

Thinking, Linking Leveraging and Maximising

RDA/PIRSA Project 2014/15 Final Report



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Executive Summary

The SA ‘Co-innovation Cluster Program, focused on premium food and wine from a clean environment, is a regional development initiative to support regional agriculture and food and wine businesses to become more collaborative, productive and globally competitive – thereby boosting economic growth, population and jobs in regional South Australia.

A cluster encompasses an array of interconnected companies, industries and associated institutions, linked by commonalities and complementarities and with the whole being more than the sum of the parts (see Appendix D).

This report seeks to identify and analyse the potential for industry or market based clusters in the Riverland, taking a whole of region perspective. It proposes that linking the food and beverage sector with other key sectors, including tourism, education, health, sports and recreation, environmental conservation and business services, may leverage and maximise the benefits of the predicted business growth in that sector and, indeed, for the whole region. More than 60% of the 36 businesses interviewed during a mapping project (Oct-Dec 2014) of the Riverland’s food and beverage supply chain are predicting between 10 – 200% growth over the next 3 years.

Findings and Recommendations

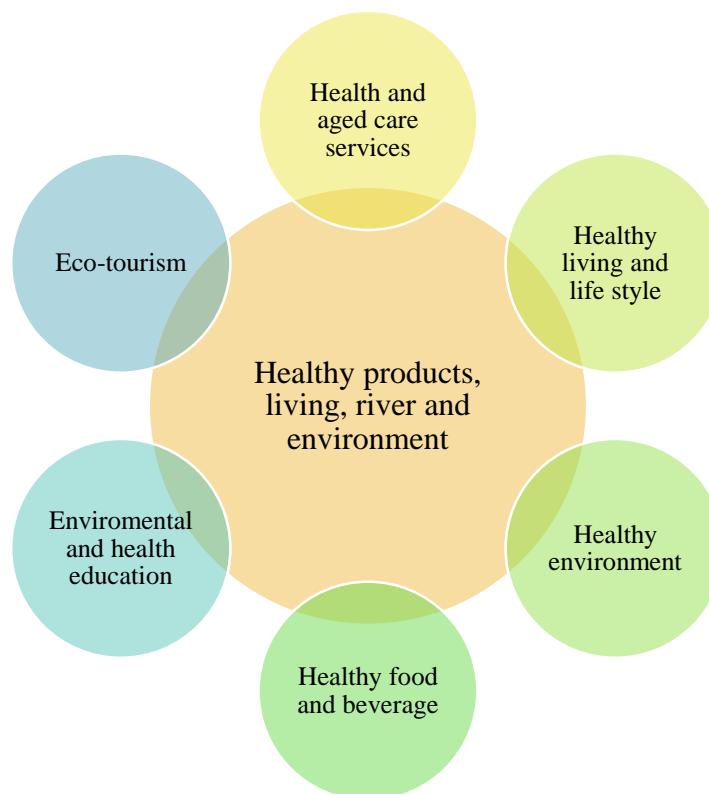
Regional vision, identity and brand

The current regional vision and targets for key development themes, in addition to the regional attributes and strengths, are used as the starting point for establishing a regional identity and brand, and hence ‘building of a cluster commons’ (as explained in Appendix D):

- 1. The Regional Vision and its various components may be considered in an interlinked way, with advantages leveraged and synergies maximised for mutual benefit.*
- 2. Regional Targets can be mutually supporting and tackled in an integrated manner to gain ‘win-wins’.*
- 3. Enhance the regional identity and ‘brand’, towards which various actors (the word actors is cluster terminology used throughout this document to describe the various people, groups, sectors, government departments, businesses or individuals that are involved) may work together, differentiating the Riverland from other regions and reinforcing its strengths.*
- 4. Building upon the region’s key characteristics and strengths, we suggest ‘healthy products, healthy living, healthy river and environment’ as key elements of a regional brand.*

5. *Such a brand may encompass a series of related elements, as illustrated in the diagram below.*
6. *The brand may form a 'linking theme' that facilitates connections and synergies between the various development themes e.g. education, tourism, immigration and retirement living, new food and beverage products and other new businesses (e.g. services sector), thereby encouraging cooperation between various actors towards common ends.*
7. *Clean, nutritious, premium Riverland products may be vehicles for promoting the unique health, wellness, river and environmental attributes of the region, with links with healthy living, tourism, education and the like, and vice versa.*
8. *The regional brand could be further developed in association with the Ehrenberg Bass Institute for Marketing Science and the Institute for Choice, UniSA.*

Regional Brand and Linking Theme (Figure 4 from Section 4):



Integration of services sectors with food and beverage

Notwithstanding predicted growth for food and beverage businesses, our investigation has revealed the importance of connections with the services sector for increased employment growth. Connecting these sectors is likely to add value to products and services by drawing upon their mutual strengths. We therefore recommend:

9. *Improve connection between service businesses/sectors (including tourism, health and education) and the core agricultural, horticultural and manufacturing sectors for creating diverse profit centres, marketing opportunities and mutual benefits.*

10. Riverland businesses that have already begun to enhance their premium food/beverage product offering by cooperating with other partners (e.g. in packaging, marketing and biological services) can provide an example to others.

Potential synergies resulting from regional brand and linking theme

Potential links and synergies within and across sectors are illustrated by several examples.

11. We suggest further consideration of the following opportunities for synergistic development:

- a. Maximising opportunities from Asian and other markets for exporting clean, nutritious, premium foods and beverages and related health products (5.1)
- b. Integrating tourist, harvest and nature trails (5.2)
- c. Linking primary industries, entrepreneurship and education (5.3).

Building the ‘clusters commons’

The current governance role of Regional Development Australia Murraylands & Riverland Inc (RDA) appears closely aligned with that of a regional cluster organisation that ‘builds the cluster commons’, through which individual, self-sufficient ‘clusters’ may be connected and integrated (Appendix D). Such organisations build a sense of belonging and trust, facilitate networking, and develop a vision and strategy accompanied by ‘regional and cluster branding’, helps build bridges (e.g. to research institutions) and stimulate traffic across the innovation gaps, and foster business development among member firms including export promotion and commercial cooperation. We therefore recommend that:

12. The RDA should continue its current role of fostering collaborative approaches and partnerships throughout the region and with external stakeholders.
13. Resultant clusters may then be expected to emerge and be championed by industry leaders and others, but all interconnected via the RDA and its cluster commons and linked to the Regional Brand.
14. ICTs may form a potential, innovative mechanism to link various actors and initiatives, in keeping with the Riverland’s Digital Strategy. This will necessitate building community capacity in ICT and creation of virtual hubs, to enable connections to customer markets, and facilitate connections, conversations and traffic between potential cluster participants.
15. Develop a pilot ICT-based linking mechanism, in association with Multiplier Technologies and/or similar ICT organisations. This could facilitate development of a pilot cluster involving primary industry, entrepreneurship and education (see 5.3).

1. Introduction

The Premium Food and Wine from the Clean Environment Co-innovation Cluster Program is a new State Government regional development initiative to support local regional agriculture and food and wine businesses to become more collaborative, productive and globally competitive. This initiative aims to improve the long term growth and competitiveness of the SA agriculture, and food and wine industries, by establishing a regional co-innovation cluster pilot program, thereby boosting economic growth, population and jobs in regional areas.

This report aims to identify opportunities, and highlight the things that need to be in place at a regional level, in order to facilitate linked up synergistic development, and thus to maximise the creation and sustainment of local jobs, skill building and skill upgrading, new technology adaptation, and water security and resource demand, on a longer term basis. It seeks to identify connections between local resources/capabilities and key development themes, uncovering synergistic opportunities among different themes.

Rather than just focusing on clustering within the Riverland’s premium food and wine sector, this investigation explores its relationship with other sectors, the key attributes that may differentiate the Riverland from other regions, and the potential for an overall linking mechanism toward a unique and visible regional brand.

To this end, the report is structured as follows. Firstly, the Riverland context is outlined in Section 2, with its challenges, opportunities, and regional business and employment trends being analysed. Next, Section 3 highlights examples of innovative Riverland businesses producing clean, premium products, especially those that have already begun to enhance their product offering by cooperating with other partners.

To create a regional and cluster identity, towards which various actors may work together, a Riverland vision and ‘brand’ is critical, differentiating the Riverland from other regions and reinforcing its strengths. Therefore, the current vision is examined in Section 4, illustrating how linkages may be found between the various components, advantages leveraged and synergies

maximised for mutual benefit. Examples of potential synergies around regional branding are presented in Section 5, followed by exploration of an ICT based ‘linking mechanism’ (Section 6).

