

THE VISION

A leading region in innovation, resilience and diversity of opportunity, with world class infrastructure and direct access to interstate and international markets, boasting an enviable lifestyle.



HUNTER

REGIONAL ECONOMIC DEVELOPMENT STRATEGY

2018 – 2022

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.



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 a 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, the strategies, and early stage actions required to achieve the vision.

Regional Economic Development Strategies articulate 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 on-going 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.

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, particularly councils, communities and local businesses, in planning their future economic activities. 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 helping to capitalise upon other economic opportunities.

This Strategy was formed in collaboration with the local councils (Cessnock City, Dungog Shire, Maitland City, Muswellbrook Shire, Port Stephens, Singleton and Upper Hunter Shire), key stakeholders and the broader regional community and with support from the NSW Government's Centre for Economic and Regional Development (CERD).

It is presented in two documents, the *Hunter Regional Economic Development Strategy 2018–2022*, which allows the reader to quickly and easily determine key content, while the accompanying *Hunter Regional Economic Development Strategy 2018–2022 Supporting Analysis* details the Strategy methodology, evidence and 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.



INTRODUCTION

The Hunter Regional Economic Development Strategy 2018–2022 (the Strategy) sets out a long term economic vision and associated strategy for the Hunter Functional Economic Region (Hunter, the Region).

Economic research suggests that regions are becoming increasingly specialised in the key engine industries¹ that drive regional economies and a region's relative strengths (endowments) play a key role in determining these specialisations.²

This Strategy is based on industry specialisations and opportunities that leverage the region's key endowments — including its natural resources; infrastructure; established clusters and institutions; location; and labour force and lifestyle — to guide investment and other actions over the period 2018 to 2022.

1. For the purposes of regional development, it is useful to classify industries as:

- Engines — industries that bring money into the region (e.g. agriculture) and that drive the local economy
- Enabling — industries that support the engines (e.g. veterinary services to agriculture), and
- Population serving — industries that support the local population (e.g. retail).

Typically the fortunes of the population-serving industries depend on the success of the engines and therefore it is useful to focus on the engine sectors that drive growth.

2. *Regional Economic Growth Enablers Report (2017)*, Centre for Economic and Regional Development.

Three core strategies have been identified to capture the opportunities, manage risks and deliver on the vision. These are:

- A. Improve inter and intra-connectivity of the Region to boost business opportunities in the 'engine' industries of Agriculture, Mining and Manufacturing
- B. Manage transitions and risks to the Coal Mining and Electricity Generation sectors and diversify the Region's economy to build resilience
- C. Improve infrastructure, services and amenities to fully realise and sustain the Region's growth potential



BACKGROUND

The Region incorporates coastal townships, agricultural lands, localities with a heavy concentration of mining and metropolitan areas that are considered part of Greater Newcastle region. It incorporates an area of 21,859 square kilometres located along the Hunter River valley, upstream of Newcastle city. It is located approximately 175 kilometres north of Sydney (with a driving time of just over 2 hours) and is crossed by the Pacific, New England and Golden Highways. The Region had an estimated residential population of 270,806 in 2016³, around seventy per cent of whom resided in major population centres. It sits within the wider Hunter area, which also includes the LGAs of Newcastle, Lake Macquarie and MidCoast⁴.

Figure 1: The Hunter Functional Economic Region



There is substantial commuting between the Region and Newcastle and Lake Macquarie LGAs, which have a combined population of 363,766⁵. As at the 2016 Census, 7.8% of people who are employed who live in Lake Macquarie work in the Region, and 11.7% of those employed who live in the Newcastle LGA work in the Region. Of those employed and living in the Region 4.2% work in Lake Macquarie, and 15.4% of those work in the Newcastle LGA.

