



Charles Sturt
University

Senate Select Committee

Jobs for the Future in Regional Areas

Submission - 6 September 2019

Office of the Vice-Chancellor
Charles Sturt University

Letter from the Vice-Chancellor

6 September 2019

Senator Richard Di Natale
Chair
Senate Select Committee Jobs for the Future in Regional Areas
Parliament House
CANBERRA ACT 2600

Dear Senator

JOBS FOR THE FUTURE IN REGIONAL AREAS

On behalf of Charles Sturt University, I am pleased to provide this submission to the inquiry of the Senate Select Committee Jobs for the Future in Regional Areas.

Charles Sturt University is Australia's largest regional university, with more than 43,000 students and approximately 2,000 FTE staff. Established in 1989, the University traces its origins to the formation of the Bathurst Experimental Farm and Wagga Wagga Experimental Farm in the 1890s. In one form or another, research, innovation and education has been integral to the University's character and mission for more than a century.

Charles Sturt University is a unique multi-campus institution with campuses at Albury-Wodonga, Bathurst, Canberra, Dubbo, Goulburn, Manly, Orange, Parramatta, Port Macquarie and Wagga Wagga, as well as various study centres located throughout regional and rural south-eastern Australia. The University's commitment to the development and sustainability of regional, rural and remote Australia is informed by the unique research focus undertaken, and the partnerships it has formed with each of its campus' local communities, local industry, and with the broader regions we serve.

Charles Sturt University welcomes the opportunity for the University to continue to contribute to the regional development public policy debate, including provide analysis, commentary and recommendations for the Committee's consideration. Our submission suggests a number of areas for reform and priority to ensure future regional development is driven in a manner that maximises jobs for the future in regional areas. Capturing jobs for the future will underwrite tomorrow's prosperity, ensure inclusive growth and secure environmental sustainability across Australia's regions.

I would be very pleased to provide further information to the Committee and would be available to provide evidence at any proposed hearings that that Committee may undertake in relation to ensuring future regional development for jobs in regional Australia.

Yours sincerely

Professor Andrew Vann
Vice-Chancellor

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Terms of Reference

The Senate Select Committee has approved terms of reference for its Inquiry into Jobs for the Future in Regional Areas. The terms of reference are provided below.

On 31 July 2019, the Senate resolved to establish a Select Committee into the Jobs for the Future in Regional Areas. The committee will inquire and report on the following matters:

- a. new industries and employment opportunities that can be created in the regions;
- b. the number of existing jobs in regional areas in clean energy technology and ecological services and their future significance;
- c. lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies;
- d. the importance of long-term planning to support the diversification of supply chain industries and local economies;
- e. measures to guide the transition into new industries and employment, including:
 - i. community infrastructure to attract investment and job creation;
 - ii. the need for a public authority to manage the transition;
 - iii. meaningful community consultation to guide the transition; and,
 - iv. the role of vocational education providers, including TAFE, in enabling reskilling and retraining;
- f. the use of renewable resources in Northern Australia to build a clean energy export industry to export into Asia; and,
- g. any related matters.

For further information, refer

https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Jobs_for_the_Future_in_Regional_Areas.

1. Recommendations

Charles Sturt University makes the following recommendations for consideration by the Senate Select Committee inquiry into jobs for the future in regional areas.

1.1 New industries and employment opportunities that can be created in the regions

Charles Sturt University makes the following recommendations to the Committee to drive the creation of new industries and stimulate growth of employment opportunities in regional Australia:

- **Government policies and public investment must be regionally targeted where growth in competitive and emerging industries makes a significant difference for job generation (that is, specialised regions, not all regions).**
- **Enable regions to build on their strengths by customising policy settings and tailoring programs based on past economic performance, existing industrial base and community assets where:**
 - **the highest investment priority should be facilitative (for example, trade access), to catalyse new economic activities in regions where local conditions are driving growth, such as, government intervention to build on local strengths that generate business and employment opportunities; and,**
 - **the highest investment priority should be market-failure correction (for example, communications infrastructure) to remove or reduce barriers to growth in regions which are lagging behind state and industry trends, such as, government intervention to support these regions in realising their full employment potential.**
- **Assess workforce and skills availability to foster specialised regional development and act to ensure potential new jobs can be filled, for example through regional learning systems or regional migration strategies as outlined in the Regional Australia Institute's, *The Future of Jobs Report 2019*.**

1.2 Existing jobs in regional areas in clean energy technology and ecological services and their future significance

Charles Sturt University makes the following recommendations to the Committee regarding existing jobs in regional areas in clean energy technology and ecosystem services and their future significance:

- **Develop and implement publicly-funded programs to ensure that local workforces are up-skilled to fill future jobs arising from continued investment in clean energy technologies in regional Australia, both during the construction phase of developments as well as when developments move to operation.**
- **Where clean energy technology developments are funded, or part-financed by government, ensure a portion of local procurement at the remote, rural and regional level. An example would be catering and accommodation in the remote community,**

trades and basic services from the nearest rural town and major engineering services from the nearest regional city.

- ***Establishment, development and on-going public funding of a national centre for ecosystem markets and services, to act as a market and technology conduit between providers of services and purchasers of services, with such a centre having a technology-transfer, product development and a market-access focus. Such a centre must be established in regional Australia with headquarters in a regional city and a hub and spoke model to ensure national coverage. Charles Sturt University's Albury campus would be an ideal location to establish the centre.***

1.3 Measures to guide the transition into new industries and employment

Charles Sturt University makes the following recommendations to the Committee regarding measures to guide the transition into new industries and employment:

- ***Continue the rollout proposed and investments detailed in Regions 2030 Unlocking Opportunity, to ensure community infrastructure to attract new investment and job creation in regional Australia is developed.***
- ***A regional development framework with the seven outcomes detailed at Section 4.3 of this submission, agreed through a national partnership comprising all levels of government and that pragmatic and measurable goals and objectives be attached to each outcome.***
- ***Delivering positive outcomes and great benefit for Australians living and working in regional, rural and remote communities will require rigorous system integration, that is:***
 - i. whole of system, with long-term policy focus and program effort on the strategies, actions and tasks required to deliver regional, rural and remote development benefit;***
 - ii. built on strongly facilitated participation by all economic, social, cultural and environmental stakeholders in any given region that drives a very high level of regionalism;***
 - iii. based on shared regional vision and leadership, with whole of stakeholder agreement and commitment to definable and measurable economic, social, cultural and environmental outcomes;***
 - iv. governed and coordinated at the regional level, with management and operationalisation distributed to the communities that comprise each region;***
 - v. guided by a planning, reporting and communication framework, including an overall regional development strategy containing economic, social, cultural and environmental roadmaps and investment plans, including capital sources and public-sector budgets;***
 - vi. owned and championed by individual members of the community (think global, act local); and,***

- vii. *a market-based response, where government intervention is strictly in the public good and within the scope of an overall regional development strategy.*
- *An arm's length, bipartisan, beyond electoral cycle, resourced and championed governance and management model be implemented as follows:*
 - a. *Through the Council of Australian Governments (COAG) and including Local Government Association (LGA), the Commonwealth would establish the Australian Regional Development Commission, the Commission would report to COAG. The national plan Regions 2030 Unlocking Opportunity could provide the foundations on which to build this.*
 - b. *The Commission would be funded 50/50 by the Commonwealth, and the States and Territories and would work with bodies such as Infrastructure Australia and AgriFutures Australia (formerly the Rural Industries Research and Development Corporation, RIRDC).*
 - c. *Commissioners would be nominated through an open, transparent and merit-based process.*
 - d. *The Commission would be headquartered in regional Australia, located in a regional city, for example, Orange or Dubbo as geographically they are in the centre of regional eastern Australia.*
- *Establish and embed meaningful and effective consultation through leadership, recognising that leadership in regional settings is pivotal to future sustainability and has many forms.*
- *Strengthen the VET system, so that it can provide the training required to ensure the skills and knowledge of future regional workforces, by:*
 - *implementing the findings of the Strengthening Skills Expert Review of Australia's Vocational Education and Training System, undertaken by The Honourable Steven Joyce; and,*
 - *implementing an education and training and skills and knowledge partnership between business and industry, education and training providers and government based on the successful Ministerial Industry Commission model that was implemented in Queensland in 2013.*
- *Strengthen the higher education and university system, so that it can provided the education required to ensure the skills and knowledge of future regional workforces, by implementing the recommendations made by Charles Sturt University in Section 4.7 National Regional, Rural and Remote Education Strategy.*

1.4 Renewable resources in Northern Australia to build a clean energy export industry to export into Asia

Charles Sturt University makes the following recommendations to the Committee regarding the opportunities for renewable resources in Northern Australia to build a clean energy export industry to export into Asia:

- ***Commonwealth and State governments work together to ensure greater and seamless alignment of the policy outcomes and program objectives of the Clean Energy Finance Corporation (CEFC) and the NAIF, to ensure opportunities for renewable resources in Northern Australia to build a clean energy export industry to export into Asia are captured.***
- ***In working together, the CEFC and NAIF partner with business and industry to boost direct investment in renewable resources in Northern Australia to build a clean energy export industry which exports to Asia.***
- ***That trade and export agencies of State governments work with Austrade and other divisions of the Department of Foreign Affairs and Trade to ensure that investments in renewable resources in Northern Australia have access to markets in Asia.***

1.5 National Regional, Rural and Remote Education Strategy

Charles Sturt University makes the following recommendations to the Committee regarding the National Regional, Rural and Remote Education Strategy:

- ***That the Commonwealth Government adopt the recommendations made by Charles Sturt University on 1 February 2019 by including them in the ongoing development and implementation of the National Regional, Rural and Remote Education Strategy, including:***
 1. ***Tertiary education and training providers stimulating economic growth in regional, rural and remote areas:***
 - ***Programs that develop and transform regional, rural and remote workforces, including business productivity that builds-on local competitive strengths and transform local economies and for improved public services such as education and health that further strengthen participation in local employment.***
 - ***Programs that retain regional, rural and remote students in regional, rural and remote Australia (refer above).***
 - ***Programs that boost regional, rural and remote participation rates in vocational education and training (VET) and higher education (refer above).***
 - ***Research activities aimed at addressing challenges and capturing opportunities before regional, rural and remote Australia (that is undertaken in situ), including specific and increased funding for regional, rural and remote Australia administered by the Australian Research Council (ARC) and National Health and Medical Research Council (NH&MRC) where physical, geographic presence in***

regional, rural and remote is a mandatory criterion, as only regional, rural and remote research institutions are able to effectively identify and address regional, rural and remote challenges and opportunities in collaborative partnership with their local communities

- **Support for arts and cultural activities, in collaboration with local community groups.**
 - **Growing VET and higher education student enrolments in regional, rural and remote Australia (refer above) which in turn grows the direct workforces of VET and higher education providers.**
 - **Industry and business development functions, including start-up business creation – borne locals are likely to stay local.**
 - **Funding for university and TAFE infrastructure, including for open-access centres of learning to encourage commitment to lifelong learning and introductory participation in informal and unaccredited study (as a pathway for more formal, accredited education and training) at learning spaces, study centres, study hubs and regional campuses.**
2. **Policies that would attract more metropolitan and international students to study at regional, rural and remote universities and campuses.**
 3. **Governments and higher education and training providers to work in concert with local regional, rural and remote communities to attract students to their area, to ensure local support for students moving to the area to study as well as ensure that student moving to the area to study are welcomed and supported by the community (not just their chosen institution of study).**
 4. **Higher Education Loans Program (HELP) discounts for student that study at regional campuses of University and continue to live and work in regional, rural and remote Australia (for say a period of three to five years post-graduation) (see above).**
 5. **A long-term, broad, behavioural change promotional campaign about the value of advanced VET study and higher education study at the regional campuses of universities, based on health, road safety and anti-smoking models targeted at students and parents in metropolitan Australia. Key messaging from such a campaign would include:**
 - **Life style attributes.**
 - **Generally lower cost of living.**
 - **That graduates of regional universities tend to enjoy better employment and economic outcomes.**
 - **After graduation 76 per cent of regional graduates have full-time work, compared to 71 per cent in the cities, with many working in**

regional areas, moreover, during their studies, students at regional universities report high levels of satisfaction with their university experience.

- ***Regional cities provide excellent opportunities for employment, career development and above all else provide very affordable housing (compared to metropolitan Australia).***
6. ***International marketing and promotion campaign informing potential international students of the value of studying at non-metropolitan campuses of Australian universities.***
 7. ***Strengthen post-study work rights for international students who study and remain in regional areas, as well as increase existing points contribution to permanent residency for international students that study priority workforce qualifications, study at regional university campuses and continue to live and work in regional, rural and remote Australia on graduation (up to 10-year retention conditions of residency).***

2. Introduction

Charles Sturt University is Australia's largest regional university, with more than 43,000 students and approximately 2,000 FTE staff. Established in 1989, the University traces its origins to the formation of the Bathurst Experimental Farm and Wagga Wagga Experimental Farm in the 1890s. In one form or another, research, innovation and education has been integral to the University's character and mission for more than a century.

The University is a unique multi-campus institution with campuses at Albury-Wodonga, Bathurst, Canberra, Dubbo, Goulburn, Manly, Orange, Parramatta, Port Macquarie and Wagga Wagga, as well as various study centres located throughout regional and rural south-eastern Australia. The University's commitment to the development and sustainability of regional, rural and remote Australia is informed by the unique research focus undertaken, and the partnerships it has formed with each of its campus' local communities, local industry, and with the broader regions we serve.

Charles Sturt University welcomes the opportunity for the University to continue to contribute to the regional development public policy debate, including provide analysis, commentary and recommendations for the Committee's consideration. Our submission suggests a number of areas for reform and priority to ensure future regional development is driven in a manner that maximises jobs for the future in regional areas. Capturing jobs for the future will underwrite tomorrow's prosperity, ensure inclusive growth and secure environmentally sustainability across Australia's regions.

The University's submission to the Select Committee into the Jobs for the Future in Regional Areas includes analysis, commentary and recommendations within the following spheres of regional development policy.

- New industries and employment opportunities that can be created in the regions.
- Existing jobs in regional areas in clean energy technology and ecological services and their future significance.
- Lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies.
- Importance of long-term planning to support the diversification of supply chain industries and local economies.
- Measures to guide the transition into new industries and employment, including, community infrastructure to attract investment and job creation, the need for a public authority to manage the transition, meaningful community consultation to guide the transition and the role of vocational education providers, including TAFE, in enabling reskilling and retraining.
- Renewable resource opportunities in Northern Australia to build a clean energy export industry to export into Asia.
- An overview of other matters that the University has contributed to the regional development public policy debate in recent years.

3. Charles Sturt University

Charles Sturt University is Australia's largest regional university, with more than 43,000 students and approximately 2,000 FTE staff. Established in 1989, the University traces its origins to the formation of the Bathurst Experimental Farm and Wagga Wagga Experimental Farm in the 1890s. In one form or another, research, innovation and education has been integral to the University's character and mission for more than a century.

Charles Sturt University is a unique multi-campus institution with campuses at Albury-Wodonga, Bathurst, Canberra, Dubbo, Goulburn, Manly, Orange, Parramatta, Port Macquarie and Wagga Wagga, as well as various study centres located throughout regional and rural south-eastern Australia.

The University's commitment to the development and sustainability of rural and regional Australia is informed by the unique research focus undertaken, and the partnerships it has formed with each of its campus' local communities, local industry, and with the broader regions it serves.

CSU offers a comprehensive suite of research and academic training programs that focus on addressing rural and regional labour market needs, growing regional economies, and preparing students for the jobs of the new economy through rural and regional Australia.

Particularly in health and medical related disciplines, Charles Sturt University seeks to address key training and equality of access issues across our rural and regional footprint, ensuring the critical supply of health professionals into local markets.

As one of Australia's largest online and distance education providers Charles Sturt University has been able to leverage its course profile and specialist expertise in education provision for the delivery of nationally available study programs. These programs support labour market skills development regardless of student location.

Our rural and regional focuses, as well as strength in online and distance education, position's Charles Sturt University as a leading institution in providing higher education opportunities to first-in-family applicants, mature-aged students, as well as those from disadvantaged backgrounds.

Increasing participation of Indigenous Australians in higher education has been a key focus area of the University's mission and ethos. Charles Sturt University consistently works in collaboration with Indigenous communities across our footprint to ensure access and develop links into the University. Our position as one of the top Australian universities for Indigenous participation is proof of our strong background in this regard.

The success of the University is demonstrated by its sector-leading performance in work-integrated learning, graduate employment and graduate incomes. Underpinning this success is the close links that the University has forged with industry, both regionally and nationally.

For example, the University is internationally recognised as a leader in work-integrated learning with students spending extended periods in employment with our industry partners as part of their degree learning and applying their knowledge in practice.

Research excellence, with a strong commitment to addressing the complex regional needs through innovation, has long been at the centre of Charles Sturt University's mission.

As evidenced by the recent Excellence in Research for Australia results (ERA 2015), Charles Sturt University is recognised internationally for competitive research strengths in agricultural science, horticultural production, food and wine sciences, crop and pasture production, veterinary science, animal production, education, curriculum and pedagogy, environmental science, applied ethics, philosophy, religious studies, criminology, nursing and marketing.

Charles Sturt University has a proud tradition of delivering high-quality research that creates new knowledge, benefits people's lives, enhances the profitability of regional industries and helps communities grow and flourish. Through its Higher Degree by Research programs, Charles Sturt University is training the next generation of researchers and professionals who use critical thinking and seek to influence the world for the better.

The recently announced AgriSciences Research and Business Park, to be located on the Wagga Wagga campus exemplifies our industry focus. The AgriSciences Research and Business Park will facilitate industry engagement and collaboration, economic growth, wealth creation, employment and skills development. Success will be evidenced by the recognition of Wagga Wagga as a world-standard centre for agricultural innovation, research and development, extension, education and training.

Today, Charles Sturt University continues a 100-year tradition of engagement and leadership with our local communities, of research and innovation in collaboration with industry, expansion in the educational opportunities offered to our diverse student body, and preparing students for employment markets emerging with the evolution of regional and the national economy.

4. Jobs for the Future in Regional Areas

Charles Sturt University is pleased to provide the following analysis, commentary and recommendations for jobs for the future in regional areas of Australia in response to the inquiry of the Senate Select Committee.

4.1 New industries and employment opportunities that can be created in the regions

Much has been written about new industries and employment opportunities that can be created in regional Australia.

In recent years, Charles Sturt University has contributed significantly to the development of public policy aimed at securing a prosperous, inclusive and sustainable future for Australians living and working in our regional cities, rural towns and remote communities. The full suite of the University's public policy contribution can be accessed at <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. As mentioned earlier, the findings and recommendations of the University's submission to Government in recent years is summarised at Attachment 1.

Drawing on Charles Sturt University's input to public policy, it is clear that the major drivers of new industries and employment opportunities beyond metropolitan Australia can be summarised as:

- Provision of community services, in particular health and education with an ageing and growing population, where most, but not all, economic activity and employment generation in these sectors is generated by the public sector, be it local, State or Commonwealth governments.
- Industry, driven by the private sector, falling into two distinct categories:
 - Primary production based on agriculture, horticulture and mining, which while investment and output, particularly exports are growing, rapid advances in technology are driving productivity gains that are reducing employment opportunities and that often result in losses of jobs in regional Australia and creation of jobs in metropolitan Australia, for example, <https://www.abc.net.au/news/rural/2017-10-27/rio-tinto-joins-tafe-in-developing-training-of-mine-workers/9080222>.
 - Knowledge-intensive, value adding business, particularly in food processing, tourism, advanced manufacturing and creative industries, most of which draw heavily on advances in information technology and are dependent on world-class communications, where barriers to global market entry are generally low and a milieu of micro-businesses, small to medium sized enterprises (SMEs), large private companies and multinational corporates exists, for example The Barossa in food processing, Cairns in tourism, Albury-Wodonga in advanced manufacturing and Bendigo in the creative industries. Knowledge-intensive, value adding businesses are by far the most important driver of the creation of new industries and employment opportunities in regional Australia, and will be even more so into the future.

To this end, the Regional Australia Institute has recently completed a detailed study investigating the importance of knowledge-intensive, value adding industries in the creation of new industries

and employment opportunities in regional Australia. Findings from the *Regional Growth Prospects – Strategic Investment in Food Processing, Tourism, Advanced Manufacturing and Creative Industries, June 2019* is summarised below.

“Food processing, tourism, advanced manufacturing and creative industries are largely driven by the private sector, are most susceptible to market forces, and have significant potential contributions to regional growth. However, employment in these four industries is not distributed evenly across regional Australia, and growth and change in these industries will not impact all regions equally.

Research in this Report provides a nation-wide and consistent evidence base to support regional development investment decisions at the national, state and regional levels. This work helps policy practitioners design policy and interventions to target the regions where it matters most and, in a way, which is appropriate for the regional economies they seek to support. It gives regional leaders timely information that helps focus efforts in a more strategic way to grow regional Australia within specialised regions.

This research identifies regions that specialise in these industries and where jobs are critical to the local economy, and how these have performed over time. Specialised regions are those where there is a high proportion of local jobs in the industry compared to the national average for a place of that size. OECD experience shows that business-led specialisation approaches are effective in supporting regions to maintain their competitiveness in national and global contexts.

This Report shows that specialised regions have not performed equally over time, with local conditions in some regions helping to drive employment growth, while local condition in others may be constraining it. Local knowledge and deeper analysis are needed to identify what is occurring locally to drive or constrain job growth. Some factors could include the impacts of a new business or business expansion, variation of high human capital in the region, government or community programs, or natural assets in the region.”

Modified from *Regional Growth Prospects – Strategic Investment in Food Processing, Tourism, Advanced Manufacturing and Creative Industries, June 2019*, Regional Australia Institute (Attachment II).

Charles Sturt University supports the findings of the Regional Australia Institute in the *Regional Growth Prospects – Strategic Investment in Food Processing, Tourism, Advanced Manufacturing and Creative Industries, June 2019*, as well as their recommendations put forward in the report. The University encourages the Committee to review the Regional Australia Institute’s work on this front as part of their deliberations. The report can be accessed at <http://antispam.csu.edu.au:32224/?dmVyPTEuMDAxJiY2OWlxZjQ1Zjc0ZmUzZTAzND01RDZEOENBRI80NjA2OF8xNTc5OF8xJiY0Nzk4ZDRhOTVhMjFjMzQ9MTMzMzMyYmdXJsPW0dHAIM0EIMkYIMkZ3d3cIMkVvZWdpb25hbGF1c3RyYWxpYSUyRW9yZyUyRWF1JTJGaG9tZSUyRndwLWNvb nRlbnQIMkZ1cGxvYWRzJTJGMjAxOSUyRjA2JTJGUkFJTUVGU0IQLTlwMTgtMi0zL TEINUZSZWd pb25hbEdyb3d0aFBYb3NwZWN0cyU1RldFQiU1RkZpbmFsJTJFcGRm> and a copy of the report is provided for reference at Attachment 2 to this submission.

4.1.1 Recommendations – Charles Sturt University

Charles Sturt University makes the following recommendations to the Committee to drive the creation of new industries and stimulate growth of employment opportunities in regional Australia:

- **Government policies and public investment must be regionally targeted where growth in competitive and emerging industries makes a significant difference for job generation (that is, specialised regions, not all regions).**
- **Enable regions to build on their strengths by customising policy settings and tailoring programs based on past economic performance, existing industrial base and community assets where:**

- *the highest investment priority should be facilitative (for example, trade access), to catalyse new economic activities in regions where local conditions are driving growth, such as, government intervention to build on local strengths that generate business and employment opportunities; and,*
- *the highest investment priority should be market-failure correction (for example, communications infrastructure) to remove or reduce barriers to growth in regions which are lagging behind state and industry trends, such as, government intervention to support these regions in realising their full employment potential.*
- **Assess workforce and skills availability to foster specialised regional development and act to ensure potential new jobs can be filled, for example through regional learning systems or regional migration strategies as outlined in the Regional Australia Institute's, *The Future of Jobs Report 2019*.**

Further Charles Sturt University, refers the Committee to the range of recommendations that the University has made to State and Commonwealth inquiries and consultations over the last three years relating to regional development, see <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. Key recommendations from the University's submissions to these inquiries and consultations relating to regional development are provided for reference at Attachment 1.

4.2 Existing jobs in regional areas in clean energy technology and ecological services and their future significance

As discussed below, investment in clean energy and ecological services is rapid growing throughout regional Australia. Indeed, not only is this investment occurring throughout regional Australia, much of it is occurring in rural towns and remote communities.

This investment is boosting job opportunities in regional areas in sectors as diverse as hydroelectricity, wind farms, solar energy, and ecosystems services from farm soil carbon capture to indigenous cool burning of savanna. Future investment in clean energy technology and ecological services promises significant job outcomes for rural towns and remote communities, as evidenced below.

4.2.3 Hydroelectricity

While opportunities for expansion of hydro power in Australia are limited, current and planned expansion of existing hydroelectric systems is delivering multibillion-dollar investment in rural towns and remote communities, and along with it many thousands of direct and indirect jobs. Further post-construction operation will lead to the creation of many hundreds of jobs. Regional job opportunities arising from hydroelectricity include:

- Snowy 2.0, see <https://www.snowyhydro.com.au/our-scheme/snowy20/>.
- Battery of the Nation Tasmania, see <https://www.hydro.com.au/clean-energy/battery-of-the-nation>.

Further, investment such as the Kidston Pumped-Hydro Facility in North Queensland demonstrate the opportunity to build pumped hydroelectricity facilities in many parts of Australia, see <https://www.statedevelopment.qld.gov.au/coordinator-general/assessments-and-approvals/coordinated-projects/completed-projects/kidston-pumped-storage-hydro-project.html>. Pump hydro facilities in effect operate as a localised or distributed power storage for wind and solar generated electricity. In effect, small versions of Snowy 2.0 and Battery of the Nation. Kidston

is in a remote location and is a rural town that has suffered many decades of employment and population decline. The Kidston Facility is a \$330 million investment that will lead to 35 full time jobs in the town once operational.

4.2.4 Wind Energy

Like hydroelectricity, current and planned expansion of wind energy operations, or farms, is delivering multibillion-dollar investment in rural towns and remote communities, and along with it many thousands of direct and indirect jobs. Investment locations are as diverse as central Victoria, the far north west coast of Tasmania and the central tablelands in New South Wales, including in many locations which have suffered population and economic decline for many decades, for example Gunning.

Many communities and local governments have identified the attraction of wind energy investment near their cities and towns and in their remote communities as once in generation opportunities to address long term decline, for example Kangaroo Island Council, South Grampians Shire and Circular Head Council, all of which have established dedicated units in their economic development offices to attract wind energy investments and jobs. The rationale for these Councils' effort is demonstrated by the work of the Clean Energy Council, for example:

"This independent report shows that wind farms have direct economic benefits for their local community, as well as major flow-on benefits for the state and the rest of the country," Clean Energy Council Policy Director Russell Marsh said.

To date, more than \$4 billion of investment has been generated by wind power in Australia, with the potential for another \$17.8 billion, based on currently proposed and approved wind farm projects.

Mr Marsh said much of the investment was going to rural and regional areas."

From: <https://www.theaustralian.com.au/business/business-spectator/news-story/landmark-report-shows-economic-benefits-of-australian-wind-farms/e378fc1949306d31083fc00cd6802006>.

Along with solar power, decentralised electricity generation including hydro and wind based in regional Australia provides the added benefit of reducing overall investment in electricity distribution networks and significantly reduces electricity losses arising from the distribution network, for example the 30 per cent of power that was lost in generating electricity in the La Trobe Valley in transmission to Portland for the operation of the now closed aluminium smelter.

4.2.5 Solar Power

As with wind energy and hydroelectricity, current and planned expansion of solar power, or farms, is delivering multibillion-dollar investment in rural towns and remote communities, and along with it many thousands of direct and indirect jobs. Investment locations are as diverse as northern Victoria, the far north west coast of New South Wales and many parts of central and western Queensland, including in many locations which have suffered population and economic decline for many decades, for example Nyngan, see <http://www.conpower.com.au/our-projects/nyngan-solar-farm>.

Again, as with wind, many local government areas are striving to capture investment in solar power and the permanent, full-time and high paid jobs the arise from solar power investments both during construction and subsequent operation. Nowhere is this more so, than the effort being made by the Central Highlands Regional Council in Queensland:

"The Central Highlands Regional Council has received an influx of solar farm applications recently, highlighting the region's readiness for investment and innovation.

Three applications have been approved by council's planning department, including one from 2015 that is now nearing the construction stage.

A further three applications are currently under assessment and, based on additional enquiries, more could be on the cards.

Mayor Cr Kerry Hayes said the interest was spread right across the region, including locations at Emerald, Tieri, Blackwater, Bluff, Dingo and Rolleston. The total area of proposed solar farms in the region, both approved and under assessment, is almost 2000 hectares and over 800 MW."

From - <http://www.centralhighlands.qld.gov.au/about-council/news/solar-farm-influx-highlights-regions-eagerness-for-innovation/>.

4.2.6 Ecosystem services

The Australian Government's Department of Agriculture defines ecosystem services as:

"Ecosystem services have been defined as the benefits to humans from nature or, direct and indirect contributions of ecosystems to human wellbeing. For the purposes of 'environmental accounting,' ecosystem services have been distinguished further as those that can be turned directly into benefits (called 'final ecosystem services') and those that support other services (called 'intermediate ecosystem service'). While still far from perfect, these distinctions are increasingly gaining acceptance in assessment processes around the world."

From - <http://www.agriculture.gov.au/ag-farm-food/natural-resources/ecosystem-services>

In effect, the emerging industrial sector of ecosystem services is based on placing a value, and therefore a price on what has historically been referred to as the commons. That is earth, water, atmosphere, public lands and waters (for example, forestry, fisheries etc.) and biodiversity (for example, sources of genetic material and therapeutic compounds).

While a nascent sector, ecosystem services has great future promise for regional, rural and remote investment and job creation, for example, soil carbon capture by farmers, revegetation of public and private degraded land, carbon sequestration and oxygen production in forestry (noting that timber used in construction provides a locked, or sequestered form of carbon) and sources of new and novel genes for crop and pasture production (for example, introducing drought tolerance from native grasses to highly-breed European grasses).

Further, ecosystem services offer particular opportunities for Indigenous Australians, particularly Indigenous Australians' with native title and who live on country in very remote locations. For example:

"The research found that significant opportunities (and some risks) exist for Indigenous people on Cape York Peninsula in the ecosystem services sector, particularly with respect to water and catchment management. Securing opportunities and managing risks needs:

- *strengthened local and regional Indigenous governance systems.*
- *the development of policies, programs and regulatory frameworks to support ecosystem services valuation.*
- *partnerships with agencies that have skills in monitoring and evaluation.*
- *building relationships with future customers (both government and non-government).*
- *identifying complementary business opportunities and income streams that can support Indigenous provision of ecosystem services.*

- *Indigenous natural and cultural resource management that can generate substantial social benefits for employees, local communities, and wider society.”*

From - *Community-based evaluation, governance, and strategic planning for Indigenous Ecosystem Services in Eastern Cape York Peninsula*, see <https://publications.csiro.au/rpr/download?pid=csiro:EP179241&dsid=DS2>.

4.2.1 Recommendations – Charles Sturt University

Charles Sturt University makes the following recommendations to the Committee to regarding existing jobs in regional areas in clean energy technology and ecosystem services and their future significance:

- ***Develop and implement publicly-funded programs to ensure that local workforces are up-skilled to fill future jobs arising from continued investment in clean energy technologies in regional Australia, both during the construction phase of developments as well as when developments move to operation.***
- ***Where clean energy technology developments are funded, or part-financed by government, ensure a portion of local procurement at the remote, rural and regional level. An example would be catering and accommodation in the remote community, trades and basic services from the nearest rural town and major engineering services from the nearest regional city.***
- ***Establishment, development and on-going public funding of a national centre for ecosystem markets and services, to act as a market and technology conduit between providers of services and purchasers of services, with such a centre having a technology-transfer, product development and a market-access focus. Such a centre must be established in regional Australia with headquarters in a regional city and a hub and spoke model to ensure national coverage. Charles Sturt University’s Albury campus would be an ideal location to establish the centre.***

As mentioned above, the University refers the Committee to the range of recommendations that the University has made to State and Commonwealth inquiries and consultations over the last three years relating to regional development, see <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. Key recommendations from the University’s submissions to these inquiries and consultations relating to regional development are provided for reference at Attachment 1.

