subsidies) of the industry. The mining industry is Mid-Western’s largest value adding industry. It accounts for 23% of the value-added produced by all industries in the region. Next is the rental, hiring and real estate services industry with 15% of total value-added and manufacturing / Wholesale Trade / Transport with 10% of total value-added.

FIGURE 145: MID-WESTERN REGION VALUE-ADD BY INDUSTRY (2016)



Source: DPC Data, BGA Work Product, AU

Data presented in Figure 15 is sources from ABS data that does not explicitly value tourism. As tourism is a key component of the Strategy it is worth noting that this sector provides 11.4% FTE of the employment in the region and has an 8.8% Industry Value Add as described in **Table 7** below.

TABLE 7 - TOURISM VALUE ADD

Industry	Total impact of tourism expenditure on the Mid-Western Region FER economy		
	Wages (\$m)	FTE	Value added (\$m)
Agriculture, Forestry and Fishing	8.4%	8.2%	8.3%
Mining	0.8%	0.8%	0.8%
Manufacturing	5.7%	7.0%	6.4%
Electricity, Gas, Water and Waste Services	7.3%	7.2%	7.4%
Construction	1.6%	1.9%	1.5%
Wholesale Trade	6.0%	6.0%	6.0%
Retail Trade	27.6%	27.6%	27.6%
Accommodation and Food Services	70.0%	67.1%	71.8%
Transport, Postal and Warehousing	12.6%	12.5%	12.9%
Information Media and Telecommunications	8.0%	7.5%	8.2%
Financial and Insurance Services	7.3%	7.2%	7.1%
Rental, Hiring and Real Estate Services	12.1%	12.6%	12.8%
Professional, Scientific and Technical Services	4.1%	4.1%	4.1%
Administrative and Support Services	8.6%	12.5%	8.7%
Public Administration and Safety	0.2%	0.2%	0.2%
Education and Training	1.7%	1.7%	1.7%
Health Care and Social Assistance	1.5%	1.6%	1.6%
Arts and Recreation Services	31.8%	31.2%	31.3%
Other Services	7.2%	8.0%	7.3%
Ownership of Dwellings	NA	NA	9.1%
<b>Total</b>	<b>8.7%</b>	<b>11.4%</b>	<b>8.8%</b>

Notes:

- The above table estimates the total impact of expenditure by visitors to the FER i.e. includes both direct and flow-on or multiplier impacts
- As an example, the total impact visitor expenditure is estimated to contribute approximately 11.4% of FTE jobs
- As an example, the total impact visitor expenditure is estimated to contribute approximately 67.1% of FTE jobs in the Accommodation and Food Services
- The estimates are based entirely on secondary data used to construct the IO table and estimate visitor expenditure.

Source: Department of Premier and Cabinet work product, AU



COURTESY MUDGE GUARDIAN

## 12. Shift-Share analysis

Shift-share analysis provides other key indicators to consider when identifying areas of regional advantage. This approach reveals whether employment changes in key industries are due to larger state-wide factors or industry-wide factors, as opposed to local and regional factors. The main component of interest in a shift-share analysis is the “local effect”, given by the change in local employment in a particular industry that **cannot** be attributed to state- or industry-level factors. This is a measure of the specific effect of local conditions on the industry. For example, the observed change in employment in the Health Care and Social Assistance Industry within the Mid-Western Region from 2011-2016 was a 12% increase. The data tells us that, if employment grew:

- Had matched NSW overall employment growth, employment would have increased by 11%
- Had matched employment growth in the Health Care and Social Assistance industry in NSW as a whole, employment would have risen by 7%

Total change in employment must equal the sum of national, industry and local effects. The local effect may therefore be calculated as a residual, equal to the change in employment, minus state-wide growth and industry effects. Net of both NSW and industry-wide growth, there was a 6% decrease in employment in the Health Care and Social Assistance industry in the Mid-Western region over the 2011-2016 period. This is the local ‘shift’ effect, which can then be used to calculate what ‘share’ of new jobs can be attributed to local factors. Shift-share analysis of important industries relevant to the region are presented below.

### 12.1. Mining

Between 2011 and 2016, employment in the Mining industry increased by 345 jobs. A shift-share analysis of this industry suggests that most employment growth in Mining was created due to local factors within the Mid-Western Region, as opposed to state-wide or industry factors (although industrial factors also had a large impact). Of the 345 jobs that were added to the Mining sector between 2011 and 2016, 55% of those jobs were added due to regional factors.

There were 362, or 28% of new coal mining industry jobs added due to local effects between 2011 and 2016. The supply of coal in the Mid-Western Region makes up this local effect, hence the large impact of local effects on employment.

