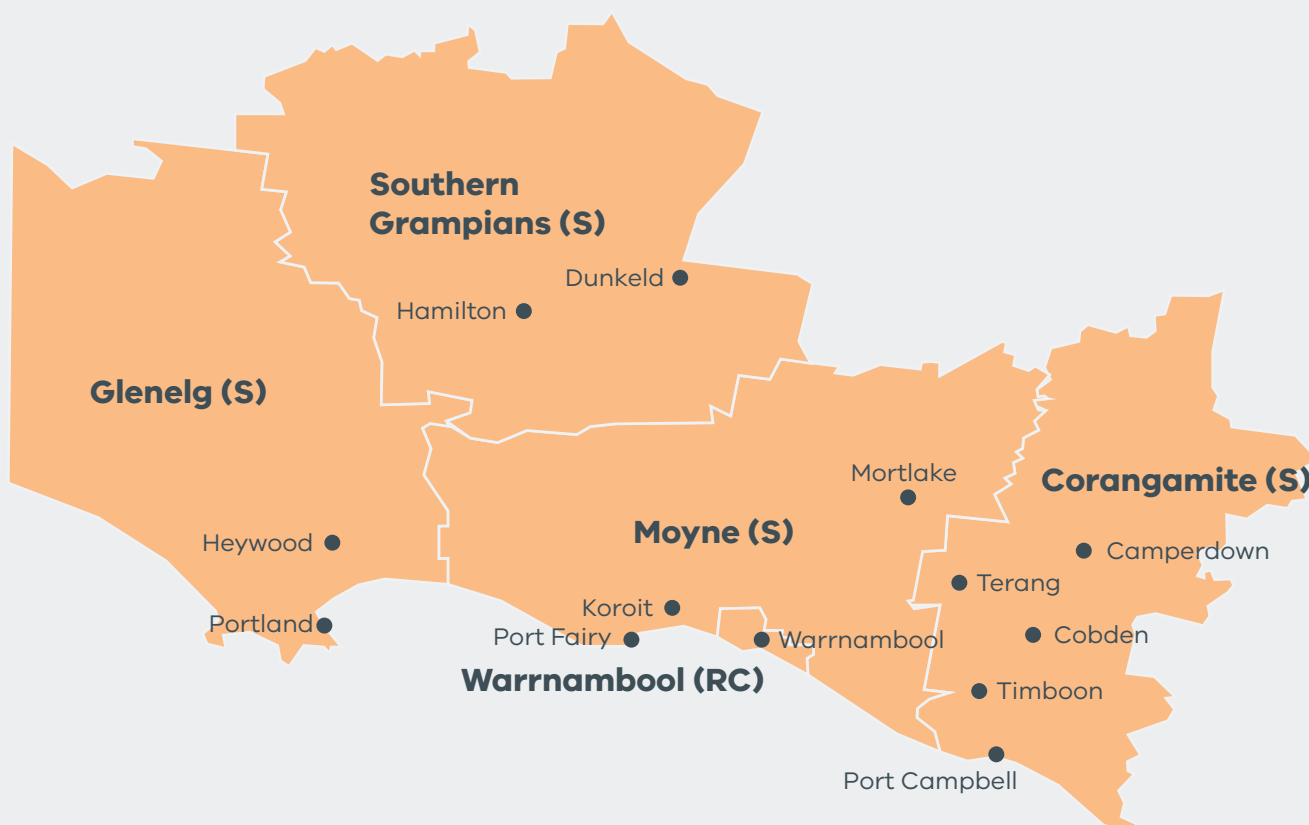




# The Great South Coast



**RC** - Rural City

**S** - Shire



# Contents

<b>1. Foreword</b>	<b>3</b>
<b>2. Executive Summary</b>	<b>4</b>
<b>3. Introduction</b>	<b>8</b>
<b>4. Acknowledgements</b>	<b>9</b>
<b>5. Economic indicators reflect a diverse economy that faces persistent workforce challenges</b>	<b>10</b>
<b>6. Industries have growth potential if labour shortages and economic conditions are met</b>	<b>14</b>
<b>7. Collaboration can address shared challenges and unlock the region's potential</b>	<b>16</b>
<b>8. Each industry has unique skills and training needs</b>	<b>19</b>
<b>9. Implementation should occur at a local level</b>	<b>27</b>
<b>10. A one-year implementation is proposed</b>	<b>28</b>
<b>Appendix A: Skills demand profiles by industry</b>	<b>29</b>
<b>Appendix B: Current training projects underway</b>	<b>55</b>



# 1. Foreword

## A message from the Minister for Training and Skills



**The Hon. Gayle Tierney MP**  
Minister for Training and Skills

The Victorian Government is committed to make Victoria the Education State. Through the *Skills First* reforms of the training and TAFE sector, the Victorian Government has committed to an ongoing annual investment in training and workforce development for Victorians of \$1.2 billion. Under these reforms, contestable funding will continue to deliver responsive and relevant training and be complemented by closer management of the system.

The alignment of training and pathways with industry need is a key priority for this government. The appointment of the first Victorian Skills Commissioner and the establishment of the Industry Engagement Framework (IEF) support this and form a key pillar of the *Skills First* reforms.

As part of the IEF, the establishment of ten Industry Advisory Groups and implementation of Regional Skills Taskforces and Industry Skills Taskforces provides a clear voice for industry to ensure that Victoria's government funded training system can best serve the needs of our local economy and communities.

It is important that students are given a choice when it comes to developing the skills that they need for the occupation they wish to pursue. It is equally as important for industry and employers to have a say in this training to ensure that these students are skilled for the current and future workforce.

Genuine engagement with industry is required to achieve this. The Regional Skills Taskforce component of the IEF provides a structured channel for industries to identify workforce training needs and promote quality training pathways that lead to skills development and jobs across regional and rural Victoria.

This process was first piloted in the Mallee region of Victoria in 2017. The process and outcomes resonated well with local industry and led to the development and implementation of local solutions to support the skilling and training needs of the Mallee region across key industries.

The Victorian Skills Commissioner has since established and facilitated a Regional Skills Taskforce for the Great South Coast region to achieve similar outcomes. This Taskforce provides a voice for local industries and employers across the municipalities of Corangamite Shire, Glenelg Shire, Moyne Shire, Southern Grampians Shire and the City of Warrnambool.

The 2018 Regional Skills Demand Profile - The Great South Coast is an important step in understanding the unique skills and training needs of the region and how they support local industry now and into the future. The report draws attention to the value of VET pathways and identifies obstacles in training and skills that industry is currently facing or is likely to face in the future.

The local insights contained in this report underpin our collective efforts to strengthen the Victorian VET system through high quality and appropriately funded training, clear and accessible training pathways and innovative delivery. Implementation of the recommendations in this report will be supported through available mechanisms and funding streams such as the Workforce Training Innovation Fund (WTIF) and the Regional and Specialist Training Fund (RSTF).

I would like to thank the Great South Coast Regional Skills Taskforce for their invaluable contribution to the evidence base needed to strengthen training and employment outcomes for Victorians. We are committed to working with local industries within the region to ensure they can access appropriately skilled individuals to undertake the occupations of today and into the future.

All users of the VET system must come together in partnership to ensure the momentum of outcomes and benefits delivered under *Skills First* reforms are sustained. The Victorian Government will continue to partner closely with industry, TAFE and other training providers to deliver on our shared aspirations as the Education State, where every Victorian can train for a brighter future.