The findings are based on Riverland data analysis, a review of cluster theory, discussions with the RDA and visits to the region, including meetings with Destination Riverland, the Food and Beverage Group, ICT Cluster and Local Government Authorities on 23rd and 24th September 2014.

2. Riverland Context, Challenges and Opportunities

2.1 Context

With 362 kilometres of the Murray River running through its region, the Riverland is a significant river-based region in South Australia and was the first irrigated region in Australia, with a history of locks, weirs and irrigation. The river accommodates houseboats and water activities such as canoeing, fishing, rowing, and water skiing. Riverland towns are situated within 260 kilometres of Adelaide, with the region strategically located on key interstate transport links between Adelaide and many eastern State major centres and capital cities. A significant amount of traffic between Western Australia and the eastern states also passes through our region.

Demographic profile of the Riverland (Murray-Darling Basin Authority 2013) shows that the region consists of approximately 33,445 people and 3,000 farm businesses. The Riverland economy is mainly based on primary industries, manufacturing, and tourism, with the *RDA Regional Roadmap 2013-2016 (Revised 2014)* identifying glasshouses and aquaculture industries, diversified primary production and value add manufacturing, renewable energies, and transport and logistics, as diversification opportunities. There is also potential for growth in the tourism sector. Nevertheless, the further development of employment opportunities, infrastructure improvements, increased levels of research and development for productivity, and additional educational opportunities, would further enhance the opportunities for socio-economic development. It is important to analyse the region’s key characteristics in terms of the strengths and potential it possesses, the internal and external challenges it is facing, and the opportunities available. By doing so, appropriate strategies can be developed to strengthen the region’s competitiveness.

2.2 Strengths and Potential

The region has many unique capabilities and resources that can lead to new opportunities to generate growth and build up its resilience for the future. In this section, the analysis is primarily focused on the aspects of agriculture, food and beverage production, tourism, education, employment, and infrastructure.

a) Agriculture, Food and Beverage Production

The strategic location of the Riverland, the Murray River, abundant sunshine all year round and rich natural resources such as high-quality soils, all contribute to the Riverland's competitive advantage in growing a variety of crops for both local and export markets. The Riverland is home to a diverse range of local produce including almonds, bush foods, capers, citrus, dates, grapes, olives and stone fruit. The region is Australia's largest wine producing region as well as a leading producer in other agricultural commodities. A number of cellar doors and restaurants offer premium food and wines with impressive views over serene landscapes and surrounding nature.

Despite the impacts of prolonged drought and the challenges of today's fluctuating business environment, the region has managed to remain competitive in citrus, nuts and in some spheres of the wine industry. Future climate change is expected to result in a warmer and drier climate, therefore water security will be of critical importance for the Riverland- especially for irrigated agriculture and horticulture (Natural Resources SA 2014). However, with the healthy, clean environment, water from the Murray River, and rich quality soils, the Riverland continues to produce healthy, nutritious, clean and organic food and beverage products, with opportunity to further explore those that are of high value, minimise water consumption and will be able to sustain such changes in climate.

As with the Limestone Coast, the carbon farming potential of the Riverland may be further explored, and could benefit from Federal Government policies and initiatives (Department of Environment 2013). Not only could this be an additional source of income for land holders, but it may also improve soil quality. Improvement of degraded landscapes can also benefit eco-tourism and food production.

These strengths and opportunities extend further to manufacturing, and business in the food and beverage production and agricultural trades. Funding support from the SA Government through

the Riverland Sustainable Futures Fund (RSFF) has enhanced capacities of food and beverage manufacturing in packaging, producing, and diversifying products to maintain competitive advantages. While continuing to trade within Australia, the region is also well placed to expand its interstate and overseas markets. However, many smaller operators require assistance to overseas market entry (see *Riverland Jobs, Growth & Investment Snapshot 2014-2016*). Premium, clean, food and wine as well as newly diversified products could be attractive to international markets. In order to strengthen local businesses, the building of intra- and inter-regional SMEs networks, the adoption of innovation and the enhancement and further building of leadership skills could further improve business expansion and future investment.

b) Tourism

Tourism has been one of the primary industries contributing to the economic diversification of the Riverland region. Natural resources and a clean, healthy environment are among the Riverland's greatest assets, including river valleys, RAMSAR listed wetlands, tranquil waterways, and conservation parks and reserves with a variety of flora and fauna (Riverland Futures Taskforce 2010, p. 10). The clean and tranquil environment is a prime appeal enticing a large number of health-conscious visitors each year who look for a getaway from stressful metropolitan life and environments, while adventurous landscapes can attract more energetic explorers. The region provides mainly river-based tourism (92% of tour operators). However, diverse tourism resources and activities are available to cater for variety of tourists, including extreme sports for challengers, trailing and hiking for adventurers, sports and health retreats for elders and health-concerned tourists, and eco-tourism for nature lovers.

In recent years, the tourism industry of the Riverland has been affected by adverse climate and economic conditions. To help the industry achieve increased investment and further growth, the *Destination Riverland Strategic Plan 2012-2015* has been released to strengthen the region's selling proposition and to create new tourism initiatives. Supportive funding from *RSFF* was granted to initially promote competitiveness against similar river-based Australian tourism regions and overseas destinations. The *Destination Action Plan* sets the target growth of Riverland tourism to be 40% by December 2020. Opportunities for regional tourism are strengthening as a fall in the Australian dollar against the US dollar continues. In addition to the potential for an influx of overseas tourists, the fall of the Australian dollar could also lead to increased export opportunities. Effective campaigns via traditional media and online networks could assist the tourism industry.

Improvements in the coordination of annual tourism events could help to ease resource bottlenecks, whilst new tourism products, enhanced facilities (e.g. convention centres) and a greater range of transport options to, from and across the region could boost economic.

c) Education and Employment

Providing opportunities for improved education and employment within the Riverland is included in the *RDA Regional Roadmap 2013-2016*, as a challenge for the region. The Riverland has reported relatively high rates of low-skilled unemployment. At the same time, the *Regional Education, Skills and Jobs Plan* has reported relatively low levels of school retention rates, therefore many initiatives have been undertaken to improve education, skills and jobs outcomes. Key contributing factors to the achievement of successful outcomes include collaborations between regional schools, vocational schools and higher education institutes (including University of Adelaide, Flinders University and University of South Australia), and government-funded educational initiatives (such as Trade Training Centres Programs and the Focus School Next Steps Initiative). For holistic improvement of the region, strategic plans and actions that connect schools, business initiatives and educational institutes and research centres are proposed. Moreover, education and employment skills should be aligned with regional economic priorities in order to enhance employment fitness, work specialisation and productivity. For instance, while the *RDA Roadmap* has announced digital technology for education, a congregated model between the IT, business and educational sectors for education and employment improvement could be developed. Moreover, providing hands-on expertise through collaborative courses in subjects such as agriculture, horticulture and environmental sciences with universities could strengthen employment in the primary industry sector. Regional businesses could play an important role in directing educational institutes to skill requirements and training demand, as well as engaging in both classroom and online professional courses. Funding granted under the *Skills for Jobs in Regions* program to upskill jobs to meet workforce needs within the region could increase the number of high-skilled regional employees.

d) Transport and Logistics Infrastructure

Located on key transport routes to the eastern states and Adelaide, the region is seeking to improve its transport and logistics infrastructure (e.g. a Freight and Rail Study). The major towns of the Riverland including Barmera, Berri, Loxton, Waikerie, Renmark and Paringa are closely connected, which allows resources to be mobilised in the region and flexible access between the

townships. *Made in SA Program*, as part of the plan to renew the Riverland by Renewal SA, has been launched to attract more small businesses to the main street. The program will promote entrepreneurship and business network opportunities. More new development zones including commercial and transport logistics in Berri, Loxton, Renmark and Waikerie have been included in the *Riverland Regional Prospectus*. The upgrade of an existing airport could widen opportunities in aviation education, emergency services and pilot licensing as well as future drone research, development and operation for communication, farming and freight. Apart from the civil infrastructure mentioned, the introduction of ICT infrastructure, and technology such as cloud storage can reduce costs in business operations, and has the ability to support e-commerce activities or virtual business environments creating borderless business opportunities which can result in providing more accessibility and efficacy to regional business operations and production.

2.3 Current Challenges

The main challenge for the long-term development of the Riverland region is to increase and sustain population growth, business investment and operations, and local employment. Some degrees of decline in those aspects have been observed in the recent years, which could be mostly attributed to economic hardship as a result of climatic conditions and the global financial crisis. (e.g. drought and water use restrictions).