3. Source: Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP).

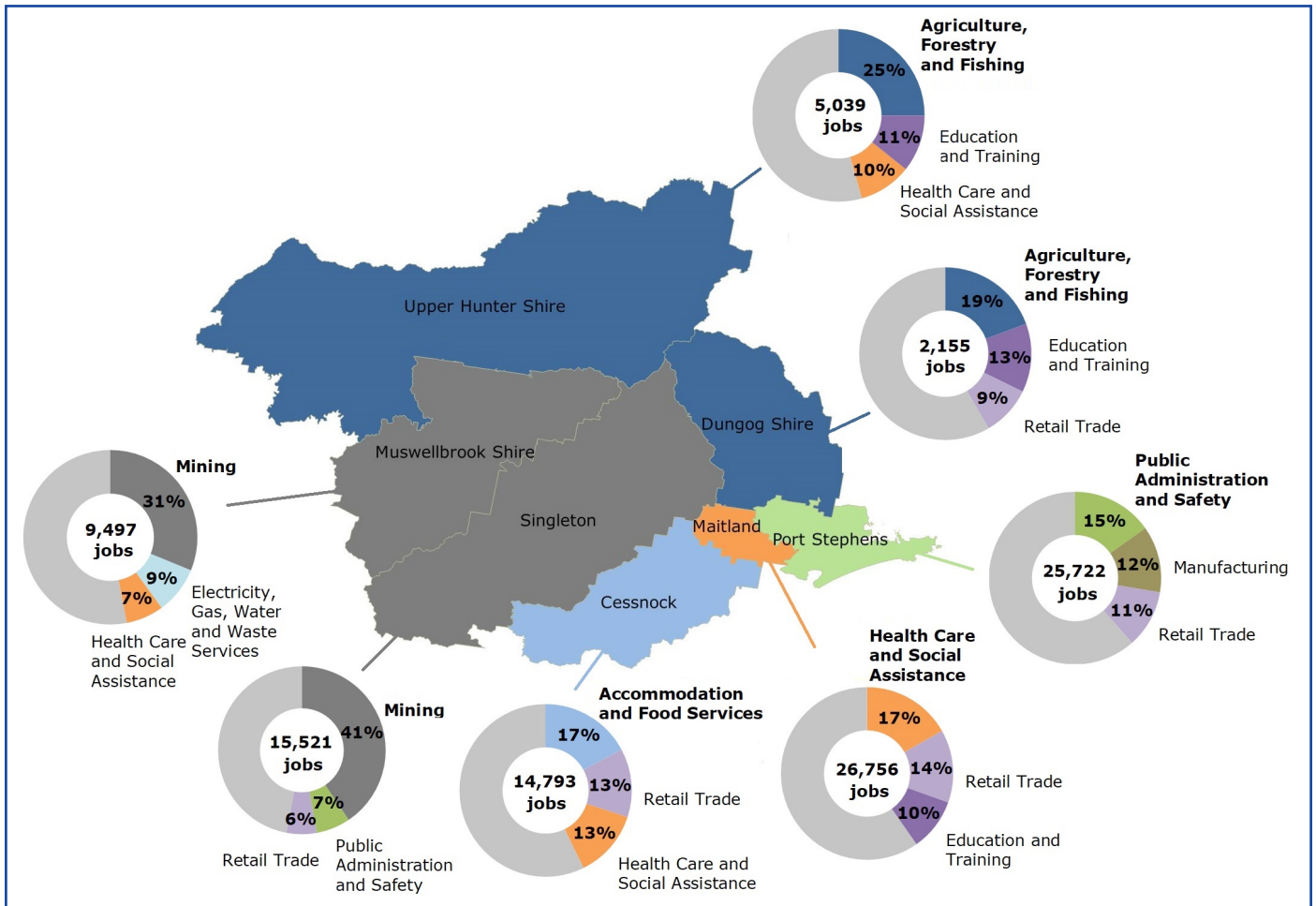
4. http://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/Hunter/Hunter-regional-plan/~/_media/39DA8C4784DB488FAD95EF1EA24099AD.ashx, Accessed 28/06/2018

The demographic and industry characteristics vary significantly by location within the Region (see Figure 2). ‘Hunter-Upper’ (incorporating Singleton, Upper Hunter, Muswellbrook and Dungog Shire) is dominated by agriculture and coal mining. ‘Hunter-Lower’ (incorporating Cessnock, Maitland and Port Stephens) is more diversified. There is some coal mining and agriculture (notably the Hunter Valley Wine region), but also substantial employment in manufacturing, defence and population serving industries. ‘Hunter-Lower’ is also more densely populated, incorporating approximately three quarters of the Region’s population.

5. Source: Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP).

BACKGROUND CONTINUED

Figure 2: Major sources of employment by LGA in the Hunter region



Source: ABS (2016), Census of Population and Housing, based on place of work.

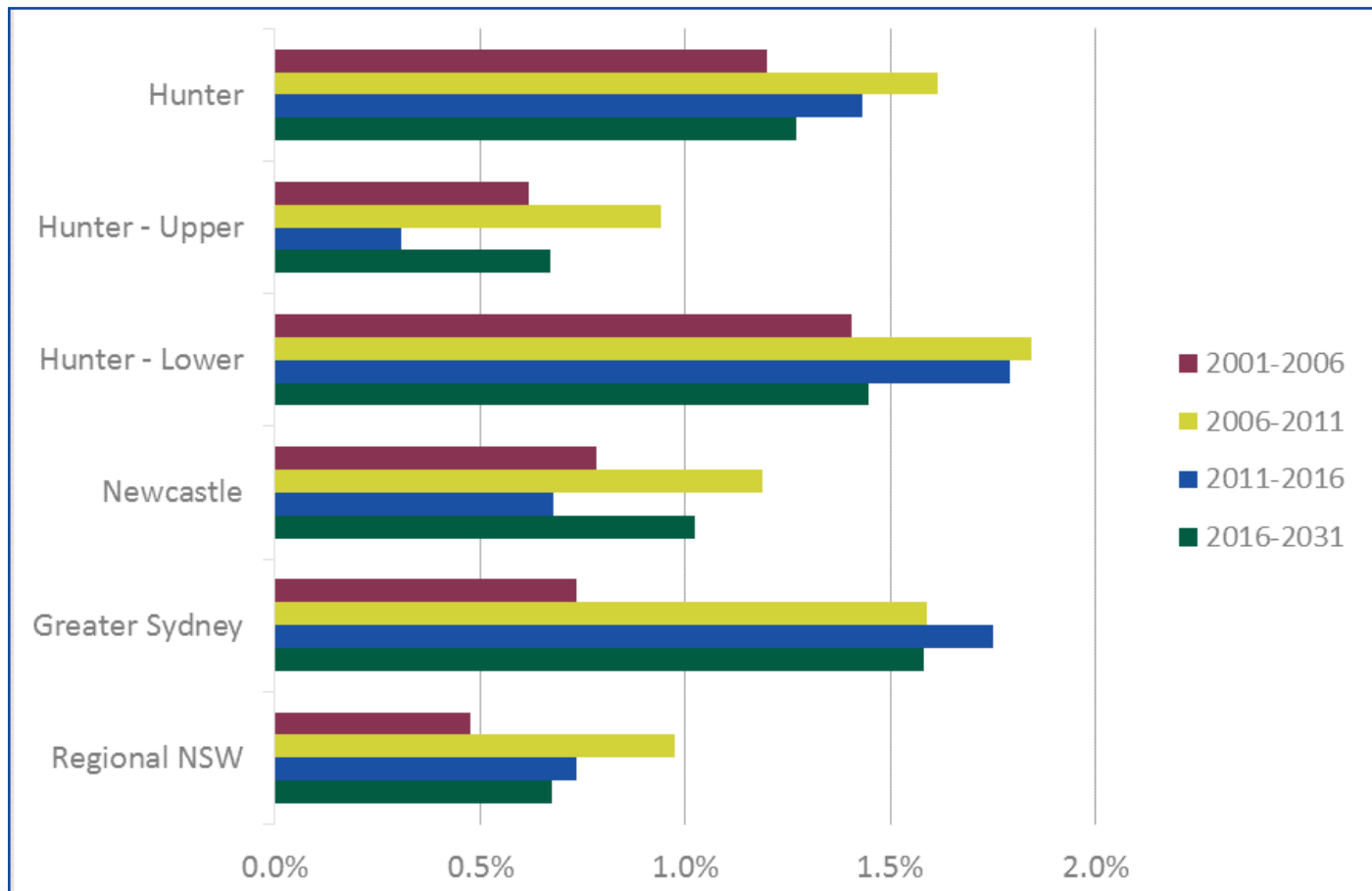
A defining feature of the Region is its rapid population growth. Since 2006 the annualised population growth rate has been 1.5% compared to the NSW average of 1.4% (see Figure 3). The growth rate has been particularly high in the Lower section of the Region (1.8%). Based on the NSW Department of Planning & Environment forecasts, the Hunter-Lower is expected to continue to grow rapidly. From 2016 to 2031, the population of Hunter-Lower is expected to grow by 24.1%, faster than that of the City of Newcastle (16.5%) and much faster than that of Regional NSW (10.6%).