**The Hon. Gayle Tierney MP**  
Minister for Training and Skills



## 2. Executive Summary



**Neil Coulson**  
Victorian Skills Commissioner

The Great South Coast, encompassing Corangamite Shire, Glenelg Shire, Moyne Shire, Southern Grampians Shire and the City of Warrnambool, has potential for economic growth. A supply of locally skilled workers to underpin this growth is critical. However, the VET system is not always aligned to the current and future skills needs of local employers. A demand driven response can help strengthen this alignment to ensure current and emerging skills shortages are addressed and workers are skilled, productive and employable.

The Great South Coast Regional Skills Taskforce (the Taskforce) was led by the Victorian Skills Commissioner (VSC) independently of, but in parallel to, Regional Development Victoria's Regional Partnerships. Comprising of industry leaders across the region, the Taskforce provided targeted advice on the skilling needs of the region and informed the development of this regional skills demand profile. Over the duration of the Taskforce, local employers who represented the demand side of the market were engaged, through eight industry round tables, to identify where future jobs may be coming from. The Taskforce then explored appropriate pathways and skills requirements.

The future prosperity of regional centres is dependent on making them attractive places to live, learn and work. Skilled local jobs create new opportunities for youth and other residents to find rewarding careers with flow-on benefits across the region's economy and community. Without this, economic growth will either stall or become dependent on outside labour. It follows that alignment of skills and training provision to industry demand is critical to realise the benefits for the Great South Coast that flow from a strong local labour force and regional economy.

The Regional Skills Taskforce model supports a strong future for Victoria's regions by working locally to identify job opportunities, create pathways and gear the VET system to support and promote future local careers. This includes working with the region to identify skills gaps and thin markets and, where appropriate, link up with local training providers, provide feedback and create partnership opportunities with employers to address the skills gaps.

Industry, TAFE, Group Training Organisations, other Registered Training Providers (RTOs), schools and government will be integral to providing the skills and pathways required to meet future economic demand. Strong partnerships, linkages and sustained collaboration are required to address systemic challenges and ensure the efficacy and equity of training and alignment to employment outcomes for all students in the Great South Coast.

### **Economic indicators reflect a diverse economy that faces persistent workforce challenges**

The Great South Coast's industry profile reflects a highly diverse economy. Agriculture accounts for 16.1% of annual real gross value added and is a major driver of the region's economy. Strong local and international demand has also led to major growth in food manufacturing, forestry and aluminium production industries. Similarly, the Great South Coast's unique location is a geographic competitive advantage in aquaculture, wind generation and tourism in the region.

Strong linkages across these major industries creates demand for the region's transport, automotive, port operation, heavy manufacturing and construction industries. These sectors are important enablers of the region's economy. Similarly, the flow of income from major industries, enabling industries and households generates demand for services such as retail and hospitality across the Great South Coast. The healthcare and social assistance industry is also significant and accounts for approximately 7.8% of annual gross value added and 12.9% of the region's workforce.

Approximately 11,200 businesses are based in the region with 98% of firms employing less than 20 workers. The few large employers in the region therefore play an important role in the labour market. The public sector is also an important employer with around 6,500 employees, or around 13% of total employment. Across all businesses in the region, 94% have a turnover of less than \$2 million with around 40% having a turnover of \$200k-\$2m.<sup>1</sup>

Employment is clustered around major cities in the region. For this reason, the region is best understood as a collection of towns with strong location connections. However, there are commonalities that exist at a regional level.

While real gross value added has grown at approximately 3% per annum over the last few years, broader labour market indicators reflect several industry and workforce pressures for the region. Unemployment rates in the Great South Coast are relatively low at 4.8%, approximately 2 percentage points lower than the state average. This manifests as skills and workforce shortages across key roles and industries.

A similar trend is observed in youth unemployment rates which currently sit at 9.5% (or approximately 1,100 people) for local residents aged 15-24 and is approximately 4.4 percentage points below the state's average. This is partly attributed to a tendency for young people to leave the region for further study and/or employment opportunities and the challenge of attracting and retaining young workers and families to the region (both intranationally and internationally). However, employers also report that their demand for young workers to fill entry level roles exceeds supply across the region. This highlights the importance of ensuring effective career pathways contextualised to the Great South Coast economy that better link and transition young people into the local workforce.

<sup>1</sup> Australian Bureau of Statistics (ABS) February 2018, Counts of Australian Businesses, including Entries and Exits, Jun 2013 to Jun 2017, Businesses by Local Government Area by Industry Division by Employment Size Ranges, June 2017 (a) (b)

Challenges associated with an ageing population and workforce are also more pronounced for the Great South Coast. This is attributed to a relatively flat population growth rate and older demographic. For instance, the share of persons aged 55 and over in the Great South Coast is 8 percentage points higher than the state's share. Local employers acknowledge that existing workforce challenges and an ageing population will place further pressure on their operations. These issues need to be deeply understood and subsequently managed to help unlock the region's economic potential.

### Local industries exhibit potential for growth if labour shortages and conditions are met

Major industries across the Great South Coast exhibit potential for growth. Current and anticipated intranational and international export demand for dairy, meat, seafood and forestry products should support the region's agriculture, aquaculture, food manufacturing and forestry industries. In 2016-17, these industries constituted almost 20 percent of the region's total gross value add. This is underpinned by several large employers that employ significant portions of the population in local areas, particularly in the secondary processing sector.

Close linkages across these sectors are likely to see demand for enabling industries such as transport, automotive, port operations, construction and heavy manufacturing follow closely. Likewise, the region's unique geographic location means it is well placed to support demand for aquaculture, wind generation and tourism. Demand for these major and enabling industries is likely to flow into local service industries via households and the workforce.

Major reforms such as the National Disability Insurance Scheme (NDIS) and an ageing population are predicted to translate into significant demand for services and workers in healthcare and social assistance. The outlook for local retail and hospitality industries is stable due to flat population growth rates and relatively stable economic conditions, where workforce demand may increase if the benefits from planned investments in tourism are realised over a broader horizon.

However, while the outlook of local industries across the Great South Coast is positive, its economic potential is dependent on the region's capacity to address existing workforce challenges and shortages. For instance, automotive and transport industries have reported shortages in critical roles. This includes truck drivers, diesel mechanics, automotive electricians, panel beaters and detailers. Similar challenges have been reported across other industries.

Employers in industries with the greatest need for labour report a disconnect where they are desperate for entry level workers but youth are unaware or disinterested in working in these roles. In many cases young people often return to these industries after a few years trying to find other work, suggesting more can be done to smooth these transitions. Similarly, all industries have identified challenges in attracting skilled professionals, with opportunities to strengthen local university pathways in the region.

Furthermore, the future trajectory of industry will also depend on the outcomes of, and how businesses respond to, various environmental conditions. For example, the outlook in agriculture, forestry, aquaculture and manufacturing will also be underpinned by future export demand, commodity price, accessibility of inputs such as water and land, and the strength of existing and new infrastructure. Broader enablers or barriers such as prevailing internet blackspots in more rural regions of the Great South Coast also need to be addressed to support the region's potential.

Ultimately, the way that training and education responds to labour shortages, how enablers are supported, and the extent to which favourable economic conditions are realised will influence the economic trajectory for the region.