4.3 Lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies

A review of the economic development literature, including that provided in reports from organisations such as the Australian Chamber of Commerce and Industry (ACCI), Committee for Economic Development Australia (CEDA), Organisation for Economic Cooperation and Development (OECD), the International Monetary Fund (IMF) and World Bank, as well as publications of State and Commonwealth governments in Australia, provides some important lessons which can be learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies. Essentially, these lessons fall into two crucial areas for catalysing future job creation.

Prosperous, inclusive and sustainable economic transformation and new job creation requires a coordinated partnership between government and the private sector, where:

- firms, regardless of size, invest capital in new products, services and processes, which in turn require personnel with every-increasing knowledge and skills sets; and,
- governments, coordinated across the three levels of government, work with industry to facilitate workforce capability and capacity through investment in education and health, and where external shocks cause local economic dislocation, work with communities to facilitate structural adjustment while concomitantly boosting regional resilience.

Successful examples of firms and governments working together to drive regional investment and create the jobs of the future in regional areas include the:

- Development of Albury-Wodonga as a centre of industry and commerce, see for example, <https://researchdata.andcs.org.au/albury-wodonga-development-corporation/165932>.
- Transformation of Wollongong from a low-skilled manufacturing economic base to a highly-skilled IT workforce (in partnership with the University of Wollongong), see for example, <https://www.domain.com.au/news/steel-smart-wollongong-transforming-770088/>.
- Redevelopment and revitalisation of the centre of Newcastle on the closure of the BHP steel works, see for example, <https://theurbandevolver.com/articles/revitalising-newcastle-behind-the-citys-billion-dollar-boom>.
- Transition of north west Tasmania from a heavy reliance on the forestry industry to an economy based on high-value, downstream processed agricultural goods and experienced-based tourism, see for example <https://www.discovertasmania.com.au/about/regions-of-tasmania/north-west>.
- Emergence of Bendigo and Castlemaine as centres for the creative industries, see for example, <https://creative.vic.gov.au/creative-state/introduction>.

As public teaching, learning and research organisations, Australia's universities have a crucial role to play in the creation of the jobs for the future, particularly in regional Australia. The role of universities in the creation of jobs for the future in regional Australia is centred on development and delivery of cutting-edge teaching and learning to ensure workforce capability and capacity development, as well as working with industries and communities to equip them with the skills and knowledge to capture the opportunities arising from and meeting the challenges confronted by structural adjustment and regional resilience through regionally-based research and development.

For example, Charles Sturt University is driving a range of teaching, learning and research initiatives in the regions within which the University operates, including the University's activities in the advanced manufacturing and food-technology spaces:

- In Wagga Wagga and the broader Riverina, where the University is working with industry and all tiers of government to develop the University's Wagga Wagga as a centre for agricultural innovation, including the AgriPark.
- Food processing teaching, learning and research for skills and knowledge development, which will be essential to ensure the capture of future value-added components of agribusiness, and employment growth from more intensive food production.
- Teaching and learning to ensure regional Australians are equipped with the skills and knowledge for new occupations in raw food production, as traditional food processing jobs

have been decreasing due to improved technologies and other efficiencies that reduce the need for human labour, noting that food processing jobs have now surpassed the number of food production jobs nationally.

- The University's advocacy for the development of the Charles Sturt New-Foods Laboratory, which will, for example, catalyse innovation of high-value food products and foster uptake of blockchain enabled distribution in support of paddock-to-plate offerings and experiences.
- Working with highly innovative, technology-based firms, such as ROBE (Riverina Oils and Bio Energy) and AQUANA Cod.
- Working with local government and other regionally based economic development agencies, such as the Regional Development Australia bodies to facilitate regional specialisations and distinctions (building regional Australia geo-branding as the European Union has successfully done trade negotiations over recent decades), which in turn has the advantage of reducing vicious-cycle competition between councils for the same businesses and industries.
- General support for the entrepreneurial business systems in the regional cities, rural towns and remote communities across the University's campus footprint.

4.3.1 Recommendations – Charles Sturt University

The recommendations made by Charles Sturt University in Section 4.4 The importance of long-term planning to support the diversification of supply chain industries and local economies and all of Section 4.5 Measures to guide the transition into new industries and employment, below, capture lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies that are applicable to regional job creation.

Adopting these recommendations would ensure lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies are not only captured, but built on for regional development success and the jobs of the future in regional Australia.

As mentioned above, the University refers the Committee to the range of recommendations that the University has made to State and Commonwealth inquiries and consultations over the last three years relating to regional development, see

<https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. Key recommendations from the University's submissions to these inquiries and consultations relating to regional development are provided for reference at Attachment 1.

4.4 The importance of long-term planning to support the diversification of supply chain industries and local economies

Long-term planning to support the diversification of supply chain industries and local economies is critically important to ensure the jobs of the future in our regional cities, rural towns and remote communities. However, supply chain challenges and opportunities are particularly acute at present due to uncertainty in trade rules and market access, for example the Sino-American Trade War, security concerns arising from China's breaches of international law in the South China Sea and Australia's trade negotiations with both the European Union and the UK at the same time as Brexit processes are playing out.

Government, particularly the industry departments of State governments and the foreign affairs and trade functions of the Commonwealth Government, including for example Austrade, has a crucial role to play in fostering (and protecting) the national and international supply chains that will be critical to ensure future job creation in regional Australia. Investment by governments in this space, together with the skills of their trade departments is critically important for the long-term planning of and support to the diversification of supply chain industries for regional, rural and remote economies.

Further, the commentary and recommendations provided above under investment in clean energy and ecological services is rapid growing throughout regional Australia and lessons which can be learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies apply equally to discussion of the importance of long-term planning to support the diversification of supply chain industries and local economies. Please refer to Sections 4.2 and 4.3, above.

4.5 Measures to guide the transition into new industries and employment

A suite of strategically planned, well financed and locally-coordinated measures are required to guide the transition of our regional cities, rural towns and remote communities into new industries and employment for the future. Key measures for success include:

- Community infrastructure to attract investment and job creation.
- Need for a public authority to manage the transition.
- Meaningful community consultation to guide the transition.
- Role of vocational education providers, including TAFE, in enabling reskilling and retraining.
- Role of regional universities in assuring workforce skills and knowledge and business capability and capacity.

Each of these key measures, and their importance in guiding our regional cities, rural towns and remote communities through the transition into new industries and employment are discussed below.

4.5.1 Community infrastructure to attract investment and job creation

Community infrastructure to attract new investment and job creation in regional Australia is a prerequisite for regional development. Not just to attract businesses and people to regions but the people and business of regions to prosper in an inclusive and sustainable future. This is a theme that has been addressed in almost all of Charles Sturt University's submissions to governments over the last decade, see <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>.

To this end, the University recognises that Commonwealth Government's commitment to community infrastructure to attract new investment and job creation in regional Australia through the *Regions 2030 Unlocking Opportunity* statement that was released by Senator the Hon Fiona Nash, Minister for Regional Development, Minister for Local Government and Territories and Minister for Regional Communications in May 2017.

"Through significant investments across the five key focus areas of Jobs and Economic Development; Infrastructure; Health; Education; and Communications, Regions 2030 outlines the Australian Government's commitment to regional Australia and its future. Additionally, this Government's

establishment of the Regional Australia Ministerial Taskforce to drive the Regions 2030 agenda demonstrates the priority we are placing on regional Australia across government.”

From <https://www.regional.gov.au/regional/publications/files/regions-2030.pdf>.

4.5.2 Need for a public authority to manage the transition

Charles Sturt University believes that a public authority is needed to manage regional development and the transition to future jobs in regional Australia. Indeed, the University has called for the establishment of such a body previously.

For example, on 15 September 2017 Charles Sturt University provided a submission to House of Representatives Select Committee on Regional Development and Decentralisation in response to the Committee's Inquiry into Regional Development and Decentralisation. The elements of the submission of 15 September 2017 regarding the establishment of an authority for regional development are relevant to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas.

The following extract from the University's submission of 15 September 2017 is provided below, in support of the University's submission to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas:

“1. Charles Sturt University recommends that a regional development framework with the seven outcomes detailed above be agreed through a national partnership comprising all levels of government and that pragmatic and measurable goals and objectives be attached to each outcome.

Delivering positive outcomes and great benefit for Australians living and working in regional, rural and remote communities will require rigorous system integration, that is an approach that is:

- i. holistic, with long-term policy focus and program effort on the strategies, actions and tasks required to deliver regional, rural and remote development benefit;*
- ii. built on strongly facilitated participation by all economic, social, cultural and environmental stakeholders in any given region that drives a very high level of distinguishing regionalism;*
- iii. based on shared regional vision and leadership, with whole of stakeholder agreement and commitment to definable and measurable economic, social, cultural and environmental outcomes;*
- iv. governed and coordinated at the regional level, with management and operationalisation distributed to the communities that comprise each region;*
- v. guided by a planning, reporting and communication framework, including an overall regional development strategy containing economic, social, cultural and environmental roadmaps and investment plans, including capital sources and public-sector budgets;*
- vi. owned and championed by individual members of the community (act local, think global); and,*
- vii. a market-based response, where government intervention is strictly in the public good and within the scope of an overall regional development strategy, for example, only decentralising government agencies where there is positive net benefit and investing in trade facilitation rather than subsidising corporate decentralisation.*

To this end, Charles Sturt University's principal recommendation to boost the performance of Australia's regional, rural and remote development efforts is to rigorously strengthen system integration.

2. Charles Sturt University, recommends that – an arm's length, bipartisan, beyond cycle and resourced and championed governance and management model be implemented as follows:

- a. Through the Council of Australian Governments (COAG) and including Local Government Association (LGA), the Commonwealth would establish the Australian Regional Development*

Commission, the Commission would report to COAG. The national plan Regions 2030 Unlocking Opportunity could provide the foundations on which to build this.

- b. The Commission would be funded 50/50 by the Commonwealth, States and Territories and would work with bodies such as Infrastructure Australia and AgriFutures Australia (formerly the Rural Industries Research and Development Corporation, RIRDC), with initial seed funding over four years of \$10 billion.*
- c. Commissioners would be nominated by Australia's Regional Development Australia Committees (RDAs) and appointed by a COAG Regional Development Ministerial Council, while the RDAs would be resourced to operate as locally-championed regional branches of the Commission.*
- d. The Commission would be headquartered in regional Australia, located in Orange or Dubbo as geographically they are in the centre of regional eastern Australia.*
- e. The RDAs would be resourced to continue and improve their regional planning work, based on the framework set out above and would have greater involvement from rural and remote communities in each area, thereby creating a genuine hub and spoke with a regional city at its core."*

From https://cdn.csu.edu.au/_data/assets/pdf_file/0010/2955907/Submission-Regional-Development-and-Decentralisation-Sub-120.pdf.

4.5.3 Meaningful community consultation to guide the transition

Meaningful community consultation to guide economic transition in regional Australia is essential to ensure the creation of future employment opportunities as well as ensure that regional Australian's participate in the jobs of the future. Consultation provides an opportunity to share relevant information and participate in meaningful discussion on economic, social and environmental matters as they affect the lives and work of regional Australians. Using the knowledge and experience of all stakeholders, particularly local stakeholders at the regional, rural and remote coalface will ensure successful regional development.

However, consultation can only be meaningfully and effectively driven through leadership. Leadership, in a regional setting has many facets, from local community champions, business owners and leaders, local government, from staff to councillors, regional branches of government, for example the Regional Development Associations, larger NGOs such as chambers of commerce and national organisations such as the union movement and economic business organisations, as well as State and Commonwealth governments.

4.5.4 Role of vocational education providers, including TAFE, in enabling reskilling and retraining

VET providers and TAFE have a mission-critical role to play in assuring workforce skills and knowledge and business capability and capacity for regional development, including for the jobs of the future in regional Australia. Australia, along with most OECD nations, has not been particularly good at aligning future workforce need with today's investment in skills and knowledge, particularly at the regional level, for example engineering professionals recruited offshore for mining construction in central Queensland.

Ensuring alignment of skills and knowledge investment with future workforce need will require effective and long-term partnerships between industry, tertiary education and training providers and all three tiers of government. Some States have attempted to put in place the infrastructure required to effect such partnerships, for example the Queensland Government's Ministerial Industry Commission (MIC), see <http://statements.qld.gov.au/Statement/2013/11/14/new-ministerial-industry-commission-ready-to-start-training-reform>.

Such initiatives often do not survive changes in governments and policies, see commentary below regarding continual changes to the VET system. Government agencies are generally not supportive of bodies such as the MIC as they can remove decision making for education and training investment from departments and Ministers. However, in order to align skills and knowledge investment with future workforce need effective and long-term partnerships between industry, tertiary education and training providers and governments is required to provide certainty for providers of education and training (investment in course development and infrastructure from physical facilities to digital systems) and future employers (supply of skilled and knowledgeable workforce for productivity gains and business expansion etc.).

Vocational education has a strong connection to higher education providers and measures should include linking to the National Regional, Rural and Remote Education Strategy (see Section 4.7, below) as this helps attract people and jobs to our regional cities, rural towns and remote communities. University graduates must also form part of educational measures to promote regional development and job creation, with a focus on the linkages to the key programs and deliverables as part of the National Regional, Rural and Remote Education Strategy.

Governments across the political spectrum and across jurisdictions have made many changes to the VET system, including TAFE over the last 15 years or so. While many of these changes have been made in the name of reform, it is clear and widely understood from the national student progression and completion data (see, <https://www.ncver.edu.au>), that system performance is falling and at best is suboptimal.

Falling student progression and completion rates do not only directly impact workforce supply, but they also reduce the flow of VET students to higher educational studies through alternative pathways to Year 12. Pathways other than Year 12, are particularly crucial to raising higher education participation and performance in regional Australia (see Section 4.5.5, below). Further, this situation drives down enrolments at regional universities, which in turn impacts the ability of regional universities to services the regional development needs of their communities.

As highlighted in the Commonwealth Government's recent review of the VET System, see *Strengthening Skills Expert Review of Australia's Vocational Education and Training System*, undertaken by The Honourable Steven Joyce in mid-2019 at https://www.pmc.gov.au/sites/default/files/publications/strengthening-skills-independent-review-australia-vets_1.pdf, system performance will need to be corrected and particularly so in regional Australia, if Australia is to secure future employment opportunities for people living in our regional cities, rural towns and remote communities. The VET system challenge has recently been summarised by industry thought leader Ms Claire Field:

"Thanks to the NCVER's [VET Knowledge Bank](#) we now have data on 21 years of VET reforms.

What the data shows is that governments have made 465 different changes to the VET system in the last 21 years. That's an average of one every two and a half weeks, every year for more than two decades.

While government policy changes are no doubt driven by good intentions, the short-term thinking must stop.

Furthermore, if States and Territories will not agree to the proposals put forward by Steven Joyce in his very thoughtful review – they surely need to come up with their own comprehensive suite of national reforms and then work with the Commonwealth to implement them.

The Australian VET sector is beset by falling levels of government funding, falling enrolments, an ageing workforce and a growing threat from the non-accredited, ed-tech sector. We need a long-term, national reform agenda which all stakeholders commit to and which governments fund accordingly."

From <https://www.clairefield.com.au/vet-reform-whats-to-be-done> and <https://www.clairefield.com.au/the-vet-reform-merry-go-round>.

Further discussion on the role of the tertiary education and training sector in regional development and the future of regional jobs is also provided at Section 4.7, below, where the Charles Sturt University addresses the importance of a national regional, rural and remote education strategy.

A discussion of the role of the regional universities in assuring workforce skills and knowledge and business capability and capacity is provided below at Section 4.5.5.

4.5.5 Role of regional universities in assuring workforce skills and knowledge and business capability and capacity

Like VET providers and TAFE, Universities have a critical role to play in assuring workforce skills and knowledge and business capability and capacity for regional development, including for the jobs of the future in regional Australia.

On 18 January 2018 Charles Sturt University wrote to the Ms Jennifer Westacott Chief Executive Officer of the Business Council of Australia regarding the Council's paper, *Future Proof: Protecting Australians through Education and Skills*, refer

https://www.bca.com.au/future_proof_protecting_australians_through_education_and_skills.

Several elements of the correspondence of 18 January 2018 are relevant to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas.

The following extract from the Vice-Chancellor's letter to the Chief Executive Officer is provided below, in support of the University's submission to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas:

“Charles Sturt University welcomes the Council's interest in the tertiary education and training system and agrees that a world-leading system will be essential to secure Australia's prosperity in the 21st Century. To this end, we:

- Extend an invitation to collaborate on policy ideas and program designs to position Australian tertiary education and training for the future, particularly in regional cities, rural towns and remote communities.*
- Agree that investing in education and research is the best way to support productivity and innovation, and to position Australia to face continuing economic change.*
- Support high levels of participation in higher education which will help Australians to develop the advanced generic and specific skills that the economy increasingly needs, including open-ended inquiry and continuous learning – the most traditional academic values – instil the attitudes and capabilities to drive and respond to the digital economy.*
- Believe that Australia can afford a high-quality university system that is open to all Australians with the ability to give it a go, as a country we cannot afford not to make this investment.*
- Contend that there is no evidence of a decline in tertiary education and training quality, and believe that achievement is a remarkable win for Australia's university system at a time when participation has expanded significantly, especially among groups traditionally under-represented in universities.*
- Believe that current funding levels are sustainable, noting that enrolments are growing at around the same rate as population growth and that the demand-driven system was successful and sustainable.*

We do note however, that despite this success story, universities have faced an uncertain policy and program funding environment for most of the last decade. The medium-term future for university policy and funding remains uncertain. Even some elements of the recent MYEFO announcements are unpredictable in their impact, indeed the recent short-term government focus on cutting tertiary

education and training expenditure will soon damage the capability and capacity of education and training providers.

Charles Sturt University appreciates the opportunity to make a submission in response to the Council's paper, as well as the Council's continuing interest in education policy, and in tertiary education and training in particular. Together with Universities Australia, we are keen to work constructively with the Council to develop ideas for effective and sustained education and training policies and programs that ensure Australia's future international competitiveness. We welcome several elements of the paper, including:

- *Commitment to sustainable policy settings that position Australia for the long term including rapid and unpredictable economic change.*
- *Recognition of the broad and varied purposes of education and training.*
- *The focus on building human capital and cultivating knowledge and enquiry.*
- *Recognition of the public and private benefits of education and training investment.*
- *Recognition of the importance of teaching and research, including the link between the two.*
- *Recognition of the different and complementary roles of higher education and Vocational Education and Training (VET) sector.*
- *Clear recognition of the positive impact of education and research on economic prosperity and growth, innovation and social cohesion.*
- *Recognition of the vital importance of tertiary education in today's world, and it's even greater importance in the economy and labour market of tomorrow.*
- *Ideas and policies to expand access to tertiary education to all Australians.*
- *Recognition of the importance of diverse pathways into (and out of) education.*
- *The strong commitment to life-long learning."*

From https://cdn.csu.edu.au/_data/assets/pdf_file/0003/3084141/CSU-Sub-Future-Proof-Protecting-Australians-through-Education-and-Skills.pdf.

Again, further discussion on the role of the tertiary education and training sector in regional development and the future of regional jobs is also provided at Section 4.7, below, where the Charles Sturt University addresses the importance of a national regional, rural and remote education strategy.

4.5.6 Recommendations – Charles Sturt University

Charles Sturt University makes the following recommendations to the Committee regarding measures to guide the transition into new industries and employment:

- ***Continue the rollout proposed and investments detailed in Regions 2030 Unlocking Opportunity, to ensure community infrastructure to attract new investment and job creation in regional Australia is developed.***
- ***A regional development framework with the seven outcomes detailed above be agreed through a national partnership comprising all levels of government and that pragmatic and measurable goals and objectives be attached to each outcome.***
- ***Delivering positive outcomes and great benefit for Australians living and working in regional, rural and remote communities will require rigorous system integration, that is:***

- viii. ***whole of system, with long-term policy focus and program effort on the strategies, actions and tasks required to deliver regional, rural and remote development benefit;***
 - ix. ***built on strongly facilitated participation by all economic, social, cultural and environmental stakeholders in any given region that drives a very high level of regionalism;***
 - x. ***based on shared regional vision and leadership, with whole of stakeholder agreement and commitment to definable and measurable economic, social, cultural and environmental outcomes;***
 - xi. ***governed and coordinated at the regional level, with management and operationalisation distributed to the communities that comprise each region;***
 - xii. ***guided by a planning, reporting and communication framework, including an overall regional development strategy containing economic, social, cultural and environmental roadmaps and investment plans, including capital sources and public-sector budgets;***
 - xiii. ***owned and championed by individual members of the community (think global, act local); and,***
 - xiv. ***a market-based response, where government intervention is strictly in the public good and within the scope of an overall regional development strategy.***
- ***An arm's length, bipartisan, beyond electoral cycle, resourced and championed governance and management model be implemented as follows:***
 - e. ***Through the Council of Australian Governments (COAG) and including Local Government Association (LGA), the Commonwealth would establish the Australian Regional Development Commission, the Commission would report to COAG. The national plan Regions 2030 Unlocking Opportunity could provide the foundations on which to build this.***
 - f. ***The Commission would be funded 50/50 by the Commonwealth, and the States and Territories and would work with bodies such as Infrastructure Australia and AgriFutures Australia (formerly the Rural Industries Research and Development Corporation, RIRDC).***
 - g. ***Commissioners would be nominated through an open, transparent and merit-based process.***
 - h. ***The Commission would be headquartered in regional Australia, located in a regional city, for example, Orange or Dubbo as geographically they are in the centre of regional eastern Australia.***

- ***Establish and embed meaningful and effective consultation through leadership, recognising that leadership in regional settings is pivotal to future sustainability and has many forms.***
- ***Strengthen the VET system, so that it can provide the training required to ensure the skills and knowledge of future regional workforces, by:***
 - ***implementing the findings of the Strengthening Skills Expert Review of Australia's Vocational Education and Training System, undertaken by The Honourable Steven Joyce; and,***
 - ***implementing an education and training and skills and knowledge partnership between business and industry, education and training providers and government based on the successful Ministerial Industry Commission model that was implemented in Queensland in 2013.***
- ***Strengthen the higher education and university system, so that it can provided the education required to ensure the skills and knowledge of future regional workforces, by implementing the recommendations made by Charles Sturt University in Section 4.7 National Regional, Rural and Remote Education Strategy (below).***

As mentioned above, the University refers the Committee to the range of recommendations that the University has made to State and Commonwealth inquiries and consultations over the last three years relating to regional development, see <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. Key recommendations from the University's submissions to these inquiries and consultations relating to regional development are provided for reference at Attachment 1.

4.6 Renewable resources in Northern Australia to build a clean energy export industry to export into Asia

While Charles Sturt University does not have any direct experience relevant to the industries and communities of Northern Australia, the proposition that Northern Australia has significant potential renewable resources to build a clean energy export industry to export to Asia is logically sound. For example, the development of the solar power to hydrogen industry in Gladstone, Queensland, see <https://www.tiq.qld.gov.au/clean-hydrogen-fuel-future/>. Such opportunities are not confined to Northern Australia, for example solar to hydrogen facilities could be established in northern New South Wales and South Australia too.

Further, the commentary provided above under investment in clean energy and ecological services is rapid growing throughout regional Australia apply equally to discussion of the opportunities arising from renewable resources in Northern Australia to build a clean energy export industry to export into Asia. Please refer to Section 4.3, above. Development of regional, rural and remote economies based on the exploitation of renewable resources in Northern Australia would best be coordinated through the Northern Australia Infrastructure Facility (NAIF).

4.6.1 Recommendations – Charles Sturt University

Charles Sturt University makes the following recommendations to the Committee regarding the opportunities for renewable resources in Northern Australia to build a clean energy export industry to export into Asia:

- **Commonwealth and State governments work together to ensure greater and seamless alignment of the policy outcomes and program objectives of the Clean Energy Finance Corporation (CEFC) and the NAIF, to ensure opportunities for renewable resources in Northern Australia to build a clean energy export industry to export into Asia are captured.**
- **In working together, the CEFC and NAIF partner with business and industry to boost direct investment in renewable resources in Northern Australia to build a clean energy export industry that exports to Asia.**
- **That trade and export agencies of State governments work with Austrade and other divisions of the Department of Foreign Affairs and Trade to ensure that investments in renewable resources in Northern Australia have access to markets in Asia.**

As mentioned above, the University refers the Committee to the range of recommendations that the University has made to State and Commonwealth inquiries and consultations over the last three years relating to regional development, see <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. Key recommendations from the University's submissions to these inquiries and consultations relating to regional development are provided for reference at Attachment 1.

4.7 National Regional, Rural and Remote Education Strategy

4.7.1 Development and implementation of a national regional, rural and remote education strategy

On 1 February 2019 Charles Sturt University wrote to the The Hon Dan Tehan MP, Minister for Education regarding the Commonwealth Government's development and implementation of a national regional, rural and remote education strategy. Many elements of the correspondence of 1 February 2019 are relevant to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas.

The following extract from the Vice-Chancellor's letter to the Minister of 1 February 2019 is provided below, in support of the University's submission to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas:

“Education is the primary driver of economic growth and it provides the opportunity for our people living and working in non-metropolitan Australia to create wealth, employment, and contribute to the nation's future prosperity. Development and implementation of a Regional, Rural and Remote Education Strategy would greatly strengthen Australia's regional, rural and remote education system for better economic, social and environmental outcomes in communities across nonmetropolitan Australia. Our regions are vital contributors to national success and we must ensure that all Australians no matter where they live or work, are provided with educational opportunity.

An effective education strategy would need to focus on individual aspiration, ease of access, personal preparedness, equity assurance and student success. The strategy would need to encompass policy interventions and program investments that increase post-secondary study options, strengthen financial, emotional and social support, boost tertiary education and training aspiration, address disadvantage, attract people and jobs to our regional cities, rural towns and remote communities and provides for a multi-generational commitment to implementation and monitoring.

Implementation of a Regional, Rural and Remote Education Strategy must include programs that:

- *Overcome distance and isolation through infrastructure investment.*
- *Ensure provider and qualification choice in community.*

- *Enable face-to-face student-academic interaction, as well as local peer-to-peer interaction and mentoring.*
- *Subsidise rural and remote student travel and accommodation expenses.*
- *Require breadth and depth in bridging, enabling and pathway programs at no costs to rural and remote students (for example fee-free TAFE study in Victoria).*
- *Grants scholarships to students for study at regional university campuses to maintain people in and attract people to regional, rural and remote Australia.*
- *Reviews, refreshes and refines the HEPP taking into account regional diversity.*
- *Encourages whole-of-community stakeholder ownership of improved study outcomes through cooperation and collaboration.*
- *Provides regional graduate employment incentives for businesses and individuals.*
- *Informs, through an awareness and promotion campaign targeted at prospective students, the value of study to regional, rural and remote communities and the value of studying at a regional university campus.*
- *Invests in productivity enhancing and participation boosting initiatives for regional, rural and remote workforce development.*
- *Funds in-situ research aimed at addressing challenges and capturing opportunities unique to regional, rural and remote Australia.*
- *Promotes far-reaching national awareness of the benefits of studying, living and working in non-metropolitan Australia.”*

From https://cdn.csu.edu.au/_data/assets/pdf_file/0018/3161250/Charles-Sturt-University-Submission-National-Regional-Rural-and-Remote-Education-Strategy.pdf

In the Vice-Chancellor’s letter to the Minister of 1 February 2019, Charles Sturt University proposed a suite of coordinated and complementary programs for implementation under a national strategy for regional, rural and remote education and training. Delivering on the objectives and outputs in each the University’s suggested programs would contribute to achieving the desired policy outcomes of a national framework for regional, rural and remote education and training. With these educational policy outcomes essential to ensure jobs for the future in regional Australia.

The University’s proposed programs included:

1. *Tertiary education and training providers stimulating economic growth in regional, rural and remote areas:*
 - *Programs that develop and transform regional, rural and remote workforces, including business productivity that builds-on local competitive strengths and transform local economies and for improved public services such as education and health that further strengthen participation in local employment.*
 - *Programs that retain regional, rural and remote students in regional, rural and remote Australia (refer above).*
 - *Programs that boost regional, rural and remote participation rates in vocational education and training (VET) and higher education (refer above).*
 - *Research activities aimed at addressing challenges and capturing opportunities before regional, rural and remote Australia (that is undertaken in situ), including specific and increased funding for regional, rural and remote Australia administered by the Australian Research Council (ARC) and National Health and Medical Research Council (NH&MRC) where physical, geographic presence in regional, rural and remote is a mandatory criterion, as*

only regional, rural and remote research institutions are able to effectively identify and address regional, rural and remote challenges and opportunities in collaborative partnership with their local communities

- *Support for arts and cultural activities, in collaboration with local community groups.*
 - *Growing VET and higher education student enrolments in regional, rural and remote Australia (refer above) which in turn grows the direct workforces of VET and higher education providers.*
 - *Industry and business development functions, including start-up business creation – borne locals are likely to stay local.*
 - *Funding for university and TAFE infrastructure, including for open-access centres of learning to encourage commitment to lifelong learning and introductory participation in informal and unaccredited study (as a pathway for more formal, accredited education and training) at learning spaces, study centres, study hubs and regional campuses.*
2. *Policies that would attract more metropolitan and international students to study at regional, rural and remote universities and campuses.*
 3. *Governments and higher education and training providers to work in concert with local regional, rural and remote communities to attract students to their area, to ensure local support for students moving to the area to study as well as ensure that student moving to the area to study are welcomed and supported by the community (not just their chosen institution of study).*
 4. *Higher Education Loans Program (HELP) discounts for student that study at regional campuses of University and continue to live and work in regional, rural and remote Australia (for say a period of three to five years post-graduation) (see above).*
 5. *A long-term, broad, behavioural change promotional campaign about the value of advanced VET study and higher education study at the regional campuses of universities, based on health, road safety and anti-smoking models targeted at students and parents in metropolitan Australia. Key messaging from such a campaign would include:*
 - *Life style attributes.*
 - *Generally lower cost of living.*
 - *That graduates of regional universities tend to enjoy better employment and economic outcomes.*
 - *After graduation 76 per cent of regional graduates have full-time work, compared to 71 per cent in the cities, with many working in regional areas, moreover, during their studies, students at regional universities report high levels of satisfaction with their university experience.*
 - *Regional cities provide excellent opportunities for employment, career development and above all else provide very affordable housing (compared to metropolitan Australia).*
 6. *International marketing and promotion campaign informing potential international students of the value of studying at non-metropolitan campuses of Australian universities.*
 7. *Strengthen post-study work rights for international students who study and remain in regional areas, as well as increase existing points contribution to permanent residency for international students that study priority workforce qualifications, study at regional university campuses and continue to live and work in regional, rural and remote Australia on graduation (up to 10-year retention conditions of residency).*

From https://cdn.csu.edu.au/data/assets/pdf_file/0018/3161250/Charles-Sturt-University-Submission-National-Regional-Rural-and-Remote-Education-Strategy.pdf

4.7.2 Independent Review into Regional, Rural and Remote Education

Further, on 29 August 2017 Charles Sturt University provided a submission to Emeritus Professor John Halsey Chair, Independent Review into Regional, Rural and Remote Education in response to Professor Halsey's request for input to Australia's regional, rural and remote education system.

Many elements of the submission of 29 August 2017 are relevant to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas.

The following extract from the Vice-Chancellor's introductory letter to the submission of 29 August 2017 is provided below, in support of the University's submission to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas:

“Charles Sturt University is pleased to provide a submission to the Halsey Review. Our submission recognises that effective regional, rural and remote education strategy must be customised and tailored to the needs of individuals, local employers and specific economies given the breadth and depth of regional diversity across Australia.