This growth has significant implications for the Strategy. For example, while the region currently offers high levels of infrastructure, services and amenities (comparable to that of surrounding metropolitan areas), the region must continue to develop these such that it is able to maintain the same level of appeal to people who may be seeking relocation from metropolitan areas and so that it can cope with its growing population.



BACKGROUND CONTINUED

Figure 3: Historical and forecast annual population growth rates – Hunter and reference regions



Source: ABS ERP by LGA, NSW Department of Planning & Environment projections (2016).



ENDOWMENTS

Endowments are strengths that a regional economy possesses and can capitalise on. Economic principles suggest that endowments play a key role in the economic development of regions. The CERD in its *Regional Economic Growth Enablers Report (2017)* found that:

*the future of individual regional economies is inexorably linked to their natural endowments and attempts to retain or establish industries without an underpinning endowment are unlikely to succeed.*⁶

A region seeking to encourage economic development should therefore concentrate on factors that enable the growth of endowment-based industries, along with building local leadership and institutional capacity/capabilities to facilitate businesses and public agencies/services to capitalise on the opportunities that a region's endowments offer.

Natural resources

The Region has abundant, accessible, high-quality coal resources (including thermal and metallurgical coal) located in the Hunter and Newcastle coal basins. In addition, there are substantial coal seam gas (CSG) resources.

The Region has a diverse range of soil types suitable for a broad range of agricultural industries. There is growing interest in using the substantial, rehabilitated buffer lands around mining sites for agricultural and light industrial purposes.

The Hunter is the largest coastal water catchment in NSW and provides a relatively stable supply of water. However, when droughts occur they can be severe and water security is a major issue, particularly for the Upper Hunter.

The Region's climate conveys a number of advantages. The coastal climate around Port Stephens is important for tourism and lifestyle. The Region's long valleys mean that maritime influences extend further inland than in other coastal catchments, reducing temperature variability and proving favourable to the equine industry.

There is good land for industrial uses in most parts of the Region, however, some LGAs have identified a need to develop/expand additional sites. For example, Dungog Shire recently identified that there was a lack of suitably zoned and developed land. Muswellbrook is looking to redevelop the Muswellbrook Showground site to commercial/industrial land. Upper Hunter Shire is seeking to provide support to existing industrial estates with a rail siding.

The Region has many other natural resources important from a lifestyle, amenity and tourism perspective. These include beaches (Port Stephens), dams and waterways, National Parks, State Forests, State Conservation Areas and Reserves.

Infrastructure, location and access to markets

The Region's location is a key source of advantage and is home to nationally significant transport infrastructure. Proximity to Newcastle (NSW's second largest city) and the Central Coast provide businesses in the Region with access to additional quality services, facilities and institutions, including the Port of Newcastle, the University of Newcastle and business infrastructure, such as food processors. The close proximity to Newcastle and the Central Coast is also important for providers of regional services (e.g. Newcastle Airport and tourism operators).

Current transport infrastructure is a key endowment of the Region. Key features include:

- the integrated rail networks used to transport coal and other bulk and containerised goods, as well as providing commuter services connecting the major towns to Newcastle;
- the major road infrastructure, including the Pacific Highway, New England Highway, Golden Highways and the recently opened Hunter Expressway; and
- Newcastle Airport, which is NSW's second busiest airport, is rapidly growing and has recently been upgraded to accommodate international flights. The Airport generates over \$1.2 billion in economic value and more than 3,300 direct and indirect jobs in the region. The location of Newcastle Airport adjoining the Royal Australian Air Force (RAAF) base is also an advantage for industries wishing to provide services to the defence and aerospace sectors.

Improvements to the interregional and interstate/international connectivity will further enhance the current range of business opportunities available for businesses, most notably the agri-business and manufacturing sectors.

Despite boasting the above infrastructure, a survey conducted of businesses in the Hunter identified communication infrastructure, road infrastructure and 'other transport infrastructure' as a key weakness in the region. With the high growth rate of the region, this infrastructure will see further strain and will need to be monitored to make sure it continues to service the Region's needs.