According to a recent ABS record, in 2013 there were in total 3,487 businesses operating in the Riverland region, including 1,006 in Renmark and Paringa, 1,205 in Berri and Barmera, and 1,276 in Loxton and Waikerie. The latest census data also indicated the total employment of 14,417 workers, including both full time and part time positions. Agriculture, manufacturing, health care, retail trade, accommodation and food, and education represent some of the main sectors. While primary production (which includes agriculture and horticulture) and manufacturing (which includes food and beverage production and farm machinery and parts fabrication) still dominate the region's economy, the tertiary industry sectors (e.g. accommodation and food, health care, retail trade, education), which are principally service-oriented, also play a strong role in the local employment.

Across the main LGAs in Riverland, Loxton Waikerie has the highest employment level in the primary production sector (23.6%). In the meantime, it also has experienced the highest attrition in business numbers, i.e. 138 exits in 2011 and 129 exits in 2012, although the local unemployment

rate still stays relatively low in comparison with the other LGAs. On the other hand, Barmera Berri has the highest percentage of employment in the manufacturing (12.9%) and the service sectors (39.6%), but saw a significant loss of local businesses in 2011-2012 (i.e. 54 businesses in 2011 and 24 businesses in 2012) and, as a result, a much higher unemployment rate. The situation in Renmark Paringa is largely similar to that of Loxton Waikerie.

By analysing such trends, it appears that the agriculture sector, despite its socio-economic importance to the region, has difficulties in maintaining its current practice and in sustaining business growth in the region. Recent years have seen some locals moving away from the agriculture and horticulture industries to small business operations in the tertiary industry sectors. However, the tertiary sectors, which are critical in complementing agriculture and manufacturing, are also facing great challenges in creating and sustaining opportunities for new businesses and employment when the economic condition is tough.

The net loss of local population is for the most part due to many young people leaving the region to seek tertiary education and life experience outside of the Riverland. Recent immigrants into the region and local people with disabilities are less employed and often face the most difficulty finding suitable employment. On the other hand, the shortage of high-skilled workers has become increasingly evident. So, new opportunities need to be created, not only for people staying on farms, but also for generating more and diversified jobs in the manufacturing and service-related sectors.

2.4 Opportunities for Business Development

Although the regional economy has a high dependence on irrigation systems for food production and manufacturing, the Riverland is pursuing its recovery by promoting diversification of existing industry, revitalising local enterprises and expanding business growth. Despite the socio-demographic difficulties and economic stress, there is still significant potential in the region's characteristics can assist in the generation of opportunities for its long-term development.

- While primary production and food and beverage manufacturing are the biggest contributors to the region's gross product in dollar value, nearly 70% of local employment is actually in service-related sectors, among which 72% (6508) are employed by non-essential service businesses (e.g. retail and trade, tourism and hospitality, healthcare, education, etc.). These

service sectors provide diverse opportunities for skilled workers, young people, as well as new migrants and people with disabilities;

- Currently, many primary producers in Riverland have or depend on off-farm supplementary income to support their core business operations and livelihood. Given the nature of such sideline income, the main sources of revenue are often associated with some form of services, such as accommodation and food services, arts, recreation, etc. Again, this demonstrates the complementation of the service-based economy to the traditional primary production economy in the region, which has become increasingly important to producers;
- The pre-retirement and retired population is now up to 50% of the total population in the Riverland, while a significant proportion of this cohort are or were primary producers. An ageing population base will result in increased demand for healthcare and aged care locally and boost opportunities for the growth of health and wellness related service businesses, which at present are still relatively small (10% of total employment and 5% of new employment). The Riverland Futures Task Force (2010) identified pre-retirement and retired living as key targeted areas for new opportunities to achieve diversified and sustainable economies for the region;
- Also, a recent survey indicated a positive sign of rebound in business confidence to invest and expand their operations in the region. An increase of 1400 new jobs on average over the next three years is forecasted. This survey also showed that in aggregate 56% of the potential new positions to be created are anticipated in the service categories which mostly involve small businesses, in comparison with 19% in agriculture and 8% in manufacturing. In the meantime, about 60% of estimated new capital investment will be toward facilities, plants, and equipment, which will be largely related to the agriculture, horticulture, and manufacturing business operations.
- Regional employment opportunities have been enhanced by the Skills for Jobs in Regions program available for up to 737 people in the Murraylands and Riverland region. The program provides training, educational and employment support, and industry mentoring. The \$717,554 funding aims to skill and prepare, job seekers for employment opportunities, in line with industry needs.

3. Current Business Innovations

Although the region faces many challenges, the preceding section has illustrated considerable potential for new business development and employment. A key strategy to create, maximise and sustain such opportunities is to better integrate the service-oriented businesses with the agriculture, horticulture and the manufacturing sectors. Thus, the service sectors can help to leverage the capability of the primary and secondary producers to reduce costs and increase diversified incomes for their business operations to keep the extant businesses in the region. Meanwhile, such linkages can also help to attract and sustain new business investment and jobs in the service sectors to ensure their development and more opportunities for young people, migrants, and skilled workers. We now examine how innovative businesses in the Riverland may currently be benefiting from linkages with others in their sector, other sectors and beyond.

The Venus Eco-citrus (Ghangarathil 2014) branded oranges and mandarins are the result of new sustainable farming systems that, although not organic, are kinder to the environment and produce safer products. The system involves minimal spraying, use of organic matter and preservation of natural insects and other life. Although the pricing reflects the 25-30% increase in growing costs and is more labour intensive, the eco-branded products are available within independent supermarkets around Australia and also exported to the US. It is noteworthy that 10 growers are co-operating not only with packing and marketing business Venus Citrus, but also with advisory services firms including Fruit Doctors, Biological Services and SED management consulting. The initiative attracted \$410 000 support from the Sustainable Futures Fund. This illustrates empathy with the unique, clean, natural environment of the region, involves safer, healthy, premium products, connects horticulture with services sector, and access to new markets via eco-branding.

The Bella Lavender Estate is another example of an innovative Riverland business, which illustrates the potential to use local produce for health and wellness related products such as soap, hand and body lotion, essential oil, arthritis cream, massage oil and the like. In addition, visitors can view the harvesting, distilling, drying and stripping of lavender, as well as enjoying coffee and purchasing gifts in the inviting visitor centre.

The Wilkadene Woolshed Brewery (Discover Murray River 2014; Hadson 2014) has created a successful beer journey from the Riverland region to the celebrity Jamie Oliver's Adelaide

restaurant. Premium natural ingredients brewed in a zero waste environment provide hand crafted premium boutique beers. The brewing process uses solar energy, rainwater and 100% recyclable techniques to deliver the products in a sustainable manner. Started with a 1000-litre tank and one beer in 2006, the business now supplies three beers, one cider and several specialty batches with an annual sale of approximately 50,000 litres across SA and interstate. In addition, Wilkadene operates and hires luxury ‘Above Renmark’ houseboats and provides accommodation on site in the environment of a historic former sheep and wheat station, all situated in a beautiful inlet of the River Murray.



Figure 1. Wilkadene Woolshed Brewery and ‘Above Renmark’ houseboats

919 Wines, a multi-award winner, is a Riverland-based company producing high quality wines. Located in Glossop, the company produces contracted wines as well as wines under their own brand. Added to the prior success, in 2013 proprietor Eric Semmler was named ‘Winestate Australian Winemaker of the Year’. With two vineyards in Glossop and Loxton, the company’s wine production facilities are capable of 70 tonnes certified organic production. The key focus of 919 Wines is evident in the company’s core values of quality, sustainability, environmental footprint and identity. The business model of 919 Wines focuses not only on producing premium wine products but also on supporting environmental responsibility. The company’s production has been implemented using low water and organic grape production techniques to reduce chemical and water consumption. As a result, not only wine flavour can be enhanced but also the company has succeeded in reducing process stream waste as well as chemical contamination.

Bickford’s distillery is a new business venture in the Riverland, which aims to generate a new beverage market and replace imported spirits. The initial investment of \$4.6 million dollars has been allocated to establishing a spirit distillery, visitor centre and cellar door in the Riverland. Black Bottle Brandy and a range of spirits such as brandy, whiskey and gin are expected to be

produced from the distillery. The key factors in decision making to establish the distillery were availability of raw materials, affordable land, availability of employment, and expansion of the tourism opportunity.