The University's submission provides detailed commentary and opinion, based on an extensive review of Australian and international literature, as well as our own comprehensive research across regional, rural and remote south-eastern Australia regarding education in non-metropolitan Australia. The University's submission addresses:

- the gap in educational achievement between regional, rural and remote students and metropolitan students;*
- the key barriers and challenges that impact on the educational outcomes of regional, rural and remote students, including aspiration, access and equity;*
- the appropriateness and effectiveness of current modes of education delivered to these students, including the use of information and communications technology and the importance of face-to-face regional, rural and remote education provision;*
- the effectiveness of public policies and programs that have been implemented to bridge the divide;*
- the challenges and opportunities to help students successfully transition from school to further study, training and employment; and,*
- innovative approaches that support regional, rural and remote students to succeed in school and in their transition to further study, training and employment.”*

And:

“Charles Sturt University supports the development and implementation of a National Regional, Rural and Remote Education Strategy. The University would like to see development and implementation of a strategy which comprises policy interventions and program investments that:

- 1. Increase post-secondary study options for regional, rural and remote (regional, rural and remote) students.*
- 2. Strengthen financial, emotional and social support for regional, rural and remote students.*
- 3. Boost tertiary education and training aspiration in regional, rural and remote communities.*
- 4. Address regional, rural and remote disadvantage.*
- 5. Attract people and jobs to our regional cities, rural towns and remote communities.*
- 6. Implement and monitor a national strategy for regional, rural and remote education and training.”*

And:

“...education providers interventions and investments would need to be designed within a national framework for regional, rural and remote education and training that includes the following policy outcomes:

- i. *Develops skilled workers to drive the economy in their communities, but also national prosperity more generally.*
- ii. *Address workforce need by strengthening regional universities to create a virtuous cycle where more people and potential entrepreneurs are attracted to regional, rural and remote communities.*
- iii. *Supports the capacity of regional universities by growing research capability and capacity, particularly in disciplines relevant to regional, rural and remote Australia.*
- iv. *Drives growth in high-skilled jobs to reduce disparity in post-secondary educational attainment between regional, rural and remote Australia and our metropolitan cities.*
- v. *Recognises the importance of start-up business creation, development and growth as key to attracting and maintaining a highly educated and trained regional workforce, and the crucial role of universities in business incubation and acceleration.*
- vi. *Provides opportunity in life and work in regional Australia to stem the loss of graduates with university degrees over students who complete a certificate level qualification.”*

From

https://cdn.csu.edu.au/_data/assets/pdf_file/0007/3084343/CSU_Sub_Regional,-Rural-and-Remote-Education.pdf

4.7.3 National Regional, Rural and Remote Tertiary Education Strategy

On Wednesday 28 August 2019 The Hon Dan Tehan MP, Minister for Education and The Hon Mark Coulton MP, Minister for Regional Services, Decentralisation and Local Government and Assistant Trade and Investment Minister released a joint media statement on the *National Regional, Rural and Remote Tertiary Education Strategy*. Refer, <https://ministers.education.gov.au/tehan/national-regional-rural-and-remote-tertiary-education-strategy>.

In releasing the *National Regional, Rural and Remote Tertiary Education Strategy*, the Commonwealth Government accepted the seven key recommendations of the expert advisory group that was chaired by The Hon Dr Denis Napthine MP:

- Improve access to tertiary study options for students in regional, rural and remote areas.
- Improve access to financial support, to support greater fairness and more equal opportunity.
- Improve the quality and range of student support services for regional, rural and remote students to address the challenges of transition and higher rates of attrition.
- Build aspiration, improve career advice and strengthen regional, rural and remote schools to better prepare students for success.
- Improve participation and outcomes for regional, rural and remote students from equity groups including low SES students, Indigenous students, students with disability and remote students.
- Strengthen the role of tertiary education providers in regional development and grow Australia's regions.
- Establish mechanisms to coordinate the implementation effort and support monitoring of the Strategy.

Charles Sturt University supports the key recommendations of the expert advisory group as outlined in the *National Regional, Rural and Remote Tertiary Education Strategy* and the announcements of Ministers Tehan and Coulton. Implementing the recommendations of the group will be critical to ensure jobs for the future in regional Australia. Further, the University is currently reviewing and considering the 33 specific actions contained in the Strategy and will respond to the Minister for Education in due course as part of the Government's continued sectoral consultation.

The University does, however, note that many of the actions involve a different approach to current policy settings, require possible reform of the sector and budgetary considerations. And notes that successful implementation of the actions contained in the Strategy will require engagement with State and Territory governments and different portfolio areas.

4.7.4 Recommendations – Charles Sturt University

Charles Sturt University makes the following recommendations to the Committee regarding the National Regional, Rural and Remote Education Strategy:

- ***That the Commonwealth Government adopt the recommendations made by Charles Sturt University on 1 February 2019 by including them in the ongoing development and implementation of the National Regional, Rural and Remote Education Strategy, including:***

8. *Tertiary education and training providers stimulating economic growth in regional, rural and remote areas:*

- ***Programs that develop and transform regional, rural and remote workforces, including business productivity that builds-on local competitive strengths and transform local economies and for improved public services such as education and health that further strengthen participation in local employment.***
- ***Programs that retain regional, rural and remote students in regional, rural and remote Australia (refer above).***
- ***Programs that boost regional, rural and remote participation rates in vocational education and training (VET) and higher education (refer above).***
- ***Research activities aimed at addressing challenges and capturing opportunities before regional, rural and remote Australia (that is undertaken in situ), including specific and increased funding for regional, rural and remote Australia administered by the Australian Research Council (ARC) and National Health and Medical Research Council (NH&MRC) where physical, geographic presence in regional, rural and remote is a mandatory criterion, as only regional, rural and remote research institutions are able to effectively identify and address regional, rural and remote challenges and opportunities in collaborative partnership with their local communities***
- ***Support for arts and cultural activities, in collaboration with local community groups.***

- **Growing VET and higher education student enrolments in regional, rural and remote Australia (refer above) which in turn grows the direct workforces of VET and higher education providers.**
 - **Industry and business development functions, including start-up business creation – borne locals are likely to stay local.**
 - **Funding for university and TAFE infrastructure, including for open-access centres of learning to encourage commitment to lifelong learning and introductory participation in informal and unaccredited study (as a pathway for more formal, accredited education and training) at learning spaces, study centres, study hubs and regional campuses.**
- 9. Policies that would attract more metropolitan and international students to study at regional, rural and remote universities and campuses.**
- 10. Governments and higher education and training providers to work in concert with local regional, rural and remote communities to attract students to their area, to ensure local support for students moving to the area to study as well as ensure that student moving to the area to study are welcomed and supported by the community (not just their chosen institution of study).**
- 11. Higher Education Loans Program (HELP) discounts for student that study at regional campuses of University and continue to live and work in regional, rural and remote Australia (for say a period of three to five years post-graduation) (see above).**
- 12. A long-term, broad, behavioural change promotional campaign about the value of advanced VET study and higher education study at the regional campuses of universities, based on health, road safety and anti-smoking models targeted at students and parents in metropolitan Australia. Key messaging from such a campaign would include:**
- **Life style attributes.**
 - **Generally lower cost of living.**
 - **That graduates of regional universities tend to enjoy better employment and economic outcomes.**
 - **After graduation 76 per cent of regional graduates have full-time work, compared to 71 per cent in the cities, with many working in regional areas, moreover, during their studies, students at regional universities report high levels of satisfaction with their university experience.**
 - **Regional cities provide excellent opportunities for employment, career development and above all else provide very affordable housing (compared to metropolitan Australia).**

13. International marketing and promotion campaign informing potential international students of the value of studying at non-metropolitan campuses of Australian universities.

14. Strengthen post-study work rights for international students who study and remain in regional areas, as well as increase existing points contribution to permanent residency for international students that study priority workforce qualifications, study at regional university campuses and continue to live and work in regional, rural and remote Australia on graduation (up to 10-year retention conditions of residency).

As mentioned above, the University refers the Committee to the range of recommendations that the University has made to State and Commonwealth inquiries and consultations over the last three years relating to regional development, see <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. Key recommendations from the University's submissions to these inquiries and consultations relating to regional development are provided for reference at Attachment 1.

4.8 Impact of Regional Inequality in Australia

On 18 July 2018 Charles Sturt University provided a submission to the Senate Standing Committees on Economics – Economic References Committee in support of their inquiry into regional inequality in Australia. Many elements of the submission of 18 July 2018 are relevant to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas.

The following extract from the Vice-Chancellor's introductory letter to the submission of 18 July 2018 is provided, in support of the University's submission to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas:

"In many cases, the commentary provided in our submissions has examined the impact of regional inequality in Australia, including within regions, between regions and between regional Australia and our major metropolitan centres. Further, the recommendations we have put forward in our submissions have included many suggestions for addressing regional inequality and what indicators should be measured to ensure success in this endeavour.

All our submissions are founded on an extensive review of Australian and international literature, as well as our own comprehensive research across regional, rural and remote south-eastern Australia regarding the indicators of, and impact of regional inequality in Australia. Throughout these submissions our commentary and recommendations address:

- *fiscal policies at federal, state and local government levels;*
- *improved co-ordination of federal, state and local government policies;*
- *regional development policies;*
- *infrastructure;*
- *education;*
- *building human capital;*
- *enhancing local workforce skills;*
- *employment arrangements;*
- *decentralisation policies;*

- *innovation;*
- *manufacturing; and,*
- *other related matters and considerations in the contest of regional, rural and remote southern New South Wales and northern Victoria.”*

From – *Submission - Inquiry in the Indicators of and Impact of Regional Inequality in Australia*, Charles Sturt University, 18 July 2018 (refer, https://cdn.csu.edu.au/data/assets/pdf_file/0020/3084140/CSU-Sub_-_Inquiry-into-the-Indicators-of,-and-Impact-of-Regional-Inequality-in-Australia.pdf).

Charles Sturt University refers the Committee to the range of recommendations contained in the *Submission - Inquiry in the Indicators of and Impact of Regional Inequality in Australia*, Charles Sturt University, 18 July 2018 which are provided for reference at Attachment 1.

4.9 Regional Development and Decentralisation

On 15 September 2017, Charles Sturt University provided a submission to the House of Representatives Select Committee on Regional Development and Decentralisation in support of their inquiry into regional development and decentralisation. Many elements of the submission of 15 September 2017 are relevant to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas.

The following extract from the Vice-Chancellor’s introductory letter to the submission of 15 September 2017 is provided, in support of the University’s submission to the Senate Select Committee Inquiry – Jobs for the Future in Regional Areas:

“I would like to draw the Committee’s attention to Charles Sturt University’s comprehensive submission on regional development and decentralisation that was prepared for the House of Representatives Select Committee on Regional Development and Decentralisation in September last year, Charles Sturt University – Submission - Inquiry into Regional Development and Decentralisation, House of Representatives - Select Committee on Regional Development and Decentralisation, 15 September 2017. The commentary and recommendations put forward in this Submission will be of value to the Committee in its inquiry into the indicators of, and impact of regional inequality in Australia. A summary of our regional development and decentralisation submission is provided herein.

Charles Sturt University’s submission to the Select Committee, outlined the University’s perspective of the opportunities for and challenges to regional development and decentralisation in Australia. While our specific commentary and recommendations in the Submission were drawn from our century-plus experience, research, knowledge and skills in development of regional, rural and remote communities in southern New South Wales and northern Victoria, our commentary and recommendations are directly applicable to the development of all non-metropolitan Australia.

Charles Sturt University believes that genuine, bipartisan commitment across all tiers of government to the coordinating of the long-term strategies and actions of economic, social and environmental stakeholders in any given region, will deliver positive outcomes and great benefit for Australians living in regional, rural and remote communities, including:

- i. growing regional populations to ensure internationally competitive relevance, increased standard of living and improved quality of life;*
- ii. sharing economic, social and environmental access and equity between regional and metropolitan Australia;*
- iii. enabling world-class experiences, cutting-edge skills development and global-knowledge transfer for people living in the regions;*
- iv. increasing participation and productivity rates in regional economies, while concomitantly reducing future economic risk through diversification;*

v. attracting and retaining private and public-sector investment, including foreign investment in the industries and infrastructure needs of the future;

vi. enhancing the vibrancy, cohesiveness and engagement of regional communities, particularly regional cities and rural towns; and,

vii. positioning regional cities, not just as local service centres, but as places with unique value propositions and competitive advantages on a national and an international scale.”

From – *Submission - Inquiry into Regional Development and Decentralisation*, Charles Sturt University, 15 September 2017 (refer, https://www.csu.edu.au/_data/assets/pdf_file/0010/2955907/Submission-Regional-Development-and-Decentralisation-Sub-120.pdf).

Charles Sturt University refers the Committee to the range of recommendations contained in the *Submission - Inquiry into Regional Development and Decentralisation*, Charles Sturt University, 15 September 2017 which are provided for reference at Attachment 1.

4.10 Other Relevant Contributions to Public Policy Development

Finally, Charles Sturt University refers the Committee to the range of recommendations that the University has made to State and Commonwealth inquiries and consultations over the last three years relating to regional development, see <https://www.csu.edu.au/division/vcoffice/ogcr/government-submissions>. Key recommendations from the University’s submissions to these inquiries and consultations relating to regional development are provided for reference at Attachment 1.

5. Conclusion

Charles Sturt University is Australia's largest regional university, with more than 43,000 students and approximately 2,000 FTE staff. Established in 1989, the University traces its origins to the formation of the Bathurst Experimental Farm and Wagga Wagga Experimental Farm in the 1890s. In one form or another, research, innovation and education has been integral to the University's character and mission for more than a century.

Charles Sturt University is a unique multi-campus institution with campuses at Albury-Wodonga, Bathurst, Canberra, Dubbo, Goulburn, Manly, Orange, Parramatta, Port Macquarie and Wagga Wagga, as well as various study centres located throughout regional and rural south-eastern Australia. The University's commitment to the development and sustainability of regional, rural and remote Australia is informed by the unique research focus undertaken, and the partnerships it has formed with each of its campus' local communities, local industry, and with the broader regions we serve.

Charles Sturt University welcomes the opportunity for the University to continue to contribute to the regional development public policy debate, including provide analysis, commentary and recommendations for the Committee's consideration. Our submission suggests a number of areas for reform and priority to ensure future regional development is driven in a manner that maximises jobs for the future in regional areas. Capturing jobs for the future will underwrite tomorrow's prosperity, ensure inclusive growth and secure environmentally sustainability across Australia's regions.

Charles Sturt University makes the following recommendations to the Senate Select Committee Jobs for the Future in Regional Areas.

Charles Sturt University makes the following recommendations to the Committee to drive the creation of new industries and stimulate growth of employment opportunities in regional Australia:

- Government policies and public investment must be regionally targeted where growth in competitive and emerging industries makes a significant difference for job generation (that is, specialised regions, not all regions).
- Enable regions to build on their strengths by customising policy settings and tailoring programs based on past economic performance, existing industrial base and community assets where:
- the highest investment priority should be facilitative (for example, trade access), to catalyse new economic activities in regions where local conditions are driving growth, such as, government intervention to build on local strengths that generate business and employment opportunities; and,
- the highest investment priority should be market-failure correction (for example, communications infrastructure) to remove or reduce barriers to growth in regions which are lagging behind state and industry trends, such as, government intervention to support these regions in realising their full employment potential.
- Assess workforce and skills availability to foster specialised regional development and act to ensure potential new jobs can be filled, for example through regional learning systems or

regional migration strategies as outlined in the Regional Australia Institute's, The Future of Jobs Report 2019.

Charles Sturt University makes the following recommendations to the Committee to regarding existing jobs in regional areas in clean energy technology and ecosystem services and their future significance:

- Develop and implement publicly-funded programs to ensure that local workforces are up-skilled to fill future jobs arising from continued investment in clean energy technologies in regional Australia, both during the construction phase of developments as well as when developments move to operation.
- Where clean energy technology developments are funded, or part-financed by government, ensure a portion of local procurement at the remote, rural and regional level. An example would be catering and accommodation in the remote community, trades and basic services from the nearest rural town and major engineering services from the nearest regional city.
- Establishment, development and on-going public funding of a national centre for ecosystem markets and services, to act as a market and technology conduit between providers of services and purchasers of services, with such a centre having a technology-transfer, product development and a market-access focus. Such a centre must be established in regional Australia with headquarters in a regional city and a hub and spoke model to ensure national coverage. Charles Sturt University's Albury campus would be an ideal location to establish the centre.

Charles Sturt University makes the following recommendations to the Committee regarding measures to guide the transition into new industries and employment:

- Continue the rollout proposed and investments detailed in Regions 2030 Unlocking Opportunity, to ensure community infrastructure to attract new investment and job creation in regional Australia is developed.
- A regional development framework with the seven outcomes detailed at Section 4.3 be agreed through a national partnership comprising all levels of government and that pragmatic and measurable goals and objectives be attached to each outcome.
- Delivering positive outcomes and great benefit for Australians living and working in regional, rural and remote communities will require rigorous system integration, that is:
- whole of system, with long-term policy focus and program effort on the strategies, actions and tasks required to deliver regional, rural and remote development benefit;
- built on strongly facilitated participation by all economic, social, cultural and environmental stakeholders in any given region that drives a very high level of regionalism;
- based on shared regional vision and leadership, with whole of stakeholder agreement and commitment to definable and measurable economic, social, cultural and environmental outcomes;
- governed and coordinated at the regional level, with management and operationalisation distributed to the communities that comprise each region;

- guided by a planning, reporting and communication framework, including an overall regional development strategy containing economic, social, cultural and environmental roadmaps and investment plans, including capital sources and public-sector budgets;
- owned and championed by individual members of the community (think global, act local); and,
- a market-based response, where government intervention is strictly in the public good and within the scope of an overall regional development strategy.
- An arm's length, bipartisan, beyond electoral cycle, resourced and championed governance and management model be implemented as follows:
 - Through the Council of Australian Governments (COAG) and including Local Government Association (LGA), the Commonwealth would establish the Australian Regional Development Commission, the Commission would report to COAG. The national plan Regions 2030 Unlocking Opportunity could provide the foundations on which to build this.
 - The Commission would be funded 50/50 by the Commonwealth, and the States and Territories and would work with bodies such as Infrastructure Australia and AgriFutures Australia (formerly the Rural Industries Research and Development Corporation, RIRDC).
 - Commissioners would be nominated through an open, transparent and merit-based process.
 - The Commission would be headquartered in regional Australia, located in a regional city, for example, Orange or Dubbo as geographically they are in the centre of regional eastern Australia.
- Establish and embed meaningful and effective consultation through leadership, recognising that leadership in regional settings is pivotal to future sustainability and has many forms.
- Strengthen the VET system, so that it can provide the training required to ensure the skills and knowledge of future regional workforces, by:
 - implementing the findings of the Strengthening Skills Expert Review of Australia's Vocational Education and Training System, undertaken by The Honourable Steven Joyce; and,
 - implementing an education and training and skills and knowledge partnership between business and industry, education and training providers and government based on the successful Ministerial Industry Commission model that was implemented in Queensland in 2013.
- Strengthen the higher education and university system, so that it can provided the education required to ensure the skills and knowledge of future regional workforces, by implementing the recommendations made by Charles Sturt University in Section 4.7 National Regional, Rural and Remote Education Strategy.

Charles Sturt University makes the following recommendations to the Committee regarding the opportunities for renewable resources in Northern Australia to build a clean energy export industry to export into Asia:

- Commonwealth and State governments work together to ensure greater and seamless alignment of the policy outcomes and program objectives of the Clean Energy Finance Corporation (CEFC) and the NAIF, to ensure opportunities for renewable resources in Northern Australia to build a clean energy export industry to export into Asia are captured.
- In working together, the CEFC and NAIF partner with business and industry to boost direct investment in renewable resources in Northern Australia to build a clean energy export industry that exports to Asia.
- That trade and export agencies of State governments work with Austrade and other divisions of the Department of Foreign Affairs and Trade to ensure that investments in renewable resources in Northern Australia have access to markets in Asia.

Charles Sturt University makes the following recommendations to the Committee regarding the National Regional, Rural and Remote Education Strategy, including that the Commonwealth Government adopt the recommendations made by Charles Sturt University on 1 February 2019 by including them in the ongoing development and implementation of the National Regional, Rural and Remote Education Strategy, including:

- Programs that develop and transform regional, rural and remote workforces, including business productivity that builds-on local competitive strengths and transform local economies and for improved public services such as education and health that further strengthen participation in local employment.
- Programs that retain regional, rural and remote students in regional, rural and remote Australia (refer above).
- Programs that boost regional, rural and remote participation rates in vocational education and training (VET) and higher education (refer above).
- Research activities aimed at addressing challenges and capturing opportunities before regional, rural and remote Australia (that is undertaken in situ), including specific and increased funding for regional, rural and remote Australia administered by the Australian Research Council (ARC) and National Health and Medical Research Council (NH&MRC) where physical, geographic presence in regional, rural and remote is a mandatory criterion, as only regional, rural and remote research institutions are able to effectively identify and address regional, rural and remote challenges and opportunities in collaborative partnership with their local communities
- Support for arts and cultural activities, in collaboration with local community groups.
- Growing VET and higher education student enrolments in regional, rural and remote Australia (refer above) which in turn grows the direct workforces of VET and higher education providers.
- Industry and business development functions, including start-up business creation – borne locals are likely to stay local.

- Funding for university and TAFE infrastructure, including for open-access centres of learning to encourage commitment to lifelong learning and introductory participation in informal and unaccredited study (as a pathway for more formal, accredited education and training) at learning spaces, study centres, study hubs and regional campuses.
- Policies that would attract more metropolitan and international students to study at regional, rural and remote universities and campuses.
- Governments and higher education and training providers to work in concert with local regional, rural and remote communities to attract students to their area, to ensure local support for students moving to the area to study as well as ensure that student moving to the area to study are welcomed and supported by the community (not just their chosen institution of study).
- Higher Education Loans Program (HELP) discounts for student that study at regional campuses of University and continue to live and work in regional, rural and remote Australia (for say a period of three to five years post-graduation) (see above).
- A long-term, broad, behavioural change promotional campaign about the value of advanced VET study and higher education study at the regional campuses of universities, based on health, road safety and anti-smoking models targeted at students and parents in metropolitan Australia. Key messaging from such a campaign would include:
 - Life style attributes.
 - Generally lower cost of living.
 - That graduates of regional universities tend to enjoy better employment and economic outcomes.
 - After graduation 76 per cent of regional graduates have full-time work, compared to 71 per cent in the cities, with many working in regional areas, moreover, during their studies, students at regional universities report high levels of satisfaction with their university experience.
 - Regional cities provide excellent opportunities for employment, career development and above all else provide very affordable housing (compared to metropolitan Australia).
- International marketing and promotion campaign informing potential international students of the value of studying at non-metropolitan campuses of Australian universities.
- Strengthen post-study work rights for international students who study and remain in regional areas, as well as increase existing points contribution to permanent residency for international students that study priority workforce qualifications, study at regional university campuses and continue to live and work in regional, rural and remote Australia on graduation (up to 10-year retention conditions of residency).

Appendix 1. Charles Sturt University - Summary of Recommendations – Regional Development 2017 to 2019

A1.1 Recommendations – Submission on National Regional, Rural and Remote Education Strategy

Refer https://cdn.csu.edu.au/_data/assets/pdf_file/0018/3161250/Charles-Sturt-University-Submission-National-Regional-Rural-and-Remote-Education-Strategy.pdf.

Drawing on this framework, Charles Sturt University proposes a suite of coordinated and complementary programs for implementation under a national strategy for RRR education and training. Delivering on the objectives and outputs in each the University's suggested programs would contribute to achieving the desired policy outcomes of a national framework for RRR education and training. The University's proposed programs include:

- Tertiary education and training providers stimulating economic growth in RRR areas: Programs that develop and transform RRR workforces, including business productivity that builds on local competitive strengths and transform local economies and for improved public services such as education and health that further strengthen participation in local employment.
- o Programs that retain RRR students in RRR Australia (refer above).
- o Programs that boost RRR participation rates in VET and higher education (refer above).
- o Research activities aimed at addressing challenges and capturing opportunities before RRR Australia (that is undertaken in situ), including specific and increased funding for RRR Australia administered by the ARC and NH&MRC where physical, geographic presence in RRR is a mandatory criterion, as only RRR research institutions are able to effectively identify and address RRR challenges and opportunities in collaborative partnership with their local communities
- o Support for arts and cultural activities, in collaboration with local community groups.
- o Growing VET and higher education student enrolments in RRR Australia (refer above) which in turn grows the direct workforces of VET and higher education providers.
- o Industry and business development functions, including start-up business creation – borne locals are likely to stay local.
- o Funding for university and TAFE infrastructure, including for open-access centres of learning to encourage commitment to lifelong learning and introductory participation in informal and unaccredited study (as a pathway for more formal, accredited education and training) at learning spaces, study centres, study hubs and regional campuses.

□ Strengthen and increase the attractiveness of regional universities:

o Recognition of the higher costs associated with smaller cohort sizes and the need to maintain multiple campuses in regional Australia, compared to metropolitan areas – CGS funding must reflect this.

o HELP discounts for student that study at regional campuses of University and continue to live and work in RRR Australia (for say a period of three to five years post-graduation).

o Recognise that not all universities are alike, and that regional universities deal with diverse cohorts who often face multiple disadvantages which require greater support and hence funding (refer proposed programs above).

o Recognition and investment in universities as the key part of regional economic and social transformation, and measure the return from investment on their community and industry engagement and impact are significant parts of their missions; all of which mean they face higher running costs due to geographic dispersion and lack of scale.

□ Policies that would attract more metropolitan and international students to study at RRR universities and campuses:

Governments and higher education and training providers to work in concert with local RRR communities to attract students to their area, to ensure local support for students moving to the area to study as well as ensure that student moving to the area to study are welcomed and supported by the community (not just their chosen institution of study).

o HELP discounts for student that study at regional campuses of University and continue to live and work in RRR Australia (for say a period of three to five years post-graduation) (see above).

o A long-term, broad, behavioural change promotional campaign about the value of advanced VET study and higher education study at the regional campuses of universities, based on health, road safety and anti-smoking models targeted at students and parents in metropolitan Australia. Key messaging from such a campaign would include:

□ Life style attributes.

□ Generally lower cost of living.

□ That graduates of regional universities tend to enjoy better employment and economic outcomes.

□ After graduation 76 per cent of regional graduates have full-time work, compared to 71 per cent in the cities, with many working in regional areas, moreover, during their studies, students at regional universities report high levels of satisfaction with their university experience.

□ Regional cities provide excellent opportunities for employment, career development and above all else provide very affordable housing (compared to metropolitan Australia).

o International marketing and promotion campaign informing potential international students of the value of studying at non-metropolitan campuses of Australian universities.

o Strengthen post-study work rights for international students who study and remain in regional areas, as well as increase existing points contribution to permanent residency for international students that study priority workforce qualifications, study at regional university campuses and

continue to live and work in RRR Australia on graduation (up to 10-year retention conditions of residency).

A1.2 Recommendations – Submission on Future Proof: Protecting Australians through Education and Skills, Business Council of Australia.

Refer https://cdn.csu.edu.au/_data/assets/pdf_file/0003/3084141/CSU-Sub-Future-Proof-Protecting-Australians-through-Education-and-Skills.pdf

Charles Sturt University appreciates the opportunity to make a submission in response to the Council's paper, as well as the Council's continuing interest in education policy, and in tertiary education and training in particular. Together with Universities Australia, we are keen to work constructively with the Council to develop ideas for effective and sustained education and training policies and programs that ensure Australia's future international competitiveness. We welcome several elements of the paper, including:

- Commitment to sustainable policy settings that position Australia for the long term including rapid and unpredictable economic change.
- Recognition of the broad and varied purposes of education and training.
- The focus on building human capital and cultivating knowledge and enquiry.
- Recognition of the public and private benefits of education and training investment.
- Recognition of the importance of teaching and research, including the link between the two.
- Recognition of the different and complementary roles of higher education and Vocational Education and Training (VET) sector.
- Clear recognition of the positive impact of education and research on economic prosperity and growth, innovation and social cohesion.
- Recognition of the vital importance of tertiary education in today's world, and it's even greater importance in the economy and labour market of tomorrow.
- Ideas and policies to expand access to tertiary education to all Australians.
- Recognition of the importance of diverse pathways into (and out of) education.
- The strong commitment to life-long learning.

A1.3 Recommendations – Submission to Inquiry on the Impact of Technological and Other Change on the Future of Work and Workers in Australia

Refer https://cdn.csu.edu.au/_data/assets/pdf_file/0006/3001965/Future-of-Work-and-Workers-Submission.pdf

Charles Sturt University makes the following recommendations:

1.1 The Future Nature of Work

That:

- Technology literacy will be crucial to maximise participation in workforce of the future. Future workforce productivity will depend on individual talent that is creative, innovative, entrepreneurial and resilient.
- Individuals, as well as education and training providers, must be incentivised to undertake and provide science, technology, arts, engineering and maths (STEAM) studies, as well as globally-focused commercial studies, particularly international markets and finance.
- Australia must aim to exceed the OECD average for public R&D expenditure in support of the recommendations above.
- Building on initiatives, such as the National Science and Innovation Agenda (NISA), see <http://www.innovation.gov.au> and the Prosperity Through Innovation Statement of January 2018, see <https://industry.gov.au/Innovation-and-ScienceAustralia/Pages/default.aspx>, Australian governments must adopt a national technology transformation agenda, much like the leadership shown by the Victorian Government in the 1990s regarding multimedia.

1.2 Impact of the Changing Nature of Work.

That building on the recommendations put forward above, governments and the private sector will have to not only continue but increase investment in -to- uti connectivity being the railway line of the 21st Century.

1.3 Wide Effect of the Changing Nature of Work on the Economy, Society and the Environment

That building on Universities Australia 2010 work regarding Australia's future academic workforce, <https://www.universitiesaustralia.edu.au/news/commissionedstudies/Academic-Workforce#.WnOZnkxuJjo>, that the Australian Government, through COAG develop and implement, with the tertiary education and training sector, a national strategy for ensuring Australia maintains and assembles a technology-orientated academic workforce through the 21st Century.

1.4 Adequacy of Legislative Frameworks for the Future Nature of Work

That the Australian Government, work with industry, unions and the tertiary education and training sector to undertake a review of, develop and implement findings, of the Fair Work Act 2009 and related legislative st Century technology fit-for-purpose to ensure international competitiveness for the future of work.

1.5 International Efforts Capturing the Opportunities and Meeting the Challenges of the Future Workforce

That the Commonwealth Government commission suitable service providers to undertake a comprehensive review of international efforts aimed at capturing the opportunities and meeting the

challenges of the future nature of work, with the report providing the basis for stakeholder consultation regarding t

1.6 Other Future Work and Workforce Considerations In Regional, Rural and Remote Communities

That the recommendations detailed above regarding the future of work and the future workforce be developed and implemented with specific consideration given to the specific circumstances and unique needs of regional cities, rural towns and remote communities across Australia.

A1.4 Recommendations – Submission to Closing the Gap – The Next Phase

Refer

https://cdn.csu.edu.au/_data/assets/pdf_file/0005/3084224/CSU_Sub_Closing_the_Gap.pdf

1 Recognising the Value of Tertiary Education & Training

Charles Sturt University recommends that:

i. the value of tertiary education and training be recognised in the ongoing Closing the Gap agenda, not just for school leavers and young adults, but all First Nations people including Elders.

ii. all education programs are designed to enable all First Nations students to engage in their own education in ways that enable them to achieve the successful outcomes they desire from the learning experience. Life experience, closely aligned with language and culture, is a strong determinant in what students want to learn and how they wish to pursue the necessary learning experiences.

iii. real progress to close the gap through tertiary education and training will depend on all Australians, Indigenous and non-Indigenous working together to effect change, adoption of enhanced reporting mechanisms, measuring actual performance with meaningful and tangible indicators, valuing culture and custom in study and agreeing targets for responsibility of management and accountability of governance.

iv. unlocking the value of tertiary education and training will require:

- equality of study outcome, not just equity in participation;
- learner support to ensure capacity for moving forward and better futures;
- greater reach, depth and presence in remote Australia, including recognising the role of digital technology and face-to-face study hubs, but that the logistical and financial challenges associated with connectivity in remote communities and locations must be overcome;
- de-alienation of learning spaces, including actions to overcome sheer loneliness and inability to engage; and,
- continual improvement and investment in pathways from school to tertiary education and training, as well as for adults (without accredited qualifications or who have disengaged from formal education) to access vocational education and training as well as higher education.