6. *Regional Economic Growth Enablers Report (2017)*, Centre for Economic and Regional Development.

ENDOWMENTS CONTINUED

Telecommunications infrastructure (both fixed line and mobile) is currently not a relative strength, however, improvements to this infrastructure, particularly in key business areas in which clustering and agglomeration could occur (such as the Newcastle Airport mentioned above), could open up and enhance business opportunities with interstate/international businesses.

Industry clusters, institutions, facilities and practices

The Region is home to several established industry clusters and institutions, which have become endowments in their own right due to a combination of reputation, facilities and practices. These clusters include Defence, Energy Generation, Manufacturing (in particular, 'advanced' manufacturing including Explosives Manufacturing), Horse Farming, Wine and Other Agribusiness.

Key facilities and assets include:

- Defence – 15 establishments, including the Williamtown Air Force Base and the Lone Pine Barracks at Singleton
- Energy generation – established power stations, high voltage transmission lines and associated grid infrastructure and gas infrastructure
- Manufacturing – a variety of major establishments, including Tomago Aluminium Smelter
- Equine – significant breeding and training facilities. In 2012, the industry association reported that thoroughbred breeders invested over \$5 billion in breeding and training facilities in the Hunter Region in the prior decade
- Wine – established wineries, vineyards and associated tourism assets. The Hunter has internationally recognised wineries with experience and prestige
- Agribusiness – including significant meat (beef, poultry and multi-species) processing facilities in the Upper and Lower-Hunter sections of the Region

There are also a number of important education and research institutions in the Region and in neighbouring Newcastle. These include two of the University of Newcastle's (UON) innovation hubs (the Williamtown Aerospace Centre in Port Stephens and UON Upper Hunter, Muswellbrook), the Port Stephens Fisheries Institute, the Tocal (agricultural) College (which recently received funding to establish a research apiary) and the Hunter Valley Equine Research Centre in Scone. The neighbouring City of Newcastle is home to the UON, the Hunter Medical Research Institute, the TAFE Innovative Manufacturing, Robotics and Science SkillsPoint and the Renewable Energy Integration Facility-CSIRO Energy Centre, which hosts a solar field and energy research hub.

Labour force and lifestyle

The Region's labour force is another important regional endowment. Businesses in the Region can draw labour and professional services from the broader Hunter and Central Coast regions. Relative to other regional locations, the broader Hunter region (including Newcastle, Lake Macquarie and MidCoast) has a relatively highly skilled labour force supported by local institutions and has relative strengths in STEM (Science, Technology, Engineering and Mathematics) and agricultural education.

The Region's significant and rapid growth in population is an important strength in creating business confidence and attracting skilled labour that supports the key industries driving the economy.

From a lifestyle perspective, the region offers many advantages including good local services, natural amenity, affordable land (relative to the surrounding regions of Sydney, Central Coast and Newcastle⁷), diversity of employment opportunities and a sense of community. The Region's strengths in terms of population and lifestyle will likely increase with the growth of the Region and increasing affordability pressures in the nearby metropolitan centres of Sydney, Newcastle and the Central Coast. To fully capture this opportunity, housing demand and supply will need to be monitored and options developed to meet future needs.

Indigenous/European Heritage

The traditional landowners of Hunter include the Geawegal people in the Upper Hunter Region, the Wonnarua people near Singleton/Maitland/Muswellbrook, the Darkinung people near Cessnock, the Awabakal people in Newcastle and the Worimi People near Nelson Bay. While many Indigenous heritage sites are off limits to the general public, sites such as the Biaime Cave, Tiddilick Rock, Worimi Conservation Lands, Finchley Trig and the Devil's Rock are accessible.

European heritage sites such as the Maitland Correctional Centre also exist within the Region. It is recommended that actions to further utilise the aforementioned tourism assets are devised when this Regional Economic Development Strategy is updated.

7. According to the 2016 Census, Hunter Valley (exc. Newcastle) (SA4) had a Median weekly rent of \$290, compared to \$440 in Greater Sydney (GCSA), \$350 in Central Coast (SA4) and \$330 in Newcastle and Lake Macquarie (SA4).

SPECIALISATIONS

Various methods can be used to obtain an understanding of those sectors within a regional economy that offer competitive advantages⁸ and further growth opportunities. One form of analysis is the Location Quotient (LQ) which measures the employment concentration in industry sectors within a region, compared with the same sectors across NSW. The higher the LQ, the higher the likelihood that a region is specialised in that industry (relative to NSW).

For the purpose of this analysis, specialisations as defined by LQs, are therefore used as an indicator of those sectors and industries that represent a region's true competitive advantages; as literature suggests, a LQ of 1.25 defines those sectors that can be considered a regional specialisation.

Importantly, while LQs are used in this document for that purpose, they are only a partial measure of competitive advantage. Hence, they have been considered alongside additional data and analyses such as Input-Output analysis to arrive at the findings for the Hunter Strategy.

A number of the Region's specialisations are illustrated in Figure 4. The figure plots selected industries in terms of the employment LQ and employment growth relative to the NSW industry average (which is a proxy for the anticipated growth in LQ in the future). A bubble's size represents the number of people employed in the industry. In this analysis, the key industries inside Hunter fall into one of the three categories below. The categories are:

Industries which are currently specialisations, and likely to be specialisations in the future

These industries are the bubbles in **blue**. They possess a LQ greater than or equal to 1.25, and hence are likely to be the region's specialisations. Employment in these sectors 'grew faster' than the equivalent sector across the whole of NSW⁹, showing regional strength. If these trends in employment continue, their LQs are likely to stay above 1.25 in the future.