Table 1: Preliminary outlook on job growth by industry<sup>2</sup>

Industry group	2016-17 Labour force	Taskforce estimate of 2018-2021 workforce growth (CAGR)	Total required workforce demand (including replacements)
Agriculture and aquaculture	~8,450	-1.0%-1.0%	+500-1,100
Food manufacturing	~2,100	0.0%-3.5%	+50-450
Forestry	~350	0.0%-3.5%	+50-100
Healthcare and social assistance	~6,600	3.0%-8.0% <sup>3</sup>	+900-2,700 <sup>4</sup>
Heavy manufacturing and construction	~4,600	2.0%-4.0%	+450-950
Tourism, retail and hospitality	~10,800	0.0%-3.0%	+350-1,700
Transport, automotive and port operations	~2,750	0.0%-4.0%	+150-650

<sup>2</sup> CAGRs refer only to new additional growth above current workforce estimates. Full time equivalent (FTE) ranges (last column) includes additional workers required due to estimated workforce exits (e.g. retirement) and net regional migration. Forecasts excludes FTE associated with large short-term projects that are likely to contract metropolitan or international workforces (e.g. wind tower construction, large infrastructure projects, etc.). Forecasts focus on key industry groups for the Great South Coast only. Other industries such as professional services, education and training, etc. are excluded from this outlook. Source: Office of the Victorian Skills Commissioner, Nous Group and Deloitte Access Economics in consultation with the Regional Skills Taskforce and industry representatives, 2018;

<sup>3</sup> A high growth scenario assumes full rollout of NDIS, family violence reforms and additional funding for aged care and early childhood education through expansions to Commonwealth Home Support Program, residential care and three year old kindergarten.

<sup>4</sup> This forecast assumes full implementation of planned government investment in healthcare and social services for the Great South Coast region

The estimates are not an exercise in precision but focus on an order of magnitude for future skills demand. The value of this model is in the use of available data with validation from industry to understand and reflect variables not captured or where data is not current. This provides a complement to planning underpinned by activity on the training supply side of the market. The estimates of additional workforce demand for the industry reflect predicted level of industry growth, and therefore do not include existing vacancies.

It should be noted that should estimates be realised, the Great South Coast region is likely to experience increased workforce pressures and labour shortages. This is reflected in already high labour participation rates, low unemployment rates, the region's ageing workforce and reported challenges to filling existing vacancies. Without skilled workers in the pipeline and the attraction of new resources, the Great South Coast's opportunity for growth may be missed. As such, sustained and collaborative action from industry, schools and training providers is imperative.

### Industries share common opportunities to unlocking the region's potential

The Taskforce identified a series of collective challenges that have contributed to the region's difficulties in attracting, training and retaining local skills and workers across local industries. Addressing these challenges is both an economic and social imperative. The Taskforce identified several opportunities, which through sustained collaboration between industry, trainers and educators, can help to address these challenges and unlock the region's potential.

Table 2: Key opportunities in VET by industry

Industry	Opportunity
<b>Agriculture and aquaculture</b>	Improve the industry readiness of entry level workers in seafood processing and aquaculture.
<b>Food manufacturing</b>	Review units of competency in biosecurity and quality assurance to ensure they are current and suited to industry needs.
	Foster local expertise in dairy processing, dairy technology and manufacturing.
<b>Forestry</b>	Align food industry licencing and ticket* standards to the new Food, Beverage and Pharmaceutical Training Package.
	Improve the training quality for tickets to ensure operators are better equipped to use modern machinery, plant equipment and technologies.
<b>Healthcare and social assistance</b>	Address current training gaps to provide local pathways for dental assistants and allied health assistants.
	Strengthen training to promote workforce mobility, adaptability and flexibility across specialisations.
<b>Heavy manufacturing and construction</b>	Accelerate development and provision of new courses to supply high priority skills (e.g. industrial coating).
	Explore training options to strengthen an electrical apprentice's ability to work in industrial settings.
<b>Tourism, retail and hospitality</b>	Explore innovative options for managers, supervisors and owner operators to access training outside trading hours. Alternate models need to minimise time away from the workplace and provide immediate returns from new knowledge.
<b>Transport, automotive and port operations</b>	Improve diesel mechanic, automotive electrician, panel beater and detailer apprenticeship numbers.
	Scope feasibility for a hybrid maritime-engineering qualification to suit local skills needs in port operations.

\* Licencing can relate to activities such as driving a forklift, dogging and rigging, and operating a boiler steam turbine or reciprocating steam engine. Tickets can include working at heights, working in confined spaces and traffic management.

Three key opportunities for the region are outlined below, and further opportunities are discussed in detail in later sections.

1. Increase exposure of high school students to local careers in the classroom and on-the-job.
2. Lift language, literacy and numeracy (LLN) standards and support development of transferable skills of young workers across industries.
3. Address shortages in skilled professionals. This may include lifting current university numbers locally and tapping into the international student graduate market.

### Each industry in the Great South Coast has unique skills and training needs

The Regional Skills Taskforce and industry leaders across the Great South Coast identified a series of opportunities unique to each industry group. The VET system, in collaboration with industry, must play an important role in capturing these opportunities to ensure the nuanced training and skilling needs of industry are met. Key opportunities for each industry are outlined below, and further opportunities are discussed in detail in later sections.



Industries across the region also report challenges in attracting skilled professionals (e.g. accountants, agronomists, forest managers, kindergarten teachers, physiotherapists and speech pathologists). Opportunities to address this issue include lifting university numbers locally, strengthening university pathways to employment in the region, and accessing the international student or labour market.

**Implementation should occur at a local level**

The legacy of the Great South Coast Regional Skills Taskforce will depend on continued industry engagement to ensure implementation success. Success will require this collaboration to extend to TAFE, other training providers, schools, universities and government to fully realise the benefits for the regional economy and local community. The unique employer and industry profile of the region indicates that rather than a coordinated regional response, collaboration at an industry level is likely to offer the greatest value. The OVSC is committed to working with these industries in the region to address the opportunities identified in this report. This includes supporting the development of region relevant career advice that is contextualised towards the skilling demands of the region. There are also challenges with the accessibility of VET in more remote parts of the region as the majority of courses which require on the job training are available in the Warrnambool area. For example, there is demand for training to be provided in the region in management and leadership for agriculture and light and heavy automotive technician training.

**A one-year implementation timeline is proposed**

There is an imperative for implementation to begin and progress quickly. The potential of the region is significant, but the workforce must be available to support it. A series of steps are proposed over the next 12 months to begin addressing the challenges and opportunities in training for industries in the region.

Industry is a key stakeholder in Victoria’s training system. This report outlines their understanding of the skills needs and challenges for the Great South Coast and where the focus is required to ensure the economic potential of the region is realised. The Taskforce has completed the first step in identifying the current gaps and potential opportunities to better align the VET system with industry needs. Implementation of initiatives to address the findings raised in this profile represents the next step in capitalising on the opportunities to align the provision of VET in the region with the current and future demand of industry.

Figure 1: Road map for implementation

Key actions	2018		2019				2020	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Refer priority issues to the Great South Coast Regional Partnership.								
Establish local governance mechanisms to support implementation.								
Advise RTOs on focus of the 2018 Regional Skills Demand Profile.								
Progress funding proposals under WTIF and RSTF.								
Schedule implementation review.								
Provide access to an OVSC staff member to support implementation.								

### 3. Introduction

Demographic, policy, technological and industry change will impact the nature of work and the skills required across Victoria. It is an economic imperative that the VET system is aligned with the current and future skills demand of industry. A demand driven response is required to address current and emerging skills shortages and ensure workers are skilled, productive and employable.

To support this direction, the Office of the Victorian Skills Commissioner (OVSC) piloted a Regional Skills Taskforce in the Mallee as a key component of its Industry Engagement Framework. Comprising of industry leaders across the region, the Taskforce provided a structured avenue for industry to provide advice on the regional outlook and future skills and training needs of the region. The success and outcomes of the Taskforce in the Mallee has prompted the establishment of a similar taskforce in the Great South Coast, with additional taskforces anticipated for other regions within Victoria from 2019 onwards.