Enabling People to Work Effectively Together

Charles Sturt University recommends that real progress to close the gap through tertiary education and training will depend on all Australians, Indigenous and non-Indigenous working together to effect change, including through:

- commitment to a process of genuine and meaningful engagement that reduces and, in the future eliminates systemically and structurally racist ideas and beliefs;
- acceptance and recognition, including constitutionally, legally through treaty and truth commission;

- authentic collaborative conversations that enable Indigenous and non-Indigenous Australians to work together for a better future;
- address feelings of inadequacy through recognition of the genuine challenges of learning in remote communities, and being from a remote community;
- building and maintaining relationships with communities to support greater involvement in learning needs;
- cultural competency training and education for institutional staff (and students);
- draw on educators and trainers with learned-experiences;
- inclusion of these themes in curriculum, for both Indigenous and non-Indigenous students; and,
- above all else, in concert with key stakeholders provide a welcoming environment in which to learn.

1.3 Enhancing Reporting

Charles Sturt University recommends that real progress to close the gap through tertiary education and training will depend on adoption of enhanced reporting mechanisms, including through reporting processes that:

- are informative and transparent;
- allow for Indigenous Australian's to be respected and have their say about what matters to them, and what is important to report on;
- are collaborative in nature, with Indigenous ownership;
- are genuinely consultative and outcomes focused (rather than "tick-the-box" bureaucracy); draw on feedback and really focus on need for change;
- manage and report quality and risk of reconciliation through continual improvement and a constant quest for Elder input and knowledge; and,
- inclusion of non-Indigenous students and staff of education and training institutions in equity and equality and the interplay between all cultures.

Using More Effective & Meaningful Performance Indicators

Charles Sturt University recommends that real progress to close the gap through tertiary education and training will depend on measuring actual performance with meaningful and tangible indicators, including through:

- development of an agreed definition of what closing the gap in education means, what it is expected to deliver and how success will be measured (beyond NAPLAN, Year 12 completion etc.);
- metrics for education and training institutions commitment to First Nations;
- ensuring non-Indigenous Australians learning about First Nations' culture, custom, people and communities, at the regional and local level, again with metrics for progress

- metrics must take into account that not all Indigenous people, their Nations and their cultures are the same;
- customised and targeted education and training performance measurement that is culturally inclusive and linguistically appropriate (learning from the poor integration of NAPLAN questions with Indigenous and remote community cultures);
- consistent with 1.2 and 1.3 above, metrics should be developed and refined by listening to Indigenous Australians to ensure outcomes are tangible and real (and genuinely understanding need to close the gap); and,
- recognising that effective and meaningful key performance indicators are crucial to close gaps – as, what gets measured gets done.

1.5 Enabling People to Understand & Value Their Differences

Charles Sturt University recommends that real progress to close the gap through tertiary education and training will depend on all Australians, Indigenous and non-Indigenous valuing culture and custom in study, including through:

- education journeys that are grounded within First People's own cultures and languages;
- providing a sense of belonging that ensures that Indigenous students become critically engaged in the learning process;
- recognising that reconciliation is more than a legal definition of title, but is more about connection to country, and the nation's history, knowledge, language, culture and stories;
- strategies to combat disadvantage and promote positive futures embedded in teaching and learning plans;
- revitalising language as a solution for inclusivity, including education and training delivery in First Nation languages and teaching of First Nation languages to non-Indigenous Australians, particularly at the regional level;
- not only empowering students, but also enabling a quality of learning engagement that is equally satisfying for the teacher and fellow learners;
striving to ensure that the world in which we live is one that values us as human beings who are valued for our 'common humanity', ie. we measure our worth by the way we are treated by others; and,
- as the basis for enabling people to understand and value their differences adopt a both ways education model for future teaching, learning and research in primary, secondary and tertiary education.

1.6 Enabling People to Commit to Targets for Responsibility & Accountability

Charles Sturt University recommends that real progress to close the gap through tertiary education and training will depend on all Australians, Indigenous and non-Indigenous agreeing targets for responsibility of management and accountability of governance, including through:

- traditional knowledge, shared understanding and be evidencebased, or at the very least, be embedded in research that will provide a future empirical evidence base; and,
- performance management descriptors that promote, encourage and reward closing the gap initiatives in education and training, at the organisational, contractual (in the case of service delivery agreements) and personnel level, including, but not limited to the following higher education commitments and targets for responsibility and accountability:
 - further development of cultural competency frameworks which clearly map targets for responsibility and accountability across training organisations and education providers;
 - further formal research into decolonising and indigenising measures;
 - development of research that identifies and focusses on the aspirations of local Indigenous communities within the sphere of across training organisation and education provider influence;
 - developing innovative and engaging online training courses in cultural competency for all staff throughout their term of employment. Where possible, modules will be developed, and face-to-face delivery will be undertaken by qualified Indigenous staff;
 - the review of all hybrid subjects to ensure cultural competency is achieved across training organisations and education providers and the tertiary education system (possibly through ASQA and TEQSA);
 - the Indigenous schools of training organisations and tertiary education providers will undertake communitybased research to build and maintain relationships between all education and training providers including, the secondary school system, and industry or local businesses; and,
 - student participation and retention in Indigenous knowledge and cultural subjects to be measured through internal analytics generated from enrolments, face to face and online student activity across training organisations and education providers.

A1.5 Recommendations – Submission Inquiry into the Indicators or, and Impact of Regional Inequality in Australia

Refer https://cdn.csu.edu.au/_data/assets/pdf_file/0020/3084140/CSU-Sub_-Inquiry-into-the-Indicators-of,-and-Impact-of-Regional-Inequality-in-Australia.pdf

Charles Sturt University's believe that genuine, bipartisan commitment across all tiers of government to the coordinating of the long-term strategies and actions of economic, social and environmental stakeholders in any given region, will deliver positive outcomes and great benefit for Australians living in regional, rural and remote communities, including:

- i. growing regional populations to ensure internationally competitive relevance, increased standard of living and improved quality of life;
- ii. sharing economic, social and environmental access and equity between regional and metropolitan Australia;
- iii. enabling world-class experiences, cutting-edge skills development and global-knowledge transfer for people living in the regions;
- iv. increasing participation and productivity rates in regional economies, while concomitantly reducing future economic risk through diversification;
- v. attracting and retaining private and public-sector investment, including foreign investment in the industries and infrastructure needs of the future;
- vi. enhancing the vibrancy, cohesiveness and engagement of regional communities, particularly regional cities and rural towns; and,
- vii. positioning regional cities, not just as local service centres, but as places with unique value propositions and competitive advantages on a national and an international scale.

1. Charles Sturt University recommends that a regional development framework with the seven outcomes detailed above be agreed through a national partnership comprising all levels of government and that pragmatic and measurable goals and objectives be attached to each outcome.

Delivering positive outcomes and great benefit for Australians living and working in regional, including indicators of and actions for addressing inequality in regional, rural and remote settings will require rigorous system integration, that is:

- i. holistic, with long-term policy focus and program effort on the strategies, actions and tasks required to deliver regional, rural and remote development benefit;
- ii. built on strongly facilitated participation by all economic, social, cultural and environmental stakeholders in any given region that drives a very high level of distinguishing regionalism; based on shared regional vision and leadership, with whole of stakeholder agreement and commitment to definable and measurable economic, social, cultural and environmental outcomes;
- iv. governed and coordinated at the regional level, with management and operationalisation distributed to the communities that comprise each region;

v. guided by a planning, reporting and communication framework, including an overall regional development strategy containing economic, social, cultural and environmental roadmaps and investment plans, including capital sources and public-sector budgets;

vi. owned and championed by individual members of the community (at local, think global – “glocal”); and,

vii. a market-based response, where government intervention is strictly in the public good and within the scope of an overall regional development strategy, for example, only decentralising government agencies where there is positive net benefit and investing in trade facilitation rather than subsidising corporate decentralisation.

To this end, Charles Sturt University’s principal recommendations to boost the performance of Australia’s regional, rural and remote development efforts, including indicators of and actions for addressing inequality in regional, rural and remote settings is to rigorously strengthen system integration.

2. Charles Sturt University, recommends that – arm’s length, bipartisan, beyond cycle and resourced and championed governance and management model be implemented as follows:

a. Through the Council of Australian Governments (COAG) and including Local Government Association (LGA), the Commonwealth would establish the Australian Regional Development Commission, the Commission would report to COAG, national plan Regions 2030 Unlocking Opportunity could provide the foundations on which to build this.

b. The Commission would be funded 50/50 by the Commonwealth, States and Territories and would work with bodies such as Infrastructure Australia and the Rural Industries Research and Development Corporation (RIRDC), with initial seed funding over four years of \$10 billion.

c. Commissioners would be nominated Australia’s Regional Development Australia Committees (RDAs) and appointed by a COAG Regional Development Ministerial Council, while the RDAs would be resourced to operate as locally-championed regional branches of the Commission.

d. The Commission would be headquartered in regional Australia, located in Orange or Dubbo as geographically they are in the centre of regional eastern Australia.

e. The RDAs would be resourced to continue and improve their regional planning work, based on the framework set out above and would have greater involvement from rural and remote communities in each area, thereby creating a genuine hub and spoke with a regional city at its core.

3. Charles Sturt University recommends an immediate, independent review of the NBN project be undertaken and that the NBN roll-out be significantly strengthened to ensure top-10 OECD ranking fibre to the home broadband services be made available to all Australians living in regional, rural and remote communities and that fibre to the CBD’s of each regional city in Australia be increased to 1GBs.

4. Charles Sturt University recommends:

a. government investment in regional development be restricted to public good and public accessible activities, including economic, social, cultural and environmental infrastructure, such as technology, transport, education and training and health; and,

b. government provide funding, through the regional development governance and management mechanisms detailed above and through industry departments for the purposes of private sector investment attraction and facilitation, including foreign direct investment, while;

c. government must ensure that it does not use tax payers' funds to share or subsidise private sector risk or be trapped into acting as a lender of last resort to the private sector under any circumstances.

A1.6 Recommendations – Submission Improving Completion, Retention and Success in Higher Education Discussion Paper

Refer https://cdn.csu.edu.au/_data/assets/pdf_file/0009/3084291/CSU_Sub_39_Improving-Completion,-Retention-and-Success-in-Higher-Education-Discussion-Paper.pdf

Recommendations

Charles Sturt University makes the following recommendations with regards the Higher Education Standards Panel's Improving Completion, Retention and Success in Higher Education Discussion Paper:

1.1 Setting expectations of completion

(1) Completion rates

Charles Sturt University recommends that formal expectations not be set for completion rates.

1.2 Enhancing transparency

(1) Data collection

Charles Sturt University recommends that:

- no changes to data collection are required to enhance transparency and accountability; and,
- attrition calculations be adjusted to accommodate study sessions that cross calendar years and to account for specific student related factors.

(2) Government websites

Charles Sturt University recommends that:

- student success, completion, retention and attrition data should be made available on the Department of Education and Training's website but not on QILT; and,
- a completions calculator should not be provided for prospective students.

(3) Student tracking

Charles Sturt University supports this element of the Panel's Discussion Paper.

1.3 Supporting students to make the right choices

Student assistance

Charles Sturt University recommends that:

- Charles Sturt University supports the need for universities to raise the aspirations of prospective students through outreach and early intervention.
- Furthermore, Charles Sturt University, recommends that informed career advice be provided to young people from as early as primary school.

1.4 Supporting students to complete their studies

(1) Support strategies

Charles Sturt University recommends that:

- Charles Sturt University argues that there are no universal best strategies, that the effectiveness of strategies are dependent on cohort and context.
- Charles Sturt University supports the nuanced use of a wide range of support strategies.

(2) Entry-Exit pathways

Charles Sturt University supports increased flexibility, but argues it must be accompanied by support to navigate the increased complexity flexibility would create.

1.5 Disseminating best practice

(1) Evaluation approaches

Charles Sturt University makes no recommendations with regards disseminating best practices and evaluation approaches.

(2) International experience

Charles Sturt University makes no recommendations with regards disseminating best practices and international experience.

(3) Sharing best-practice

Charles Sturt University makes no recommendations with regards disseminating best practices and sharing best-practice.

Embedding success

Charles Sturt University makes no recommendations with regards disseminating best practices and embedding success.

1.6 Regulating

(1) Compliance strategies

Charles Sturt University recommends that TEQSA continues to use its full range of powers proportionately to risk for Table A, B and C providers. We do not believe any additional powers are required, but accept that additional processes might be required for high risk Table C providers.

A1.7 Recommendations – Submission School to Work Transition

Refer https://cdn.csu.edu.au/_data/assets/pdf_file/0004/2853301/Submission-School-to-Work-Transition-Sub-64.pdf

School to work transition policy outcomes

Charles Sturt University believes that transition from school to work policy outcomes must:

- provide access to all;
- enable individualisation of solutions;
- address generic problem-solving;
- engage the community – whole of student support system; and,
- guarantee benefit, at both the individual, institutional and community level that:
 - o recognise and accept credentials authorising entry into career opportunities or postsecondary education programs;
 - o placement or acceptance in post-secondary vocational training and higher education programs;
 - o placement in competitive or supported employment; and,
 - o participation in continuing and adult education, adult services, and independent living in community settings.

1.2 School to work transition program design

Charles Sturt University believes success in transition from school to work program design, development and implementation aimed at meeting the aforementioned policy outcomes, relies on:

- pathways that deliver strong social capital in communities;
- transition programs that enhance the work skills and dispositions of young Australians to work – making them ‘work ready’;
- transition programs that develop significant human capital capabilities in young people which enable them to assume positions in the workplace more readily and with better outcomes for employers;
- ensuring considerable benefits to all parties involved in placing young people in quality programs that support the transition from school to work are realised;

employers and potential employees being encouraged to trial an industry or company to ascertain if it was their preference;

- considering the demands of local sites, different opportunities are available for all stakeholders;
- involving considerable effort from schools and industry;

- providing options for addressing skill shortage, nationally but also locally;
- acknowledging that economic benefits are long term and should be built into the longterm planning of potential employers; and
- acknowledging that rural Australia may be particularly disadvantaged in offering options for transitioning young people from school to work as there are often limited options available in some towns for employment.

1.3 School to work transition program outputs

Charles Sturt University believes success in transition from school to work program interventions, or actions, incorporated into the design and development of school to work transition programs, must facilitate the following seven system outputs:

1. economic and education fundamentals as the foundation for good outcomes.
2. reduction in early school leaving as it is more efficient and effective than treating disengagement at a later stage.
3. rapid responses to disengagement.
4. formal participation requirements to drive effective responses for improving outcomes.
5. Individualised approaches, but recognise they are more expensive to deliver.
6. Solutions that are driven locally as they tend to be more sustainable and effective.
7. Integrated responses that help reduce confusion amongst participants and are more efficient and effective.

1.4 School to work transition stakeholder responsibilities

Charles Sturt University believes the development of work or study 'readiness' must be a joint responsibility of all stakeholders with definition of the roles and responsibilities and the theme of collaboration and partnership between schools, families and employers required:

- Schools (and families) predominantly have responsibility for assisting young people to start the development of Foundation Skills and Knowledge and Self-understanding.
- Some exposure to Broad Industry Understanding can take place at school, but that it requires the input of employers and industry. Tertiary education providers and employers are responsible for helping young people to develop Occupation-specific Skills and Knowledge.
- Employers are responsible supporting the development of Workplace-specific Skills and Knowledge, including making expectations of workplace behaviour and performance clear to young people.

1.5 School to work transition priority areas

Charles Sturt University believes that there are three broad priority areas for facilitating a successful transition from compulsory education to full-time work:

1. Getting educational fundamentals right:

- o Developing literacy and numeracy skills in early school years.
- o Strong and effective school leadership.
- o A robust curriculum.
- o High standards of teacher quality and effective accountability.
- o Appropriate recognition of school and student disadvantage in funding arrangements.

2. Promoting engagement and ensuring streamlined services are available for young people who are disengaged from employment, education and training:

- o Dealing more quickly with young people that become disengaged.

o Creating integrated responses to promote engagement and facilitate reengagement and in delivering such integrated responses managed their delivery in an accountability framework that answers:

- Who should fund the elements and what level of funding certainty should be provided?
- Whether the elements should be re-focused in any way, including eligibility criteria and target clients?
- How to manage the transition from a National Partnership context?

3. Engaging business to increase opportunities and enhance the employability of young people:

o Schools, the community and businesses need to work together in partnerships to create opportunities for successful transitions to meaningful employment.

1.6 School to work transition system governance

Charles Sturt University believes driving positive school to work transition will require effective system governance that involves all stakeholders in agreeing policy outcomes and setting program outputs, including:

- A clear scope and agenda for its operation.
- Funding and secretariat support to enable data collection, analysis and dissemination.
- Fewer meetings of higher value, including one face-to-face meeting focused on the annual reporting of data/trends and interpretation from experts in the field.
- A continued commitment to openness of discussion and sensitivity to specific jurisdictional contexts.
- A forum for responding to emerging policy issues and priorities.

1.7 School to work transition measurement and reporting

Charles Sturt University believes that measuring and reporting will be crucial and that effective measuring and reporting should provide a basis for evidence-based decision making in the

governance of Australia's school to work transition system, however to deliver effective system measurement and reporting and number of barriers will need to be addresses, including:

- the widespread lack of understanding and confidence in how to measure these school to work transition capabilities at the individual, institutional and community wide level in a way that is authentic and meaningful;
- concerns about what the results of the assessment of these capabilities might be used for and that this might further disadvantage those who are already struggling, or that results may not be interpreted accurately by employers, perhaps for diagnostic or self-reflection purposes rather than for summative reporting; and,
- no point in establishing a benchmark for certain capabilities if there are not mechanisms in place for helping students to reach those benchmarks.

1.8 An effective policy framework for school to work transition

In summary, Charles Sturt University proposes a school to work transition policy framework that we believe would deliver positive results at the individual, institutional and community level, our five-part framework includes:

1. Workplace specific skills and knowledge.
2. Occupation specific skills and knowledge.
3. Broad industry understanding, including career pathways and necessary attributes and skills.

Self-understanding, including an understanding of own strengths, weaknesses and interests and how these might relate to work, as well as an ability to manage own behaviour in a work situation.

5. Foundation skills and knowledge, not only literacy and numeracy skills, but also skills that provide a foundation for applying technical knowledge and skills, (such as digital literacy, learning, problem solving, innovation, communication and reflection skills) and a basic understanding of the world of work.

1.9 An operative program design for school to work transition

Finally, Charles Sturt University proposes a school to work transition program design that we believe would deliver positive results at the individual, institutional and community level, our 10-part design includes:

1. Effective assessment.
2. Real communication and active motivation.
3. Fitness for purpose.
4. Value for money.
5. Logistics – including technological considerations and professional development needed for teachers and other stakeholders to deliver.
6. Reliability – training and education consistency and assessment over time.
7. Validity – drawing upon many sources of evidence.

8. Fairness – by avoiding any bias created by elements that are not being assessed (such as lack of familiarity with the language or context).

9. Credibility – amongst those who have a stake in the outcomes of the assessment.

10. Simplicity and clarity.

1.10 Gain in school and how this contributes to supporting students to prepare for postsecondary education and training

Charles Sturt University provides a series of recommendations to improve gain in school and how this contributes to supporting students to prepare for post-secondary education and training in this submission. Please refer to the recommendations set out earlier in this Section under the following key elements of Australia's school to work transition system:

- School to work transition program design.
- School to work transition program outputs.
- School to work transition stakeholder responsibilities.
- School to work transition priority areas.
- School to work transition measurement and reporting.

1.11 Better inform and support students in relation to post-school education and training

Charles Sturt University provides a series of recommendations to better inform and support students in relations to post-secondary education and training in this submission. Please refer to the recommendations set out earlier in this Section under the following key elements of Australia's school to work transition system:

- School to work transition program outputs.
- School to work transition stakeholder responsibilities.
- School to work transition priority areas.
- School to work transition measurement and reporting.
- An effective policy framework for school to work transition.
- An operative program design for school to work transition.

1.12 Other possible initiatives to enhance school to work transition outcomes

Charles Sturt University provides a series of recommendations in relation to other possible initiatives that could enhance school to work transition outcomes in this submission. Please refer to the recommendations set out earlier in this Section above under the following key elements of Australia's school to work transition system:

- School to work transition policy outcomes.

- School to work transition program design.
- School to work transition program outputs.
- School to work transition priority areas.
- An effective policy framework for school to work transition.
- An operative program design for school to work transition.

A1.8 Recommendations - Submission Inquiry into Regional Development and Decentralisation

Refer https://cdn.csu.edu.au/_data/assets/pdf_file/0010/2955907/Submission-Regional-Development-and-Decentralisation-Sub-120.pdf

1. Charles Sturt University recommends that a regional development framework with the seven outcomes detailed above be agreed through a national partnership comprising all levels of government and that pragmatic and measurable goals and objectives be attached to each outcome.

Delivering positive outcomes and great benefit for Australians living and working in regional, rural and remote communities will require rigorous system integration, that is an approach that is:

- i. holistic, with long-term policy focus and program effort on the strategies, actions and tasks required to deliver regional, rural and remote development benefit;
- ii. built on strongly facilitated participation by all economic, social, cultural and environmental stakeholders in any given region that drives a very high level of distinguishing regionalism;
- iii. based on shared regional vision and leadership, with whole of stakeholder agreement and commitment to definable and measurable economic, social, cultural and environmental outcomes;
- iv. governed and coordinated at the regional level, with management and operationalisation distributed to the communities that comprise each region;
- v. guided by a planning, reporting and communication framework, including an overall regional development strategy containing economic, social, cultural and environmental roadmaps and investment plans, including capital sources and public-sector budgets;
- vi. owned and championed by individual members of the community (act local, think global - glocal); and,
- vii. a market-based response, where government intervention is strictly in the public good and within the scope of an overall regional development strategy, for example, only decentralising government agencies where there is positive net benefit and investing in trade facilitation rather than subsidising corporate decentralisation.

To this end, Charles Sturt University's principal recommendation to boost the performance of Australia's regional, rural and remote development efforts is to rigorously strengthen system integration.

2. Charles Sturt University, recommends that – an arms length, bipartisan, beyond cycle and resourced and championed governance and management model be implemented as follows:

- a. Through the Council of Australian Governments (COAG) and including Local Government Association (LGA), the Commonwealth would establish the Australian Regional Development Commission, the Commission would report to COAG. The national plan Regions 2030 Unlocking Opportunity could provide the foundations on which to build this.
- b. The Commission would be funded 50/50 by the Commonwealth, States and Territories and would work with bodies such as Infrastructure Australia and AgriFutures Australia (formerly the

Rural Industries Research and Inquiry Development Corporation, RIRDC), with initial seed funding over four years of \$10 billion.

c. Commissioners would be nominated by Australia's Regional Development Australia Committees (RDAs) and appointed by a COAG Regional Development Ministerial Council, while the RDAs would be resourced to operate as locally-championed regional branches of the Commission.

d. The Commission would be headquartered in regional Australia, located in Orange or Dubbo as geographically they are in the centre of regional eastern Australia.

e. The RDAs would be resourced to continue and improve their regional planning work, based on the framework set out above and would have greater involvement from rural and remote communities in each area, thereby creating a genuine hub and spoke with a regional city at its core.

3. Charles Sturt University recommends an immediate, independent review of the NBN project be undertaken and that the NBN roll-out be significantly strengthened to ensure top-10 OECD ranking fibre to the home broadband services be made available to all Australians living in regional, rural and remote communities and that fibre to the CBD's of each regional city in Australia be increased to 1GB/s.

4. Charles Sturt University recommends:

a. government investment in regional development be restricted to public good and public accessible activities, including economic, social, cultural and environmental infrastructure, such as technology, transport, education and training and health; and,

b. government provide funding, through the regional development governance and management mechanisms detailed above and through industry departments for the purposes of private sector investment attraction and facilitation, including foreign direct investment, while;

c. government must ensure that it does not use tax payers' funds to share or subsidise private sector risk, or be trapped into acting as a lender of last resort to the private sector under any circumstances.

5. As an example of best-practice regional development leadership, Charles Sturt University recommends that the Commonwealth immediately fund the MDMS through contributing \$50 million over four years to establish a regional medical school that is dedicated to training and retaining doctors in regional, rural and remote Australia. This investment will address chronic doctor shortages; increase higher educational opportunities and deliver lasting economic and social benefits to communities.

Recommendations Submission - Regional, Rural and Remote Education

Refer https://cdn.csu.edu.au/data/assets/pdf_file/0007/3084343/CSU_Sub_Regional,-Rural-and-Remote-Education.pdf

Charles Sturt University recommends the following with regard strengthening Australia's regional, rural and remote education system for better economic, social and environmental outcomes for students and our communities across Australia:

1.1 The gap in educational achievement between regional, rural and remote students and metropolitan students

Charles Sturt University makes the following recommendations:

- That student aspiration and capability built in and through schools be recognised as essential for regional, rural and remote educational outcomes and that governments directly invest in this area of comparative market failure (when compared to metropolitan outcomes).
- That educational pathway options for regional, rural and remote students be greatly expanded to materially deliver access and equity gains for nonmetropolitan Australians. Refer to recommendations provided by Charles Sturt University in submission to the Senate Education and Training Committee Inquiry of 7 July 2017 regarding the proposed Higher Education Support Legislation Amendment (A More Sustainable, Responsive and Transparent Higher Education System) Bill 2017).
- The design, development and delivery by higher education training providers of a greater range of Bachelor programs that articulate from vocational education and training (VET) diplomas and Certificate 4s, including greater integration between levels 4, 5, 6 and 7 of the Australian Qualification Framework (AQF), including amendment of National Vocational Education and Training Regulator Act 2011 (NVR) and Tertiary Education Quality Standards Agency (TEQSA) regulations to enable nesting of VET and higher education qualifications and vice versa.
- That Government, Schools and tertiary education continue to focus and investment in participation and success programs by government, schools and tertiary education and training providers, including continuation and expansion of HEPPP, particularly in regional, rural and remote Australia.
- Again, refer recommendations provided by Charles Sturt University in submission to the Senate Education and Training Committee Inquiry of 7 July 2017 regarding the proposed Higher Education Support Legislation Amendment (A More Sustainable, Responsive and Transparent Higher Education System) Bill 2017).

1.2 The key barriers and challenges that impact on the educational outcomes of regional, rural and remote students, including aspirations and access issues

Charles Sturt University makes the following recommendations:

- That governments design and implement funded programs that support pathways for non-traditional students in regional, rural and remote Australia, building on the successful interventions and learnings of the University.

That governments design and implement pathway programs that build on the regional retention results of the Graduate Outcomes Survey and the crucial role the University plays in developing and securing skills for the regional workforce, which in turn supports the viability of regional businesses and communities.

- That governments provide additional funding for the University to work with schools and their communities in promoting the benefits of, and developing aspiration for, higher education across non-metropolitan Australia. This work has been demonstrated to be a prime influence in the increasing number of university enrolments by regional, rural and remote students reported in the national data.
- That governments provide additional support and funding to enable higher education to provide role models (for example, university academics, graduates working in the community, and non-metropolitan focused teaching, learning and research institutes such as the proposed Murray Darling Medical School), noting that for universities to be able to continue to influence regional secondary students in this crucial area public funding will be required.
- That to provide an appropriate evidence base, government support and expand Charles Sturt University's pilot research into the barriers and challenges that impact on the educational outcomes of regional, rural and remote students (CIN Educational Consulting & Charles Sturt University, Office of Indigenous Affairs). This work would include aspirations and access issues to address this as a first step to enabling all regional, rural, remote school leaders, onsite access to contextually relevant, face-to-face professional learning and on-going support.
- That governments, collectively utilise individual rural and remote schools as the contextual centre for professional development for principals and school executives. Such work would include ongoing and professional support, delivered by experienced rural and remote education experts insitu.
- That State governments partner with universities, such as Charles Sturt, to prepare and accredit professional development for educators specifically for rural and remote school leadership in rural and remote communities throughout Australia, this would include pre-teaching appointment and on-going insitu professional development and mentoring.
- The Review team examine Charles Sturt University's early research findings referred to herein and conduct consultations within the pilot communities that this nascent work is being undertaken in, as well as request the Commonwealth Department of Education and Training to partner with the University to progress this research enquiry for tailored, contextualised and insitu professional development of rural and remote educators for improvement of student learning outcomes (CIN Educational Consulting & Charles Sturt University, Office of Indigenous Affairs).

The appropriateness and effectiveness of current modes of education delivered to these students, including the use of information and communications technology and the importance of face to face regional, rural and remote education provision

Charles Sturt University makes the following recommendations:

- That the Commonwealth Government, as a matter of national urgency, immediately review, refine and revise its information technology and communications policies, to ensure that all Australians, including those in regional, rural and remote Australia have world's-best access to the internet.
- To this end, the Commonwealth Government's national broadband network initiative be expanded to provide full fibre (or equivalent) to the home for all regional, rural and remote Australians, noting that failure to do so will consign non-metropolitan Australia to great education disadvantage and irrelevance in the digital century.

□ That technology and communications related initiatives in the Commonwealth Government's Regions 2030 Unlocking Opportunity policy statement be revised to reflect the two recommendations above, and that following revision of the policy statement and our two recommendations above be funded in full and implemented as a matter of priority to ensure a viable future for regional, rural and remote Australia.

□ That technology and communications related initiatives in the Commonwealth Government's Regions 2030 Unlocking Opportunity policy statement be revised to reflect the two recommendations above, and that follow revision the policy statement and our two recommendations above by funded in full and implemented as a matter of priority to ensure a viable future for regional, rural and remote Australia.

□ That government devise new and effective ways of financing information technology and communications access, hardware and software for regional, rural and remote students and their family's that consider the often very short life spans of technology products, noting that current public funding models do not take into account the useful life of technology, and therefore subject regional, rural and remote students to additional disadvantage over their metropolitan peers.

□ Finally, Charles Sturt University supports the recommendations provided by Mr Craig Petersen, the Principal of Denison College of Secondary Education and Deputy President of the New South Wales Secondary Principal's Council, in his submission to the Independent Review of Regional, Rural and Remote Education.

Also, refer to recommendations in Section 1.5 below.

The effectiveness of public policies and programs that have been implemented to bridge the divide Charles Sturt University supports the recommendations provided by Mr Craig Petersen, the Principal of Denison College of Secondary Education and Deputy President of the New South Wales Secondary Principal's Council, in his submission to the Independent Review of Regional, Rural and Remote Education.

Charles Sturt University has made a number of other recommendations in Section 4.5, that we believe would strengthen effectiveness of public policies and programs that have been implemented to bridge the divide between regional, rural and remote education outcomes and those of metropolitan Australia.

1.5 The gaps and opportunities to help students successfully transition from school to further study, training and employment

Charles Sturt University makes the following recommendations:

1. Development of complementary investment in soft resources that leverage the use of existing hard resource facilities in regional Australia.
2. An agile funding model that removes barriers to cross-sector collaboration and rewards engagement with community and industry. In particular, a dedicated strategy to enable education providers to develop seamless transitions between Vocational Education and Training and Higher Education providers (Acer: credit-based pathways in tertiary education) (NCVER; a half-open door: pathways for VET award holders into Australian universities 2013), including:

□ a continuing focus on implementing the Australian Qualifications Framework (AQF) operational guidelines for pathways, in particular working towards guaranteed entry into Higher Education courses for VET award holders;

□ combined educational leadership from all three sectors, with dedicated, senior roles that hold responsibility for collaboration and education pathways;

□ investment in systems to monitor student progress and achievements within and between all three sectors (enabled through the Universal Student Identifier (USI)); and,

□ accessible, well-structured information about pathway options for students and key influencers (including parents and careers counsellors).

3. A model that has a core function of maximising the use of technology and capacity building around digital service delivery in a way that addresses disparities in regional capacity and ability (Morgan, 2016) and addresses substantial growth in regional to metropolitan migration for Higher Education study (a 75 per cent increase between 2008 – 2014) (National Centre for Student Equity in Higher Education; Regional Student Participation and Migration 2017).

4. Education pathways that address existing and emerging workforce needs, customised for regional communities. The pathways should have a focus on digital ability, critical thinking and entrepreneurship and critically, expose students to industry and vice versa.