The future of coal mining in Australia is uncertain. While the industry has seen significant growth over the past 10 years, there are indications that the national industry may currently be declining or will be soon. The International Energy Agency recently suggested that global demand for coal would decrease over several years.<sup>4</sup> China, the world’s largest consumer of coal products, has reduced its investment into coal-fired power plants by 25% (and is subsequently investing in renewable energy sources).

It is arguable that much of the Mid-Western Region’s economic future is relatively dependent on the stability of the coal market. While the national market for coal saw a small increase after several years of declines, it has not come close to its peak consumption levels of 2008–2009.<sup>5</sup> Coal consumption is down 2% over the past 10 year period, while all other energy sources – oil, gas and renewable energy – saw positive gains in the same decade. During the 2016–2017 time period, coal consumption made

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<sup>4</sup> IEA forecast

<sup>5</sup> 2016-australian-energy-statistics

up 32% of energy use in Australia. However, the absolute quantity of national coal consumption was low relative to international consumption.

Coal mining will continue to underpin the economy for the medium term. Much of the coal produced in the region feeds the Bayswater PowerStation which will be in operation till at least 2035. Bayswater supply's much of the electricity needs for NSW and there is significant investment in coal mining expansion at the present time. The Moolarben mine 40km north of Mudgee that is expanding as is the Ulan Mine. This expansion is expected to add 450 new jobs to the region. The Bylong Coal Project 55km NE of Mudgee is nearing approval and will employ about 700 people during construction and 450 in operation. Additionally the Bowden silver mine project 26 km east of Mudgee and is likely to employ another 220 people if approved and the EIS for this mine has been submitted. Supporting Industry clusters around mining will be an essential part of the region's future.

## 12.2. Agriculture, Forestry and Fishing

The Agriculture, Forestry and Fishing industry is the fourth largest industry in terms of size in the Mid-Western LGA at 8.8% of total industry size in the region. The industry however, declined by 2% over the 2011-2016 period, which represented a loss of 14 jobs for the Mid-Western economy over that period of time. This loss was relatively moderate, in spite of the 5% decline in employment in the industry across the entire NSW state. Local factors contributed to 34% of the total change, in agricultural employment in the Mid-Western, whilst the industry effect contributed a lesser 20% of the decline. Anecdotal evidence from industry surveys and workshops indicate that this could be due to workers shifting from the agriculture industry into mining, as employment in mining greatly increased. Skills are broadly transferable between the two industries and wages in mining are generally much higher.

## 12.3. Accommodation and Food Services / Tourism

In 2016, the Accommodation and Food Services industry employed 8.3% (or 770 people) in the Mid-Western Region and had a LQ of 1.14. The thriving Accommodation and Food Services industry does particularly well in Mudgee during monthly events. However, the region faces an accommodation capacity shortage when these events occur. Thousands of visitors from outside of the Mid-Western Region travel to Mudgee and neighbouring towns; yet local hotels, bed and breakfasts and backpacker hostels reach maximum capacity during big events. These figures spike further for the Mid-Western Region's annual Wine Festival, which brings in thousands of wine connoisseurs from around the state and country.



PERRY STREET HOTEL, MUDGEE COURTESY TRIPADVISOR

Accommodation alone employed 208 employees according to the 2016 Census and had a LQ of 2.12. According to Mudgee Region Tourism's 2017-2020 Destination Management Plan, there are around 100 total providers of accommodation services in the Mid-Western Region, with a maximum capacity of 860 rooms or 2,460 guests.