Banrock Station also represents innovative approaches, integrating wine production with a visitor centre, conference facilities, ecological management of a wetland, and association with research organisations and other partners. It is one of the 65 wetlands of international importance in Australia recognised for hosting unique biodiversity and ecosystems, and is also of cultural significance. Banrock Environment Trust funds nature conservation projects worldwide, supported by the proceeds of wine sales. The Wine and Wetland Visitor Centre (WWC) welcomes up to 100,000 visitors per year who are able to enjoy a coffee, meal, and unique wine tasting experience, overlooking the wetlands and the floodplain. From its deck (Figure 2 and front cover), the WWC opens on a circuit of 8 km of walking trails, including 1km of boardwalk, several rest areas, and 5 bird hides. The WWC has begun to develop cultural and social activities beyond the classical wine/dine experience, including art exhibitions, concerts, and local producers' markets on site.



Figure 2. Banrock Station: view of wetland from deck (during drained phase)

Such spontaneous collaborative practices may inspire more connected up approaches by others, and introduce the interlinked, 'cluster' thinking that is outlined in the next Section.

4. Towards a Regional Brand and Linking Theme

4.1 Regional Vision

Previous sections have examined the region's context, challenges and opportunities, analysed business and employment trends, and highlighted some current business innovations with potential for growth. The current regional vision and targets are now considered in an interlinked manner, leading to the development of a 'linking theme' based upon a regional brand.

The Riverland Futures Taskforce produced a Riverland Regional Prospectus (2010), with a vision of the region summarised as: '*A vibrant resilient region that capitalises on change, embraces sustainability, and provides an inspirational living, investment and working environment*'. The Prospectus enlarges upon this vision (Box 1).

VISION FOR THE FUTURE

By the year 2030 the Riverland will be home to a thriving, prosperous and sustainable community. The region's population has increased to 40,000 with employment across a range of sectors.

The economy continues to be underpinned by primary production but supported by a more diversified economy represented by an increasing focus on value added food and beverage processing, tourism and education.

Investors seeking opportunities in value added food and beverage processing have been attracted to the region because of access to an abundant and diverse source of quality produce, world class irrigation infrastructure, strategic transport linkages to market and a skilled workforce.

Investment in eco tourism has broadened the tourism sector recognising the region's readily accessible and pristine natural environment together with an engaging food and wine experience delivered with city style and country hospitality.

A major investment in a range of quality education facilities and the development of tertiary education and vocational training programs has resulted in the Riverland being recognised as a leader in the education sector. In turn, this has meant young students and families are moving into the area bringing with them fresh ideas and increased vitality.

Baby-boomers have recognised that the Riverland offers the availability of quality yet affordable housing and a relaxed lifestyle in a tranquil environment that provides access to an outstanding range of health and other services, sporting and recreational facilities and the necessary amenities for easy living. Likewise, pre – retirees have chosen a better work / life balance in the Riverland by making use of its high speed broadband network.

In summary, by the year 2030 the Riverland is recognised as one of the most desirable and sustainable regional destinations in Australia.

Box 1. Vision for the future (Riverland Futures Taskforce 2010)

4.2 An Integrated Vision

Taking a holistic, cross-sector perspective of the vision, it is possible to begin *thinking* how the various components may be *linked*, how advantages may be *leveraged* and how synergies can be *maximised* for mutual benefit:

- *The pristine natural environment, centred on the river, is a source of organic and premium food and beverages.*
- *The healthy environment, healthy products and health services of the Riverland can also be an important contributor to healthy living (among pre-retirees, retirees, families and communities), which may be supported by physical activities, sports and health related events.*
- *Eco, cultural and health tourism may build upon the clean, organic food products, indigenous foods and culture, regional hospitality, and natural attractions.*
- *These attributes also support a relaxed, healthy, and affordable living environment, not only for baby-boomers, pre-retirees and the aged, but also for young families, immigrants, and students.*
- *Vocational and tertiary education can support a skilled workforce, entrepreneurship and innovative new enterprises, and jobs growth in a more diversified service economy.*
- *Educational programmes and research can complement and support the food/nutrition, health, tourism, environmental, and sports themes.*
- *Clean and premium food and beverages, eco-tourism, health and education products and services could be linked to enable a clearer identity and higher visibility for the region's businesses in both international and national markets.*
- *Linking and leveraging effects can be facilitated by high-speed broadband, transport and other strategic infrastructure.*

The following Figure 3 demonstrates links between the key components of the vision around a strengthened regional identity, supported by the natural assets and resources, facilities and infrastructure (e.g. irrigation, transport, ICT).

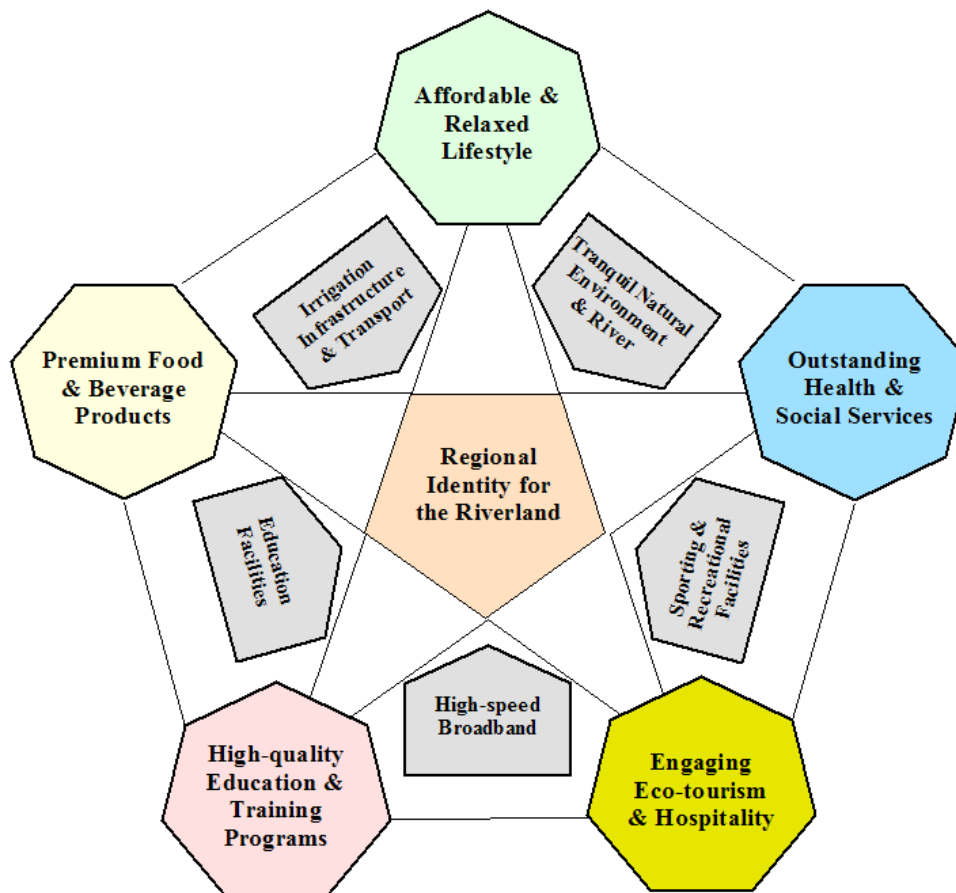


Figure 3. Linking components of the vision around a regional identity

4.3 Tackling Targets in an Integrated Manner

Related to the vision, the 20-year growth objectives are to increase the Riverland’s population by approximately 7000 people and grow investment by \$500m. To achieve these objectives and achieve a diversified and sustainable economic base, the Riverland Futures Taskforce (2010) identified pre-retirement, retirement, immigration, additional new food and beverage manufacturing, tourism, education and local business development as key development themes. The broad, measurable targets for each of these themes or objectives are:

- *Additional new food, value add and beverage manufacturing outputs:* in excess of \$100m;
- *Local business development:* Internal expansion and external attraction of key businesses collectively increasing the gross region output by \$30m.
- *Tourism:* Doubling the current visitor nights to a total of 1.34m nights per annum;
- *Education:* Increasing by 5,000 the number of students attracted to key educational linkages and specialisation across secondary and tertiary providers;

- *Pre-retirement/retirement*: Increase number of people in pre-retirement and retirement living by a factor of 2.5.

Other priorities within the RDA’s Regional Roadmap 2013-2016 (RDA Murraylands & Riverland 2014) include: sustainable communities and population growth; access to international, national and regional markets; and, of special relevance to this report, *effective cross-sectoral and intergovernmental partnerships*. This also applies to achievement of SA Strategic Plan targets (Appendix C).

Thus, similar to the holistic, integrated approach to the vision described above, tackling regional targets in an interlinked manner is likely to result in ‘win-wins’, with more results (e.g. economic and employment growth) from less resources and cost. This is illustrated in Box 2.