In collaboration with the Great South Coast Regional Skills Taskforce, the OVSC has prepared this report, a 2018 Regional Skills Demand Profile. The profile provides an economic outlook for the region, including a short to medium term view on labour, skills and training requirements by key industry groups. This process was conducted independently and in parallel to the Victorian Government's Regional Partnerships. It is intended to provide an evidence base, from the perspective of industry, on:

- how the training system can better support the local economy and jobs
- potential investments and interventions to meet regional skills demand and development
- opportunities to address pathways, thin markets and skills gaps to improve employment outcomes

Additionally, a series of broader consultations with industry were conducted to provide a richer industry perspective on the challenges and opportunities for the region. To support future policy and planning, industry workforce forecasts were also developed in consultation with and validated by the Taskforce.

The process for each Regional Skills Taskforce draws on the rich level of data held between governments and industry. It is noted that Victoria's regional economy is highly dynamic, where predictions made in the past are not always reflective of what is likely to happen in the future. Employer forecasts of investment and labour market implications, made possible through the independence of this process, have been important for validating historic data on demographics and training supply without which the risk of further misalignment would have been amplified.

This process represents a step in better aligning VET with the current and future needs of local industry. While achieving alignment is an important step in maximising local job opportunities, the onus remains on all stakeholders to sustain ongoing collaboration to ensure implementation success. While student choice remains a feature of the VET system, it is also important to present a profile of the region's future, including demand, to allow local students the opportunity to make informed decisions about their pathways.



## 4. Acknowledgements

The OVSC would like to acknowledge the time, contribution and insights of the Taskforce (Table 3) and additional representatives from industry, local government, training providers and related agencies. The findings in this report would not be possible without their openness, generosity, expertise and commitment to the regional economy and community.

Table 3: Great South Coast Regional Skills Taskforce members

Name	Position	Organisation
<b>Kirsty Appleton</b>	General Manager, Human Resources	Warrnambool Cheese and Butter Factory
<b>Gary Howden</b>	Franchise Owner	Telstra Franchise Group
<b>Peter Chellis</b>	Plant Manager	Portland Aluminium
<b>Lindsay Ferguson</b>	Regional Manager	WestVic Dairy
<b>Shannon Curran</b>	Operations Manager	Port Of Portland
<b>Doreen Power</b>	Chief Executive Officer	Lyndoch Living
<b>Brendan Ryan</b>	Contract Manager	TW Power Services Pty Ltd
<b>Bruce Anson</b>	Chief Executive	Warrnambool City Council
<b>Craig Fraser</b>	Director, Primary and Community Services	South West Healthcare
<b>David Johnson</b>	HR, EHS, QNDT and Services Manager	Keppel Prince Engineering
<b>Robert Lee</b>	Service Manager	Callaghan Motors
<b>Kerry Nelson</b>	CEO	Mpower
<b>Luke Thorpe</b>	Operations Manager	Yumbah Aquaculture
<b>Brian Williamson</b>	Managing Director	Porthaul
<b>Anthony Walsh</b>	Regional Manager – Green Triangle	PF Olsen Australia
<b>Jason Rodger</b>	Director	Rodger Constructions
<b>Margaret Donehue</b>	Secretary	South West Trades & Labour Council

\*Renee Anyon, Human Resources Manager – West, Warrnambool Cheese and Butter Factory, represented Kirsty Appleton on the Taskforce as required.

\*Heidi Van Es, Regional Extension Officer (Young Dairy Network), WestVic Dairy, represented Lindsay Ferguson on the Taskforce as required.

\*Garth Turner, Senior Forester, PF Olsen Australia, represented Anthony Walsh on the Taskforce as required.

## 5. Economic indicators reflect a diverse economy that faces persistent workforce challenges

The Great South Coast’s economic and workforce profile reflects a highly diverse economy (Figure 2). Agriculture is a major driver of the region’s economic output, accounting for approximately 16% and 17% of the region’s annual gross value added and total workforce respectively. Key sectors include dairy production, livestock and various crops. The region also enjoys strong intranational and international export demand for aquaculture, dairy products, meat processing, seafood processing, smelter products and forestry products.

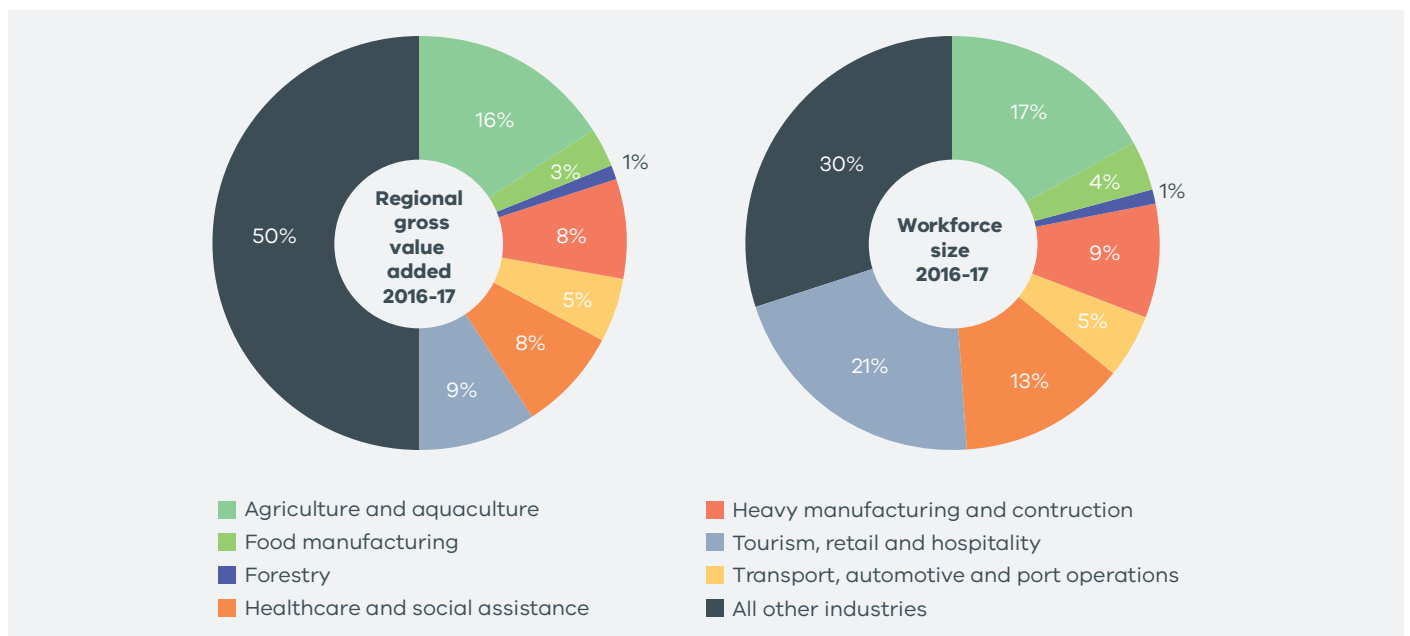
The region’s geographic location has created demand for wind generation and related industries. Likewise, the region’s unique cultural and environmental assets, such as the Great Ocean Road and the Twelve Apostles, have supported an active tourism sector for many decades. Strong linkages across these major industries creates demand for the region’s transport, automotive, port operation, heavy manufacturing and construction industries. These industries are important enablers of the region’s economy.

The flow of income from major and enabling industries and households generates demand for service industries across the Great South Coast (Figure 3). Tourism, retail and hospitality accounts for almost 9% of annual gross value added and 21% of the region’s workforce. The healthcare and social assistance industry is also significant and accounts for approximately 8% of annual gross value added and 13% of the region’s workforce.