5. Incentives for earlier and deeper collaboration between both the schools and VET sectors, and the Higher Education sector. This would include more opportunities for schools and VET students (and key influencers such as parents) to engage with their local education providers both within the school, VET campus and on Higher Education campuses.

6. More coordination around pathway promotions within schools, between Higher Education and Vocational education providers, with the intent of reducing duplication and triplication activities (and to ensure that no school misses out).

7. A continuing focus on the professional development of community and industry leaders within regional Australia, alongside and in collaboration with educational leaders. This professional development should focus on building an advanced capability for collaboration in complex and changing environments, managing ambiguity and stakeholder engagement.

8. A core requirement, for digital ability and capacity be raised. Digital inclusion research indicates that regional Australians are 20 per cent less likely to use online technologies to manage their work and personal lives than the national average (Roy Morgan, Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2016). With technological impacts cited as one of five disruptive megatrends for the next 10 years by Price Waterhouse Coopers (PWC: what is a megatrend and why do they matter?), a dedicated focus will help to bridge this gap.

9. A broader definition of information and communications technology (ICT) investment within education sectors. While Professor Halsey's Discussion Paper touches on the need for innovation in the use of ICT (Pages 33 & 34), it does not address regional disparities associated with community ability in the use of ICT. Specific investment is required to ensure that once technologies are accessible, teachers and educational leaders can make the best use of this technology. This would include investment in best practice use of videoconferencing and collaboration between networks of connected education providers.

10. A continued focus on providing opportunities for students to access education and training in the regional areas that they reside. Students who study in regional areas tend to remain in regional areas after graduation and provide a ready supply of professionals to fill critical regional roles (Acer: Credit based pathway in tertiary education).

Innovative approaches that support regional, rural and remote students to succeed in school and in their transition to further study, training and employment

Charles Sturt University makes the following recommendations:

- that the Aspiration and Outreach agenda be continued; □ that university school zones for partnership activity between universities be established to allow for greater collaboration between institutions;
- ongoing targeted support tailored to address access, participation and success issues faced by Indigenous peoples who reside in regional, rural and remote areas; and,
- strategies to enhance Indigenous participation should be designed in conjunction with local communities and embrace a whole of university approach.

Furthermore, in this respect, Charles Sturt University recommends ongoing targeted support tailored to address access, participation and success issues faced by Indigenous peoples who reside in regional, rural and remote areas.

We also recommend that strategies used should be designed in conjunction with local communities and embrace a whole of university approach. That is, success in this area will not be enhanced by central, standardised approaches. For example, Charles Sturt University's Strong Moves mentoring program, links to Future Moves and to the Indigenous Student Centres at the University. This mentoring program was built in consultation with parents and students from our local communities and provides a seamless relationship for school students with staff and students in the University.

1.7 Charles Sturt University - Learnings from regional New South Wales and Victoria and potential intervention strategies to boost regional, rural and remote educational outcomes.

Charles Sturt University makes the following recommendations:

- that the Aspiration and Outreach agenda be continued;
- the proposed budget reforms that remove enabling funding to be rejected;
- that consideration is given to the need for additional strategies to effectively support and engage regional rural and remote students who study by distance education; and,
- that three-year funding streams for outreach funding are established.

Furthermore, Charles Sturt University supports a minimum three-year HEPPP funding stream to encourage schools' continued partnerships and participation, as per the August 2017 EPHEA statement:

This three-year funding stream would mean that equity practitioners can coordinate widening participation and retention programs, resources and partnerships more effectively and sustainably.

(EPHEA 2017, Information to Government Representatives regarding the Higher Education Support Legislation Amendment [A More Sustainable, Responsive and Transparent Higher Education System] Bill 2017.)

We also recommend that the Independent Review into Regional Rural and Remote Education examine the early research findings from work currently underway, including that of Charles Sturt University. In particular, we recommend that the Review consult face-to-face with the pilot schools

and communities and drive a partnership with the University to progress the pilot and research enquiry.

Finally, we recommend that the Review team consider the early trends emerging from this research and partner with Charles Sturt University for further development of the model.

*Appendix 2. Regional Australia Institute in
the **Regional Growth
Prospects – Strategic
Investment in Food
Processing, Tourism,
Advanced Manufacturing and
Creative Industries, June
2019***

June 2019
SIP.2018.2.3.1



REGIONS IN
TRANSITION



FUTURE OF
REGIONAL JOBS



CITIES &
TOWNS

SHARED INQUIRY PROGRAM 2018

REGIONAL GROWTH PROSPECTS

STRATEGIC INVESTMENT IN FOOD PROCESSING,
TOURISM, ADVANCED MANUFACTURING AND
CREATIVE INDUSTRIES



REGIONAL
AUSTRALIA
INSTITUTE

KNOWLEDGE POLICY PRACTICE

ABOUT THE REGIONAL AUSTRALIA INSTITUTE

Independent and informed by both research and ongoing dialogue with the community, the Regional Australia Institute (RAI) develops policy and advocates for change to build a stronger economy and better quality of life in regional Australia – for the benefit of all Australians. The RAI was established with support from the Australian Government.

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REFERENCE

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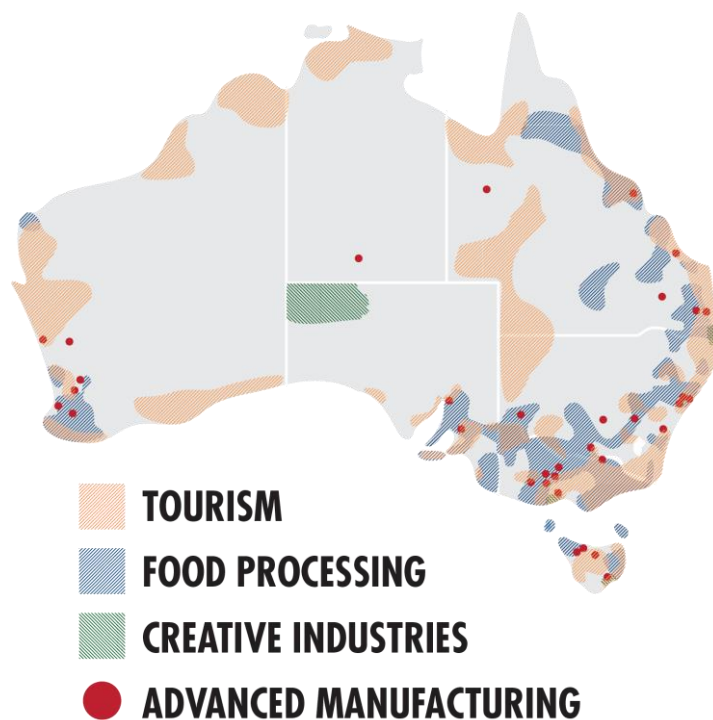
EXECUTIVE SUMMARY

This Report – *Regional Growth Prospects: Strategic Investment in Food Processing, Tourism, Advanced Manufacturing and Creative Industries* – is the culmination of research conducted by the Regional Australia Institute (RAI).

These four industries are largely driven by the private sector, are most susceptible to market forces, and have significant potential contributions to regional growth. However, employment in these four industries is not distributed evenly across regional Australia, and growth and change in these industries will not impact all regions equally.

Research in this Report provides a nation-wide and consistent evidence base to support regional development investment decisions at the national, state and regional levels. This work helps policy practitioners design policy and interventions to target the regions where it matters most and in a way which is appropriate for the regional economies they seek to support. It gives regional leaders timely information that helps focus efforts in a more strategic way to grow regional Australia within specialised regions.

This research identifies regions that specialise in these industries (Map 1) and where jobs are critical to the local economy, and how these have performed over time. Specialised regions are those where there is a high proportion of local jobs in the industry compared to the national average for a place of that size. OECD experience shows that business-led specialisation approaches are effective in supporting regions to maintain their competitiveness in national and global contexts¹.



Map 1: The regions which specialise in the food processing, tourism, advanced manufacturing and creative industries, 2016

This Report shows that specialised regions have not performed equally over time, with local conditions in some regions helping to drive employment growth, while local condition in others may be constraining it.

Local knowledge and deeper analysis is needed to identify what is occurring locally to drive or constrain job growth. Some factors could include the impacts of a new business or business expansion, variation of high human capital in the region, government or community programs, or natural assets in the region.

POLICY IMPLICATIONS:

- 1. Target policy and investment to the regions where growth in the four industries really matters for job generation (i.e. the specialised regions, not all regions).**
- 2. Tailor policy approaches based on the region's past employment growth where:**
 - i. the highest investment priority should be to catalyse new economic activities in regions where local conditions are driving growth. In these regions, government intervention may build on local strengths to generate business and employment opportunities; and**
 - ii. the highest investment priority should be removing or reducing barriers to growth in regions which are lagging behind state and industry trends. In these regions, government intervention may support these regions in realising their full employment potential.**
- 3. Assess workforce and skill availability in the specialised regions and act to ensure potential new jobs can be filled, for example through regional learning systems or regional migration strategies as outlined in the RAI's The Future of Jobs Report.**

The key industry findings from this work are:

FOOD PROCESSING

- Food processing, or the value add component of agribusiness, is a more likely prospect for employment growth than food production. Occupations in raw food production have been decreasing alongside improved technologies and other efficiencies that reduce the need for human labour. Food processing jobs have now surpassed the number of food production jobs nationally.
- Food processing employment is more concentrated geographically than the broader agriculture industry. There are very distinct areas where food processing really matters and could be a source of growth in the future. Largely these regions are in the south west corner of Western Australia, surrounding Adelaide, throughout much of Victoria, inland along the New South Wales east coast, north western Tasmania and around the Queensland towns of Cairns, Townsville and Rockhampton.
- Many of these areas are geographically close and could be approached with cross boundary collaborations in investment, workforce development and other strategies.
- There is potential for locally led migration initiatives to help regions secure the workforce needed for new or expanding food processing businesses.

TOURISM

- Tourism is the largest national employer of the four industries and it is growing the most, to the extent where it is taking employment share from other industries. Tourism employment in regional Australia is following this trend.
- Policy and programs which seek to create regional jobs on the back of tourism growth should target specialised regions. These regions are not necessarily the iconic or well-known tourism destinations but rather they are places where tourism really matters for local employment and job generation.
- Tourism specialisation is particularly concentrated along the coastlines of Australia (excluding northern Queensland), parts of the interior in southern Queensland along the Northern Territory and South Australian borders, and New South Wales along the South Australian border and much of Tasmania.
- There are some regions where tourism spend is high in relation to the number of people living there. This means that in some places there is a greater spend per person released into the local economy. This includes the tourism regions of North West Western Australia, Snowy Mountains New South Wales and Tropical North Queensland.
- Not all regions are positioned to capture the benefits from international tourism growth. For many, domestic tourism provides clearer prospects for growth. Substantial justification would be needed for regions seeking government support to build an international tourism market where one does not exist already.

ADVANCED MANUFACTURING

- Advanced manufacturing is a small employer in regional areas however jobs in the industry are highly concentrated.
- Only a very small number of regions specialise in advanced manufacturing and there is no strong geographic congregation of these. For these reasons, a national industry strategy is of little benefit and efforts should instead be focused on the handful of places where the industry really matters for local employment.
- In the small number of regions which specialise in advanced manufacturing, it is often one or a few businesses which are responsible for the majority of employment in the industry. These sorts of regional businesses could be a focus for employment growth efforts.
- Advanced manufacturing regions produce niche products and employ people with very niche skills. These are competitive on the international market because so few companies globally can fill the niche. There is an opportunity here to leverage these skills and have greater involvement in global markets.
- Advanced manufacturing often builds on existing primary industries and its fortunes are tied to these industries, such as agriculture and mining, who purchase machinery.

CREATIVE INDUSTRIES

- Employment in creative industries is growing in regional Australia but there are very few regions which are specialised in the industry.
- There is often a positive relationship between population size and creative employment and these places also have a higher number of creative services, or business-to-business, jobs such as graphic designers, web developers and other.
- Places with a high proportion of jobs in creative industries are largely places where people want to live. Creative industries play a role in local innovation and liveability, which may include attracting and/or retaining population in regional areas.
- This industry has an important presence in some smaller and more remote Indigenous communities where there is an opportunity to build on growing international and domestic demand for Indigenous art.

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INTRODUCTION

This Report looks at four industries that are critical to the economic future of regional Australia. Two of these industries, food and agribusiness and tourism, are predicted to growⁱⁱ strongly in the coming decade in response to expectations of growth in international demand and Australia's comparative advantage. Advanced manufacturing is highly important in a small number of regions, reflecting both historical strengths and great adaptability and engagement in global supply chains. Creative industries have a vital role in supporting business innovation, and underpinning the cultural vitality of regions.

All four of these industries are based on the private sector, with space for a range of business sizes from small to very large. These private sector dominated industries stand in contrast to the services industries that are underpinning employment growth in many regions and, while the service industries have a mix of public, private and not-for-profit operators, they are framed by public sector expenditure. As such, the four industries profiled in this Report have been selected as they have significant potential contributions to regional growth, and are most susceptible to market forces.

Employment in these four industries is not distributed evenly across regional Australia and growth and change in these industries will not impact on all regions equally. There are some regions that have a large number of jobs in the industry and others that demonstrate clear national specialisations suggesting deep 'critical mass'. These are important considerations for decision makers supporting communities through industry change and ensuring regions are positioned to take advantage of growth in these industries.

This Report presents an assessment of the relative exposure of Local Government Areas (LGAs) to the predicted growth of the food processing and tourism industries, as well as changes in the advanced manufacturing and creative industries. This includes analysing how regions are positioned to take advantage of growth opportunities and where government support could improve their position.

The results outlined in this Report are designed to help governments identify regional areas that are most strongly aligned to the food processing, tourism, advanced manufacturing and creative industries. These are areas with a high proportion of employment in each industry relative to the national average and which are most reliant on the industries for employment. This understanding shows where success in food processing, tourism, advanced manufacturing and creative industries matter for a region's future.

Regional leaders and regional policy developers can use this evidence base to help focus their efforts in a more targeted and strategic way to grow regional Australia on the back of industry growth. Equally, it provides an evidence base for investment in a more targeted and strategic way, which will capture regional development benefits on the back of growth in food processing, tourism, parts of manufacturing and creative industries. It also identifies the regions to support during significant industry downturn.

READING THIS REPORT

This section outlines some key terms and ideas which underpin the research and have been applied across the four industries. All supporting appendices are available in the electronic version of this report which is available at www.regionalaustralia.org.au.

SPECIALISED REGIONS

Industry growth is most important in regions that demonstrate specialisation. This means places where employment is a high proportion of local jobs compared to the national average for a place of that size. This is different to the total number of jobs, which is often skewed to places with a large population rather than showing the significance of the industry in a smaller place.

Regions that specialise are better able to demonstrate the capability to be competitive in global supply chains, and are where it is most important to be prepared for opportunities and/or changes. This means that there are some regional economies where these industries really matter in terms of jobs.

To identify the regions where food processing really matters, a Location Quotient analysis was used (see Appendix C for a detailed description of the methods). Location Quotients are a quantitative measure of the specialisation of a region's employment in a given industry, against the national average for employment in that industry. Scores are generated to demonstrate the magnitude of the industry's importance in the local economy. Regions with a high Location Quotient score (i.e. highly specialised) in food processing are more dependent on the success of the industry for economic outcomes. Alternatively, areas with low specialisation typically have greater diversity amongst their industries or have a different dominant industry, such as mining, construction or services. Regions which score over 1 are above the national average.

The top specialised regions were selected based on their Location Quotient score using natural breaks in the data. That means there was a significant jump between the scores of the top ranked regions and those that followed.

Many LGAs have maintained their specialisation in food processing for several years meaning that this is a fairly solid prospect for continued regional employment in the local economy.

For regions which do not specialise, other industries are a more likely source of growth and importance from a regional development and job generation perspective.

DRIVING AND CONSTRAINING REGIONS

By looking at the employment data in finer detail, we can see that these four industries are growing in some places and declining in others. Using a Shift Share Analysis (see Appendix C for a detailed description of the methods), regional employment growth can be split into three parts:

1. job growth attributed to national employment growth,
2. job growth attributed to industry employment growth and
3. jobs growth attributed to local conditions.

This third element, growth attributed to local conditions, is useful for seeing how a region's jobs are growing, outside of national and industry trends. It can show that the unique features of a region are resulting in more or less jobs being created than the national and industry average.

By looking at the contribution of local conditions to jobs growth between 2011 and 2016, we can divide the specialised LGAs into two groups, firstly those where local conditions are driving employment average rates and secondly, those where local conditions are constraining employment growth to below average rates.

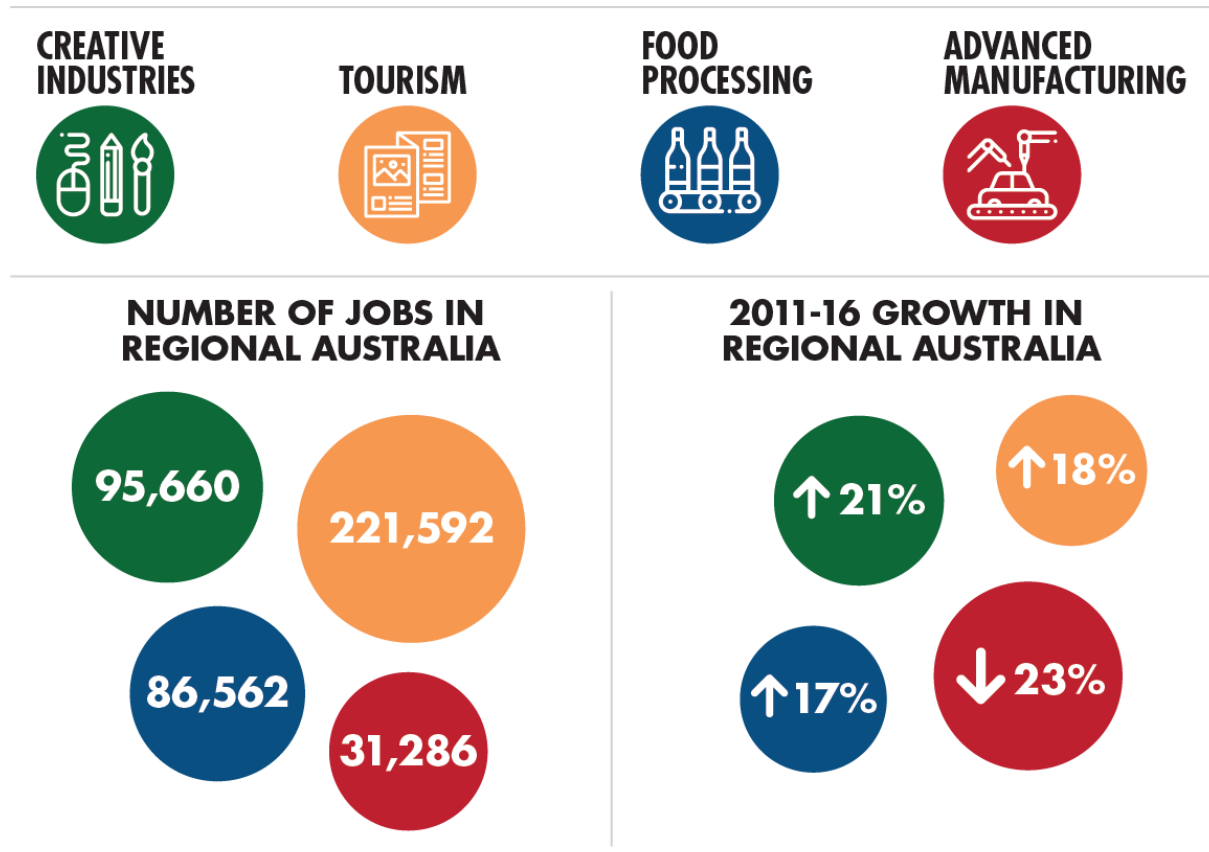
LOCAL CONDITIONS

Local conditions are the unique features of the region which contribute to job growth or not, outside of national and industry forces. It identifies the exact local conditions which are at play in any one region, local knowledge and/or further analysis is needed. Some local conditions that may contribute to job growth include the impacts of new businesses or business expansion, high human capital in the region, government or community programs, transport networks, access to research and technology and/or natural assets in the region.

The local conditions are different between regions. It is important to understand what local conditions are contributing to job growth or not, to enable regions to make adjustments and be better positioned to capture future job growth.

REGIONAL EMPLOYMENT IN THE FOUR INDUSTRIES

Food processing, tourism, advanced manufacturing and creative industries are significant employers in regional economies as well as important drivers for economic growth in regional Australia.



POLICY IMPLICATIONS

Liveability & population attraction + retention

Biggest employer & fastest growing

Ripe for cross collaboration

Linked to success of primary industries

FOOD PROCESSING

Food processing refers to the component of agribusiness that turns raw commodities into a value-added product or products for consumption. This includes occupations such as bread manufacturing, cheese and dairy product manufacturing, meat and seafood processing and wine and other alcoholic beverage manufacturing (Appendix A includes the full list of included jobs). Food production, which involves the growing or producing raw commodities, however, has not been a focus of this research. Instead, it looks solely at food processing as the more likely source of job generation in regional Australia.

In 2016, there were 86,562 jobs in food processing in regional Australia and from 2016 to 2011, regional food processing employment increased by 17 per cent.

In 2016, regional Australia accounted for 49.3 per cent of all food processing jobs, this means there is a near 50:50 share between jobs in metropolitan and regional areas.

This is a change from previous decades where food processing was more concentrated in regional areas, particularly near where the products were grown. Now the regions that have the greatest concentration of food processing employment are often in regions that are in close proximity to major cities and the services and ports (sea and air) they provide.

Transport costs and labour availability are likely contributors to this migration of processing away from source regions. However some well-established food processing businesses that were once on metropolitan fringes are gradually being encroached on by urban sprawl and the associated land price increases. There is an opportunity for regions to take advantage of this if they can ensure labour needs can be met, such as through community initiatives to encourage migration settlement (see an example at Appendix B).

Regions that specialise in food processing jobs are geographically more concentrated than the broader agribusiness industry. This means that there are very distinct areas where employment in food processing really matters.

WHERE DO FOOD PROCESSING JOBS REALLY MATTER?

In 2016, a little under a quarter were specialised (37 per cent or 158 LGAs) and a third had no jobs in food processing. This means there are very distinct areas where food processing is an important source of employment and a likely source of job generation.

Figure 2 shows the specialised food processing regions, indicated in red hues, are largely in the south west corner of Western Australia, surrounding Adelaide, throughout much of Victoria, inland along the New South Wales east coast, north western Tasmania and around the Queensland towns of Cairns, Townsville and Rockhampton.

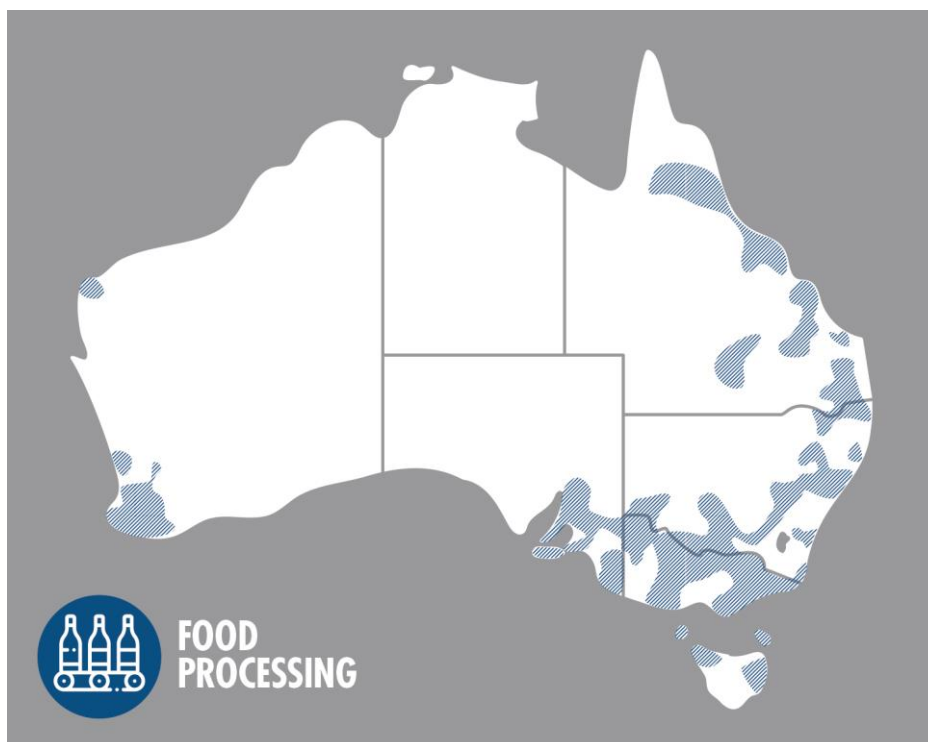


Figure 2: Location of key regions that specialise in food processing, 2016

The regions with the highest specialisation in food processing are in Table 1. This shows that for Plantagenet, Barossa, Indigo and Woodanilling, food processing is a very important source of employment. These regions could also be in a position to take advantage of growth in the food processing industry because a high proportion of their local workforce already works in that industry – a sign of proven competitiveness.

Table 1: Most specialised regions for regional food processing employment, 2016

Rank	Local Government Area	State	Total Jobs	Industry Jobs	Proportion of Industry Jobs	Location Quotient Score
1	Plantagenet	WA	1,873	404	21.6%	12.04
2	Barossa	SA	9,578	2,030	21.2%	11.83
3	Indigo	VIC	4,497	927	20.6%	11.50
4	Woodanilling	WA	154	30	19.5%	10.87

Analysis based on data from the Australian Bureau of Statistics (2016) Census of Population and Housing.

Plantagenet, Barossa and Indigo have significant employment in wine and beverage processing, which contributes to these high scores. Plantagenet also has a number of jobs in meat processing and Indigo has a sizeable number of jobs in cereal and dairy processing.

In some regions with small populations, the specialisation may be based on a single, large business and less diversity amongst other industries. An example is Woodanilling, with its goat and sheep meat abattoir and an engaged workforce of only 154 people. Other regions have a wider range of businesses that dilute the extent of specialisation – for example the Barossa with its many wine producers.

Plantagenet, Barossa, Indigo and Woodanilling show the upper scale of food processing employment in a region where the industry really matters for local employment. Across all regions, the main occupations contributing to growth across regional Australia were meat processing, wine and other alcoholic beverage and bread manufacturing.

FOOD PROCESING EMPLOYMENT – OPPORTUNITIES AND CHALLENGES

The food processing specialised regions have performed differently over time in terms of employment growth. This means that in areas where food processing really matters, some regions have seen strong employment growth while others have not kept pace with national and industry trends.

Looking at the two groups for food processing, there are more regional LGAs where local conditions are driving local employment, than regions where local conditions are constraining it (179 LGAs vs 127 LGAs). That means there are unique local features in many regional communities that are driving employment in food processing, more so than national and industry employment trends. Regions are performing strongly in this regard.

In 2016, the greatest job growth based on local conditions was in Greater Geelong Victoria (350 food processing jobs) where the greatest increases were in the occupations of bread manufacturing (160 jobs), beer manufacturing (75 jobs) and other food product manufacturing (57 jobs). However this is the top performer and there is considerable variation between regions. Figure 3 gives some examples across the range of regional variation.

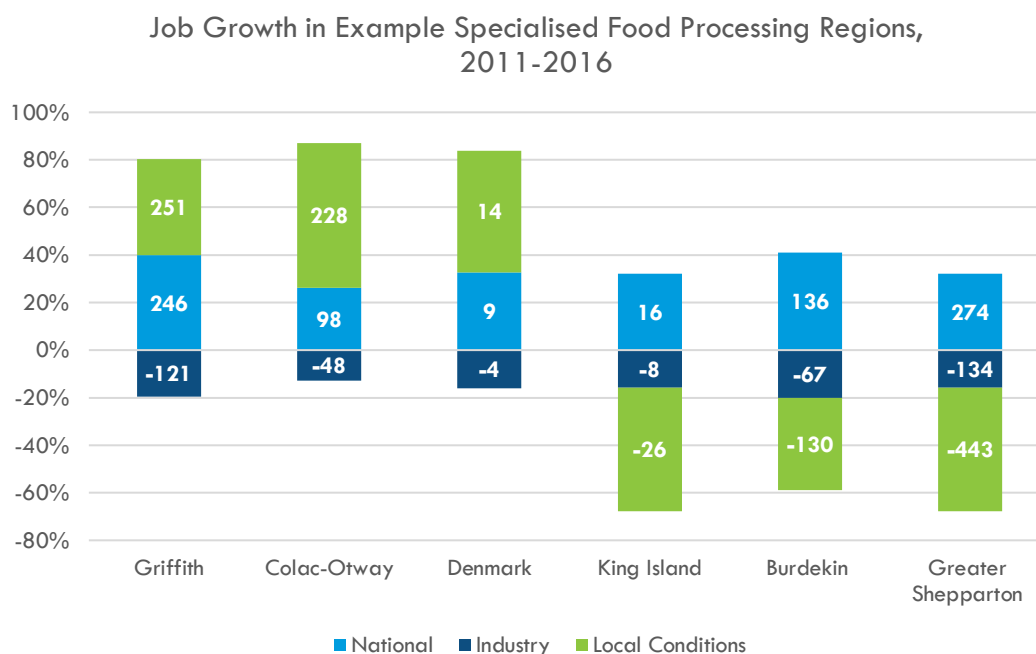


Figure 3: Job growth in six example regions that specialise in food processing, split into the components that can be attributed to national employment growth, industry employment growth and local conditions, 2011-2016

Griffith New South Wales and Colac-Otway Victoria are example regions at the upper end of the range, where local conditions have most driven employment growth (by 251 and 228 jobs respectively), whereas Burdekin Queensland and Greater Shepparton Victoria are regions where local conditions have most constrained growth (by -130 and -443 jobs respectively). Denmark Western Australia and King Island Tasmania are examples of smaller sized regions and show the scale that local conditions can contribute to employment growth (14 and -26 jobs respectively). The results for all regions are at Appendix D.

In Griffith from 2011 to 2016, food processing grew by 376 jobs. Of these, 246 jobs can be attributed to national growth and 251 jobs can be attributed to local conditions, but -121 jobs were not realised because of industry trends. Alternatively, in Burdekin, there was a decrease in the number of food processing jobs (-61 jobs). Both industry trends and local conditions contributed to this decrease (-67 jobs because of industry trends and -130 jobs because of local conditions).

For the LGAs that are driving growth in food processing employment, many are in close geographic proximity and are across LGA and other boundaries. For example in New South Wales, Carrathool, Griffith, Gundagai, Junee, Leeton, Narrandra and Wagga Wagga are all in close proximity and specialise in food processing. A similar example is in Victoria, with Central Goldfields, Greater Bendigo, Loddon, Macedon Ranges, Mount Alexander and Swan Hill. These driving regions also cross other boundaries where the regions form a rough doughnut shape in the south west corner of Western Australia, the regions surrounding Adelaide in South Australia and the regions in eastern and north western Tasmania.

POLICY IMPLICATIONS FOR FOOD PROCESSING

Food processing employment really matters in the specialised regions, which may mean larger regions are excluded because they have high employment in a range of other industries. In some regions where a particular industry's contribution appears less significant to state goals, the region may actually be highly specialised in that industry and thus reliant on that industry's success for employment growth. These smaller but still highly specialised areas may be a lower priority for national, state level industry policies but they should be an important priority for regional development strategies where the goal is to promote growth in all regions.

Specialised food processing regions are often located near each other geographically which therefore creates possibilities for cross regional investment, workforce development and other strategies rather than just relying on individual projects.

Ensuring labour force needs can be met is one way to support companies that want to move or expand in regional areas. Community initiatives to encourage migration settlement are one way to ensure regional labour needs can be met. Enabling migration settlement to occur in regional communities who want it, can help companies be confident that they can fill workforce and skill needs to operate at full capacity.

TOURISM

Tourism is a broad category that includes aspects of transport, accommodation, food retailing and recreational services (Appendix A includes the full list of included jobs). For this research the ABS Tourism Satellite Accounts approach to ascribing a proportion of employment in a range of selected industries to tourism operations has been used. This has been done to disentangle jobs supported by local consumption from the jobs supported by tourism.