### 13. Location Quotients

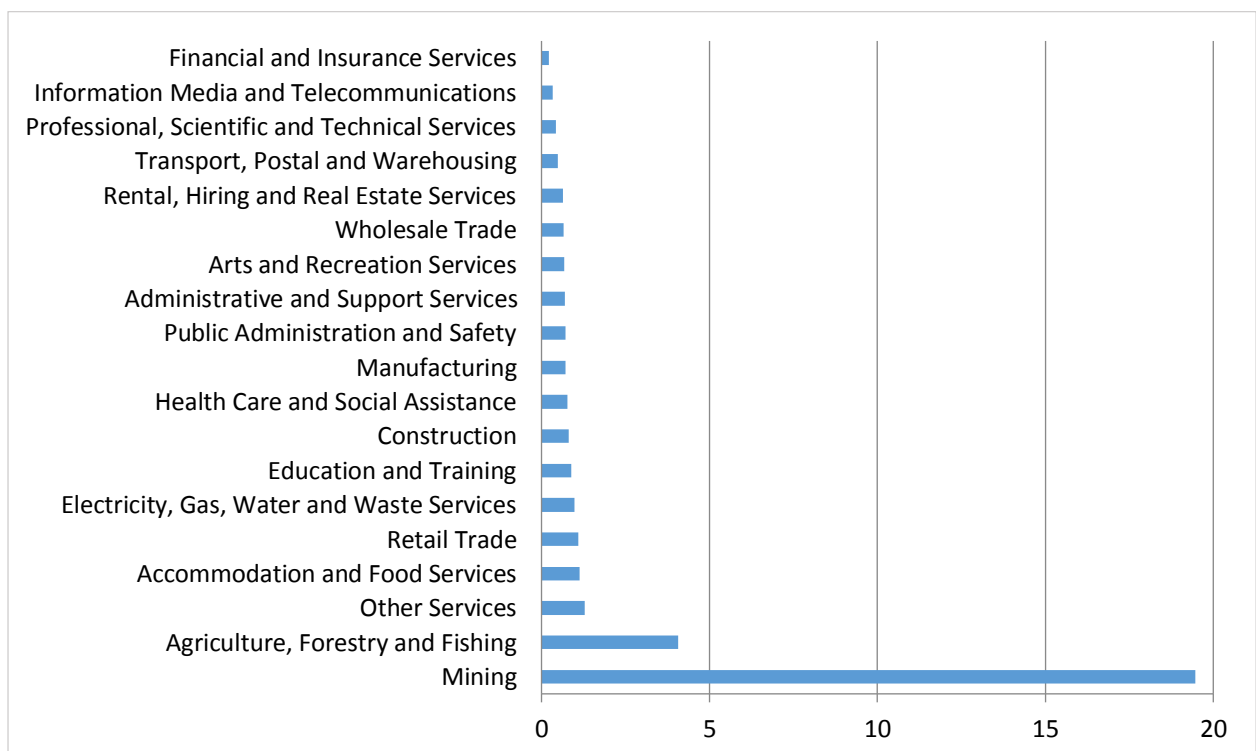
Local effects that drive employment changes can be teased out of overall employment data by assessing location quotients. Location quotients are calculated by comparing industry-level employment percentages to corresponding percentages within a “base area,” and obtaining a ratio from the comparison. The location quotient (LQ) can be calculated as:

$$LQ = \frac{\left(\frac{\text{Local Employment in Industry A, Year T}}{\text{Total Employment in Year T}}\right)}{\left(\frac{\text{Reference Employment in Industry A, Year T}}{\text{Total Reference Employment in Year T}}\right)}$$

If an industry location quotient for a particular area is greater than 1.0, by definition the industry’s presence within that particular area is relatively more concentrated or stronger than the industry’s concentration in the base area. Industry LQs help define which industries make the regional economy unique and are potentially “export-oriented”. A LQ less than 1 is indicative of less competitive advantage in the Mid-Western Region compared to the state.

Location quotients for each industry are displayed below. In the Mid-Western Region, the Mining; Agriculture, Forestry and Fishing; and Accommodation and Food Services industries all have LQs greater than one, so as stated above, this indicates a relative concentration of the industry compared to New South Wales as a whole (see Figure 156). Most other industries have a LQ at or below 1.

FIGURE 156: 2016 LOCATION QUOTIENTS BY INDUSTRY



Source: DPC Data, AU

## 14. Industry Cluster Analysis

Industry clusters and potential industry clusters were examined from a number of perspectives. As a starting point, Input-Output data was reviewed for industry sectors or subsectors that showed greater value-added or net exports proportionately, relative to NSW as a whole. Also, this report sought to build clusters around competitively significant backbone industries using the location quotients in the above section. One can think of this industry cluster analysis as linking most of this report's metrics.

Using a framework derived from prior research, the availability of factors required for specific industry specialisations was assessed. For example, in the case of agribusiness, analysis was conducted to identify whether the basic and advanced factors were available or required locally, regionally or nationally; such as raw materials, labour and knowledge resources like universities with an agricultural focus. Local demand conditions, supporting firms and firm structure and rivalry were also assessed.