Industries which are currently specialisations, but may lose its status as a specialisation in the future

These industries are the bubbles in **red**. They possess a LQ greater than or equal to 1.25, and hence are likely to be the region's specialisations. However, employment in these sectors did not grow as fast as the equivalent sector across the whole of NSW. Hence, if these trends in employment continue, their LQs may drop below 1.25 in the future.

Industries which are currently not specialisations, but likely to be specialisations in the future

These industries are the bubbles in **green**. They possess a LQ less than 1.25, and hence are unlikely to be the region's specialisations. However, employment in these sectors grew faster than the equivalent sector across the whole of NSW, showing regional strength. If these trends in employment continue, their LQs are likely to reach 1.25 in the future.

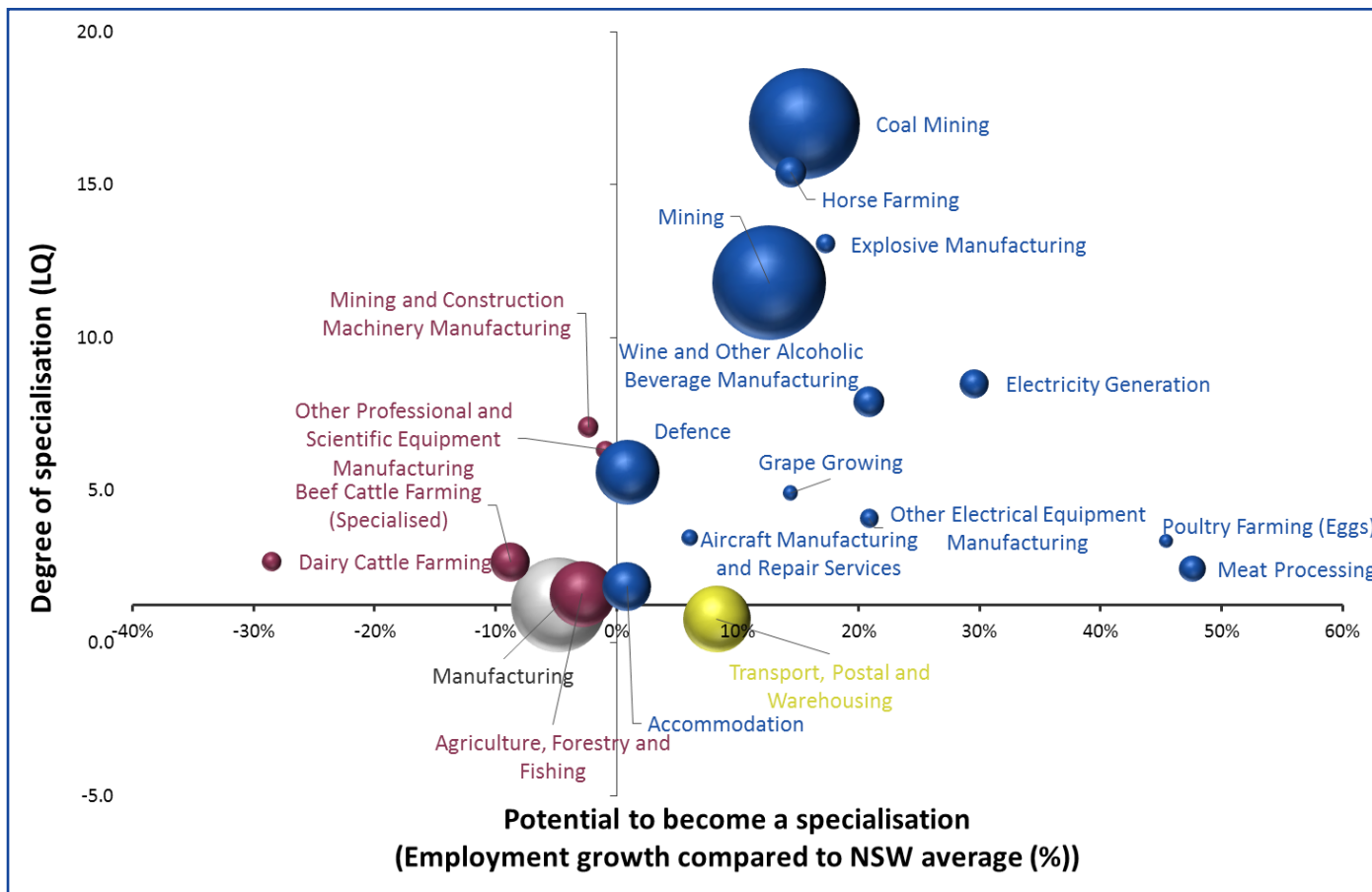
Based on the LQ analysis, the Region has a number of specialisations including *Mining, Manufacturing, Defence, Electricity Supply and Agriculture, Forestry and Fishing*.

8. A region's competitive advantage for an industry includes its ability to produce goods and services at a lower cost or differentiate its products from other regions, along with access to external factors which enhance business and operations/minimize risk (Stimson, Stough and Roberts, 2006).
9. It should be noted that there could be three cases in which employment 'grew faster' in the region compared to the same industry across the whole of NSW. These are the case where:
 1. The industry experienced an increase in employment in the Region and in NSW as a whole, and the % increase for the Region was more than that of NSW,
 2. The industry experienced an increase in employment in the Region but declined in NSW as a whole, and
 3. The industry declined in employment in both the Region and in NSW as a whole, but as a % the Region lost less of its employment in the industry than NSW as a whole.

A similar case also applies to the cases in which employment in the Region's sectors 'did not grow as fast' as the equivalent sectors across the whole of NSW.