Approximately 11,200 businesses are based in the regions with 98% of firms employing less than 20 workers. The few large employers in the region therefore play an important role in the labour market. The public sector is also an important employer with around 6,500 employees, or around 13% of total employment. Outside the public sector around 40% of all businesses are in the agriculture industry, while most businesses are concentrated in the two largest towns in the region, Warrnambool and Portland. Across all businesses in the region, 94% have a turnover of less than \$2 million with around 40% having a turnover \$200k-\$2m. This likely reflects the high share of non-employing businesses that are farms.

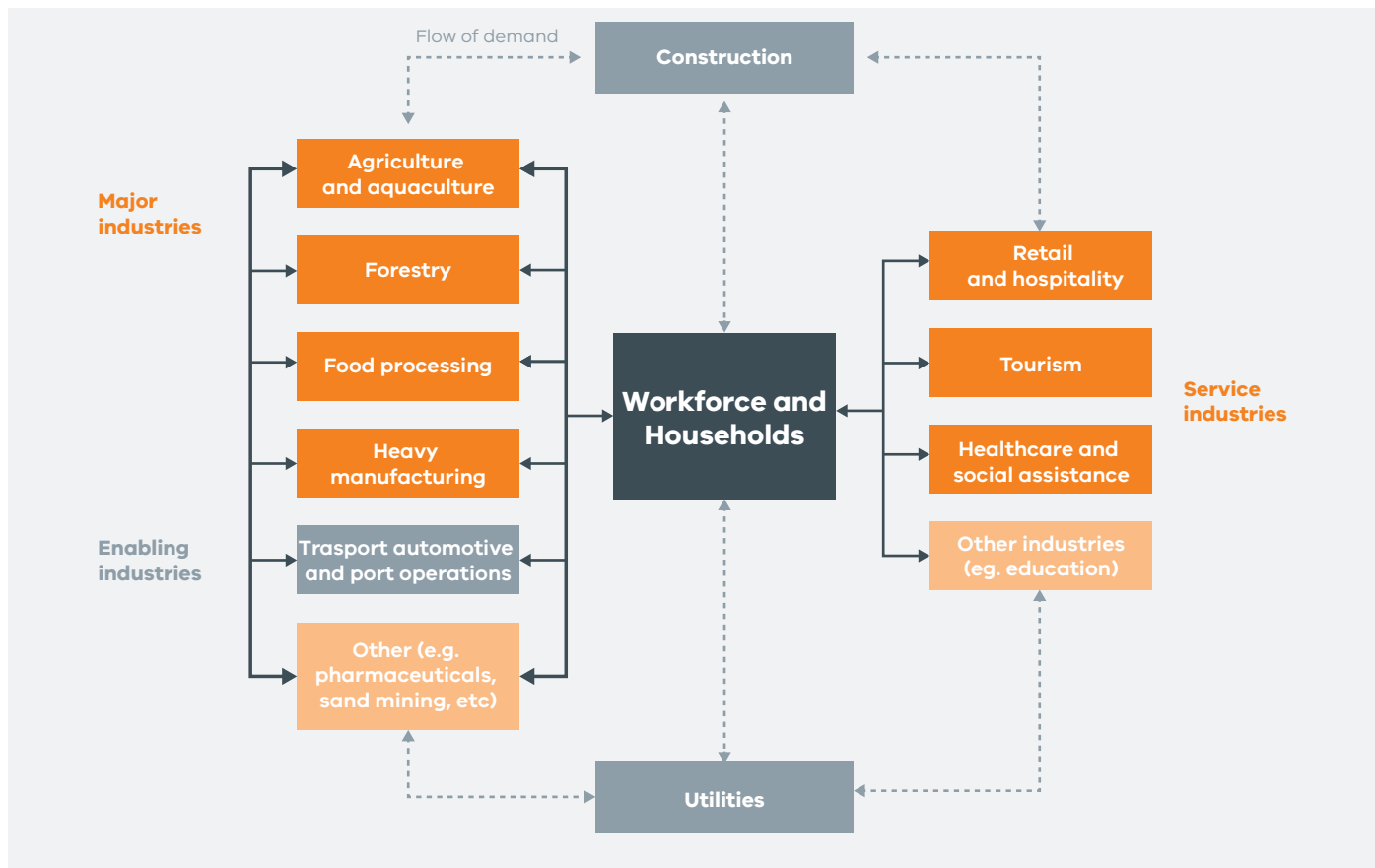
Employment is clustered around major towns in the region. For this reason, the region is best understood as a collection of towns with strong location connections. However, there are commonalities that exist at a regional level. The region has a number of large businesses that employ significant portions of the workforce in local areas, mainly in the heavy manufacturing, food manufacturing and healthcare industries. This means that areas where large employers are present are strongly reliant on them for workforce stability, as well as their secondary impacts on many small to medium businesses in the local supply chains. Examples of these large employers include, Alcoa Australia Limited, Keppel Prince Engineering, The Midfield Group, Warrnambool Cheese and Butter Factory and South West Healthcare. To ensure these employers continue to grow, it is important that the workforce challenges they face are addressed and VET will play an important role in developing the skills required to fill new positions.

Figure 2: Current economic and labour market contribution by industry<sup>5</sup>



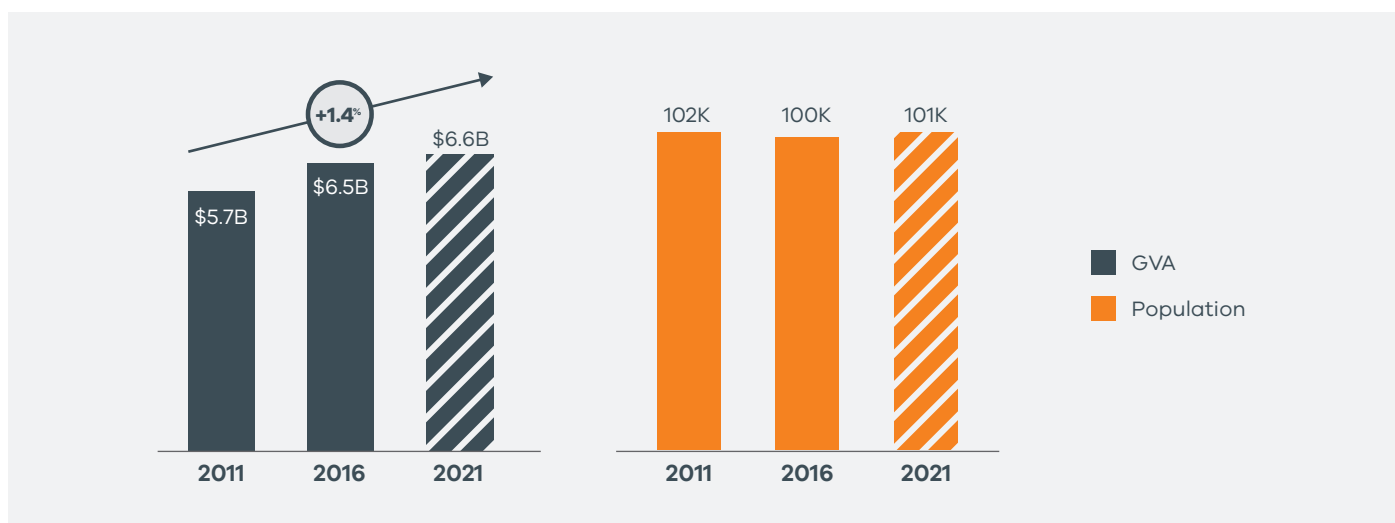
<sup>5</sup> Deloitte Access Economics analysis for the Victorian Department of Education and Training, 2017; Historical data is estimated based on Deloitte Access Economics’ analysis of data sources including ABS 2011 Census data, ABS Labour Force Survey data, and ABS State Accounts. Workforce size refers to total employment; GVA units are \$million in 2014-15 dollars. ‘All other industries’ includes important industries in the region, such as pharmaceuticals, sand mining and education, but are not explored in detail as part of this report.