Porter (1998) states that clusters tend to 'drive the direction and pace of innovation'.<sup>6</sup> Clusters can be loosely described as a set of geographically and economically interconnected firms. Porter (1990) posits that a cluster's health is assessed by innovation and competition, which depend on how close firms are to each other and their competition. He justifies this assertion by providing four reasons why innovation and competition greatly depend on inter-firm location:

- Factor conditions: Firms located near each other enjoy low-cost transportation of *basic factors*, such as raw materials and other physical resources. *Advanced factors*, such as knowledge and "the business spirit" are also likely to be shared in close proximity.
- Demand conditions: Proximity to a sizeable and sophisticated local market can encourage firms to compete for customers by providing quality and personalised service.
- Related and supporting industries: Firms can focus on reducing costs by efficiently improving their production process if supplementary suppliers are nearby.
- Company strategy, structure and rivalry: Firms can gain from "keeping friends close, and keeping enemies closer" if they learn from rival opportunities (i.e. niche information, shared resources or ideas) and if they can strategically innovate against rival threats.

Based on Porter's rationale, Input-Output analysis and preliminary interviews, several sectors were initially evaluated. From the focus group and follow-up discussions, industry cluster analysis further refined the list to agribusiness, mining, manufacturing and agriculture logistics, viticulture and retiree and aged care businesses.

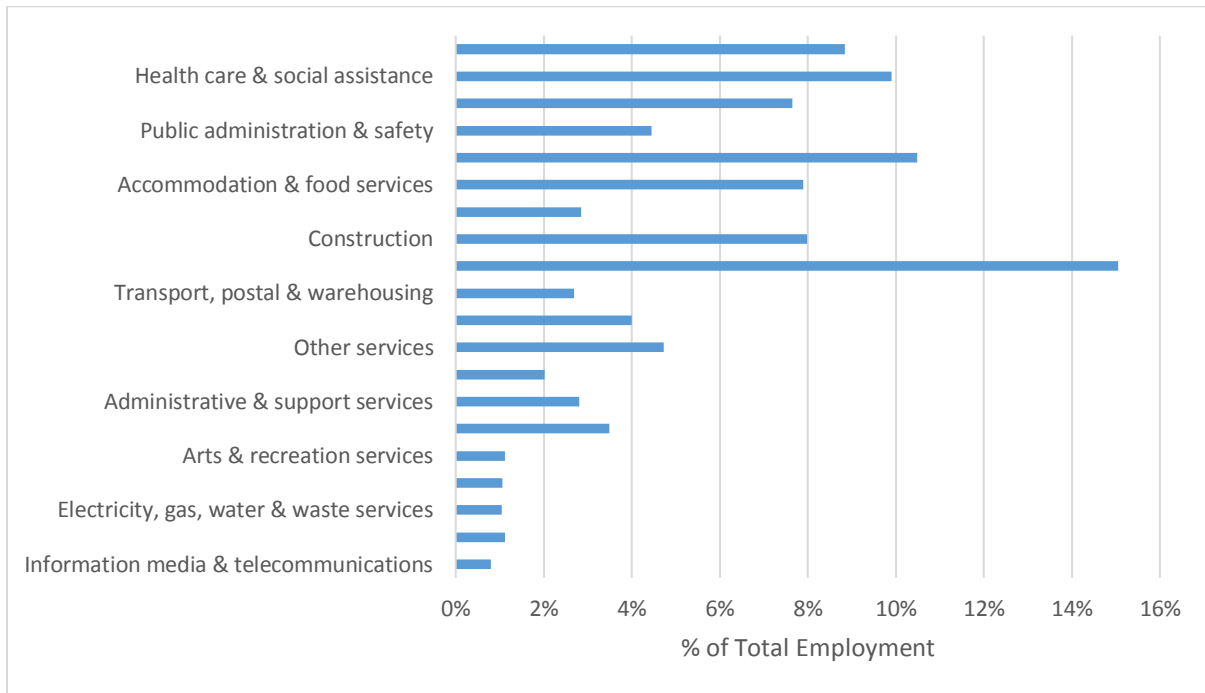
The distribution of employment by industry in the region is shown in Figure 167. Mining is one the largest employers throughout the Mid-Western Region, accounting for more than 10% of total employment in the region. Agriculture, Forestry and Fishing and Accommodation and Food Services also employ a large share of workers, each with more than 8% of the total employment in the Mid-Western Region.

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<sup>6</sup> *Clusters and the new economics of competition*, Porter (1998).



FIGURE 167: SHARE OF TOTAL EMPLOYMENT BY TWO DIGIT ANZSIC LEVEL, 2016



Source: ABS 2016 Census of Population and Housing, AU

The relative contribution of various industries to the overall income of the Mid-Western Region can be evaluated by comparing the number of businesses in a sector to the employees in that sector. For example, if the number of firms in an industry sector comprises only 2% of the overall economy but 10% of overall employment, the sector would be characterized by fewer, larger firms. Conversely, if 10% of firms support 2% of employment, then the sector would consist of many smaller firms. As shown in **Table 8** (below), Agriculture, forestry and Fishing firms make up 37% of all firms in the region but only 9% of employment (i.e. many small firms) while Mining accounts for only 1% of all firms but 15% of employment (few, large firms). This understanding is important in the strategy development and how these sectors should be approached, particularly in the implementation stages. Gazelle companies are more likely to appear in those sectors that have a high number of firm that employ small numbers of staff. For example a café that employs a small number of people, given the right mentoring could expand to employ many more people. There are many examples of this in the Mid-Western and other regional towns in NSW. The approach will be very different to those industries that are few but employ many.