Of the four industries covered in this research, tourism is the biggest employer and it has grown the most. In 2016, there were 221,592 tourism jobs across regional Australia and from 2011 to 2016 regional tourism employment increased by 18 per cent. Alongside this employment growth, the industry has also increased its proportion of Australian jobs which has increased significantly. This means employment in the industry is growing more than some other industries.

Tourist visitation is higher in metropolitan areas which provides an opportunity for regions because the capital cities can serve as the gateway to regional tourism.

WHERE DO TOURISM JOBS REALLY MATTER?

All regional LGAs had some form of tourism employment in 2016, and of these 38 per cent (or 162 LGAs) were regions where the industry really matters for employment. These are the specialised regions.

The large number of regions that specialise in tourism are distributed widely. Geographically some regions where tourism specialisation is particularly concentrated are along the coastlines of Australia bar northern Queensland, parts of the interior in southern Queensland along the Northern Territory and South Australia borders, and New South Wales along the South Australian border, and much of Tasmania (Figure 4). These are not the iconic or popular tourism destinations, but where the industry is very important to these regions. This is because tourism is one of the main income sources for some remote areas and some communities have limited economic diversity beyond the tourism industry.

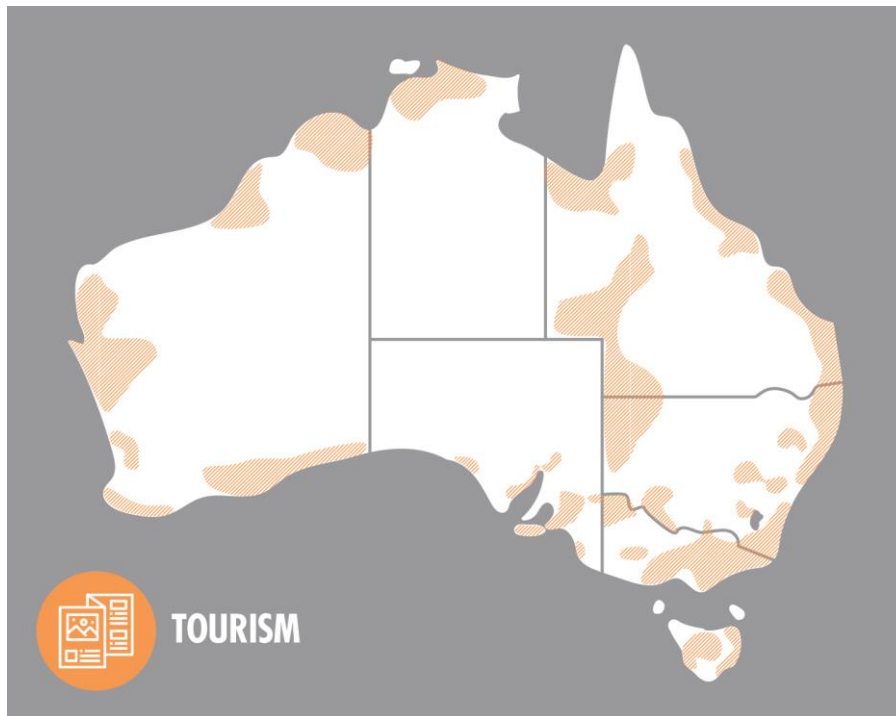


Figure 4: Location of key areas with a number of specialised tourism regions, 2016

The 4 regions with the highest specialisation in tourism are listed in Table 2. This shows what regions with a significant level of tourism employment look like.

Table 2: Most specialised regions for regional tourism employment, 2016

Rank	Local Government Area	State	Total Jobs	Industry Jobs	Proportion of Industry Jobs	Location Quotient Score
1	Unincorporated Vic	VIC	2,102	524	24.9%	4.09
2	Douglas	QLD	5,288	846	16.0%	2.62
3	Glamorgan/Spring Bay	TAS	1,338	182	13.6%	2.23
4	Tasman	TAS	655	86	13.2%	2.16

Analysis based on data from the Australian Bureau of Statistics (2016) Census of Population and Housing.

Popular and high profile tourist locations, such as the Barossa, do not feature as might be expected in this specialisation analysis. This is because the overall economy in these areas are more diverse, so overall employment and growth in these regions are less reliant on tourism alone. This does not mean that tourism is not important as a key industry in these regions from a national, state or regional development perspective, but it is not a clear or strong local specialisation. Growth in other industries alongside or instead of tourism may be more important to local and regional success.

In Table 2, Unincorporated Victoria refers to areas that are managed by the state rather than a local council like other LGAs. In Victoria, these unincorporated areas are largely outer islands and alpine resort areas. For this region there is limited employment in other industries so the level of specialisation in tourism is high. This is particularly true for the alpine regions that have high tourism employment during the winter months when the ABS Census is conducted.

In 2011 and 2006, Unincorporated Victoria, Glamorgan/Spring Bay and Tasman were also among the most specialised LGAs for tourism employment. This means that over time, there has been little change in the importance of tourism for employment in these regions. In 2011, Douglas was not one of the highest specialised LGAs for tourism because from 2007 to 2012, Douglas was part of the bigger LGA of Cairns which included a larger number of jobs in a greater number of industries. It is likely the geography of Douglas retained its specialisation in tourism before this boundary change.

Alongside these specialised regions, there are some regions where the ratio of tourism spend is high in relation to the number of people living in the region.

This means that some regions have a greater tourism spend per person released into the local economy than others.

Figure 5 shows that this is greatest in the Tourism Regions of:

1. North West Western Australia where the average annual visitor spend is \$14,455 per person. This is due to the relatively high average annual spend (\$1.5b);
2. Snowy Mountains New South Wales (\$13,77 per person) where there is a high domestic overnight visitor spend (\$421m or 88 per cent of the total spend) and spending associated with snow sports; and
3. Tropical North Queensland (\$12,940 per person) where there is a high international tourism spend (\$1b or 28 per cent of the total spend) and spending associated with experiencing the Great Barrier Reef.

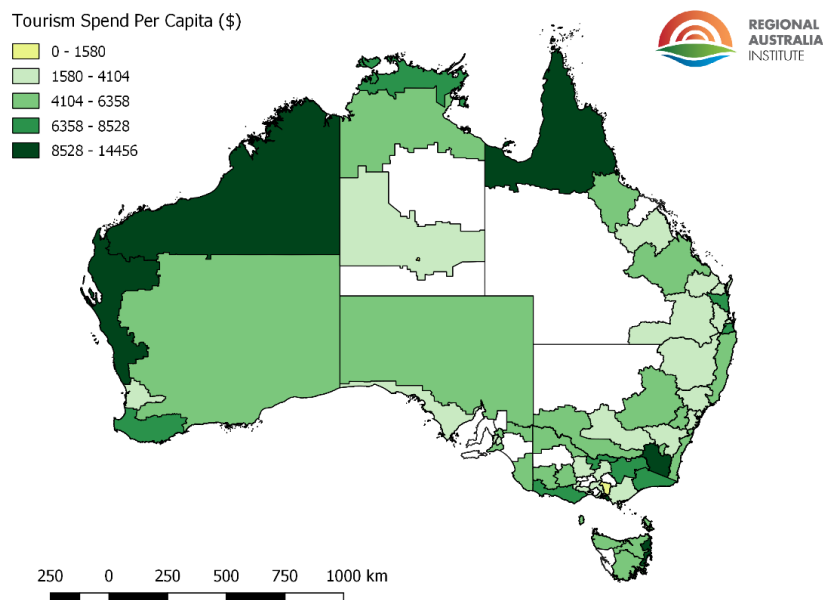


Figure 5: Tourism Spend Per Capita (including International, Domestic Overnight and Domestic Day Trip Visitors) (\$) The darker the shade of green, the higher the tourism spend per capita. White indicates gaps in the dataset (Analysis based on data from Tourism Research Australia, 2017, International and National Visitors Surveys)

A number of the specialised regions are within Tourism Regions with the highest tourism spend per capita. These are listed for the top seven high visitor spend per capita Tourism Regions (Table 3).

Table 3: Specialised regions within the Tourism Regions with the highest visitor spend per capita, 2017

Tourism Region	State	Spend per Capita	Local Government Area	Tourism's Jobs Share	Tourism Jobs
North West	WA	\$14,455	Broome	8.6%	593
			Wyndham-East Kimberley	7.3%	249
Snowy Mountains	NSW	\$13,777	Snowy Monaro Regional	12.7%	1,174
Tropical North	QLD	\$12,940	Douglas	16.0%	846
			Burke	8.6%	11
			Cairns	8.2%	5,226
			Carpentaria	6.4%	51
East Coast	TAS	\$12,186	Glamorgan/Spring Bay	13.6%	182
			Break O'Day	9.3%	147
Philip Island	VIC	\$11,659	Unincorporated VIC	24.9%	524
			Bass Coast	8.9%	841
Coral Coast	WA	\$8,528	Shark Bay	12.6%	50
			Northampton	10.5%	113
			Irwin	8.2%	78
			Carnarvon	6.7%	168
			Greater Geraldton	6.6%	964
High Country	VIC	\$8,351	Unincorporated VIC	24.9%	524
			Alpine	9.3%	401
			Mansfield	8.2%	247
			Indigo	6.4%	288
			Wangaratta	6.1%	702

In many cases, where tourism really matters for local employment there is also a high visitor spend per person being released into the local economy.

TOURISM EMPLOYMENT – OPPORTUNITIES AND CHALLENGES

Some regions where tourism employment really matters have performed more strongly than others over time.

Across all of regional Australia, there are 28 LGAs driving tourism employment compared to 132 LGAs constraining tourism employment growth. Figure 6 shows example regions and the range of growth performance across regional Australia.

Job Growth in Example Specialised Tourism Regions, 2011-2016

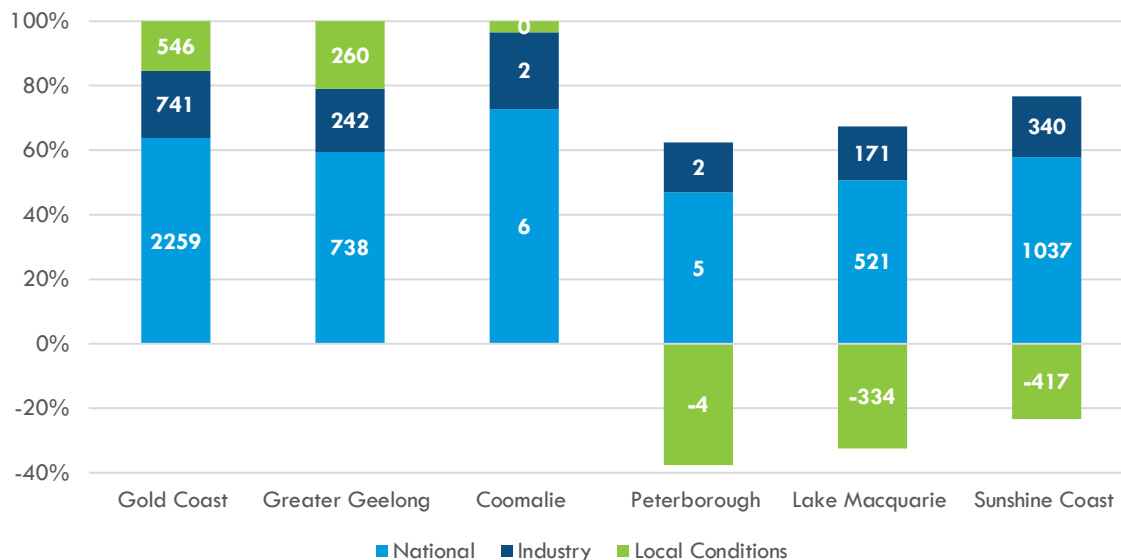


Figure 6: Job growth in six example regions that specialise in tourism, split into the components that can be attributed to national employment growth, industry employment growth and local conditions, 2011-2016

Figure 6 shows the range which local conditions have contributed to tourism job growth. The Gold Coast Queensland and Greater Geelong Victoria were among the regions where local conditions contributed the most to tourism job generation (546 and 260 jobs respectively), whereas Lake Macquarie New South Wales and Sunshine Coast Queensland were among the regions where local conditions most constrained tourism job growth (-334 and -417 jobs respectively). Coomalie Northern Territory and Peterborough South Australia are examples of smaller regions. Coomalie’s tourism job growth was exactly on par with national and industry trends and local conditions did not drive or constrain growth. Peterborough’s local conditions constrained job growth, which meant -4 jobs were not realised. The results for all regions are at Appendix D.

From 2011 to 2016, the Gold Coast grew by 3,546 tourism jobs (Figure 6). Of these, 2,259 jobs can be attributed to national growth, 741 jobs can be attributed to industry growth and 546 jobs can be attributed to local conditions. Alternatively, the Sunshine Coast grew by 960 tourism jobs but local conditions meant that it is 417 tourism jobs behind what the national and industry trends suggest a place of that size should have had from 2011 to 2016.

Among the regions with the greatest tourism employment growth from local conditions are the Gold Coast (546 jobs), Douglas north of Cairns (413 jobs) and Noosa (413 jobs). These regions have existing strengths in international tourism and could benefit from its predicted growth. However not all regions have strengths in international tourism and for many regions, domestic tourism provides clearer prospects.

Across Australia, domestic tourism is the greatest contributor to the tourism industry nationally with \$67.5 billion from domestic overnight travel and \$21.4 billion from domestic day trips in 2016-17ⁱⁱⁱ. International tourism has been increasing more rapidly than domestic tourism, but is still a smaller

portion of the market (\$42.5 billion). In the future, by 2026-27, domestic tourism will still be the greatest contributor to tourism by overall visitor numbers. However, by visitor spend international and domestic tourism are expected to be near par. International visitor spend is predicted to account for 44 per cent of the total visitor spend in 2026-27, with the remaining spend from overnight domestic visitors (44 per cent) and domestic day trippers (13 per cent)^{iv}. Visitation and tourism spend, however, vary between regions.

POLICY IMPLICATIONS FOR TOURISM

The tourism industry employs 221,592 regional Australians and it is an industry that is predicted to continue growing^v.

Policy that seeks to create jobs on the back of predicted tourism growth should target specialised regions. These regions may not necessarily be the iconic and well publicised tourism hot spots but rather they are places where tourism really matters for local employment and job generation. From a regional development perspective, these are the regions where growth will have the biggest impact and job potential.

Most of the regions that specialise in tourism are not keeping pace with national and industry trends. Policy approaches should look to reduce and/or remove factors at the local level that are constraining growth, noting that these barriers may differ across regions. However in the regions which are driving tourism employment growth, support should instead look to catalyse further job growth.

Visitor spending for tourism contributes far greater per capita regional income than spending in metropolitan regions. Some parts of regional Australia average over \$10,000 tourism spend per resident, per year. Per resident, some regions rely more on tourism jobs and expenditure than metropolitan areas, particularly for the regions where there are limited other job prospects.

Policy interventions that address international tourism should focus on regions with existing strengths in international tourism, while for others domestic tourism offers clearer prospects for growth. Substantial justification may be required for regions who are seeking government incentives to build an international tourism market where one does not exist already.

ADVANCED MANUFACTURING

Advanced manufacturing involves production of higher value, more complicated products than traditional manufacturing. This includes producing chemicals, medicines, machines, technical equipment, appliances and other products (Appendix A includes the full list of included jobs).

In 2016, there were 31,286 advanced manufacturing jobs in regional Australia which is a decrease from 2011 by -23 per cent. This reflects declines in the broader manufacturing industry. This has occurred while Australia's total employment has been increasing.

WHERE DO ADVANCED MANUFACTURING JOBS REALLY MATTER?

Advanced manufacturing features more strongly in some regional economies than others. The types of regions that most commonly specialise in advanced manufacturing are the smaller and more remote regions which are shaped by local ingenuity (15 LGAs), and regional cities with a population over 50,000 (12 LGAs), which have large workforces, diverse economies and feature other forms of manufacturing employment.

There are only a small number of regions where advanced manufacturing really matters for local employment. Only 39 LGAs (or 9 per cent) specialised in the industry (Table 4). Half of all regional LGAs had no employment in advanced manufacturing in 2016.

Table 4: Most specialised regions for regional advanced manufacturing employment, 2016

Rank	Local Government Area	State	Total Jobs	Industry Jobs	Proportion of Industry Jobs	Location Quotient Score
1	Harvey	WA	6,225	443	7.1%	5.01
2	Cloncurry	QLD	2,802	197	7.0%	4.95
3	Federation	NSW	4,595	255	5.5%	3.91
4	Ararat	VIC	4,541	248	5.5%	3.85
5	Perenjori	WA	704	30	4.3%	3.00

Analysis based on data from the Australian Bureau of Statistics (2016) Census of Population and Housing.

The occupations that contribute to high scores in these regions are inorganic chemicals, synthetic resin and synthetic rubber manufacturing in Harvey, fertiliser manufacturing in Cloncurry, explosive manufacturing in Federation, electric cable and wire manufacturing in Ararat and mining and construction equipment manufacturing in Perenjori.

The majority of these have had a specialisation in advanced manufacturing over the longer term, indicating limited change over time. Harvey and Cloncurry were amongst the top most specialised LGAs for advanced manufacturing in 2011 and 2006. Federation's predecessor, Corowa LGA, was also amongst the top specialised LGAs in 2011 and 2006. This means that these LGAs have maintained a strong proportion of jobs in advanced manufacturing over at least a 10-year period. Ararat was not one of the top specialised LGAs for advanced manufacturing in 2006 but did become one of the top most specialised places in 2011 and 2016. This is because from 2006 to 2011, Ararat grew from 172

advanced manufacturing jobs to 301, where a large contributor to the increase was a near doubling of the number of electric cable and wiring manufacturing jobs. Perenjori had a similar story of advanced manufacturing job growth where the region went from 0 jobs in advanced manufacturing in 2006 and 2011, but grew to 30 jobs by 2016 because a major mining operation opened in 2013.

For regions with a specialisation in advanced manufacturing, there is no strong spatial congregation. Instead these are largely individual LGAs where advanced manufacturing jobs really matter, nestled alongside neighbours where advanced manufacturing is not so crucial to the local economy and job generation (Figure 7).

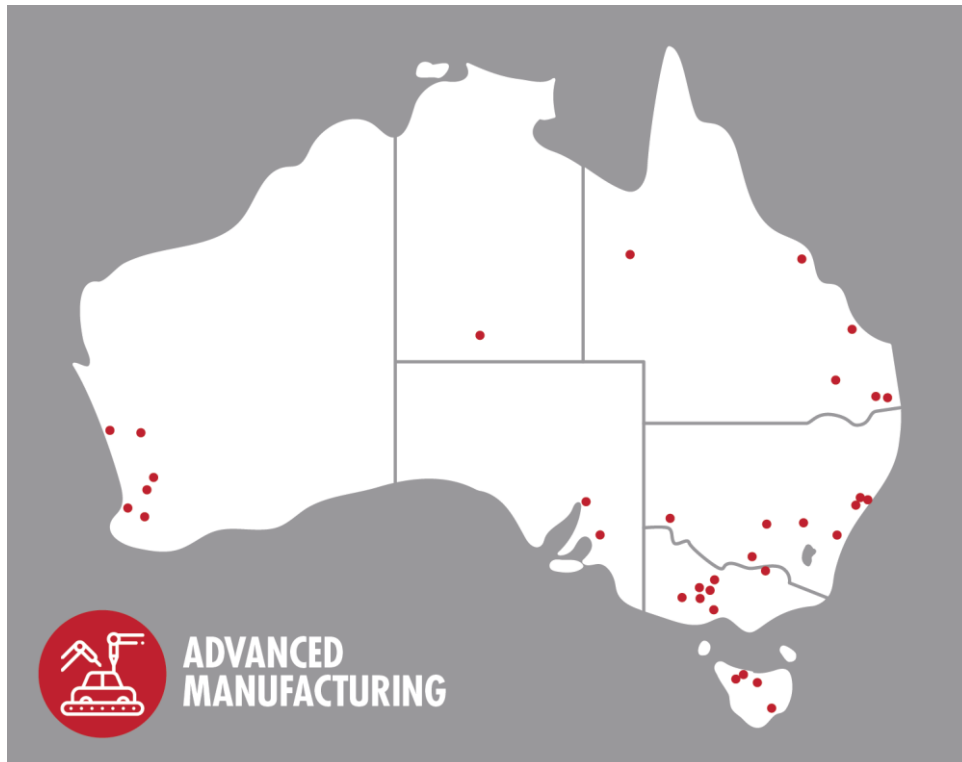


Figure 7: Location of specialised advanced manufacturing regions, 2016

This spatial distribution can be partly explained by the companies underpinning the industry.

Often one or two companies are responsible for the majority of advanced manufacturing jobs in a region.

Some example companies are listed in Table 5, these account for a significant proportion of local advanced manufacturing jobs.

Regions that specialise in advanced manufacturing typically produce a niche product that is unique to that area, driven by a particular company or group of related companies. This results in a workforce that is highly skilled in a niche area of manufacturing which, in some cases, can produce items that are competitive on the international market because so few companies have a skilled labour force on hand.

Table 5: Examples of companies that accounted for a large proportion of local advanced manufacturing jobs, 2016

State	LGA	Major Advanced Manufacturing Occupation	Example Company
VIC	Ararat	Electric Cable and Wire Manufacturing	AME Systems
VIC	Central Goldfields	Machine Tools and Parts Manufacturing	Sutton Tools
QLD	Cloncurry	Fertiliser Manufacturing	Incitect Pivot
NSW	Cowra	Agricultural Machinery and Equipment Manufacturing	K-Line Ag
TAS	Glenorchy	Shipbuilding and Repair Services; Boatbuilding and Repair Services	Incat
VIC	Greater Geelong	Motor Vehicle Manufacturing	Ford Motors
WA	Harvey	Basic Inorganic Chemical Manufacturing	Cristal
WA	Harvey	Synthetic Resin and Synthetic Rubber Manufacturing	Simcoa Operations
WA	Irwin	Boatbuilding and Repair Services	Dongara Marine
QLD	Mackay	Mining and Construction Machinery Manufacturing	Komatsu
SA	Mount Remarkable	Agricultural Machinery and Equipment Manufacturing	Jamestown Engineering
TAS	Waratah/Wynyard	Mining and Construction Machinery Manufacturing	Elphinstone
WA	West Arthur	Agricultural Machinery and Equipment Manufacturing	Pederick Engineering

Data compiled from various local council and company websites, and the Australian Bureau of Statistics (2016) Census of Population and Housing.

Similar to food processing, there are many single large employers in the industry and there may be some that are considering a shift to regional Australia, where land is more readily available at a lower cost, alongside other business benefits.

ADVANCED MANUFACTURING EMPLOYMENT – OPPORTUNITIES AND CHALLENGES

Not all specialised regions have had equal employment growth in the industry. Figure 8 gives examples of regions across the range of high employment growth to low, based on local conditions.

Job Growth in Example Specialised Advanced Manufacturing Regions, 2011-2016

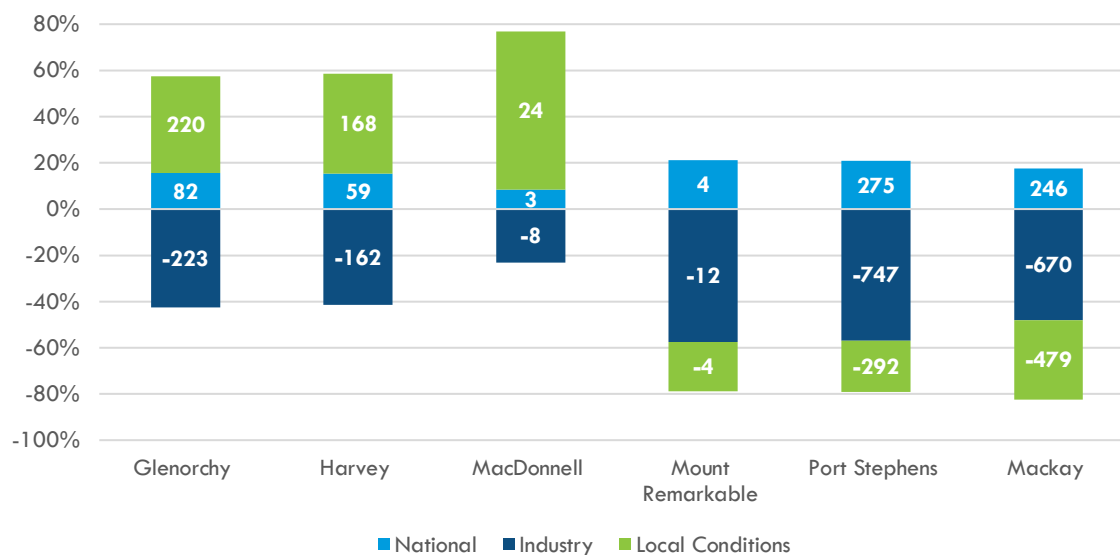


Figure 8: Job growth in six example regions that specialise in advanced manufacturing, split into the components that can be attributed to national employment growth, industry employment growth and local conditions, 2011-2016

The national employment decline of advanced manufacturing (-26 per cent) means that in each example region there were employment declines in the ‘industry’ component (shown in dark blue in Figure 8). Glenorchy Tasmania and Harvey Western Australia are example regions at the upper end of the range, where local conditions have most driven employment growth (by 220 and 168 jobs respectively), whereas Port Stephens New South Wales and Mackay Queensland are regions where local conditions have most constrained growth (-292 and -479 jobs respectively). MacDonnell Northern Territory and Mount Remarkable South Australia are examples of smaller sized regions where local conditions have contributed an additional 24 jobs in MacDonnell, yet in Mount Remarkable -4 jobs have not been realised because of local conditions. The results for all regions are at Appendix D.

From 2011 to 2016, Glenorchy grew by 79 advanced manufacturing jobs. Job growth was hampered by industry trends that meant -223 advanced manufacturing jobs were not realised. But national and local conditions meant there was an increase in overall job numbers rather than a decline (82 jobs can be attributed to national growth and 220 jobs can be attributed to local conditions). Alternatively, at Port Stephens local conditions had a negative effect where advanced manufacturing decreased by -764 jobs, with -292 of these jobs not being realised as a result of local conditions. Industry trends also had a negative effect.

For a number of the specialised regions, advanced manufacturing employment is reliant on primary industries in the area. Agriculture and mining are industries that feature in many regional economies, and many advanced manufacturing specialised regions are built around the strength of these industries. Some of the occupations that are repeatedly the highest employer in specialised regions are Agricultural Machinery and Equipment Manufacturing, Mining and Construction Manufacturing and Explosive Manufacturing. In regional Australia, Agricultural Machinery and Equipment Manufacturing

employs 1,237 people, Mining and Construction Machinery Manufacturing employs 2,347 people and Explosive Manufacturing employs 1,433 people. Large portions of these advanced manufacturing jobs can be attributed to the production of goods and/or services for the agricultural and mining industries.

This also means that in a number of regions, advanced manufacturing employment is tied to the fortunes of the agricultural and mining industries. Just under half of the regions where local conditions have constrained advanced manufacturing employment include Mining and Construction Machinery Manufacturing as their highest employer. This means that when the mining industry declined in 2011-2016, the advanced manufacturing jobs it supported declined too but as the mining sector recovers there are opportunities for advanced manufacturing to capture this growth.

POLICY IMPLICATIONS FOR ADVANCED MANUFACTURING

Advanced manufacturing is not a major employer in regional Australia (31,286 jobs which is almost 1 per cent of regional jobs) however it is significant in 34 regional economies (34 LGAs).

Support for regional employment, through advanced manufacturing growth, should be tightly targeted to these regions where advanced manufacturing really matters for employment. These regions are:

- New South Wales: Bland, Cessnock, Cowra, Federation, Maitland, Port Stephens, Wentworth, Wingecarribee;
- Northern Territory: MacDonnell;
- Queensland: Cloncurry, Gladstone, Ipswich, Lockyer Valley, Mackay, Western Downs;
- South Australia: Light, Mount Remarkable;
- Tasmania: Burnie, Glenorchy, Meander Valley, Waratah/Wynward;
- Victoria: Ararat, Ballarat, Central Goldfields, Greater Bendigo, Greater Geelong, Mount Alexander, Wodonga;
- Western Australia: Beverley, Cunderin, Harvey, Irwin, Perenjori and West Arthur.

There is often one or two companies responsible for the bulk of advanced manufacturing jobs. This is true for both the smaller and more isolated regions, and the regional cities, with bigger populations and more diverse economies.

Only a very small number of regions specialise in advanced manufacturing. Consequently, a regional Australia wide advanced manufacturing strategy would be of little benefit and have little benefit compared to interventions that target specific regions. Instead, the few regions that specialise in advanced manufacturing and the small number of major companies responsible for the bulk of advanced manufacturing jobs, could be the focus of targeted advanced manufacturing employment strategies.

Further analysis and/or local knowledge are needed to identify the local conditions that are driving or constraining advanced manufacturing job growth. An example which may constrain growth is inability to assure labour or specialists skills. There are opportunities for regional communities that can guarantee sufficient workforces to meet companies needs. Regions may be able to achieve this through encouraging migration settlement (see an example at Appendix B).

Migration settlement, in regional communities who want it, may help remove these barriers to business expansions or attraction of new businesses. Skilled labour shortages are a key constraint on growth and settlement assistance will help companies be confident that they have the workforce and skills they need to operate at full capacity.

At the regional level, advanced manufacturing employment increases and decreases may be tied to the fortunes of primary industries like agriculture and mining. When agriculture or mining are facing a downturn, advanced manufacturing jobs may be at risk and early transition initiatives may be needed.

CREATIVE INDUSTRIES

Creative industries comprise two groups of occupations: the first is cultural production, which involves creating type occupations such as musicians, photographers, dancers, artists, writers and the second is creative services which are more business oriented creative occupations such as graphic designers, architects and web developers (Appendix A includes the full list of included jobs).

Both cultural production and creative services are heavily skewed to metropolitan areas and regional Australia accounts for only 19 per cent of Australia's creative industries jobs. However the industry is growing nationally and in regional Australia. There were 95,660 creative industries jobs in regional Australia in 2016 which increased by 21 per cent from 2011 to 2016.

These jobs numbers are people who consider creative industries as their primary occupation and it is an underestimate because other creative professionals are involved in the industry as a secondary job or casual contract work that is not counted in the Census data. It also does not capture the value of unpaid creative activities that form a significant part of regional community life.

WHERE DO CREATIVE INDUSTRIES JOBS REALLY MATTER?

Over a third of regional LGAs had no primary employment in creative industries (35 per cent) and only four LGAs have a specialisation in the industry. These regions are Bryon New South Wales, Anangu Pitjantjatjara South Australia, Hobart Tasmania and Surf Coast Victoria (Figure 9). This highlights the bias of creative industries presence in metropolitan economies and the uniqueness of these four regions which are bucking the trend.



Figure 9: Location of key areas with a number of specialised creative industries regions, 2016

Byron, Hobart, Anangu Pitjantjatjara and Surf Coast were amongst the top specialised LGAs for creative industries in 2011 and 2006 as well, which means creative industries have been a significant part of local employment for more than ten years (2006-2016) and this is likely to persist.

Byron has a strong and diverse mix of creative industries occupations, with the full range of creative industries occupations being represented except for ICT Support and Test Engineers and Gallery, Library and Museum Technicians. The creative industries occupations employing the most people in Byron in 2016 were creative services roles: Graphic and Web Designers and Illustrators (122 jobs), Advertising, Public Relations and Sales Managers (115 jobs) and Advertising and Marketing Professionals (104 jobs). Cultural producers were also well represented but, owing to the nature of the occupations, provided fewer jobs. The highest cultural production jobs being in Journalism and Other Writers (41 jobs), Authors and Books and Script Editors (38 jobs), Visual Arts and Crafts Professionals (36 jobs) and Photographers (35 jobs).

Hobart's creative employment focused more strongly on computing based creative occupations such as Software and Applications Programmers (381 jobs) and ICT Support Technicians (362 jobs). The Surf Coast had a fair mix of creative occupations, excluding computing based creative occupations, and stronger representation from architecture based occupations and Fashion, Industrial and Jewellery Design (40 jobs). In Anangu Pitjantjatjara the creative occupations were exclusively Visual Arts and Crafts Professionals (35 jobs).