Box 2. Tackling targets in an interlinked manner

Development of new businesses and SMEs involving clean, premium food and associated health products (e.g. essential oils, rose water) may require education in entrepreneurship and business knowledge (e.g. the Business Academy at Renmark High), generate new opportunities in food and health related tourism (e.g. Riverland Rose Festival), and attract more pre-retirees and retirees to the region to enjoy its healthy and relaxed living environment.

4.4 Regional Brand for Linking Development Themes

The Riverland’s context, challenges and opportunities were examined earlier (Section 2). Emerging from this analysis, and the analysis of the regional vision and targets for building a distinctive identity, a case may be made for the region to project a brand encompassing ‘healthy products, healthy living, healthy river and environment’ to provide an overall linking theme (Figure 4). To retain and promote economic development of the region, pre-retirement, retirement, immigration, adding new food/beverage manufacturing, tourism, education and local business development have been identified by the Riverland Futures Taskforce (2010) as the development themes to be accomplished by 2030. As the linking theme, the “healthy products, healthy living, healthy river and environment” branding captures the common attribute of these development themes and can effectively support synergies among them. By this means, opportunities may be boosted for new economic and employment growth, greater attraction for visitors, immigrants and investment, and improved access to more and broader customer markets.

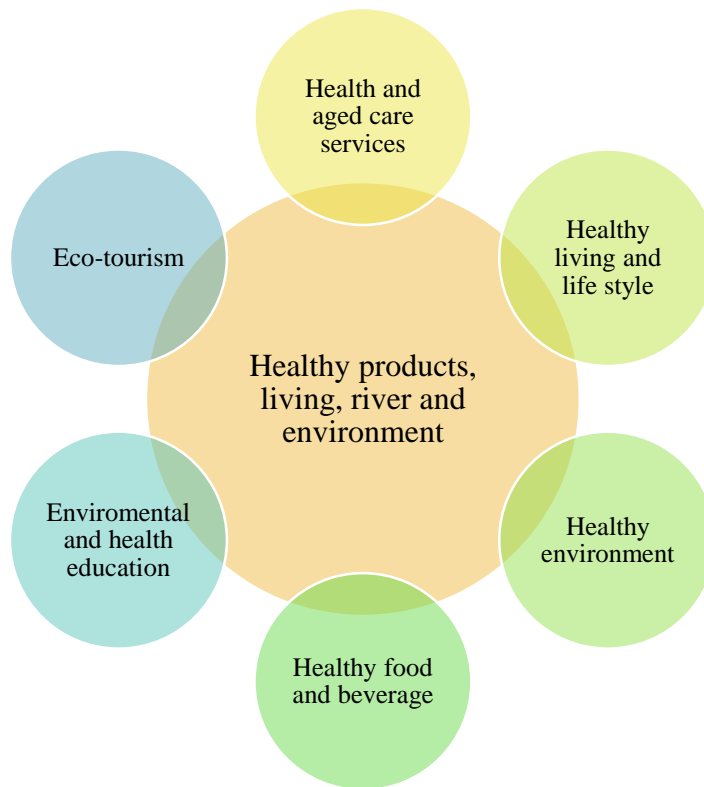


Figure 4. *Regional Brand for Linking Development Themes*

The brand is consistent with the notion that productive agriculture, natural resource management and healthier families and communities can be mutually supporting, as promoted by Landcare and others. This is well demonstrated by the ‘Positive Farming Footprints Project’ initiated by the Rural Woman of the Year 2014. See Box 3.

Box 3. *Natural Resource Management, Productive Agriculture and Healthier Communities*

The significance of well-integrative social, environmental and natural resources management is demonstrated by the Positive Farming Footprints Project initiated by Ms Pip Courtney, Rural Woman of the Year 2014. In an interview with ABC Landline (28 September 2014), she shared her holistic view on enhancing agricultural community capacity by managing farming and natural resources effectively and profitably as “it’s about achieving natural resource management and agriculture production together....We will achieve Landcare outcomes – natural resource management outcomes, more productive agriculture and healthier families and communities”.

The following example illustrates how the regional brand can assist linking various development themes. A key requirement of pre-retirement/retirement living and immigration is physical and mental health. To attain this status, the population of these groups need access to healthy food and beverage, clean and green environment, active and healthy activities, health education, health care services, and other social activities as they become or remain part of community. At the same time, high demand in eco-tourism has been acknowledged globally. This type of demand is commonly driven by the countries with overpopulation, environment degradation, food contamination, pollution and scarce resources. A report produced by Department of Agriculture (2014) states that China is among those countries which are interested in healthier lifestyle and cleaner food. This is an opportunity for Riverland tourism to provide and promote accommodation, food and services that attract interest of this target group. The ability to attract international tourists could result in generating new products and services. For example, rose and orange blossom water is well-known to Indian and Mediterranean cultures as a crucial part of their gastronomies and ceremonies. As the region has the largest rose garden in the southern hemisphere and is a producer of citrus, rose and orange blossom water could be introduced as new products produced from the existing regional resources.

Thus, innovative food, beverage and related products and businesses, which showcase the region's clean, healthy, natural attributes, may be linked with the services sector and with other themes to leverage overall growth and employment – not only for growers, but also for smaller businesses, start-ups and entrepreneurs

5. Examples of Potential Synergies for Regional Branding

Thus far, this report has highlighted the region's special attributes, articulated an interlinked vision and strategies, showed how horticulture and processing sectors can be better connected with service oriented businesses, and identified innovative businesses in the Riverland that exemplify this approach. In addition, health, wellness and environment emerged as an over-riding regional brand that could provide link regional development themes. This section illustrates how this approach can uncover potential synergies between various sectors for mutual benefit.

5.1. Maximising Opportunities from Asia Markets for Clean, Nutritious Premium Foods, Beverages and Related Health Products

According to the Agricultural Competitiveness Green Paper (Agricultural Competitive Taskforce 2014), Australia is *not* likely to become in literal terms the ‘food bowl of Asia’, but can continue to contribute to the food needs of the region, including through being a *niche supplier of premium agricultural products*. The large and growing population of middle and upper income earners in Asia (and beyond) means that this niche is a large-scale opportunity for Australian products, which will need to be differentiated by safety, environmental, quality and health standards. Thus, many more businesses may be able to export to overseas markets, beyond the current 16%, in a clustered, synergistic manner, as now discussed.

The China Agribusiness Initiative (SA Government 2013) aims to realise opportunities for premium South Australian food and wine in China, and to attract investment in SA agribusinesses and high-value markets (e.g. dairy, wine and aquaculture). It notes that food nutrition and safety is a significant issue in China, where consumers are ‘keen to access nutritious food from pristine environments’. Relationships with HK, Shandong and Fujian form the focus of the initiative, *which also promotes connections with other sectors and clustering*.

In this regard, Tasmania’s relationship with China and Fujian illustrates how export of food products (walnuts) is integrated with tourism, education, research and other sectors (Box 4).

Furthermore, increasing export opportunities to Malaysia and the United Arab Emirates (UAE) have been highlighted by Business SA. As continental gateways, these two international markets could be among the Riverland’s future targets for premium food, beverages and allied products. Malaysian food demand has been influenced by consumer awareness of healthy diet and lifestyle. In addition to increasing the current fruit, vegetable and wine exports, future opportunities for exotic fruit juices and blends have also been indicated. UAE is known as a gateway to the Middle East where approximately 90% of food is imported (Smith 2014). According to the Australian Trade Commission (2014), opportunities for food and beverage products include fast and processed food, soft drinks, flavoured water and, notably, health and organic foods. The interest in food and beverage of UAE and the Middle East can be demonstrated from the Gulfood Exhibition which is held annually in Dubai and attracts more than 80,000 trade buyers each year (Gulfood 2015).

Box 4. Tasmania's relationship with Fujian, China

Tasmania also fosters sister-state relationships with Fujian in an integrated manner, focused on agricultural products but also linked with renewable energy, tourism, R&D and culture. It is beginning to export walnuts (ABC 2014), which have recognised health benefits in China. Furthermore, partnerships between the Tasmanian and China walnut industries are being pursued, involving not only growers but also researchers. The University of Tasmania is currently in talks with a large China corporation to set up a new institute in China. In addition, the number of Chinese visitors to Tasmania has increased by 61% over 12 months, with Tourism Tasmania educating service providers in catering for the Chinese market and cultural understanding. Such a cross-sector, linked-up approach, involving growers and producers, service providers, researchers, government and the like, accompanied by relationship building with customer markets, illustrates how synergistic approaches may operate across a region and beyond.