TABLE 8. MID-WESTERN REGION INDUSTRY COMPOSITION BY BUSINESS SECTOR

Industry	Firms (2015)	Employment (2015)
Agriculture, forestry and fishing	37%	9%
Construction	13%	8%
Retail trade	6%	10%
Professional, scientific and technical services	6%	3%
Rental, hiring and real estate services	6%	1%
Accommodation and food services	5%	8%
Manufacturing	4%	4%
Other services	4%	5%
Transport, postal and warehousing	4%	3%
Financial and insurance services	3%	1%
Health care and social assistance	3%	10%
Administrative and support services	3%	3%
Wholesale trade	2%	2%
Mining	1%	15%
Arts and recreation services	1%	1%
Education and training	1%	8%
Public administration and safety	0%	4%
Electricity, gas, water and waste services	0%	1%
Information media and telecommunications	0%	1%

Source: Firms by industry data from ABS (Mudgee East and Mudgee West SA2 regions combined),  
Employment by industry data from ABS (Mid-Western LGA)

## 14.1. The interaction between manufacturing, wholesale and transport for both mining and agribusiness

Input-Output analysis describe a high degree of economic interaction between manufacturing, wholesale and transport logistics for both mining and agribusiness. The current ABS-derived Input-Output tables show that five of the top ten value-added output producers for intermediate goods are specialised manufacturing sectors, with four of the remaining sectors providing supporting or related services. Manufacturing is not an industry that immediately springs to mind in the Mid-Western region. This inter-relationship needs to be explored further and is a component of the second strategy around growing an industry cluster around the manufacturing sector.

Phone interviewees and survey respondents reported that the Mid-Western Region is highly lacking in rail infrastructure while road infrastructure was satisfactory, which are both necessary for the manufacturing and logistics success. While rail infrastructure exists for coal mines to export goods, it is virtually non-existent for the manufacturing industry. Lack of rail infrastructure for manufactured goods suggests that the manufacturing industry must rely on local road network for transport. This report's strategies acknowledged the need to support this cluster through logistical means and is supported by Goal 4.2 of the Mid-Western Regional Councils Delivery Program 2017/21 which is dedicated to the 'efficient connection to major towns and cities'.

During discussions with stakeholders, they mentioned that there was significant potential for cross-overs between the agriculture and mining industries' needs, due to common demands for machinery,

repair, specialised labour and other supporting services. Manufacturing, wholesale, and trade / transport sectors support employment comparable to tourism and agriculture. Metals manufacturing, in particular, shows comparative advantage relative to other NSW LGAs in both employment and output and requires specialised labour, access to materials and transport options. Local producers have developed their own access to materials and transport options and work together with the larger regional network. The relatively mature base of skilled labour is likely to be increasingly valuable as the growing mining and substantial agriculture / viticulture sectors can be expected to generate demand for the sector for at least a decade.

## 14.2. Viticulture and tourism



LOUEE ENDURO AND MOTOCROSS COMPLEX [WWW.OUEE.NET.AU](http://WWW.OUEE.NET.AU)

The justification to develop a strategy that provides support for a diverse range of winemaking firms came about from several interviewees expressing the need to support its tourism-oriented labour market. Several stakeholders discussed the difficulty in finding a consistent stream of labour to do tasks such as greet tourists and provide a sommelier-level analysis to enhance the winery experience. Some labourers were either seasonal workers (e.g. university students on a vacation or backpackers) or had to travel far distances. A skilled and consistent workforce was identified as an area requiring improvement. Thus, supporting the pool of niche winemaking knowledge and experience was a two-pronged approach to gain supply chain efficiencies and to positively leverage tourism.

While tourism has been identified by stakeholders and others in the business community as a growing industry, there is no dedicated “Tourism” industry in ABS classifications. Tourism is generally seen as a cluster of leisure businesses. There has been a push to increase tourism in the past few years in the Mid-Western Region. The increase in tourism has benefited at least partly from the 2016 ‘Let’s Skip Town Campaign’ that highlighted Mudgee’s endowments of wine and rural charm to attract overnight stays from wealthy cosmopolitan patrons of Sydney. Mudgee Regional Tourism Inc. employed research consultants to analyse tourism opportunities and secure partnerships with high-profile content agencies such as Broadsheet, a lifestyle website that is marketed toward young urban professionals with high disposable incomes and discerning tastes.