Three of these are operating in larger regional economies, where Byron and Surf Coast have strong economic ties to the nearby cities of Brisbane and Melbourne and Hobart is large itself and has benefits afforded to it because it is the state's capital city. This matches the RAI's earlier findings that found a positive relationship between city size and creative employment^{vi}.

Anangu Pitjantjatjara is completely different. The region is remote, has a small workforce (a total of 569 jobs) and is not reliant on the economies of large nearby places. The number of people working as creative producers in the region means they are a significant part of the local economy and are of particular importance because there are limited other industries for job creation: it is a thin market. There are other small, remote communities that are in a similar position, where their specialisation score is almost above average. These include the Northern Territory’s East Arnhem and MacDonnell (Alice Springs). Together, these three regions also have a high proportion of Indigenous artists, who are starting to tap into the growing demand, domestically and internationally for Indigenous Australian art. This means that creative industries are important for communities with limited other job prospects, and in communities tapping into the growing demand for Indigenous Australian art.

From a regional development perspective, creative industries play a more important role in communities than just the jobs they provide.

Creative industries play a role in the attraction and/or retention of regional populations and therefore may be vital for broader socioeconomic vibrancy of regional communities.

Table 6 lists the top 30 regions based on their concentration of creative industries jobs. A high number of these regions are high amenity, lifestyle driven places where people typically want to live.

Table 6: Regions with the highest Locational Quotient score for creative industries employment, 2016

Rank	Local Government Area	State	Total Jobs	Industry Jobs	Proportion of Industry Jobs	Location Quotient Score
1	Byron	NSW	12,267	942	7.7%	1.31 (specialised)
2	Hobart	TAS	47,372	3,030	6.4%	1.09 (specialised)
3	Anangu Pitjantjatjara	SA	569	35	6.2%	1.05 (specialised)
4	Surf Coast	VIC	8,201	503	6.1%	1.05 (specialised)
5	Gold Coast	QLD	224,777	11,867	5.3%	0.90
6	Noosa	QLD	19,192	956	5.0%	0.85
7	Adelaide Hills	SA	9,330	459	4.9%	0.84
8	Newcastle	NSW	92,167	4,343	4.7%	0.81
9	Sunshine Coast	QLD	105,623	4,934	4.7%	0.80
10	Hepburn	VIC	4,314	197	4.6%	0.78
11	Greater Geelong	VIC	89,797	4,095	4.6%	0.78
12	Kingborough	TAS	8,035	357	4.4%	0.76
13	Wollongong	NSW	75,024	3,249	4.3%	0.74
14	Darwin	NT	43,150	1,806	4.2%	0.72

Rank	Local Government Area	State	Total Jobs	Industry Jobs	Proportion of Industry Jobs	Location Quotient Score
15	Wingecarribee	NSW	17,088	692	4.0%	0.69
16	Macedon Ranges	VIC	11,931	479	4.0%	0.69
17	Bellingen	NSW	3,388	132	3.9%	0.67
18	Central Coast	NSW	99,082	3,831	3.9%	0.66
19	Ballarat	VIC	43,111	1,660	3.9%	0.66
20	Redland	QLD	38,646	1,486	3.8%	0.66
21	Wanneroo	WA	41,929	1,499	3.6%	0.61
22	Queanbeyan-Palerang	NSW	13,975	493	3.5%	0.60
23	Greater Bendigo	VIC	42,399	1,464	3.5%	0.59
24	Launceston	TAS	32,360	1,117	3.5%	0.59
25	Tweed	NSW	26,612	900	3.4%	0.58
26	Mount Alexander	VIC	6,514	220	3.4%	0.58
27	Augusta-Margaret River	WA	5,451	184	3.4%	0.58
28	Busselton	WA	12,840	432	3.4%	0.58
29	Cairns	QLD	63,992	2,104	3.3%	0.56
30	Albury	NSW	23,424	756	3.2%	0.55

Analysis based on data from the Australian Bureau of Statistics (2016) Census of Population and Housing.

Amongst the top 30, about half are larger places and half are smaller (populations under 5,000). Many of these regions are large and diverse themselves or are within reach of the services of a large nearby city. Most of these regions are in close proximity to the coast (less than an hour's drive). New South Wales accounts for almost a third of the regions (nine regions), followed by Victoria (seven regions), Queensland (five regions), Tasmania (four regions), Western Australia (three regions), South Australia (two regions) and finally the Northern Territory (one region).

When divided into sub-industries, there are a number of regional areas that are specialised in aspects of creative industries. The sub-industries are:

1. Advertising and Marketing;
2. Architecture, Design and Visual Arts;
3. Film, TV and Radio;
4. Music and Performing Arts;
5. Publishing; and
6. Software and Digital Content.

Byron is specialised in the creative industries as well as specialising in most of the creative sub-industries, which is unusual for regional Australia. This shows a diverse mix of creative occupations in a high concentration, which is important for local employment.

Advertising and Marketing is a particularly large employer for creative industries, as it includes a number of creative services roles which service the surrounding businesses of typically larger regional places. Architecture, Design and Visual Arts is a broader category and accordingly throws up a more diverse range of regional communities where employment in the sub-industry is important. This includes larger and more diverse places, small remote cultural producer communities and mining places such as Ashburton Western Australia which has a high proportion of Architectural, Building and Surveying Technicians (527 jobs) associated with the mining industry.

The Gold Coast is a real outlier for the sub-industry of Film, TV and Radio with 721 jobs in the sub-industry; this may be associated with the significant government and private investment supporting the film industry in the region. The sub-industry also stands out as quite important for a number of smaller Indigenous communities such as Central Desert Northern Territory, Broome Western Australia, Alice Springs Northern Territory and the larger community of Darwin Northern Territory.

In Music and Performing Arts, the Gold Coast again has a large number of jobs (0.2 per cent of employment or 429 jobs). However the sub-industry is more important for Byron (0.4 per cent or 43 jobs), Mareeba outside Cairns (0.3 per cent or 19 jobs) and Hobart (0.3 per cent or 122 jobs). A large number of small regions specialise in Publishing with the main occupations related to running and managing the local library, gallery and/or museum. This highlights the importance of these local institutions to employment in small places.

CREATIVE INDUSTRIES – OPPORTUNITIES AND CHALLENGES

A large number of regions with creative industries employment saw increasing numbers of jobs in the sector between 2011 and 2016. Some regions however out performed their peers, resulting from unique local conditions in their region (Figure 10).

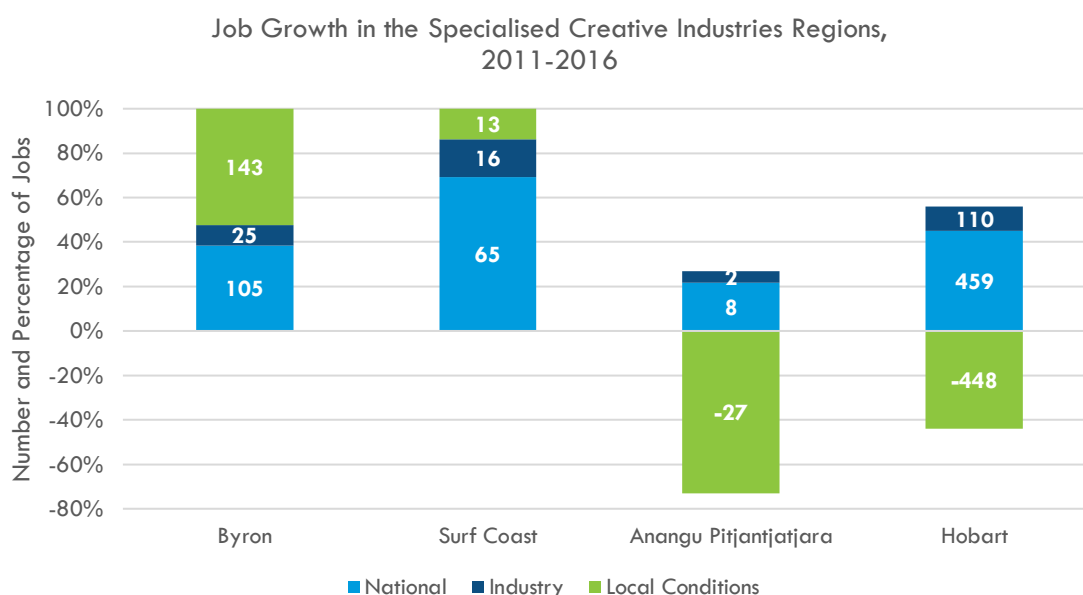


Figure 10: Job growth in the four regions which specialise in creative industries, split into the components that can be attributed to national employment growth, industry employment growth and local conditions, 2011-2016

For the specialised regions, the places where creative industries employment really matters, three increased the jobs in creative industries overall while Anangu Pitjantjatjara decreased. Local conditions contributed to the decrease in creative industries jobs in Anangu Pitjantjatjara by -27 jobs).

Over the same period, Byron increased by 274 creative jobs and a significant portion of this growth (143 jobs) can be attributed to local conditions. Surf Coast had a smaller proportion of jobs attributed to local conditions (13 jobs) but it still performed above national and industry employment trends (an increase of 93 creative industries jobs overall). Hobart was considerably constrained by local conditions over the period, despite seeing a modest increase in creative jobs (121 jobs) for a region of its size. This meant that Hobart was 448 jobs behind the number of creative industries jobs it should have added. This was the greatest decrease attributed to local conditions for any of the 429 regional LGAs.

POLICY IMPLICATIONS FOR CREATIVE INDUSTRIES

While creative industries remains strongly clustered in or around metropolitan areas, employment in creative industries has been growing in regional areas at a rate which is not insignificant (up 21 per cent or 16,852 jobs).

There are four regions which specialise in creative industries across regional Australia. These are Byron, Hobart, Surf Coast and Anangu Pitjantjatjara. This highlights the bias of creative industries' presence in metropolitan economies and the uniqueness of these four regions which are bucking the trend.

Beyond employment, creative industries may play a role for a greater number of regions as a way to attract and/or retain regional populations. Creative industries are linked to supporting the overall desirability and liveability of a place. Therefore some government programs aimed at strengthening creative employment could have the flow-on effect of helping smaller regions that are struggling with population retention.

Employment in creative industries is also particularly important in small regions with thin markets where there are limited other industries for employment. This includes Anangu Pitjantjatjara, East Arnhem and MacDonnell. Film, TV and Radio occupations serve similar importance in the communities of Central Desert, Broome, Alice Springs and Darwin. There is an opportunity to build on growing domestic and international demand for Indigenous art which could support economic growth in these regions.

Further analysis and local knowledge are needed to identify the exact local conditions that helped drive creative industries employment growth in Byron and Surf Coast and constrained growth in Hobart and Anangu Pitjantjatjara.

This research is based on the Australian Bureau of Statistics Census because there is a lack of nationally consistent data on secondary jobs and the gig economy for creative industries. Tracking these forms of employment are important because they are likely to play a greater role in future jobs.

CONCLUSION

Food processing, tourism, advanced manufacturing and creative industries are key for the economic future of regional Australia. These are industries that require a high level of human labour and are largely driven by the private rather than public sectors. However, these industries are not evenly distributed across regional Australia and growth and change in these industries will not impact all regions equally.

In examining food processing, tourism, advanced manufacturing and creative industries through a regional development lens, as opposed to an overall state level industry policy, the level of specialisation is crucial. Some regions can make a large contribution to an industry but may not be particularly specialised in that industry because of high employment in other industries.

Alternatively, some regions where a particular industry's contribution appears less significant to national and state goals, may actually be highly specialised in that industry and thus reliant on that industry's success for employment growth. These highly specialised areas may be a lower priority for national and state level industry policies but they should be an important priority for regional development strategies where the goal is to promote growth in all regions.

Investment in specialised regions should differ for four industries. The specialised regions have seen employment increasing above the national and industry average whereas other industries have seen employment not keeping pace with the averages. To address this, policy interventions need to either help catalyse employment growth in specialised regions that have been performing strongly or help specialised regions reduce or remove local barriers to employment growth. There are different policy interventions needed for different places depending on the industry mix and pace of employment growth.

The local conditions which are contributing to these trends will differ between regions. These could be identified through further analysis and/or through the communities themselves who have significant local knowledge about changes in their local workforce. Local conditions that contribute to job growth may include assured labour and skills, business expansions, government or community initiatives and natural or infrastructure assets. Identifying these local conditions is key in deciding how to build on local strengths which are driving job growth or reduce barriers which are constraining job growth.

This research helps policy makers and communities know where to focus their efforts for greater impact and value for resources. It helps guide investment to be directed in a more targeted and strategic way, to capture regional development benefits on the back of industry growth, in a way which suits the unique economy and workforce of the region.

POLICY IMPLICATIONS:

- 1. Target policy and investment to the regions where growth in the four industries really matters for job generation (i.e.: the specialised regions, not all regions).**
- 2. Tailor policy approaches based on the region's past employment growth where:**
 - i. the highest investment priority should be to catalyse new economic activities in regions where local conditions are driving growth. In these regions, government intervention may build on local strengths to generate business and employment opportunities, and**
 - ii. the highest investment priority should be removing or reducing barriers to growth in regions which are lagging behind state and industry trends. In these regions, government intervention may support these regions in realising their full employment potential.**
- 3. Assess workforce and skill availability in the specialised regions and act to ensure potential new jobs can be filled, for example through regional learning systems or regional migration strategies as outlined in the RAI's The Future of Jobs Report.**

APPENDIX A – INDUSTRY OCCUPATION CODES

FOOD PROCESSING ANSZIC CODES

ANZSIC Code	Occupation	ANZSIC Sub-Division
1111	Meat Processing	Food Product Manufacturing
1112	Poultry Processing	
1113	Cured Meat and Smallgoods Manufacturing	
1120	Seafood Processing	
1131	Milk and Cream Processing	
1132	Ice Cream Manufacturing	
1133	Cheese and Other Dairy Product Manufacturing	
1140	Fruit and Vegetable Processing	
1150	Oil and Fat Manufacturing	
1161	Grain Mill Product Manufacturing	
1162	Cereal, Pasta and Baking Mix Manufacturing	
1171	Bread Manufacturing (Factory based)	
1172	Cake and Pastry Manufacturing (Factory based)	
1173	Biscuit Manufacturing (Factory based)	
1174	Bakery Product Manufacturing (Non-factory based)	
1181	Sugar Manufacturing	
1182	Confectionery Manufacturing	
1191	Potato, Corn and Other Crisp Manufacturing	
1192	Prepared Animal and Bird Feed Manufacturing	
1199	Other Food Product Manufacturing (not elsewhere classified)	
1211	Soft Drink, Cordial and Syrup Manufacturing	Beverage and Tobacco Product Manufacturing
1212	Beer Manufacturing	
1213	Spirit Manufacturing	
1214	Wine and Other Alcoholic Beverage Manufacturing	

TOURISM ANSZIC CODES

ANZSIC Code	Industry	Proportion Attributed to Tourism (ratio)
A	Agriculture, Forestry and Fishing	0
B	Mining	0
C	Manufacturing	0
D	Electricity, Gas, Water and Waste Services	0
E	Construction	0
F	Wholesale Trade	0
G	Retail Trade	0.089
H	Accommodation and Food Services	0.454
I	Transport, Postal and Warehousing	0.137
J	Information Media and Telecommunications	0.013
K	Financial and Insurance Services	0
L	Rental, Hiring and Real Estate Services	0.02
M	Professional, Scientific and Technical Services	0
N	Administrative and Support Services	0.038
O	Public Administration and Safety	0
P	Education and Training	0.054
Q	Health Care and Social Assistance	0.005
R	Arts and Recreation Services	0.135
S	Other Services	0.011

ADVANCED MANUFACTURING ANZSIC CODES

ANZSIC Code	Occupation	ANZSIC Sub-Division
1811	Industrial Gas Manufacturing	Basic Chemical and Chemical Product Manufacturing
1812	Basic Organic Chemical Manufacturing	
1813	Basic Inorganic Chemical Manufacturing	
1821	Synthetic Resin and Synthetic Rubber Manufacturing	
1829	Other Basic Polymer Manufacturing	
1831	Fertiliser Manufacturing	
1832	Pesticide Manufacturing	
1841	Human Pharmaceutical and Medicinal Product Manufacturing	
1842	Veterinary Pharmaceutical and Medicinal Product Manufacturing	
1851	Cleaning Compound Manufacturing	
1852	Cosmetic and Toiletry Preparation Manufacturing	
1891	Photographic Chemical Product Manufacturing	
1892	Explosive Manufacturing	
1899	Other Basic Chemical Product Manufacturing n.e.c.	
2311	Motor Vehicle Manufacturing	Transport Equipment Manufacturing
2312	Motor Vehicle Body and Trailer Manufacturing	
2313	Automotive Electrical Component Manufacturing	
2319	Other Motor Vehicle Parts Manufacturing	
2391	Shipbuilding and Repair Services	
2392	Boatbuilding and Repair Services	
2393	Railway Rolling Stock Manufacturing and Repair Services	
2394	Aircraft Manufacturing and Repair Services	
2399	Other Transport Equipment Manufacturing n.e.c.	
2411	Photographic, Optical and Ophthalmic Equipment Manufacturing	Machinery and Equipment Manufacturing
2412	Medical and Surgical Equipment Manufacturing	
2419	Other Professional and Scientific Equipment Manufacturing	
2421	Computer and Electronic Office Equipment Manufacturing	
2422	Communication Equipment Manufacturing	
2429	Other Electronic Equipment Manufacturing	
2431	Electric Cable and Wire Manufacturing	
2432	Electric Lighting Equipment Manufacturing	
2439	Other Electrical Equipment Manufacturing	
2441	Whiteware Appliance Manufacturing	
2449	Other Domestic Appliance Manufacturing	
2451	Pump and Compressor Manufacturing	
2452	Fixed Space Heating, Cooling and Ventilation Equipment Manufacturing	
2461	Agricultural Machinery and Equipment Manufacturing	
2462	Mining and Construction Machinery Manufacturing	
2463	Machine Tool Parts and Parts Manufacturing	
2469	Other Specialised Machinery and Equipment Manufacturing	
2491	Lifting and Handling Equipment Manufacturing	
2499	Other Machinery and Equipment Manufacturing	

CREATIVE INDUSTRIES ANZSCO CODES

ANZSCO Code	Occupation	Creative Segment
1311	Advertising, Public Relations and Sales Managers	Advertising and Marketing
2124	Journalists and Other Writers	
2251	Advertising and Marketing Professionals	
2113	Photographers	Architecture, Design and Visual Arts
2114	Visual Arts and Crafts Professionals	
2321	Architects and Landscape Architects	
2323	Fashion, Industrial and Jewellery Designers	
2324	Graphic and Web Designers, and Illustrators	
2325	Interior Designers	
2326	Urban and Regional Planners	
3121	Architectural, Building and Surveying Technicians	
3994	Jewellers	
2121	Artistic Directors, and Media Producers and Presenters	
2123	Film, Television, Radio and Stage Directors	
3995	Performing Arts Technicians	
2111	Actors, Dancers and Other Entertainers	Music and Performing Arts
2112	Music Professionals	
2122	Authors, and Book and Script Editors	Publishing
2246	Librarians	
3993	Gallery, Library and Museum Technicians	
5997	Library Assistants	
2611	ICT Business and Systems Analysts	Software and Digital Content
2612	Multimedia Specialists and Web Developers	
2613	Software and Applications Programmers	
2632	ICT Support and Test Engineers	
3131	ICT Support Technicians	

APPENDIX B – EXAMPLE OF LOCAL MIGRATION INITIATIVES



MIGRATION COMMUNITY NARRATIVE:

NHILL



REGIONAL AUSTRALIA INSTITUTE

BACKGROUND

Nhill is a small country town half way between Melbourne and Adelaide. It has a population of around 2,200 people.

Located in the Wimmera Wheatbelt region of western Victoria, Nhill is the administrative headquarters of the Shire of Hindmarsh.

Agriculture is the main source of employment for residents here, and many have jobs in either farming or food processing – most notably fowl.



NHILL'S MIGRATION STORY

When John Millington was appointed General Manager of Luv-a-Duck poultry farm more than 30 years ago, this business was producing 5,000 ducks weekly. By the time John retired in 2013, production had increased to 100,000.

You can't talk about Nhill's migration story without mentioning Luv-a-Duck. It was the desire of this businesses to expand its operations that gave birth to the migration story here; a community-led migration program that has seen the resettlement of more than 200 Burmese Karen refugees. The Karen community now makes up 10 percent of Nhill's entire population.

John Millington and his wife Margaret were involved in Nhill's Karen resettlement program from day one.

Back in 2009, Nhill was facing a declining population and had a very low unemployment rate – around 2 percent. Essentially, it had very few spare workers.

At the same time, the town's largest commercial employer, Luv-a-Duck, was looking to expand. However, Luv-a-Duck didn't have the workforce it needed, and Nhill couldn't provide it. To fill this local employment need, Luv-a-Duck looked to the Karen people in Burma.

Working in collaboration with resettlement agency AMES Australia, the Millington's helped small groups of Karen refugees move from Melbourne to Nhill in 2010.

The positive experiences of these first-movers inspired others and, by the following year, there were more than 70 Karen refugees (including families and children) living in the community.

Through a staged recruitment and resettlement process over nearly a decade, Luv-a-Duck has come to employ more than 50 Karen in Nhill. But it hasn't just been the poultry producer that has welcomed new staff. Australia Wildflowers, based in Laharum, south of Horsham, also employs around 45 Karen.

A total of 17 additional businesses in town now have Karen workers, including the local school, hospital, aged care facility, mechanics, steel manufacturer, grain handling facility and grocery store.



QUESTION FROM NHILL

Regional and rural towns have the capacity to provide housing and employment for newcomers, whether they are born here or are migrants. How can the government help us promote these opportunities beyond the main capital cities?

LESSONS LEARNED

Between 2009 and 2014, more than 70 Full-Time Equivalent positions have been added to the Nhill region's economy. The settlement of the Karen refugees is arguably the largest contributor to this growth.

However, if you ask anyone living in Nhill, the contribution of Karen refugees goes well beyond job creation. They have re-energised the community.

We have become a multicultural town. We have become far more accepting of other nationalities. The Karen have revitalised our town, which was previously facing population decline.

— Annette Creek, Executive Officer, Nhill Learning Centre

The Nhill Learning Centre has been instrumental in the settlement of the Karen community in Nhill. It has established many programs, including a volunteer mentoring program and job-ready project, to help settle people into the community.

Before the resettlement program, Nhill Learning Centre had just one employee. Nowadays, it boasts a team of 12 staff who work in part-time roles. This increase in staff is solely due to demand created by new residents.

Nhill's new residents have also given rise to a Karen grocery store and a community garden. Another development has been Paw Po, a social enterprise for Karen women to weave traditional fabrics and sell them. While it has only been operating for just over 18 months, Paw Po has become a tourist attraction.

The broader impact of Nhill's new residents has been profound. In 2015, a report commissioned by AMES and undertaken by Deloitte Access Economics – *Small Towns, Big Returns* – found the economic impact of Nhill's increased labour supply, in terms of Gross Regional Product, to be around \$41.5 million.

While jobs have been identified as a necessary factor in the success of the Karen resettlement, *Small Towns, Big Returns* also identified several other critical aspects. These include strong leadership, a welcoming community, and the need for appropriate accommodation to be available for new arrivals.

"Sadly, when we started, we were naïve as to what the Karen were all about, what they had suffered under the military regime in Burma, and what they knew about their new country," John Millington said.

For instance, Mr Millington said that when speaking about Nhill being near the "border", one refugee asked if "that was near the Thai border?"

John Millington said the main message he would give to other towns thinking of embarking on their own settlement program is that it's not just about the worker when it comes to a successful outcome.

"It's about the wife and the kids. If they are happy with their new home, things will work," Mr Millington said.

To date, 18 families have purchased homes in the Nhill district. "We are continually amazed, but proud, of the manner in which our community has accepted and embraced the Karen and vice versa," Mr Millington said.

CHALLENGES AHEAD

Undoubtedly, clear and open communication between the local community and the Karen community has underpinned the success of the settlement program in Nhill. The willingness of employers to 'give refugees a go' has also helped enormously.

While the relationship between the Nhill community and local government has been excellent throughout the town's settlement journey, John Millington and Annette Creek both

said that Nhill did not receive the same degree of assistance from the state and federal government.

"In hindsight, we should have engaged more with them. Perhaps then we may have received additional support. This is something we will have to work on in the future," John Millington said.

"Our town has changed, and we continue to change – but that is progress. Nothing stays the same," Mr Millington said.

COMMUNITY CONTACT

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APPENDIX C – METHODS

Food processing, tourism, advanced manufacturing and creative industries were selected because they are largely driven by private, rather than public, sector activity and they are industries which provide significant employment. These industries also have a strong presence in regional Australian economies. Furthermore, agribusiness and tourism are predicted to grow based on Australia's competitive advantage and international demand^{vii}.

This study focuses on direct employment in food processing, tourism, advanced manufacturing and creative industries. The classification of occupations in these industries is based on existing definitions derived from the Office of the Chief Economist, the Australian Bureau of Statistics (ABS) using the Australian New Zealand Standard Industrial Classification Codes (ANZSIC codes)^{viii}. For the industries, 4 and 3-digit ANZSIC codes were used. Census data from 2016 was used primarily with matching data from 2006 and 2011 used to observe changes over time. In these cases, the ABS correlations were used to adjust for changes in geographic boundaries across years. Adjustments were made for ABS randomisation in the case of small counts, which the ABS use as a measure used to protect personal privacy.

From a regional development perspective, food processing is a more likely prospect for regional job growth compared to food production. In 2016, the number of processing jobs nationally surpassed the number of production jobs in the sector as production employment fell more sharply than processing employment. As a result, this work has focussed on processing as the most likely source of employment growth in regional Australia. Food processing includes the value add side of food and agribusiness such as occupations which involve converting a raw agricultural product.

The main geographies used throughout the Report are Local Government Areas as this is a geography of sufficient granularity to show differences across regional Australia, a range of data sources match the geography and it is a geography policy makers are familiar with from a decision making perspective. For the tourism industry, Tourism Research Australia's geography of Tourism Regions was used to calculate the visitor spend per capita.

The research uses Location Quotients to determine how specialised each LGA is in each industry. Location Quotients are a quantitative measure of the specialisation of a region's employment in a given industry, against the national average for employment in that industry (see formulas section). This works on the proportion of concentration of employment which therefore account for different sized populations and workforces across Australia.

Scores are generated to demonstrate the magnitude of the industries importance in the local economy. Regions with a high Location Quotient score (i.e.: a high specialisation score) in the four industries are more dependent on the success of these industries for economic outcomes. Alternatively, areas with a low specialisation score typically have greater diversity amongst their industries or have a different dominant industry, such as mining, construction or services. Regions which score over 1 are above the

national average and are specialised regions. Regions scoring less than 1 are not considered specialised regions. Natural breaks were used to determine the top specialised regions.

To look at each LGA's performance over the most recent Census period (2011 to 2016), a Shift Share Analysis approach was used (see formulas section). Such an approach looks at a region's employment change over time and allocates the change in the number of jobs to three aspects of the economy:

- National Effect is the share of regional employment growth attributed to growth in overall **employment nationally**.
- Industry Effect is the share of regional employment growth attributed to growth in the **industry** at the national level.
- Local Competitiveness Effect is the share of regional employment growth attributed to **local conditions** or the unique conditions and features of that place.

The role of local competitive effect is of particular interest here as it indicates where local features and conditions or driving areas growth rate relative to other regions. Local knowledge, further queries and analysis are needed to pin point the reasons for the regions over-performing and under-performing compared with national and industry trends, but this analysis is essential for guiding such inquiries.

Together this approach enables assessment of places with strong or weak growth specialisation, providing guidance to policy makers and community leaders about the type of investment or change that might be needed to support regional job growth on the back on industry growth.