To substantially increase exports to burgeoning Asian and other global markets, it may be possible to link horticultural produce (i.e. almond, citrus, roses and grapes) with premium health products such as essential oil made from kernels, seeds, petals and peels. Premium Riverland products may be branded as clean, nutritious, and sustainable, adapted to the warmer and drier climate of the future, recognising the importance of water security. In this regard, alternative food crops better adapted to lower rainfall, such as mustard and vetch, have been suggested by Natural Resources SA (2014, p. 57). Export opportunities for premium food and more drought resistant health related products include dates, nuts, indigenous bush foods, Mallee oil, olive oils, essential oils, rose water and vitamins (e.g. Vitamin C from citrus products).

These may be grown in harmony with nature and organically certified, involving collaboration not only with businesses in the service sector including marketing, management and the like, but also research scientists. Aided by information technology and online communications for marketing and trade, partnerships with customer organisations and corporations will ensure products match customer requirements, and may lead to food and/or environmental tourism and immigration. In turn, this may foster integration among festivals and events (e.g. Rose, Food and Wine Festivals) and is likely to boost the local hospitality service industry, creating demand for retail food outlets, visitor centres, accommodation and other related services. The theme of healthy food/healthy living may be reinforced by health services, health resorts and the sporting and recreation sectors.

Importantly, relationships with the export customer markets may attract domestic and overseas investment in primary production, processing and necessary infrastructure, including warehousing,

transport and logistics, irrigation, clean renewable energy and the like. The Australian Centre for Asian Business, University of SA, is among possible external partners to attract increased Asian business and investment, as well as establishing long-term relationships with Asian organisations, governments and markets.

However, unique opportunities for the Riverland to develop partnerships with the UAE and related countries (e.g. Oman) could be further explored, with a cluster constructed around products such as premium table dates. The Gurra Downs Date Company, Riverland, has already established relationships with the Arabian region, winning the International Date Palm Award 2010 and practising techniques to use and reuse water more efficiently (see Reilly, 2012). UniSA also has a special relationship with a graduate from Oman, who is a leader in irrigation in that country. Given the Riverland's pioneering role in irrigation in Australia, exchanges and cooperative research with Oman could readily be fostered, including attraction of tourists from that region. In that regard, support of International Centre for Muslim and non-Muslim Understanding, UniSA, could be enlisted to increase cross-cultural understanding in the Riverland.

5.2. Integrating Tourist, Harvest and Nature Trails

Given that the 5 main Riverland towns are closely connected, there is an opportunity for food and wine trails and routes to link up various producers as part of a food tourism cluster, and connecting the many and diverse environments and attractions of the region. River/houseboat hire and cruises, cycling, horse-riding, ballooning and other routes can connect via clean, healthy transport modes and mobile apps with a number of food and wine producers, health farms and other attractions. This enables a richer, interconnected visitor experience that reflects the healthy attributes and relaxing lifestyle of the region. This may help diversify incomes for growers, such as by home-stay, food outlets and the like.

As illustrated earlier in Figure 4, food and wine tourism may also be linked with eco-education/eco-tourism, where facilities are ecologically sustainable (e.g. recycle wastes, water) and visitors are educated in the organic and sustainable nature of food and health products of the unique and clean natural environment. The 'Great River Murray Walks' proposal (Figure 5), for adventure trekking in the Renmark-Chowilla area, provides an innovative model for other similar trails that may traverse the region. Similarly, a range of other sectors and service businesses can be integrated with food tourism routes and enrich the Riverland experience e.g. food and beverage

outlets, health and fitness services, environmental education services, heritage education (irrigation history, old pumping stations), outback tourism operators (via Calperum and Taylorville stations), indigenous foods and culture, transport services (including boats), camping gear rental, IT services (mobile apps) etc.

Riverland stakeholders highlighted the potential of the Riverland as a destination for backpackers, who provide seasonal labour and, via their extensive social media and other networks, could act as regional ambassadors. The region may also be promoted as an affordable and healthy destination for young families, who may enjoy camping and recreation in an interconnected series of parks and natural attractions, again with horse-riding, cycling, boat and similar transport modes. Healthy walking and fitness trails for pre-retirees and retirees were other possibilities, again connected to food and beverage outlets and supported by the retail and service sector (including health and education).

Natural attractions of the region may also be interconnected, including RAMSAR wetlands and nature reserves, to promote ecological tourism, combined with education and interpretation.



Figure 5. The 'Great River Murray Walks' (Destination Riverland)

5.3. Linking Primary Industries, Entrepreneurship and Education

Key strengths of the Riverland region are the world-class irrigation system, highly mechanised and capital intensive manufacturing processes and one of the largest wine and fruit producers in Australia. According to the RDA's *Regional Roadmap 2013-2016 (Revised 2014)*, the region's success in primary industries' productions derive from the water use efficiencies and advanced technologies. To increase productivity, innovation, improve skills and fulfil the large-scale demand for clean, premium food and beverage products from China/ Asia, India and Middle East, arguably partnerships with education, research and innovation institutions are essential. This will not only generate opportunities for work placement and employment for upskilled workers, whose jobs will directly serve the industries, but also foster innovation by connecting primary industry and research groups.

In this regard, the Renmark High School Business Academy has been established to build entrepreneurship and business skills, and create pathways for graduates to build their own businesses. The academy cooperates with other schools in the region (e.g. Glossop, Loxton), so together they could form the hub of an education-primary industries cluster, as practised elsewhere (Box 5).

Box 5. Partnerships between schools and farmers

Lessons could be learned from Ms Julie Aldous, 2014 Rural Woman of Year (Victoria), who is pursuing the development of partnerships between schools and their rural communities, as well as career pathways supported by further education and universities. She developed the applied learning 'Mansfield Model', with placements to local farms, for skilled young people to choose careers in primary industries.

Such a cluster could involve universities and research, building upon existing collaboration and including University of Adelaide (entrepreneurship), UniSA (information technology) and the redeveloped Loxton Research Centre. The latter will be the nexus of irrigation research and innovation, facilitate improved outcomes for irrigation businesses and create economic diversification in the region, while attracting international delegations, conferences and conducting world class training.

It could tap into funding avenues such as the SA River Murray Sustainability Program (SARMS), which is aimed at ‘bringing the elements together’, improving irrigation efficiency, harnessing the expertise of allied industries, and improving regional economic development and innovation (see Appendix B).

Beyond irrigation, horticulture, and production of food and beverages, and consistent with the elements of the regional ‘brand’ described earlier, education could also encompass hospitality and tourism, health sciences, environmental studies, cross-cultural understanding and languages. This may be expected to attract more economic inflows into accommodation, food and beverage outlets, and retail and other services sectors. With the post-study work arrangements (Australian Government 2014) offered by the Australian Government, eligible graduates of a higher education degree will be offered extended options for working in Australia up to four years, which may attract further expertise and population to the Riverland. Other synergies may be found with relevant government agencies, both state and federal, and research institutes and centres such as the Resilience and Wellness Centre of SA Health and Medical Research Institute (SAHMRI).

6. ICT as a Linking Mechanism

As explained in Appendix D, clusters are a collective set of actors: firms, research organisations, education institutions, capital providers, public organisations and so on (see Figure 1). However, customers are arguably the most important element, with strategic partnerships being formed with customer organisations and regions in Australia and globally.

In addition to identity building and trust, paths and bridges have to be built to enable ‘traffic’ between these entities and collaboration.

In this regard, the Riverland RDA has developed a Digital Strategy (2014): ‘The Digital World negates the tyranny of distance and opens up the opportunity to connect with anyone, anywhere at any time’. Fundamental to implementing this strategy is the need to raise awareness, expand access, improve digital literacy and build community capacity in connecting to customer markets and facilitating connections and ‘traffic’ between cluster entities.

Virtual hubs may be constructed and form the basis of clusters and synergistic development, including the three examples outlined above. Smart internet entrepreneurs may be attracted to the Riverland, also collaborating within physical hubs (disused premises in the town) as per the Renewal SA initiative.

For example, to maximise access to overseas markets for clean, nutritious, premium food and beverages, a virtual hub may be created to bring various participants together, a cluster commons, promoting the regional brand and to fostering exchange of ideas and online discussion with customers and among firms, education institutions, research bodies and government, with connections to allied sectors e.g. health, environment, tourism. The internet presence of firms, via scanning of physical products, should not only promote their products and services but also highlight the overall regional brand. Websites may offer a virtual experience of the growing and production processes using online videos and the like, and may be produced in various languages, focusing on the Asian and Middle East markets.