SPECIALISATIONS CONTINUED

Figure 4: Employment by sector in the region – degree of specialisation and future potential



Source: ABS 2011 and 2016 Census of Population and Housing. See the full report for notes regarding the analysis.

Mining (specifically coal mining) is the most significant industry in the Region, being the largest single employer and the greatest contributor to regional exports and gross value added. There do not appear to be any capacity or resource constraints that will limit coal mining in the foreseeable future and there are a number of mining proposals that have been approved or are in progress.

The largest risks to the industry are macroeconomic. A downturn in international demand continues to be a key risk for the sector and by extension, a risk for the Region's economy. Diversification into industries in which the Region has a specialisation (or has significant endowments which will allow development of an industry into a specialisation) will help mitigate the impact of short and long-term risks to the Mining industry, and thereby build a more resilient economy.



SPECIALISATIONS CONTINUED

Manufacturing is also a major employer in the Region. While not a specialisation, some sub-industries of Manufacturing are specialisations of the Region. For example, 'Advanced' manufacturing (including sub-industries such as Explosives Manufacturing) is a key opportunity for growth that builds on existing strengths, including the strength of the local labour force in STEM subjects, educational institutions and linkages with the defence sectors.

The development of the Defence and Aerospace Related Employment Zone (DAREZ) adjoining Newcastle Airport provides additional opportunities for advanced manufacturing, particularly in relation to aerospace and defence. It is expected that the Williamstown Aerospace Centre (WAC) within the DAREZ will position the Region as a major national and international centre for the aerospace and aviation industry. Some flow-on effects to Retail Trade in Port Stephens (location of Newcastle Airport) can also be expected.

The outlook for the defence sector in the Region, which already boasts an LQ of 5.6 (in 2016), is very strong. The Department of Defence's plans include a commitment for RAAF Base Williamstown to remain as the nation's main fighter pilot training base and to house most of the planned F-35 Joint Strike Fighter (JSF) Lightning aircraft. The housing of the JSF will significantly increase the amount of local expenditure on products and services to support the RAAF Base. The NSW Defence Strategy notes that JSF will be catalysing \$1 billion of investment in the base and that there is 'a significant opportunity to establish Williamstown as the centre of Australian industry participation supporting the JSFs fleets in the Asia Pacific region'.

The Region is home to two major coal-fired power generation plants (Liddell and Bayswater), which provide around 30 per cent of the installed capacity of NSW electricity generation. Both plants are scheduled for closure (Liddell in 2022 and Bayswater in 2035), however, there are other energy generation opportunities leveraging the existing energy infrastructure, local capabilities and renewable energy resources (including wind, solar, biofuels and hydro). Projects that have been proposed, or are in development, include wind and solar facilities in the Upper Hunter, a pilot bio-refinery in Muswellbrook and a gas-fired electricity generation plant.

Within Agriculture, Forestry and Fishing there are a number of specialisations. The Upper Hunter is one of three centres of thoroughbred breeding excellence in the world and the Region employed 700 people in 2016. With a LQ of 15.4, this industry accounts for almost half of NSW's employment in horse breeding. There is significant potential for expansion of this industry, the major constraining issue being uncertainty associated with mining related land-use conflicts.

The Region's other major agricultural specialisations are Beef Cattle Farming (LQ of 2.6), Poultry Farming – Eggs (LQ of 3.3) and Dairy Cattle Farming (LQ of 2.7). There are opportunities to grow these industries through greater productivity, increases in available land (from increases in the buffer lands and rehabilitated lands) and potentially improved water access.

The Region is also synonymous with wine making, being one of only two internationally recognised wine production areas in Australia, and the Hunter Valley Wine Country is closely integrated with tourism. Tourism is also significant in Port Stephens, where the focus is on coastal and marine tourism. An issue facing the Tourism and Wine industries is perceived reputational risk linked to land-use conflicts and open-cut mining.



STRATEGY

The Region has several opportunities to build on its specialisations and its endowments and grow the economy. In consultation with the Councils, three core strategies have been identified to capture these opportunities, manage risks and deliver on the vision for the Region.

Specialisations/opportunities

- Mining
- Manufacturing
- Defence
- Energy generation
- Agriculture businesses
- Tourism

Drivers of change, issues and risks

- Connectivity issues and opportunities
- Rapid growth of the region and congestion
- Reliance on coal mining
- Transitions in energy and mining
- Water security
- Land use conflicts and planning



Strategies

- Improve inter and intra-connectivity of the region to boost business and socio-economic opportunities in the 'engine' industries of Agriculture, Mining and Manufacturing
- Manage transitions and risks to the Coal Mining and Electricity Generation sectors and diversify the region's economy to build resilience
- Improve infrastructure, services and amenities to fully utilise the region's growth potential

An initial set of initiatives, actions and infrastructure priorities consistent with the strategic framework have been identified to accompany the strategies. It is expected that over time other actions capable of contributing to the attainment of the region's vision will be identified. An action's alignment with the strategy is the primary strategic consideration. Actions will be subject to further qualitative and quantitative evaluative processes.



A | Improve inter and intra-connectivity of the Region to boost business opportunities in the 'engine' industries of Agriculture, Mining and Manufacturing

Connectivity refers to the flow of people, information, products and services. Connectivity within the region and with domestic and international markets can be improved through enhanced transport and telecommunications infrastructure and services, and through better community and business networks.

One of the major endowments of the Region is its proximity to metropolitan areas. It is vital that this strategy takes advantage of this endowment. The largest 'engine' industries of Mining, Manufacturing and Agriculture, Forestry and Fishing together exported a total of \$4.54 billion worth of goods/services out of Hunter. Higher quality and more direct roads, better rail freight connection, easier international airport connections and improved telecommunications will all assist in opening up further business opportunities and reducing industry costs.