FORMULAS

Location Quotients were calculated using:

$$Location\ Quotient = \frac{\left(\frac{Number\ of\ Industry\ Jobs\ in\ the\ Region}{Total\ Number\ of\ Jobs\ in\ the\ Region}\right)}{\left(\frac{Number\ of\ Industry\ Jobs\ in\ Australia}{Total\ Number\ of\ Jobs\ in\ Australia}\right)}$$

The Shift Share Analysis was calculated using:

$$National\ Effect = {}_i region^{t-1} * \left(\frac{AUST^t}{AUST^{t-1}}\right)$$

$$Industry\ Effect = \left({}_i region^{t-1} * \frac{{}_1 AUST^t}{{}_1 AUST^{t-1}}\right) - National\ Effect$$

$$Local\ Competitiveness\ Effect = {}_i region^{t-1} * \left(\frac{{}_i region^t}{{}_1 region^{t-1}} - \frac{{}_i AUST^t}{{}_1 AUST^{t-1}}\right)$$

Where:

${}_i region^{t-1}$ = number of regional jobs in an industry (*i*) at the beginning of the analysis period (*t* - 1)

${}_i region^t$ = number of regional jobs in an industry (*i*) at the end of the analysis period (*t*)

$AUST^{t-1}$ = total number of jobs in Australia at the beginning of the analysis period (*t* - 1)

$AUST^t$ = total number of jobs in Australia at the end of the analysis period (*t*)

${}_i AUST^{t-1}$ = number of jobs in Australia in industry (*i*) at the beginning of the analysis period (*t* - 1)

${}_i AUST^t$ = number of jobs in Australia in industry (*i*) at the end of the analysis period (*t*)

APPENDIX D – THE CONTRIBUTION OF LOCAL CONDITIONS TO JOB GROWTH IN ALL REGIONAL LOCAL GOVERNMENT AREAS, 2011 TO 2016

Key to interpret the results:

	Food Processing	Tourism	Advanced Manufacturing	Creative Industries
Most job growth from local conditions (First Quintile)	350 to 38 jobs	558 to -1 jobs	614 to 22 jobs	632 to 13 jobs
More job growth from local conditions (Second Quintile)	38 to 11 jobs	-1 to -11 jobs	22 to 7 jobs	13 to 4 jobs
Medium job growth from local conditions (Third Quintile)	11 to 2 jobs	-11 to -25 jobs	7 to -2 jobs	4 to -11 jobs
Less job growth from local conditions (Fourth Quintile)	2 to -19 jobs	-25 to -61 jobs	-2 to -18 jobs	-11 to -38 jobs
Least job growth from local conditions (Fifth Quintile)	-19 to -443 jobs	-61 to -587 jobs	-18 to -843 jobs	-38 to -448 jobs
No jobs in the industry in 2016	N/A	N/A	N/A	N/A

NEW SOUTH WALES

Local Government Area	FOOD PROCESSING		TOURISM		ADV.MANUFACTURING		CREATIVE INDUSTRIES	
	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions
Albury	No	136	Yes	-42	No	-18	No	-49
Armidale Regional	No	-11	Yes	-83	No	12	No	-22
Ballina	No	29	Yes	-190	No	44	No	-99
Balranald	No	6	Yes	-10	N/A	N/A	N/A	N/A
Bathurst Regional	Yes	-250	Yes	-82	No	-47	No	-64
Bega Valley	Yes	24	Yes	-162	No	-5	No	-10
Bellingen	Yes	37	Yes	-40	No	-1	No	-4
Berrigan	No	11	Yes	-42	No	9	No	7

Bland	No	-8	No	-34	Yes	28	N/A	N/A
Blayney	Yes	73	No	-3	N/A	N/A	N/A	N/A
Bogan	No	7	No	-13	N/A	N/A	N/A	N/A
Bourke	N/A	N/A	No	-4	N/A	N/A	N/A	N/A
Brewarrina	N/A	N/A	No	-7	N/A	N/A	N/A	N/A
Broken Hill	No	6	Yes	-84	No	26	No	-25
Byron	Yes	-141	Yes	-51	No	8	Yes	143
Cabonne	Yes	8	No	-8	No	-4	No	-47
Carrathool	Yes	9	No	2	N/A	N/A	N/A	N/A
Central Coast	Yes	-219	Yes	-317	No	-118	No	128
Central Darling	N/A	N/A	No	-11	N/A	N/A	N/A	N/A
Cessnock	Yes	89	Yes	-66	Yes	35	No	-58
Clarence Valley	No	-157	Yes	-171	No	8	No	18
Cobar	N/A	N/A	No	-29	N/A	N/A	N/A	N/A
Coffs Harbour	No	-47	Yes	-208	No	-37	No	-50
Coolamon	No	-10	No	-1	N/A	N/A	N/A	N/A
Coonamble	N/A	N/A	No	-21	N/A	N/A	N/A	N/A
Cowra	Yes	8	No	-25	Yes	33	No	-10
Dungog	No	14	Yes	-35	N/A	N/A	No	27
Edward River	Yes	40	No	-21	No	-4	No	3
Eurobodalla	No	37	Yes	-195	No	25	No	-5
Federation	Yes	-97	Yes	-87	Yes	29	No	-1
Forbes	No	-9	No	-28	No	3	No	17
Gilgandra	N/A	N/A	No	-14	N/A	N/A	N/A	N/A
Glen Innes Severn	No	7	Yes	-37	N/A	N/A	No	3
Goulburn Mulwaree	Yes	65	Yes	-68	No	42	No	6
Greater Hume Shire	No	-17	No	-26	No	5	No	-20
Griffith	Yes	251	No	-56	No	46	No	12
Gundagai	Yes	110	Yes	-59	No	-6	No	-13
Gunnedah	Yes	-8	Yes	-46	N/A	N/A	No	-18

Gwydir	No	2	No	-11	N/A	N/A	N/A	N/A
Hay	No	7	No	-29	N/A	N/A	N/A	N/A
Hilltops	Yes	71	No	-64	No	-2	No	41
Inverell	Yes	127	No	-54	No	16	No	-17
Junee	Yes	83	No	-7	N/A	N/A	No	7
Kempsey	Yes	53	Yes	-108	N/A	N/A	No	-56
Kiama	No	12	Yes	-43	N/A	N/A	No	8
Kyogle	No	16	No	-17	N/A	N/A	No	1
Lachlan	N/A	N/A	No	-35	No	8	No	-5
Lake Macquarie	Yes	-159	Yes	-334	No	-441	No	79
Leeton	Yes	70	No	-34	No	15	No	4
Lismore	Yes	66	No	-157	No	-35	No	-107
Lithgow	No	-35	Yes	-94	No	-15	No	14
Liverpool Plains	No	-43	No	-21	No	-14	No	6
Lockhart	N/A	N/A	No	-9	N/A	N/A	N/A	N/A
Maitland	No	-64	Yes	-64	Yes	-97	No	-5
Mid-Coast	Yes	-107	Yes	-238	No	-70	No	103
Mid-Western Regional	Yes	-40	No	-92	No	-12	No	8
Moree Plains	No	14	No	-62	No	18	No	-17
Murray River	Yes	33	Yes	-45	No	13	No	33
Murrumbidgee	Yes	13	No	-3	N/A	N/A	N/A	N/A
Muswellbrook	No	18	No	-102	No	-45	No	-3
Nambucca	No	-15	Yes	-58	No	-18	No	8
Narrabri	No	-17	No	-42	No	-8	No	36
Narrandera	Yes	15	No	-52	N/A	N/A	No	-1
Narromine	No	23	No	-14	No	10	No	6
Newcastle	No	87	Yes	-108	No	-843	No	-287
Oberon	N/A	N/A	No	-23	No	9	No	13
Orange	No	-18	No	-68	No	-268	No	2
Parkes	No	-11	Yes	-41	No	4	No	11

Port Macquarie-Hastings	No	34	Yes	-48	No	-12	No	-17
Port Stephens	No	15	Yes	-70	Yes	-292	No	32
Queanbeyan-Palerang	No	15	No	-23	No	-10	No	76
Richmond Valley	Yes	121	Yes	-31	No	-1	No	-13
Shellharbour	No	-7	Yes	7	No	8	No	3
Shoalhaven	Yes	74	Yes	-133	No	34	No	-35
Singleton	Yes	-42	No	-44	No	-84	No	-61
Snowy Monaro Regional	No	59	Yes	-100	N/A	N/A	No	20
Snowy Valleys	No	9	No	-57	No	6	No	26
Tamworth Regional	Yes	2	Yes	-156	No	-7	No	-8
Temora	No	-11	No	-7	N/A	N/A	No	3
Tenterfield	No	1	No	-22	N/A	N/A	No	6
Tweed	No	34	Yes	-61	No	19	No	1
Unincorporated NSW	N/A	N/A	Yes	-31	N/A	N/A	N/A	N/A
Upper Hunter Shire	Yes	55	No	-64	No	1	No	24
Upper Lachlan Shire	N/A	N/A	No	5	No	1	N/A	N/A
Uralla	No	6	No	-18	N/A	N/A	N/A	N/A
Wagga Wagga	Yes	266	No	-117	No	63	No	-51
Walcha	N/A	N/A	No	-10	No	7	N/A	N/A
Walgett	No	1	No	-23	N/A	N/A	N/A	N/A
Warren	N/A	N/A	No	-8	N/A	N/A	N/A	N/A
Warrumbungle Shire	No	6	No	-54	N/A	N/A	No	-4
Weddin	No	2	No	-6	No	-1	N/A	N/A
Wentworth	Yes	-22	No	-34	Yes	48	N/A	N/A
Western Plains Regional	Yes	125	Yes	-102	No	23	No	42
Wingecarribee	No	-61	Yes	-49	Yes	-113	No	7
Wollongong	No	7	Yes	-268	No	-221	No	-211
Yass Valley	Yes	-6	Yes	-11	No	3	No	-9

NORTHERN TERRITORY

Local Government Area	FOOD PROCESSING		TOURISM		ADV.MANUFACTURING		CREATIVE INDUSTRIES	
	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions
Alice Springs	No	-21	Yes	-102	No	5	No	-77
Barkly	N/A	N/A	No	-13	N/A	N/A	No	-21
Belyuen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Central Desert	N/A	N/A	No	-4	N/A	N/A	No	10
Coomalie	N/A	N/A	Yes	0	N/A	N/A	No	15
Darwin	No	6	Yes	57	No	44	No	-175
East Arnhem	N/A	N/A	No	-8	N/A	N/A	No	9
Katherine	N/A	N/A	No	-88	No	15	No	-9
Litchfield	No	36	No	140	No	112	No	340
MacDonnell	N/A	N/A	No	-24	Yes	24	No	-39
Palmerston	No	5	Yes	67	No	-18	No	41
Roper Gulf	N/A	N/A	No	2	N/A	N/A	No	10
Tiwi Islands	N/A	N/A	No	-17	N/A	N/A	N/A	N/A
Unincorporated NT	No	23	Yes	47	No	25	No	0
Victoria Daly	N/A	N/A	No	10	N/A	N/A	N/A	N/A
Wagait	N/A	N/A	Yes	-2	N/A	N/A	N/A	N/A
West Arnhem	N/A	N/A	Yes	-70	N/A	N/A	No	-55
West Daly	N/A	N/A	No	-10	N/A	N/A	No	-7

QUEENSLAND

Local Government Area	FOOD PROCESSING		TOURISM		ADV.MANUFACTURING		CREATIVE INDUSTRIES	
	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions
Aurukun	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Balonne	N/A	N/A	No	-23	N/A	N/A	N/A	N/A
Banana	Yes	-16	No	-83	No	-18	No	-18
Barcardine	N/A	N/A	No	-20	N/A	N/A	No	-5
Barcoo	N/A	N/A	No	0	N/A	N/A	N/A	N/A
Blackall-Tambo	No	-6	No	-16	N/A	N/A	N/A	N/A
Boulia	N/A	N/A	No	-5	N/A	N/A	N/A	N/A
Bulloo	N/A	N/A	Yes	3	N/A	N/A	N/A	N/A
Bundaberg	Yes	-141	Yes	-106	No	-63	No	-13
Burdekin	Yes	-130	No	-53	No	-11	No	-30
Burke	N/A	N/A	Yes	-16	N/A	N/A	N/A	N/A
Cairns	No	-99	Yes	-587	No	268	No	-189
Carpentaria	N/A	N/A	Yes	-22	N/A	N/A	N/A	N/A
Cassowary Coast	Yes	25	No	-123	No	21	No	-39
Central Highlands	No	9	No	-192	No	-10	No	-65
Charters Towers	No	-14	No	-62	N/A	N/A	No	-5
Cherbourg	N/A	N/A	No	0	N/A	N/A	N/A	N/A
Cloncurry	No	8	No	-18	Yes	50	No	10
Cook	No	-1	No	-18	N/A	N/A	No	26
Croydon	N/A	N/A	No	-2	N/A	N/A	N/A	N/A
Diamantina	N/A	N/A	Yes	-3	N/A	N/A	N/A	N/A
Doomadgee	N/A	N/A	No	-2	N/A	N/A	N/A	N/A
Douglas	Yes	82	Yes	413	No	-34	No	-60
Etheridge	N/A	N/A	No	-14	N/A	N/A	N/A	N/A
Flinders	N/A	N/A	No	-17	N/A	N/A	N/A	N/A

Fraser Coast	No	4	Yes	-207	No	-289	No	-143
Gladstone	No	3	Yes	17	Yes	39	No	-176
Gold Coast	No	205	Yes	546	No	614	No	632
Goondiwindi	No	-17	No	-50	No	17	No	-16
Gympie	Yes	-42	No	-145	No	-38	No	20
Hinchinbrook	Yes	-84	No	-60	No	-3	No	-14
Hope Vale	N/A	N/A	No	1	N/A	N/A	N/A	N/A
Ipswich	Yes	-96	No	215	Yes	229	No	112
Isaac	No	16	No	-209	No	61	No	-99
Kowanyama	N/A	N/A	No	-4	N/A	N/A	N/A	N/A
Livingstone	Yes	33	Yes	-288	No	-106	No	-174
Lockhart River	N/A	N/A	No	3	N/A	N/A	N/A	N/A
Lockyer Valley	Yes	34	No	-81	Yes	7	No	-37
Longreach	No	5	No	-38	No	3	No	-18
Mackay	Yes	102	Yes	-409	Yes	-479	No	-259
Mapoon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Maranoa	No	-10	No	-57	No	-1	No	-5
Mareeba	Yes	14	No	-64	No	18	No	-47
McKinlay	N/A	N/A	No	-12	No	6	N/A	N/A
Mornington	N/A	N/A	No	1	N/A	N/A	N/A	N/A
Mount Isa	No	4	No	-102	No	-7	No	-28
Murweh	Yes	-26	No	-21	N/A	N/A	N/A	N/A
Napranum	N/A	N/A	No	4	N/A	N/A	N/A	N/A
Noosa	No	-53	Yes	413	No	-88	No	88
North Burnett	No	14	No	-43	N/A	N/A	No	-13
Northern Peninsula Area	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Palm Island	No	6	No	-3	N/A	N/A	N/A	N/A
Paroo	N/A	N/A	No	1	N/A	N/A	No	7
Pormpuraaw	N/A	N/A	No	-5	N/A	N/A	N/A	N/A
Quilpie	N/A	N/A	No	-9	N/A	N/A	N/A	N/A

Redland	Yes	-39	Yes	-181	No	-62	No	-88
Richmond	No	8	Yes	22	N/A	N/A	No	13
Rockhampton	Yes	-9	Yes	51	No	25	No	-10
Scenic Rim	Yes	86	Yes	-52	No	-36	No	44
Somerset	Yes	184	No	-49	N/A	N/A	No	14
South Burnett	Yes	23	No	-85	No	-16	No	2
Southern Downs	Yes	47	Yes	-139	No	-10	No	-1
Sunshine Coast	No	123	Yes	-417	No	118	No	358
Tablelands	Yes	-26	No	-48	N/A	N/A	No	-67
Toowoomba	Yes	-314	No	-183	No	-80	No	-10
Torres	N/A	N/A	No	-20	N/A	N/A	No	6
Torres Strait Island	N/A	N/A	No	-18	N/A	N/A	No	-57
Townsville	No	49	Yes	134	No	-105	No	-276
Weipa	N/A	N/A	Yes	7	N/A	N/A	No	10
Western Downs	No	-16	No	-86	Yes	54	No	24
Whitsunday	Yes	-77	Yes	-83	No	26	No	-39
Winton	N/A	N/A	Yes	-8	N/A	N/A	N/A	N/A
Woorabinda	N/A	N/A	No	3	N/A	N/A	N/A	N/A
Wujal Wujal	N/A	N/A	No	0	N/A	N/A	N/A	N/A
Yarrabah	N/A	N/A	No	1	N/A	N/A	N/A	N/A

SOUTH AUSTRALIA

Local Government Area	FOOD PROCESSING		TOURISM		ADV.MANUFACTURING		CREATIVE INDUSTRIES	
	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions
Adelaide Hills	Yes	102	Yes	-33	No	-4	No	25
Alexandrina	Yes	26	Yes	-70	No	-99	No	-29
Anangu Pitjantjatjara	N/A	N/A	No	-6	N/A	N/A	Yes	-27
Barossa	Yes	-97	Yes	-36	No	-21	No	-19
Barunga West	N/A	N/A	No	-16	N/A	N/A	N/A	N/A
Berri and Barmera	Yes	61	No	-44	No	6	No	4
Ceduna	N/A	N/A	Yes	-34	N/A	N/A	No	6
Clare and Gilbert Valleys	Yes	-17	Yes	-41	N/A	N/A	No	19
Cleve	N/A	N/A	No	-14	N/A	N/A	N/A	N/A
Coober Pedy	N/A	N/A	Yes	-13	N/A	N/A	N/A	N/A
Copper Coast	No	-14	Yes	-33	No	2	No	18
Elliston	N/A	N/A	No	-2	N/A	N/A	N/A	N/A
Flinders Ran	N/A	N/A	Yes	-12	N/A	N/A	N/A	N/A
Franklin Harbour	N/A	N/A	Yes	-2	N/A	N/A	N/A	N/A
Gawler	No	-14	Yes	-13	No	-2	No	6
Goyder	Yes	15	No	-10	No	7	N/A	N/A
Grant	Yes	25	No	-1	N/A	N/A	N/A	N/A
Kangaroo Island	Yes	18	Yes	-20	N/A	N/A	No	-24
Karoonda East Murray	N/A	N/A	No	0	N/A	N/A	N/A	N/A
Kimba	N/A	N/A	No	-10	N/A	N/A	N/A	N/A
Kingston	Yes	13	No	-10	N/A	N/A	N/A	N/A
Light	Yes	40	No	25	Yes	2	No	36
Lower Eyre Peninsula	N/A	N/A	No	-3	N/A	N/A	N/A	N/A
Loxton Waikerie	Yes	8	No	-41	N/A	N/A	No	-26
Mallala	Yes	29	No	-6	No	6	No	9

Maralinga Tjarutja	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mid Murray	Yes	-30	Yes	-13	No	-3	No	18
Mount Gambier	No	-17	Yes	-153	No	10	No	-80
Mount Remarkable	N/A	N/A	No	-17	Yes	-4	N/A	N/A
Murray Bridge	Yes	-64	No	-22	No	23	No	-56
Naracoorte and Lucindale	Yes	15	No	-24	N/A	N/A	No	1
Northern Areas	Yes	-19	No	-15	N/A	N/A	No	6
Orroroo/Carrieton	Yes	13	No	-6	N/A	N/A	N/A	N/A
Peterborough	Yes	3	Yes	-4	N/A	N/A	N/A	N/A
Port Augusta	No	6	Yes	-50	No	-59	No	-28
Port Lincoln	Yes	11	Yes	-50	No	-7	No	-16
Port Pirie City and Dists	No	-6	No	-54	No	-46	No	1
Renmark Paringa	Yes	69	Yes	3	No	-1	No	3
Robe	Yes	-13	Yes	-10	N/A	N/A	N/A	N/A
Roxby Downs	N/A	N/A	No	-34	No	8	No	-10
Southern Mallee	No	2	No	-13	N/A	N/A	No	7
Streaky Bay	No	12	No	-8	No	6	N/A	N/A
Tatiara	Yes	41	No	-29	N/A	N/A	No	-8
The Coorong	No	10	No	-23	N/A	N/A	No	7
Tumby Bay	No	5	No	-10	N/A	N/A	N/A	N/A
Unincorporated SA	No	21	No	-162	No	-17	No	-50
Victor Harb	No	-2	Yes	-28	N/A	N/A	No	-25
Wakefield	Yes	139	No	-24	N/A	N/A	No	0
Wattle Range	Yes	-107	No	-68	No	17	No	12
Whyalla	No	-13	Yes	-61	No	14	No	-38
Wudinna	N/A	N/A	No	-7	N/A	N/A	N/A	N/A
Yankalilla	Yes	-28	Yes	-22	N/A	N/A	No	10
Yorke Peninsula	Yes	-19	No	-43	No	0	No	-10

TASMANIA

Local Government Area	FOOD PROCESSING		TOURISM		ADV.MANUFACTURING		CREATIVE INDUSTRIES	
	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions
Break O^Day	Yes	4	Yes	-19	N/A	N/A	No	21
Brighton	No	-18	Yes	23	N/A	N/A	No	-4
Burnie	Yes	48	Yes	-26	Yes	-263	No	-72
Central Coast	Yes	-59	Yes	-14	No	-28	No	20
Central Highlands	N/A	N/A	Yes	-3	N/A	N/A	N/A	N/A
Circular Head	Yes	67	No	-30	No	2	No	8
Clarence	Yes	25	Yes	-49	No	4	No	-21
Derwent Valley	No	1	No	0	N/A	N/A	No	25
Devonport	Yes	77	Yes	-138	No	16	No	-115
Dorset	No	19	Yes	-30	N/A	N/A	N/A	N/A
Flinders	Yes	7	No	-2	N/A	N/A	N/A	N/A
George Town	Yes	11	No	-39	No	9	No	6
Glamorgan/Spring Bay	Yes	32	Yes	-35	No	2	No	-4
Glenorchy	Yes	-121	No	-134	Yes	220	No	-86
Hobart	No	-8	Yes	-7	No	13	Yes	-448
Huon Valley	No	-2	No	-24	No	14	No	-24
Kentish	No	7	Yes	-20	No	0	No	15
King Island	Yes	-26	No	0	N/A	N/A	N/A	N/A
Kingborough	Yes	14	Yes	-11	No	-24	No	-24
Latrobe	Yes	42	No	-8	No	-4	No	-16
Launceston	No	7	Yes	-166	No	-110	No	-203
Meander Valley	No	-50	Yes	-51	Yes	53	No	14
Northern Midlands	Yes	145	No	-27	No	-11	No	-8
Sorell	Yes	8	Yes	-11	N/A	N/A	No	6
Southern Midlands	Yes	9	No	-10	N/A	N/A	No	13

Tasman	No	-6	Yes	-5	N/A	N/A	No	7
Waratah/Wynyard	Yes	108	No	-19	Yes	16	No	6
West Coast	N/A	N/A	Yes	-71	N/A	N/A	No	7
West Tamar	Yes	18	Yes	-74	N/A	N/A	No	-31

VICTORIA

Local Government Area	FOOD PROCESSING		TOURISM		ADV.MANUFACTURING		CREATIVE INDUSTRIES	
	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions
Alpine	Yes	48	Yes	-75	N/A	N/A	No	6
Ararat	Yes	-16	No	-34	Yes	29	No	-28
Ballarat	Yes	-247	Yes	79	Yes	37	No	-144
Bass Coast	Yes	17	Yes	-153	No	-53	No	-95
Baw Baw	Yes	-9	Yes	-25	No	-1	No	-18
Benalla	Yes	30	No	-59	No	-6	No	-7
Buloke	Yes	-20	No	-10	N/A	N/A	No	-3
Campaspe	Yes	-101	No	-32	No	15	No	-14
Central Goldfields	Yes	74	Yes	-9	Yes	12	No	9
Colac-Otway	Yes	228	Yes	-50	No	6	No	8
Corangamite	Yes	-35	No	-44	No	-1	No	4
East Gippsland	Yes	-54	Yes	-140	No	20	No	-85
Gannawarra	Yes	-24	No	-38	No	-13	No	2
Glenelg	No	-11	No	-81	No	-8	No	37
Golden Plains	Yes	58	No	-20	N/A	N/A	No	-9
Greater Bendigo	Yes	213	Yes	19	Yes	132	No	-107
Greater Geelong	No	350	Yes	260	Yes	-232	No	488
Greater Shepparton	Yes	-443	No	-18	No	-30	No	-22
Hepburn	Yes	30	Yes	-66	N/A	N/A	No	13
Hindmarsh	Yes	30	No	-22	No	9	N/A	N/A

Horsham	No	-37	Yes	-70	No	-14	No	-19
Indigo	Yes	-146	Yes	-20	N/A	N/A	No	-23
Latrobe	No	-45	No	0	No	-25	No	3
Loddon	Yes	36	No	-11	N/A	N/A	No	6
Macedon Ranges	Yes	126	Yes	5	No	52	No	11
Mansfield	No	-13	Yes	-81	No	2	No	9
Mildura	Yes	-34	Yes	-107	No	22	No	-81
Mitchell	Yes	22	Yes	1	N/A	N/A	No	-123
Moira	Yes	-16	No	-60	No	2	No	-12
Moorabool	No	56	Yes	-1	No	-11	No	64
Mount Alexander	Yes	16	No	-23	Yes	-1	No	-1
Moyne	Yes	-117	No	-32	No	-31	No	7
Murrindindi	No	-28	Yes	-40	No	5	No	-28
Northern Grampians	Yes	118	Yes	-72	No	-7	No	-18
Pyrenees	Yes	-16	No	-7	N/A	N/A	No	28
Queenscliffe	N/A	N/A	Yes	-40	No	13	No	13
South Gippsland	Yes	-159	No	-116	N/A	N/A	No	-24
Southern Grampians	No	9	No	-84	No	-4	No	-20
Strathbogie	Yes	-13	Yes	-6	N/A	N/A	No	4
Surf Coast	No	48	Yes	32	No	-13	Yes	13
Swan Hill	Yes	13	No	-14	No	12	No	-15
Towong	Yes	7	No	-21	N/A	N/A	No	6
Unincorporated Vic	N/A	N/A	Yes	-2	N/A	N/A	No	2
Wangaratta	Yes	9	Yes	-86	No	-6	No	-14
Warrnambool	Yes	245	Yes	-29	No	-26	No	-49
Wellington	Yes	7	No	-35	No	60	No	-12
West Wimmera	N/A	N/A	No	-17	N/A	N/A	No	6
Wodonga	Yes	-76	No	71	Yes	-152	No	-77
Yarriambiack	N/A	N/A	No	-21	No	-12	No	0

WESTERN AUSTRALIA

Local Government Area	FOOD PROCESSING		TOURISM		ADV.MANUFACTURING		CREATIVE INDUSTRIES	
	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions	Specialised (Yes/No)	Jobs from Local Conditions
Albany	No	51	Yes	-8	No	7	No	-20
Ashburton	N/A	N/A	No	111	No	162	No	400
Augusta-Margaret River	Yes	15	Yes	4	N/A	N/A	No	25
Beverley	N/A	N/A	No	-4	Yes	0	N/A	N/A
Boddington	N/A	N/A	No	-27	N/A	N/A	No	-25
Boyup Brook	N/A	N/A	No	-5	N/A	N/A	N/A	N/A
Bridgetown-Greenbushes	No	10	No	-21	N/A	N/A	No	0
Brookton	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Broome	No	8	Yes	-57	No	11	No	-30
Broomehill-Tambellup	N/A	N/A	No	-3	N/A	N/A	N/A	N/A
Bruce Rock	N/A	N/A	No	-4	N/A	N/A	N/A	N/A
Bunbury	Yes	220	No	-153	No	-75	No	-73
Busselton	Yes	-2	Yes	47	No	9	No	78
Capel	Yes	80	No	78	N/A	N/A	No	41
Carnamah	N/A	N/A	No	-4	N/A	N/A	N/A	N/A
Carnarvon	No	-29	Yes	-14	N/A	N/A	No	29
Chapman Valley	N/A	N/A	No	2	N/A	N/A	N/A	N/A
Chittering	Yes	-15	No	-4	N/A	N/A	No	14
Collie	N/A	N/A	No	-59	N/A	N/A	No	-168
Coolgardie	N/A	N/A	No	-19	No	4	N/A	N/A
Coorow	N/A	N/A	No	-2	N/A	N/A	N/A	N/A
Corrigin	N/A	N/A	No	-3	N/A	N/A	N/A	N/A
Cranbrook	Yes	0	No	1	No	-1	N/A	N/A
Cuballing	N/A	N/A	No	0	N/A	N/A	N/A	N/A
Cue	N/A	N/A	No	-11	N/A	N/A	N/A	N/A

Cunderdin	N/A	N/A	No	-5	Yes	6	N/A	N/A
Dalwallinu	N/A	N/A	No	-3	No	1	No	9
Dandaragan	No	2	No	-9	N/A	N/A	N/A	N/A
Dardanup	No	4	Yes	99	No	25	No	17
Denmark	Yes	14	Yes	-3	N/A	N/A	No	11
Derby-West Kimberley	N/A	N/A	No	-28	N/A	N/A	No	-43
Donnybrook-Balingup	No	-3	No	-7	No	8	No	-1
Dowerin	N/A	N/A	No	-4	N/A	N/A	N/A	N/A
Dumbleyung	N/A	N/A	No	4	N/A	N/A	N/A	N/A
Dundas	N/A	N/A	Yes	-20	N/A	N/A	No	7
East Pilbara	N/A	N/A	No	-120	No	-23	No	-19
Esperance	No	2	Yes	-62	No	20	No	4
Exmouth	Yes	4	Yes	-2	N/A	N/A	No	18
Gingin	Yes	-18	No	-18	N/A	N/A	N/A	N/A
Gnowangerup	N/A	N/A	No	-9	N/A	N/A	No	5
Goomalling	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Greater Geraldton	No	19	Yes	-51	No	42	No	-56
Halls Creek	N/A	N/A	No	-25	N/A	N/A	No	-22
Harvey	Yes	167	No	38	Yes	168	No	-38
Irwin	No	8	Yes	-15	Yes	21	No	7
Jerramungup	No	7	No	-2	N/A	N/A	No	6
Kalgoorlie/Boulder	No	2	No	-86	No	-17	No	-52
Karratha	No	4	No	-160	No	-42	No	-276
Katanning	Yes	-66	No	-16	N/A	N/A	N/A	N/A
Kellerberrin	N/A	N/A	No	0	N/A	N/A	N/A	N/A
Kent	N/A	N/A	No	5	N/A	N/A	N/A	N/A
Kojonup	N/A	N/A	No	-7	N/A	N/A	N/A	N/A
Kondinin	N/A	N/A	No	-13	N/A	N/A	N/A	N/A
Koorda	N/A	N/A	No	1	N/A	N/A	N/A	N/A
Kulin	N/A	N/A	No	0	N/A	N/A	N/A	N/A

Lake Grace	N/A	N/A	No	-2	N/A	N/A	N/A	N/A
Laverton	N/A	N/A	No	-14	No	22	No	7
Leonora	N/A	N/A	No	-67	No	20	N/A	N/A
Mandurah	No	27	Yes	41	No	-17	No	-1
Manjimup	Yes	-18	Yes	-50	No	2	No	-25
Meekatharra	N/A	N/A	No	-22	No	7	N/A	N/A
Menzies	N/A	N/A	No	4	N/A	N/A	N/A	N/A
Merredin	N/A	N/A	No	-14	No	-11	N/A	N/A
Mingenew	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Moora	N/A	N/A	No	-11	No	10	N/A	N/A
Morawa	N/A	N/A	No	-15	N/A	N/A	N/A	N/A
Mount Magnet	N/A	N/A	No	-12	N/A	N/A	N/A	N/A
Mount Marshall	N/A	N/A	No	5	N/A	N/A	N/A	N/A
Mukinbudin	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Murchison	N/A	N/A	Yes	3	N/A	N/A	N/A	N/A
Murray	No	-10	No	-32	No	-4	No	-19
Nannup	Yes	11	Yes	0	N/A	N/A	N/A	N/A
Narembeen	N/A	N/A	No	-3	N/A	N/A	N/A	N/A
Narrogin	Yes	29	No	-16	N/A	N/A	No	-7
Ngaanyatjarraku	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Northam	No	-10	No	-62	No	14	No	1
Northampton	N/A	N/A	Yes	-14	No	6	N/A	N/A
Nungarin	N/A	N/A	No	3	N/A	N/A	N/A	N/A
Perenjori	N/A	N/A	No	-13	Yes	30	N/A	N/A
Pingelly	N/A	N/A	No	-5	N/A	N/A	N/A	N/A
Plantagenet	Yes	4	No	-21	N/A	N/A	No	13
Port Hedland	N/A	N/A	No	-41	No	44	No	-114
Quairading	N/A	N/A	No	-3	N/A	N/A	N/A	N/A
Ravensthorpe	N/A	N/A	No	-16	No	12	N/A	N/A
Sandstone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Serpentine-Jarrahdale	No	18	No	37	N/A	N/A	No	19
Shark Bay	N/A	N/A	Yes	-10	N/A	N/A	N/A	N/A
Tammin	Yes	8	No	0	N/A	N/A	N/A	N/A
Three Springs	N/A	N/A	No	-6	N/A	N/A	N/A	N/A
Toodyay	No	8	Yes	-11	N/A	N/A	N/A	N/A
Trayning	N/A	N/A	No	1	N/A	N/A	N/A	N/A
Upper Gascoyne	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Victoria Plains	N/A	N/A	No	-9	N/A	N/A	N/A	N/A
Wagin	Yes	-3	No	-1	N/A	N/A	N/A	N/A
Wandering	N/A	N/A	No	2	N/A	N/A	N/A	N/A
Wanneroo	No	49	No	558	No	87	No	299
Waroona	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
West Arthur	N/A	N/A	No	3	Yes	4	N/A	N/A
Westonia	N/A	N/A	No	-1	N/A	N/A	N/A	N/A
Wickepin	N/A	N/A	No	7	N/A	N/A	N/A	N/A
Williams	Yes	2	No	-6	N/A	N/A	N/A	N/A
Wiluna	N/A	N/A	No	-3	N/A	N/A	N/A	N/A
Wongan-Ballidu	N/A	N/A	No	-2	N/A	N/A	N/A	N/A
Woodanilling	Yes	30	No	1	N/A	N/A	N/A	N/A
Wyalkatchem	N/A	N/A	No	3	N/A	N/A	N/A	N/A
Wyndham-East Kimberley	No	6	Yes	-39	N/A	N/A	No	-66
Yalgoo	N/A	N/A	No	-3	N/A	N/A	N/A	N/A
Yilgarn	N/A	N/A	No	-22	N/A	N/A	N/A	N/A
York	N/A	N/A	Yes	-9	N/A	N/A	No	7

NOTES AND REFERENCES

- ⁱ OECD (2013) Innovation-driven growth in regions: the role of smart specialisation
- ⁱⁱ Deloitte (2014) Positioning for prosperity: Catching the next wave, Ch. 3, in Building the Lucky Country: Business imperatives for a prosperous Australia
- ⁱⁱⁱ Tourism Research Australia (2018) The tourism industry: A 2017-18 overview
- ^{iv} Tourism Research Australia (2017) Tourism Forecasts
- ^v Deloitte (2014) Positioning for prosperity: Catching the next wave, Ch. 3, in Building the Lucky Country: Business imperatives for a prosperous Australia
- ^{vi} Pearson, L. (2017) How can our cities match Europe's for finding value in their creative vibe?, *The Conversation*, Regional Australia Institute, Canberra.
- ^{vii} Deloitte (2014) Positioning for prosperity: Catching the next wave, Ch. 3, in Building the Lucky Country: Business imperatives for a prosperous Australia.
- ^{viii} Food processing uses the Office of the Chief Economist definition and 4 digit ANZSIC Codes, 'tourism' uses the Australian Bureau of Statistics' Tourism Satellite Account, 1 digit ANZSIC Codes and ABS ratios, 'advanced manufacturing' uses the Department of Industry and Science definition and 4 digit ANSZIC Codes and 'creative industries' uses Queensland University of Technology definitions and 4 digit ANZSCO Codes.