Similarly, a virtual hub for tourist, harvest and nature trails may bring together various tourism providers (houseboats, cycling, ballooning and adventure trekking), allied to Destination Riverland. Moreover, web links may connect to allied-services and experiences e.g. food and beverage outlets, health and fitness services, environmental and heritage education, camping gear suppliers and the like. This connected up approach may extend to mobile apps, enabling trekkers to access products and services along the way e.g. riverboats.

Finally, a primary industry, entrepreneurship and education hub may enable school programmes (e.g. Redeveloped Loxton Research Centre, Renmark Business Academy) to connect with potential students and industry. Opportunities for international students to study in the Riverland may be highlighted, for placements in farms to be facilitated, and for research groups to support innovation in irrigation horticulture, agriculture and water efficiency. The Riverland's world class expertise in these fields may be showcased, attracting international delegations, trade fairs, conferences and training.

All such virtual hubs should reinforce the regional brand, and further facilitate synergies by being inter-connected. For example, global customers for premium produce may wish to explore tourist trails, to send students to study in the Riverland, and to collaborate on research.

7. Closing Comments

Generally, the world economy has seen a transition from primary/secondary industries/sectors to tertiary industries/sectors. Services industries in the tertiary sector have grown rapidly in most emerging economies as economic growth power engines. In the context of Riverland development, added value may be gained from the predicted future growth in the primary/secondary sector (food and beverages) by strengthening links with growing tertiary sectors such as health care, tourism, hospitality, educational and business services. Such a strategy may generate a larger economic multiplier effect throughout the region and further support the sustainability of primary sectors, especially when connected to that sector as we have suggested – all under the umbrella of a common regional vision, identity and brand.

Based on an assessment of the region’s key characteristics, vision and targets, a focus on *‘healthy products, healthy living, healthy river and environment’* may facilitate cluster formation in the region, offering a breakthrough for the region’s economic growth and employment. Clean nutritious, premium Riverland products can thus be vehicles for promoting the unique health, wellness, river and environmental attributes of the region, reinforced by links with healthy living, tourism, education and the like, and vice versa.

To capitalise upon new ventures in the primary and secondary sectors, the skills base can be strengthened by business and entrepreneurship training, accompanied by partnerships with the services sector (e.g. finance, marketing, management, distribution, ICT). Innovation can be increased via collaboration with research institutions, universities and organisations such as the redeveloped Loxton Research Centre.

Similarly, links and synergies with the tourism, hospitality, recreation and health sectors can add further value to food and beverage production. For example, a combination of tourism with agriculture (in the form of agri-tourism) would greatly increase the added value of local agricultural produce and increase the agricultural sector’s revenue returns. In addition, more health resort, healthy living and recreation facilities to cater for the growing pre-retirement and aging population needs in the region will not only increase jobs in those sectors, but also increase local

consumption of healthy, nutritional food and beverage products, essential oils and the like, thus stimulating growth and employment within the agricultural and horticultural sector.

As a general development strategy, those tertiary sectors that demonstrate better fit to the region's natural resources and endowment, complementing the growth in premium food and beverages, should be encouraged and supported. For example, these may include ICT, finance, marketing, export, immigration and management services. A further consideration is to attract and guide external investment into service sectors that evidence promising market demand. This investment would represent a positive shock factor to the region's economic system and can create a multiplier effect upon other sectors, including investment in regional infrastructure (e.g. transport, conference, health and education).

This project has sought to map cluster potential and to highlight the things that need to be in place at a regional level, such as the consideration of a regional brand, finding synergies among regional development themes and building appropriate networks to enable progress towards creation of specific clusters on a longer term basis.

The report puts forward an overall regional strategy for 'Thinking, linking, leveraging and maximising' opportunities for joined up approaches, and is intended to generate discussion among various stakeholders and lead to more in depth investigations.

Appendix A: Statistical Profile of Riverland Region

	Barmera	Berri	Loxton	Renmark and Paringa	Waikerie
Population	6,622	4,149	5,345	9,453	6,380
Population groups (by age in %)					
• Less than 25	30.0	31.9	30.4	30.8	27.6
• Between 25 to 44	22.2	24.8	22.4	24.3	21.7
• Between 45 to 64	29.9	25.0	26.1	27.7	31.0
• 65 and over	18.0	18.4	21.1	17.0	19.6
Indigenous population (%)*	3.7	6.2	2.3	1.8	2.0
Total born overseas population (%)*	16.8	17.9	10.2	20.6	15.1
Speaks a language other than English at home (%)*	10.6	8.8	4.0	14.3	4.8
Persons with post school qualification (%)*	42.7	46.7	43.0	42.7	42.6
Total Number of Businesses (no.)	768*/752	443*/440	609*/600	1,006*/978	679*/663
Business Entries	68	36	58	87	50
Business Exits	103	45	69	107	66
Top 5 Business by Industry (no.)	Agriculture, Forestry & Fishing (388) Construction (90) Retail Trade (35) Manufacturing (32) Transport, Postal & Warehousing (29)	Agriculture, Forestry & Fishing (95) Rental, Hiring & Real Estate Services (49) Retail Trade (48) Construction (41) Professional Scientific & Technical Services (33)	Agriculture, Forestry & Fishing (262) Construction (64) Retail Trade (39) Other Services (37) Rental, Hiring, & Real Estate Services (34)	Agriculture, Forestry & Fishing (434) Construction (105) Rental, Hiring, & Real Estate Services (71) Retail Trade (54) Financial & Insurance Services (39)	Agriculture, Forestry & Fishing (306) Construction (60) Rental, Hiring, & Real Estate Services (48) Retail Trade (42) Other Services (29) Transport, Postal and Warehousing (28)
Top 5 Occupation of employed persons (%)*	Labourers (18.5) Managers (17.4) Technicians & Trade Workers (14.0) Professionals (11.5) Community and Personal Service Workers (11.0)	Labourers (18.2) Professionals (17.1) Technicians & Trades (12.9) Community & Personal Service Workers (12.6) Clerical and Administrative Workers (12.4)	Labourers (18.6) Managers (16.1) Professionals (14.1) Technicians & Trades (13.3) Community & Personal Service Workers (10.5) Clerical & Administrative Workers (10.3)	Labourers (23.9) Managers (16.2) Technicians & Trade Workers (11.1) Professionals (10.6) Clerical and Administrative workers (10.3)	Labourers (22.5) Managers (20.9) Technicians & Trade Workers (11.7) Professionals (9.8) Community & Personal Service Workers (9.7)
Top 5 Employment by Industry (%)*	Agricultural, Forestry & Fishing (14.8) Health Care & Social Assistance (12.7) Manufacturing (12.7) Retail Trade (11.2) Education & Training (7.1) Accommodation & Food Services (6.1)	Health Care & Social Assistance (15.9) Manufacturing (10.6) Retail Trade (9.9) Accommodation & Food Services (9.2) Education & Training (8.6)	Agricultural, Forestry & Fishing (16.1) Health Care & Social Assistance (14.6) Retail Trade (11.5) Education & Training (8.7) Manufacturing (7.5)	Agricultural, Forestry and Fishing (19.9) Retail Trade (11.6) Health Care & Social Assistance (11.2) Education and Training (8.6) Manufacturing (6.2)	Agricultural, Forestry and Fishing (23.2) Retail Trade (10.4) Manufacturing (10.1) Health Care & Social Assistance (9.4) Education & Training (6.9) Accommodation & Food Services (6.1)
Unemployment rate (%)*	6.7	8.8	5.1	5.6	4.9
Tourist Accommodation Establishments with 15 or more rooms (no.)	3	2	1	6	2
Conservation and Natural Environments (ha)**	31,719.3	124	193	15,343	174,022
Production from Relatively Natural Environments (ha)**	0	0	0	0	70,448.1
Production from Dryland Agriculture and Plantations (ha)**	9,713	117.5	7,795.3	51,825	304,046.7
Production from Irrigated Agriculture and Plantations (ha)**	8,036.8	292	4,668.5	15,170	12,563.9

Appendix B: Riverland's Funding Opportunities

Premier's Research and Industry Fund (PRIF) - Innovation Voucher Program

This program supports collaboration between Small to Medium Enterprises (SMEs) and Research Service Providers (RSPs) to facilitate and encourage technological innovation and industry diversification in priority areas. Central to the program is stimulating innovation in SMEs to develop new manufactured products or systems and drive productivity and business profitability. These areas include high value manufacturing, mining and resources, products and services, such as medical devices, engineering and design, food processing and production, environmental monitoring and clean technologies.