For example, leveraging Newcastle Airport and its connections to Asia is a major potential growth opportunity for the region's 'engine' industries. Boosting the industries' international recognition with further efficiency in export routes will further the Region's comparative advantages in these sectors.

Telecommunication infrastructure was identified as the most significant weakness facing the Region in the online survey (see Strengths and Weaknesses in Appendix 2 of the Supporting Analysis). Specifically, a lack of adequate fixed line and/or mobile service is a recognised 'barrier to growth' that prevents businesses from establishing in a location. Poor mobile reception is also a continual hindrance for existing businesses. Improvements such as provision of NBN services at key sites like Newcastle Airport will allow business clusters located in close proximity to achieve their full potential.

Infrastructure Priorities

There are multiple infrastructure priorities to improve the region's connectivity, including:

- enhancements to improve traffic flow, in particular:
 - improved connections to the Hunter Expressway and Newcastle Airport
 - addressing key pinch points on major routes including bypasses on the New England Highway around Muswellbrook, Singleton and Scone
 - the Pacific Motorway (M1) extension to, and through, Raymond Terrace
 - upgrade rural bridges to support greater load limits
- improved rail connections, in particular the Lower Hunter Freight Corridor which will enable a future dedicated freight rail line to be constructed between Fassifern and Hexham
- mobile telecommunication towers and fixed line infrastructure
- leverage international connections (air, port and institutional)

Key Initiatives

Other key initiatives under this strategy are:

- support growth in airport services (routes and facilities)
- lobby for improvements to important infrastructure outside of the region
- support growth of regional and international business networks

B | Manage transitions and risks to the Coal Mining and Electricity Generation sectors and diversify the Region's economy to build resilience

The Region's reliance on Coal Mining and Electricity Generation means that it is important that the region looks to the future and considers and prepares for scenarios in which there are significant and/or sudden shifts in mining activity. In Electricity Generation, the Liddell and Bayswater power plants in the Upper Hunter will be shut down in 2022 and 2035, respectively. These closures will have a local impact but will also facilitate new opportunities to expand into emerging energy options by leveraging the region's infrastructure and natural advantages.

There are planned mine closures in the Region as well as proposed new mines. Mine rehabilitation and expansion proposals potentially pose significant land-use conflict risks, which will require close evaluation. Nevertheless, the Region needs to address the issues and maximise the opportunities resulting from mine closures and new projects. These include maximising the use of rehabilitated lands, voids and buffer lands, however, proactive management will be essential to address impacts and capture opportunities.

Actions which account for uncertainties in the Coal Mining sector will also assist in building economic stability and resilience. Actions which support emerging industries that are consistent with the Region's strengths will not only help mitigate the impact of short-term 'shocks' and long-term changes to Mining, but will also offer increased diversification opportunities for the Region's workforce.

Industries which can assist in reducing the impact of 'shocks' to Coal Mining include Defence, Manufacturing

(in particular, 'advanced' manufacturing sub-sectors such as Explosive Manufacturing), Horse Breeding, Wine, 'intensive' agriculture sub-sectors and Tourism. Supporting these industries will be a priority if the Region is to become "A leading region in innovation, resilience and diversity of opportunity".

One initiative which will encourage 'emerging' industries is the Defence and Airport Related Employment Zone (DAREZ) being developed next to the Newcastle Airport. The DAREZ development is a unique defence, aviation, aerospace and technology-focused development that will provide special purpose defence and aviation related employment. This is proposed to be built on land with direct and secure airside access adjacent to the Williamstown RAAF Base. Active participation in this development could also open up flow-on opportunities for the Retail Trade in Port Stephens and other areas of the Region. It is forecast that the Hunter Defence and Aerospace Zone (HDAZ) within the DAREZ will significantly add to the Region's productivity and competitiveness, creating an estimated 5,650 jobs and some \$246.64m in economic impact.

Finally, it should be noted that some of the key initiatives may have effects on the success and/or the feasibility of others, hence, these initiatives should be undertaken first to achieve maximum efficiency in resources (land, opportunity cost etc). For example, management of potential land-use for the Region is an initiative which should be undertaken first.

Infrastructure Priorities

The key initiatives under this strategy are:

- manage potential land-use conflicts from mining expansions
- develop land-use plans for the Region (especially to provide investment certainty to the wine and equine industries)
- support transition in power generation
- optimise mine site rehabilitation and uses of rehabilitated and buffer lands
- support transitioning and expansion of the workforce
- promote innovation in emerging industries
- support development of the DAREZ industrial/commercial land for the aviation and defence sectors
- support/funding of innovation hubs for development of innovation in Advanced manufacturing and related services
- develop tourism assets and supporting infrastructure
- develop and enhance the region's events to build the Region's capacity and reputation as an event destination
- improve access to National Parks and State Forests

Key Initiatives

The key infrastructure requirements under this strategy include:

- Mine site rehabilitation projects
- Support the development process for industrial/commercial land for the Aerospace and defence industries

C | Improve infrastructure, services and amenities to fully realise and sustain the Region's growth potential

According to DPE estimates, the population of the Hunter-Lower is expected to grow by 24.1% over the years 2016-2031. This is a faster rate than that of Regional NSW (10.6%), and even that of the City of Newcastle (16.5%). A strategy to manage the infrastructure, services and amenities of the Hunter Region, while fully capturing its population growth potential, is critical to its economic future.