**Table 8** (above) displays the impact of tourism in the Mid-Western Region FER. The values provided by DPC are estimates of tourism’s total (direct and flow-on) impact to wages, full-time equivalent (FTE) and value-added to an industry. As an example, tourism expenditure in the region “funds” 11.4% of full-time equivalent employees. Tourism mostly impacts Accommodation and Food Services, Arts and Recreation Services and Retail Trade.

Several museums can be found in the Mid-Western Region, primarily in the four main urban centres – Rylstone, Mudgee and Gulgong. Each of the museums represents a historical perspective of the respective town. An opportunity exists to connect each of these museums in a ‘heritage trail’ throughout the city. This will further add to the intrinsic and social value that the region offers in the Tourism industry, and allow the council to further capitalise on the first aim of the strategy; in developing and diversifying the tourism sector.

In addition to these museums, an art gallery at the Cudgegong Shire Building in downtown Mudgee is currently being discussed by interested parties, including Council. Adding an art gallery has potential to further increase interest in the tourism offerings of the Mid-Western Region and simultaneously add a sense of culture and leisure value. Among all amenities in the business community survey, Art was ranked ‘below average’ by 22% of respondents. This was the third highest ‘Below Average’ ranking of all regional amenities. A local art gallery could assist in changing the perception of a below average art category.

Sports Tourism is another significant contributor to the Mid-Western Region’s local tourism economy. In Mudgee, the Glen Willow Sporting Complex – built in 2012 – brings rugby union, rugby league, soccer, netball, and many other supporting events to the Mid-Western Region. The estimated overall 2012–2017 economic impact from the Sports Complex is \$21 million. A Stage 2 upgrade is planned for the sports complex, more details can be found in the Regional Action Plan section of the report.

The natural surroundings and environment also draw sports tourists to the region. The Mid-Western Region can capitalise on its natural environment through the creation of things like the new mountain bike trail in Mudgee and the Louee motocross complex which is on [Lue Station](#), a working sheep and cattle property situated near the village of Lue. Louee is only 20 minutes’ drive East of Mudgee and approximately 3 hours’ drive from Sydney or Newcastle.

All in all, acknowledging this cluster of leisure-oriented businesses justified this report’s strategy to build on the viticulture industry and diversify overall tourism offerings.



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## 15. Infrastructure Audit

The following infrastructure audit profiles the Mid-Western Region's various infrastructure needs, which include traditional infrastructure as well as internet technologies and health infrastructure. Acknowledging the potential and the limitations of the region's infrastructure landscape helped support several strategies and any respective infrastructure priorities.

Infrastructure Type	Description
<b>Transport</b>	
<b>Road</b>	<p>The Castlereagh Highway (or B55) is the main highway through the Mid-Western Region, running from Lithgow in the South to Gilgandra in the North. The highway intersects with Mudgee at its midpoint. Mudgee and the rest of the Mid-Western Region miss some of the arterial roads, such as the A32 which connects nearby major economic centres such as Bathurst, Orange and Dubbo.</p> <p>A majority of motor tourists travel to Mudgee by way of the Castlereagh Highway. Some roads connecting Mudgee to other regional hotspots of Dubbo and Orange are perceived to be in poor condition by stakeholders. In turn, this is perceived as an economic constraint for tourism; and for exports, like wine, leaving the region. This has also been corroborated in the Mid-Western Regional Councils Delivery Plan 2017/21 which identifies in, strategy 4.2.1 Develop a regional transport network in partnership with government agencies that grows with the needs of residents and businesses a program to lobby for improved access to Western NSW from Sydney.</p>
<b>Air</b>	<p>Aeronautical transport into and out of the Mid-Western Region is principally served by Mudgee Airport. Pelican Airlines provides inexpensive air travel between Mudgee and Sydney. The relatively low cost of flying in / out of the region creates opportunities for out-of-town commuters to regularly engage in business locally. Some entrepreneurs fly to Mudgee to work Monday through Friday, then fly back to Sydney for the weekend. It has also be noted that some executives work in Sydney 3 or 4 days a week and work in Mudgee 2 or 3 days a week choosing the lifestyle of the region over Sydney. The airline is propped up by Government incentives and funding And should be recognised as a critical part of the regional offering</p> <p>Upgrades and major works are planned for the 2017-2018 financial year. These upgrades include an extension of the terminal building, an extension of the main taxiway, and installation of precision approach path lighting and the replacement of runway lighting.</p>
<b>Rail</b>	<p>All rail infrastructure in the Mid-Western Region is used for freight. The Sandy Hollow–Gulgong railway line – also known as the Ulan line – serves the coal mines in Ulan. It runs 125 kilometres from the small rural town of Sandy Hollow to the Northern section of the Mid-Western Region, terminating in Gulgong.</p>