Figure 3: Industry interconnectedness – The Great South Coast's economy



Despite a relatively stable population, annual real gross value added by the region is anticipated to grow at approximately 2% per annum between 2016 and 2021 (Figure 4). This outlook is reflective of current and potential capital investments (both private and public), further increases in industry productivity, potential economies of scale attributed to regional growth and a positive outlook on international export demand.

Figure 4: Forecast gross value added and population growth – The Great South Coast<sup>67</sup>



<sup>6</sup> Deloitte Access Economics analysis for the Victorian Department of Education and Training, 2017; Historical data is estimated based on Deloitte Access Economics' analysis of a few data sources including ABS 2011 Census data, ABS Labour Force Survey data, and ABS State Accounts. GVA units are \$million in 2014-15 dollars.

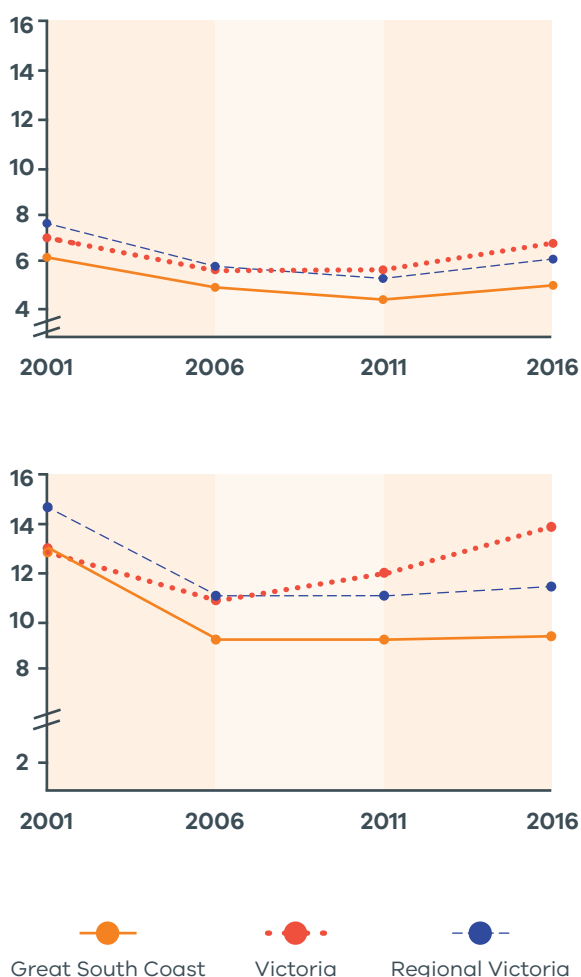
<sup>7</sup> The Great South Coast Population Forecasts, Victoria in Future 2016, accessed 2018



Ongoing public investment should also support the region's economic condition. This includes planned upgrades for Hamilton Highway, Henty Highway – Green Triangle and Princes Highway West – Colac to the South Australian border.<sup>8</sup> Similarly, the \$100m Warrnambool Railway Line Upgrade for 13 road level crossings should improve travel times and increase services for V/Line trains. Other investments, such as the \$1m Twelve Apostles Improvement Program<sup>9</sup>, planned development for renewable energy generation (discussed in section 6), and commitment to modernise and upgrade schools across the Great South Coast will also support industries central to the region's economy.<sup>10</sup>

However, current labour market indicators and reports from employers suggest that workforce challenges persist. Unemployment rates in the Great South Coast are almost 2 percentage points below the Victorian average for the equivalent period (Figure 5). This manifests as skills and workforce shortages across key roles and industries.

Figure 5: Unemployment rates – Great South Coast and Victoria<sup>11</sup>



A similar trend is observed in young workers, where the region's unemployment rate for people aged 15-24 is approximately 4.4 percentage points below the state's average. This in part reflects the greater tendency for young people to leave for further study and/or employment opportunities outside the Great South Coast; and the challenge of attracting and retaining young workers and families to the region (both intranationally and internationally).

Because of young people relocating to metropolitan areas to pursue further study, common occupations dependent on a university level education remain in shortage across the region (e.g. accountants, forest managers, kindergarten teachers, speech pathologists, physiotherapists). However, the low unemployment rates could also indicate that young people who do remain in, or move to the region are more likely to gain employment. There are some potential solutions being put in place to lift local university numbers and utilise the international student graduate market.

For example, Deakin University has been working with the Warrnambool City Council on solutions for local unfilled vacancies by connecting Deakin graduates with employers in Warrnambool. The Recruitment Team at Deakin will work with employers to find candidates to join their organisation from Deakin's Melbourne and Geelong campuses where courses such as engineering and IT are delivered. Despite these efforts, this remains a common issue across all major industries in the region. If these initiatives are unsuccessful the region will become increasingly dependent on labour from outside of the region, including skilled migrant workers to meet their workforce needs.

Some employers have responded by seeking workers from outside the region. Applications by employers for workers under the Regional Sponsored Migration Scheme have increased but off a low base. In 2017-18, 63 applications were received from local employers with 55 approved. In contrast, only 43 were approved in 2016-17. Cook/chef was the most common nominated role followed by farmers, nurses and pharmacists.

In a region calling out for workers for entry level roles, meaningful pathways for youth into employment can be an important lever to address reported worker shortage across the region. Again, these challenges are relatively more pronounced for the Great South Coast than the rest of regional Victoria (by approximately 2 percentage points). The importance of youth to the region's future prosperity is further accentuated by the regions, ageing population and relatively flat population growth rate (noting that Victoria is anticipated to grow at 1.8% per annum).<sup>12</sup> The share of persons aged 55 and over in the Great South Coast is 8 percentage points higher than the state share for instance. There is potential for the region to partly address this challenge by promoting the affordability of living in the region to skilled young people looking for employment. The combination of low property values and low unemployment rates in the region relative to more metropolitan parts of Victoria, is a potential attraction for young people to move to the region.