RSPs will be contracted to provide research and development services to a SME for a specific project agreed upon by both parties. These services could include, but are not limited to:

- Innovative production techniques
- Proof of concept
- Testing of prototypes
- Innovative design

Vouchers with a value between \$10,000 and \$50,000 are available.

Source: Grants - RDA Murraylands & Riverland, South Australia

Stronger Regions Fund

This program initially seeks to help industry adjust to the wind-down of manufacturing sector. The funding aims at helping communities with poor socioeconomic circumstances and high average unemployment, by improving local facilities, creating local jobs and building needed infrastructure. The Stronger Regions Fund is expected to replace the Regional Development Australia Fund (RDAF).

Location: National

Funding Amount: \$20,000 and \$10m

Available Funds: \$200m per year for 5 years (\$1b total)

Opening Date: 1.7.2015

Closing information: Will require 1:1 matched funding basis

Source: Grants - RDA Murraylands & Riverland, South Australia

South Australian River Murray Sustainability Program (SARMS)

The program comprises two funding programs:

1. The \$240 million Irrigation Industry Improvement Program (SARMS-3IP)

The program allocates funding through three distinct funding streams for maximum and long-term benefits to river communities:

- a. Irrigation Efficiency Stream One (\$80 million)
 - b. Water Return Stream Two (\$40 million)
 - c. Irrigation Industry Assistance Stream Three (\$120 million)
2. The \$25 million Regional Economic Development (RED)

RED comprises three programs aiming to harness the expertise of allied industries and advance irrigation research:

- a. Regional Development and Innovation Fund Sub-Program (\$12.5 million)
- b. Industry-led Research Sub-Program (\$5 million)
- c. Loxton Research Centre Redevelopment (\$7.5 million)

Source: Funding Programmes - Department of Infrastructure and Regional Development, Australian Government

Premium Food and Wine Co-Innovation Cluster Program

The State Government is making almost \$500,000 in grants available for Riverland, Murraylands and Limestone Coast food and wine businesses looking to grow through innovation. The \$2.7 million, four-year Premium Food and Wine Co-Innovation Cluster Program is aimed at helping food and wine businesses in these regions to explore new opportunities for growth by forming and developing industry clusters.

Round 2 is now open, with successful applicants eligible for grants totalling \$490,000. This grant opportunity could assist businesses in productivity improvement and competitiveness. The application process for Round 2 grants will open on Friday January 30, and will close on Friday March 27. Funding deeds with successful applicants should be completed by the end of May. Individual grants of up to \$70,000 are available.

Source: South Australian Tourism Commission: Corporate Site

Appendix C: SA Strategic Plan Priorities and Targets

The Riverland Futures Taskforce (2010) viewed the Riverland vision and priorities within the context of priorities and targets within the South Australian Strategic Plan (Government of South Australia 2011, p.20), with ‘premium food and wine from our clean environment’, ‘every chance for every child’ and ‘growing advanced manufacturing’ seen as most applicable to the Riverland.

However, most of the priorities under the SA Strategic Plan may be applied to the Riverland in some way. Of most importance, they can all be linked to and strengthen the food and wine/beverage sector, and the priority of ‘premium food and wine from our clean environment’. This integrated approach is also likely to contribute to achievement of goals and targets within the SA Plan. Some examples are: Cycling (target 2); Tourism industry (target 4); Aboriginal wellbeing (target 6); Business investment (target 38); Food industry (target 40); Regional population levels (target 46); Jobs (target 47); Ageing workforce participation (target 48); Broadband access (target 57); Online business (target 58); Climate change adaptation (target 62); and Renewable energy (target 64).

For example, ‘Safe communities, healthy neighbourhoods’ promotes people coming together and socialising in safe public spaces such as playgrounds or parks for physical activity and thus contribute to lifestyle diseases such as obesity. It encourages regular exercise and choice of nutritious food, also walking or cycling to local services. In this regard, the healthy clean environment of the Riverland has much to offer. In addition, as the Taskforce highlighted, a comparative advantage of the Riverland is that it is ‘an affordable place to live’, and to this can be added affordable land.

Moreover, ‘creating a vibrant city’ need not just apply to Adelaide, but also Regional towns such as Renmark, Loxton, Berri, Waikerie, Barmera and others in the Riverland. Similar to Adelaide, many young people are leaving, and to retain these will require more lifestyle and career choices, and attracting talented people and business investors from around the world. ‘The state priority of ‘realising the benefits of the mining boom for all’ does not just apply to mining (of which Riverland has little) but also energy development, such as solar and wind (RDA Murraylands & Riverland 2014, p.15) as the Riverland enjoys abundant sunshine and has strong wind currents. Energy

projects can help regional towns transform to be ‘larger, resilient and liveable’ and ‘employ a diverse workforce’.

SA also has policies and priorities related to climate change, with a climate change adaptation plan for the Murray-Darling Basin (that includes Riverland) having been launched in 2014 (Natural Resources SA Murray-Darling Basin 2014).

Thus, a wider range of state and federal government departments, agencies and other organisations and actors than described in the Roadmap (RDA Murraylands & Riverland 2014, p.20) may be able to connect and contribute to Riverland regional development. These many include, for example, research institutes such as the SA Health and Medical Research Institute (SAHMRI), which has a Wellbeing and Resilience Centre (SAHMRI 2014).

Appendix D: Cluster Theory and Models

A cluster is a group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. More than a single industry, clusters encompass an array of linked industries and other entities important to competition. Furthermore, in a cluster, the whole is greater than the sum of the parts (Porter 2000). The notion of clusters may have its origins in systems theory, where a system is defined by a purpose or intent for a group of elements, such as competitiveness. The attributes of a system include purposeful action, boundary, interconnected elements, and transformation (Bertalanffy 1976).

Zhu et al (2015) put forward an integrated model for development of a stronger community, based upon earlier work of Xing, Ness and Lin (2013) that used systems theory to enable synergistic community transformation. The model consists of eight major components i.e. common goals or purpose, a boundary and context, networks of actors, their capabilities, assets and resources, and mechanisms that enable interconnections and synergies between the various actors and elements of the system. The network of actors is a consortium of heterogeneous stakeholders, such as citizens, corporations, government agencies, research and academic institutions, financial institutions and the like, which have a similar vision and intention for value co-creation to achieve the desired transformation.

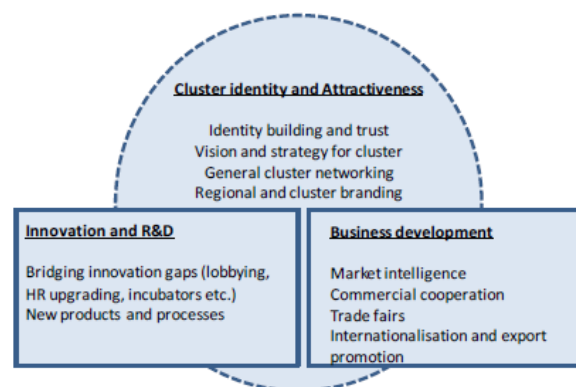


Similarly, Sölvell and Williams (2013) see clusters as a collective set of actors: firms, research organisations, education institutions, capital providers, public organisations and so on (see Figure 6).

Figure 6 (left): Constructing the cluster commons

Figure 7 (right): Three types of activities performed by cluster organisations

(source: Sölvell and Williams, 2013)



A ‘cluster commons’ is the place where cluster actors meet, with cooperation as the main mechanism. Importantly, paths and

bridges have to be built to enable ‘traffic’ and collaboration. The common pool of resources consists of some level of:

- Trust - to allow exchange of ideas
- Common identity - to stimulate construction and use of the commons
- Structure - to facilitate networking and meetings (the paths and bridges).

According to Sölvell and Williams (2013), the cluster has to be constructed by the different actors in the cluster, although cluster organisations (Figure 7) may be set up as ‘meta-organisations with the sole purpose of ‘building the commons’. In this regard, cluster organisations rest on three pillars of activities. Firstly, as part of overall cluster identity and attractiveness, they need to build a sense of belonging and trust, facilitate networking, and develop a vision and strategy accompanied by ‘regional and cluster branding’. Secondly, the organisation helps build bridges (e.g. to research institutions) and stimulate traffic across the innovation gaps. Thirdly, foster business development among member firms including export promotion and commercial cooperation. With a common identity, vision, brand and trust, continuous traffic may then occur between various firms and other actors (e.g. universities, researchers, government and financiers), enabling new ideas, concepts, products, processes and services to be tried, tested and developed. Thus, regional competitiveness may be enhanced to the benefit of all participants.

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