Other	
<b>Telecommunications</b>	<p>Initial phone conversations with key stakeholders revealed that internet infrastructure was a significant barrier to economic growth in the Mid-Western Region. Reliable internet connections are possible for those located within the heart of local towns, but stable connections are less likely the further one gets from the heart of town. New businesses looking to start up operations outside of the main centres may be hamstrung in providing online goods or services.</p> <p>Strategy 4.2.2 of the Regional Councils Delivery Plan 2017/21 has identified this as a regional issue and is a critical piece of infrastructure across all industries.</p>
<b>NBN</b>	<p>The National Broadband Network (NBN) has been progressively rolled out throughout all of Australia; and in 2016, NBN was introduced into the Mid-Western Region. Many survey respondents and focus group participants have perceived the NBN to be disappointing, as connection speeds are not as fast as was expected. As part of the REDS strategy 4 - Support the attraction and retention of an increased number of diverse businesses and industries while developing a strong entrepreneurial reputation we have identified the Area Switch Technology Choice Program that could be supported by Council. The program helps businesses switch from Fibre to the Node (FTTN) technology to Fibre to the Premises (FTTP) technology</p>
<b>Dark Fibre</b>	<p>A relatively new internet technology – Dark Fibre – is a privately owned and operated optic fibre network that provides point – to – point connections between premises and is seen as an alternative to the NBN. There are a growing number of Dark Fibre providers with some of the bigger providers such as TPG active in the market. It is currently not offered in the Mid-Western Region. Conversations with providers revealed Dark Fibre is potentially available within Mudgee but not in smaller towns like Kandos, Rylstone or Gulgong. As this technology develops this could be a viable alternative for some companies such as mining operations.</p>
<b>Health Infrastructure</b>	<p>The town of Mudgee has a small public hospital – Mudgee Health Service – that contains about 50 beds. It also contains an emergency department. One of the concerns about attracting new workers to the Mid-Western Region is its lack of health care. A \$70 million upgrade to Mudgee Health Service has commenced, once complete, the upgraded facilities will offer more sophisticated equipment and require additional doctors and staff. This will serve to boost the Mid-Western Region’s capacity in health care. Other health care services in the Mid-Western Region include the Rylstone Multi-Purpose Hospital, serving the Rylstone community.</p>

## 16. Institutional Audit

The Mid-Western Region has a diverse collection of institutions, all of which are interconnected in its economic development. Understanding how each organisation can interact with each other can help decision makers to implement the strategy. Some of the institutions have more local level concerns, such as the business chambers in Gulgong, Rylstone and Mudgee. Others, on the other hand, have regional level outlooks, like Mid-Western Regional Council and the Mudgee Regional Tourism Incorporated. At higher macroeconomic levels, NSW agencies like Department of Premier and Cabinet and the Department of Industry have state-wide responsibilities for economic development. Each of the parties interact on economic development matters; and have done so well before and during the project. This section will help decision makers navigate the various groups if this report's strategies will be implemented.

Institution Type	Description
<b>Mid-Western Regional Council</b>	An overview of the Mid-Western Region is provided in the Regional Audit section of the report. There are nine members of the council (including the Mayor and Deputy Mayor). Core government services are provided by Council for the Mid-Western Region, including business growth enablers. While some bureaucratic issues were raised by stakeholders, issues were considered minor and readily addressed. Council is largely considered an asset to economic development based on feedback.
<b>Orana Regional Development Area</b>	The Mid-Western Region Council's Region LGA belongs to the Orana Regional Development Area, which covers Central West and West NSW (25% of all of NSW area). The Orana RDA is the largest RDA in NSW with 13 local government areas in its boundary. It contains nearly 123,000,000 people and has a Gross Regional Product of \$8.075 7billion. The Mid-Western region has a GRP of \$1.941 Billion and is second only to the GRP of Dubbo. A Workforce Development Strategy was completed in November 2014 by Urbis. The Mid-Western Regional Relocation project specifically addresses skills gaps and shortages in the Orana RDA.
<b>Regional Organisation of Councils</b>	The Mid-Western Region LGA is not a member of any Regional Organisation of Council (ROC). The Mid-Western Region was historically associated with the Central NSW Region of Councils (CENTROC) but left the organisation in 2016.
<b>Office of Regional Growth NSW</b>	The DPC Office of Regional Growth is responsible for growth of regional areas throughout the NSW; and has a long history of work within the Mid-Western Region.
<b>NSW Department of Premier and Cabinet</b>	The NSW Department of Premier and cabinet (DPC) is a state organisation that leads the NSW public sector in fulfilling its commitments and priorities. The DPC will be granting funds to regions based on the needs of that region. The funding could support priority infrastructure projects, as outlined in this report.