<sup>8</sup> State Budget, Great South Coast Regional Partnership, 2017

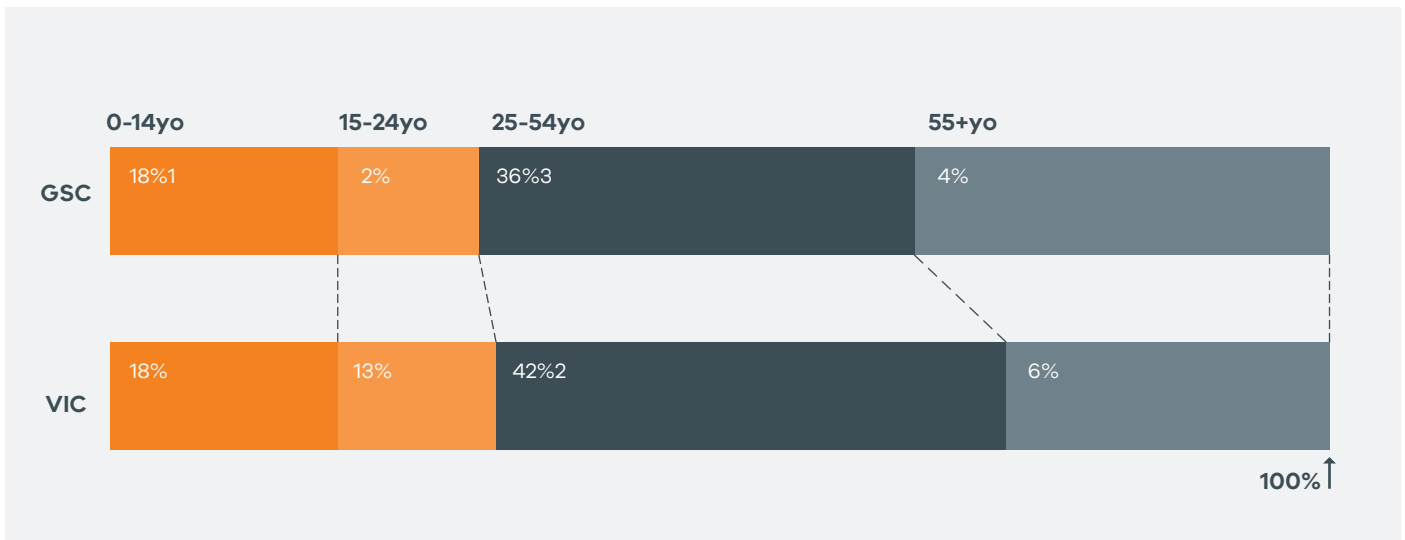
<sup>9</sup> \$50m upgrades for Great Ocean Road, G21 – Geelong Region Alliance, 2017

<sup>10</sup> State Budget, Great South Coast Regional Partnership, 2017

<sup>11</sup> 2016 Census (Table Builder) Employment, Income and Education; Australian Bureau of Statistics; accessed 2018

<sup>12</sup> Victoria in Future 2016, State Government of Victoria, 2016

Figure 6: Age distribution – Great South Coast and Victoria<sup>13</sup>



While not an immediate pressure, many employers signalled that a significant percentage of future workforce demand will be driven by replacing the ageing workforce. The combination of an ageing demographic with a low forecast of population growth and increasing demand in entry level positions across industries represents major workforce challenges, but also opportunities for the region. These challenges and opportunities need to be deeply understood and subsequently managed to help unlock the region's economic potential.



<sup>13</sup> 2016 Population Age Total – Great South Coast and Victoria, ABS Cat 3235.0, Australia Bureau of Statistics, accessed 2018

## 6. Industries have growth potential if labour shortages and economic conditions are met

Major industries across the Great South Coast exhibit potential for growth. Current and anticipated intranational and international export demand for dairy, meat, seafood and forestry products should support the region's agriculture, aquaculture, food manufacturing and forestry industries. Close linkages across these sectors will most likely see demand for enabling industries such as transport, automotive, port operations, construction and heavy manufacturing follow closely. For instance, the Port of Portland estimates blue gum wood chip throughput to grow from 2.7m tonnes to 3.5m tonnes over the next few years.<sup>14</sup>

Likewise, the region's unique geographic positioning and increase in export demand is likely to support demand for renewable energy generation and tourism, and is reflected in planned public and private investments. As part of the Victorian Government's renewable energy targets, construction plans are in the approval process for two different wind farm developments in the region. Once construction is complete, these will provide additional ongoing employment during operation. In addition to these new developments, Keppel Prince Engineering have recently secured a contract to supply 15 turbine towers to Tilt Renewable's Salt Creek Wind Farm.<sup>15</sup> The development of a major solar farm near Camperdown is also proposed to begin in July 2019. After a 12-15 month construction period, this is predicted to create 12 ongoing positions once it is operational. Similarly in the tourism sector, funding has been committed to major developments, including projects such as improvement programs for the Twelve Apostles, Castle Rock Lookout, Loch Ard George precinct and Port Campbell National Park.<sup>16,17</sup> While the impact of these investments is not expected to boost tourism in the immediate term there remains scope to grow the local visitor economy through current tourists extending their stay in the region.

Demand for these major and enabling industries should flow into local service industries via households and the workforce. Major reforms such as the National Disability Insurance Scheme (NDIS) and an ageing population are expected to translate into strong demand for services and workers in healthcare and social assistance. The outlook on local tourism, retail and hospitality industries is stable due to flat population growth and relatively stable economic conditions, where workforce demand may increase if the benefits from planned investments in tourism are realised over a broader horizon.

While the outlook for local industries across the Great South Coast is positive, its economic potential is dependent on the region's capacity to address existing workforce challenges and shortages. Employers across agriculture, aquaculture and forestry for instance continue to face challenges with filling vacancies across entry level, middle management and specialist roles. Automotive and transport industries have reported shortages in critical roles, including truck drivers, diesel mechanics, automotive electricians, panel beaters and detailers. Similar challenges have been reported across other industries such as agriculture, where there are shortages in entry level roles including farmhands, shearers and milkers, as well more specialist roles like agronomists, veterinarian assistants, diesel mechanics and specialists in hydraulics and refrigeration. The Great South Coast's capacity to attract and retain young and local workers across industries will be important to managing workforce challenges.

In addition to workforce challenges, the outlook of industry will also depend on the outcomes of, and how businesses respond to, various environmental conditions. For example, in agriculture, forestry, aquaculture and manufacturing future export demand and commodity price, accessibility of inputs such as water and land, the strength of existing and new infrastructure, and supply of skilled and specialist workers will shape likely outcomes. Likewise, the outlook on tourism, retail and hospitality will depend on the timing and efficacy of planned investments, as well as how local businesses respond to online competition, new business models (e.g. the sharing economy) and increased customer expectations.

Broader enablers will also affect the region's capacity to sustain continued economic growth. For instance, while the region's percentage of households with internet connections has increased from 52% in 2006 to 78% in 2016, employers continue to cite issues around telecommunication infrastructure as a major barrier to business growth.<sup>18</sup> The prevalence of internet blackspots in more remote regions means that potential productivity gains from investments in technology remain underutilised.

Ultimately, the way that training and education responds to labour shortages, how enablers are addressed, and the extent to which favourable economic conditions are realised will influence the economic trajectory for the region.

<sup>14</sup> Future Growth, Port of Portland, 2017

<sup>15</sup> Salt Creek Wind Farm, Tilt Renewables, 2018

<sup>16</sup> \$50m upgrades for Great Ocean Road, G21 – Geelong Region Alliance, 2017

<sup>17</sup> Shipwreck Coast Master Plan – Stage 1 Projects, State Government Victoria, accessed 2018, <<https://www.shipwreckcoast.vic.gov.au/shipwreck-coast-master-plan-stage-1-projects>>

<sup>18</sup> Internet Connections 2006-2016, Regional Development Victoria, 2018

Table 4: Preliminary outlook on job growth by industry<sup>19</sup>

Industry group	Estimated FTE in 2018	Preliminary estimate of 2018-2021 workforce growth (CAGR)	Taskforce estimate of 2018-2021 workforce growth (CAGR)	Total required workforce demand (including replacements)
Agriculture and aquaculture	~8,450	-3%	-1.0%-1.0%	+500-1100
Food manufacturing	~2,100	-1%	0.0%-3.5%	+50-450
Forestry	~350	-19%	0.0%-3.5%	+50-100
Healthcare and social assistance	~6,600	+5%	3.0%-8.0% <sup>20</sup>	+900-2,700
Heavy manufacturing and construction	~4,600	+0%	2.0%-4.0%	+450-950
Tourism, retail and hospitality	~10,800	-1%	0.0%-3.0%	+350-1,700
Transport, automotive and port operations	~2,750	+1%	0.0%-4.0%	+150-650

\* This report notes that the forecast provided is not necessarily an exercise in precision but on the anticipated order of magnitude and direction around future skills demand. The value of this approach is in combining the richness of available data, validated with industry leaders, to understand likely variables that are not always captured in historical trends and analysis. The estimates of additional workforce demand for the industry reflect the predicted level of industry growth, and therefore do not include existing vacancies.