Population growth supports engine industries by attracting skilled labour and assists businesses seeking deeper labour pools. This is especially the case when considering skilled workers/graduates from metropolitan areas who are looking for a combination of an urban lifestyle and lower housing prices (when compared to metropolitan areas). Growth can also lead to economies of scale in key infrastructure used by residents and business. Maximising the opportunity requires maintaining and enhancing the region's attractive lifestyle and leveraging these features in retaining and attracting the labour and businesses that will support economic growth.

To sustain that growth over time, attract potential new residents and to incentivise current residents to stay in the Hunter, the Region must continue to support and update its current foundations of recreational assets, services and amenities.

The Productivity Commission's Geographic Labour Mobility Report (2014) has mentioned that richness of cultural amenities, recreational opportunities and the 'buzz' of the local arts and music scene are key factors an individual considers when looking at his/her relocation options. The report also gave quality of Government services (including schools, hospitals) to be major factors in an individual's relocation decision.

The fast growth of the Hunter Region will also put pressure on existing local infrastructure, services and amenities. Without proper forward planning, and development of required infrastructure/services in health care and education, the Region's growth potential may not be fully realised.

Infrastructure Priorities

The key initiatives under this strategy can be broadly categorised as:

- maintain and enhance lifestyle by revitalising regional centres and communities
 - investing in new/enhanced lifestyle assets
 - supporting development of arts/cultural facilities and events
 - encouraging community connections
- market the region to maximise the lifestyle opportunities
- monitor and plan for upgrades of local infrastructure

Key Initiatives

Key infrastructure requirements include:

- monitor and develop services infrastructure (health, education, emergency services) for sustained growth

Strategies and Actions			
Enablers	Improve inter and intra-connectivity of the Region to boost business opportunities in the 'engine' industries of Agriculture, Mining and Manufacturing	Manage transitions and risks to the Coal Mining and Electricity Generation sectors and diversify the Region's economy to build resilience	Improve infrastructure, services and amenities to fully realise and sustain the Region's growth potential
Infrastructure	<ul style="list-style-type: none"> ➤ Implement key projects (M1 extension to and through Raymond Terrace, Lower Hunter Freight Corridor, Golden Highway to New England Highway flyover) ➤ Address key pinch points (Muswellbrook bypass, Singleton bypass, Singleton Gowrie Gates, Scone bypass) ➤ Improve other road connections (e.g. to Newcastle Airport, Hunter Expressway) and rail connections ➤ (Investigate re-opening Cessnock to Maitland rail line for passenger services) ➤ Upgrade rural bridges to support higher loads 	<ul style="list-style-type: none"> ➤ Water security pipeline projects to increase the 'networking' of water in the Hunter region ➤ Provide supporting infrastructure to optimise the use of rehabilitated and buffer lands ➤ Support development of Hunter Defence and Aerospace Zone and other employment lands ➤ New rail freight siding at Scone ➤ Upgrade Scone Airport and Cessnock Airport ➤ Develop/upgrade key tourist attractions ➤ Improve Tourism signage and way finding 	<ul style="list-style-type: none"> ➤ Monitor and Develop services infrastructure (health, education, emergency services) for growth ➤ Advocate for the creation of new railway stations in growth areas, or improved connections to pre-existing stations ➤ monitor and plan for upgrades of local infrastructure, services and amenities
Utilities and land use	<ul style="list-style-type: none"> ➤ Ensure strategic corridors are protected in land-use plans ➤ Improve telecommunication services (mobile towers, as well as provision of NBN at key sites including Newcastle Airport) 	<ul style="list-style-type: none"> ➤ Explore options for use of buffer lands, voids and rehabilitation lands ➤ Provide non-statutory guidance on land uses ➤ Establish planning controls that deliver greater certainty of land use 	<ul style="list-style-type: none"> ➤ Identify and protect the region's heritage ➤ Deliver existing Urban Release Areas and infill areas
Govt regulation, services, information	<ul style="list-style-type: none"> ➤ Support growth in Newcastle Airport routes and services ➤ Expand/improve public transport services 	<ul style="list-style-type: none"> ➤ Promote new opportunities arising from the closure of coal-fired power stations ➤ Promote innovation in emerging industries ➤ Ensure charges (e.g. co-contribution) are not excessive ➤ Promote manufacturing in the region, including explosives manufacturing 	<ul style="list-style-type: none"> ➤ Enhance access to recreational facilities and connect open spaces ➤ Facilitate greater access to and development of facilities in National Parks and State Forests ➤ Monitor housing supply/demand and explore options to meet the demands
People and skills	<ul style="list-style-type: none"> ➤ Support growth of regional and international business networks ➤ Improve access to TAFE, University and College education 	<ul style="list-style-type: none"> ➤ Support transitioning and expansion of the workforce (workforce planning, encourage skills development) ➤ Support industry specific training ➤ Support establishment of innovation centres 	<ul style="list-style-type: none"> ➤ Marketing the region to encourage skilled-workers and businesses to relocate ➤ Develop Hunter Business Portal to advertise the area

IMPLEMENTATION

A detailed action plan is included in the *Hunter Regional Economic Development Strategy 2018-2022 Supporting Analysis*.

The Strategy will need to be implemented by all seven member councils as well as state government agencies and local entities.

The completion of this document is intended to be the first stage of an ongoing process where new specific actions aligned with the Vision are identified through application of the framework. It is suggested that an Advisory Committee made up of representatives from each council be established to progress the actions listed in this Strategy, apply the Strategy's framework to identify new actions to be added to the Action Plan, develop key performance indicators and evaluate outcomes. The Advisory Committee would meet every three months and would report progress on actions to each council

The Advisory Committee could also meet every six months with the relevant Regional Director from NSW Premier and Cabinet. These meetings could also be used to check the Strategy's progress and review current grant opportunities.

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.



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First published: July 2018

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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.