<sup>7</sup> RDA Orana [Economic Profile](#)

Institution Type	Description
<b>NSW Department of Primary Industries</b>	The NSW Department of Primary Industries (DPI) is a state level organisation responsible for industries such as agriculture and fishing and related aspects like animals / livestock, water and food safety. Given that there is a large agriculture sector in the Mid-Western Region, feedback from DPI was critical.
<b>Educational Institutions</b>	Two TAFE campuses exist within the Mid-Western Region, both located in Mudgee. TAFE provides a necessary supply of trade skills to the Mid-Western Region, especially to the mining industry. The Mudgee Learning Resource Hub can provide a valuable resource for local employers seeking to fill skills gaps. The university courses that are delivered closest to the Mid-Western Region are offered by Charles Sturt University (CSU) satellite campuses.
<b>Commerce Chambers and Business Groups</b>	The Mudgee Chamber of Commerce (MCC) seeks to serve the local business community in the town of Mudgee, the Mid-Western Region's economic centre. Within the Mid-Western Region, the Mudgee Business Association, Gulgong Chamber of Commerce and Rylstone Kandos Business and Tourism Inc all operate.
<b>NSW Minerals Council</b>	The NSW Minerals Council has a significant representation in the Mid-Western Region. The Coal Mining sector employs a large share of workers in the Mid-Western Region and also contributes to a majority of its output.
<b>Trade Groups</b>	Mudgee Region Tourism, Mudgee Fine Foods Inc., Mudgee Wine and Grape Growers Association Inc and the Olive Growers Mudgee Inc. serve their respective industries throughout the Mid-Western Region.
<b>Mudgee Region Tourism (MRT)</b>	Mudgee Regional Tourism is the Mid-Western Region's peak tourism body. It consists of around 300 members and seeks to boost and promote tourism in the Mid-Western Region. The key performance metric for the Mudgee Regional Tourism is increasing the number of overnight stays in the Mid-Western Region. Mudgee Regional Tourism works closely with other peak bodies in the Mid-Western Region, such as Mudgee Wine, Mudgee Wine and Grape Growers Association, Ulan Mining and the Rylstone Tourism Group, amongst others.
<b>Mudgee Wine</b>	Mudgee Wine is the Mid-Western Region's peak viticulture body. It represents many of the local, family owned vineyards throughout the Mid-Western Region. Mudgee Wine has been working closely with Council and Mudgee Region Tourism to increase the marketability of local vineyards throughout the Mid-Western Region.



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## 18. ABS Census Employment Reporting Methodology Changes

The ABS has changed reporting methodology between the 2011 and 2016 Census in both allocation of employment by “place of work” in terms of geographical allocations; and in terms of “number of persons” by industry sector. Both of these factors impact on comparisons between the two data sets. This means that although the direction of the growth (or decline) is unlikely to be affected, the magnitude of growth (or decline) might be impacted. This will not have a material impact on the strengths, endowments and specialisations of the region; and thus does not impact the resulting strategies contained within this Regional Economic Development Strategy.

The differences are as follows. The “place of work” employment data has, for the 2016 Census results, been estimated by allocating all individuals to an LGA including individuals who:

- did not specify a place of work address
- only specified somewhere in New South Wales
- only specified a particular SA2 level

However, the “place of work” data provided by the ABS for the 2011 Census estimates the number of those employed at the individual LGA level excluding the following “non-defined” categories, which are reported separately:

- Place of work – Capital City undefined
- Place of work – no fixed address
- Place of work – state/Territory undefined (i.e. at the NSW level, somewhere in NSW)

Reallocating the effectively “non-defined” data from the 2011 Census to individual LGAs cannot be done on a simple pro rata basis. Accordingly, the “place of work” data for 2011 in this document reflects that provided by the ABS and, without reallocating the “non-defined” categories, may be understated. Consequently, the difference in workers in any given LGA between 2011 and 2016 may be overstated.

Discussions with the ABS are ongoing with regards to a working solution on how to deal with this difference and thus could not be resolved by the time of publishing.

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