This exercise benefits from the leadership and expertise of industry in providing indicative workforce numbers, planned investments and related evidence to assess and validate labour force projections. In combination with existing ABS labour force, population and economic data, a view on where demand is now and will be in the future is constructed. This contrasts with prior planning that has often been too reliant on the direction set by the training supply side of the market.

The scope of this process and demand profile focuses on issues and opportunities related to vocational skills, training and pathways. Broader economic, social and demographic issues related to labour supply raised during consultations will be referred to Regional Development Victoria and the Great South Coast Regional Partnership for consideration and future action.

<sup>19</sup> Preliminary CAGRs refer only to new additional growth above current workforce estimates. FTE ranges (last column) includes additional workers required due to estimated workforce exits (e.g. retirement) and net regional migration. Forecasts excludes FTE associated with large short-term projects that are likely to contract metropolitan or international workforces (e.g. wind tower construction, large infrastructure projects, etc.). Forecasts focus on key industry groups for the Great South Coast only. Other industries such as professional services, education and training, etc. are excluded from this outlook. Source: Office of the Victorian Skills Commissioner, Nous Group and Deloitte Access Economics in consultation with the Regional Skills Taskforce and industry representatives, 2018;

<sup>20</sup> A high growth scenario assumes full rollout of NDIS, family violence reforms and additional funding for aged care and early childhood education through expansions to Commonwealth Home Support Program, residential care and three year old kindergarten.



## 7. Collaboration can address shared challenges and unlock the region's potential

Training in the region is made up of qualifications, as well as apprenticeship and traineeship programs which include on the job training components. Although the total number of people engaged in training overall is decreasing by approximately 13% per year on average, in 2017 there were approximately 10,000 people enrolled in training across the region.

In 2017, apprenticeships made up approximately 17% of the total number of people enrolled in training in the Great South Coast region, with combined total enrolment numbers remaining relatively constant over the 2014-17 period. However, there is indication of a slight shift in enrolment numbers from apprenticeships to traineeships over the same period. While apprenticeship enrolments in food manufacturing have reduced on average by 35% per year, the strongest increase in traineeships is also in the food manufacturing industry, which potentially indicates a shift from apprenticeships to traineeships in this industry over the 2014-17 period. Other industries, such as tourism, retail and hospitality, saw apprenticeship enrolment increases of 28% per year, while modest growth in apprenticeship enrolments have also been seen in the heavy manufacturing and construction sectors.

The Regional Skills Taskforce and industry representatives across the Great South Coast identified common opportunities to support the alignment of skills and training with current and future industry needs. Table 5 provides an outline of cross-industry opportunities for the Great South Coast that were developed in consultation with local industries. These opportunities are likely to require strong partnerships and collaboration between industry, schools, TAFE, universities and government.

Table 5: Shared opportunities for the Great South Coast<sup>21</sup>

Situation	Opportunity
<p>Local young workers will be important to the region's current and future workforce supply. However, there are challenges to attracting and retaining them. This is reflected in the region's relatively lower unemployment rates.</p> <p>There is appetite to increase the level of regional collaboration to help young people learn about and access opportunities with local industry. Employers in forestry and aquaculture for instance have expressed interest to better engage with students through schools.</p>	<p><b>Strengthen collaboration between educators and industry</b> to facilitate discussions and initiatives around the alignment of skills and training with local industry needs. This can also provide a channel for employers in agriculture, aquaculture, forestry, etc. to explore industry engagement opportunities with schools.</p>
	<p><b>Showcase the career opportunities and pathways with local industry</b> to students, parents and educators (locally and state-wide) to build awareness and engagement. Strategies should focus on building the attractiveness of industry and leverage available channels via schools, community events and social media.</p>
	<p><b>Explore options to increase exposure of secondary school students</b> to local careers in the classroom and on the job. Opportunities include pre-employment programs, school-based apprenticeships and interdisciplinary teaching models such as the Timboon Agricultural Project.</p>

<sup>21</sup> Timboon P-12 School developed and trialled the Timboon Agriculture Project in partnership with WestVic Dairy, the Gall Family Trust and the Gardiner Foundation. The project focused on creating an agricultural precinct within the school grounds to improve student engagement (both in the classroom and off-campus experience) and contextualise learning in the context of local industry. Source: Timboon Agriculture Project, Timboon P-12 School, 2017, <[http://www.timboonp12.vic.edu.au/page/206/Timboon-Agriculture-Project-\(TAP\)](http://www.timboonp12.vic.edu.au/page/206/Timboon-Agriculture-Project-(TAP))>



Situation	Opportunity
<p>Effective development of transferable skills and LLN skills in young people will better prepare them for entry level roles across the region.</p> <p>Existing assets and infrastructure can be better utilised. For instance, Brauer College's trade training centre at Caramut Road, Warrnambool remains underused.</p>	<p><b>Consider lifting the language, literacy and numeracy (LLN) standards of students.</b> RTOs should review their entry requirements and accessibility and availability of their LLN support programs to support or lift existing standards.</p> <p><b>Identify approaches to develop transferable skills in young workers across industries.</b> This includes customer service skills and baseline digital literacy. Exposure to STEM is also valuable and can prepare young workers for many roles with industry (e.g. agriculture, forestry, etc.).</p> <p><b>Investigate possibilities to leverage underutilised assets.</b> This might involve repurposing existing infrastructure to support new or additional VET programs across sectors which both schools and RTOs across the region can access.</p>
<p>Common occupations requiring a university level education remain in shortage across the region (e.g. accountants, forest managers, kindergarten teachers and speech pathologists).</p>	<p><b>Identify options to address shortages in skilled professionals.</b> This may include lifting current university numbers locally and tapping into the international student graduate market.</p>
<p>Poor quality and short duration training delivery for valued licences (e.g. forklift licence)</p> <p>Exposure to real-world practice can improve the job-readiness of students that pursue required tickets and licences.</p>	<p><b>Refer opportunities to revise or refresh the licensing model to relevant state authorities.</b> Training for licences should provide a more structured pathway for students to transition from theory to simulated practice to supervised practice on the latest machines and technologies used by industry. Training is only of value if it is delivered at high quality and with an appropriate number of hours of practical experience. Similarly, alternative models, such as the introduction of different licensing grades (e.g. L plates and P plates) may help employers to better evaluate the job-readiness of candidates.</p>
<p>Many people feel they are not able to engage in training due to barriers to access, including their geographical location and employment situation.</p>	<p><b>Developing a new training model</b> that can better overcome geographical and employment barriers to accessing training. This should include providing options for providing workplace integrated training solutions as well as training provided out of working hours.</p>



## 8. Each industry has unique skills and training needs

Consultations with leaders and representatives across key industry groups in the region has identified opportunities to better align the VET system with their industry's skills requirements and forecast workforce demand. This section provides a snapshot of each industry's outlook, job requirements, challenges and opportunities. The following industries are addressed:



**Agriculture and aquaculture**



**Food processing**



**Forestry**



**Healthcare and social assistance**



**Heavy manufacturing and construction**



**Tourism, retail and hospitality**






**Transport, automotive and port operations**

Please refer to Appendix A for more detailed commentary on each industry.



## Agriculture and aquaculture

**Agriculture is central to the region's economy and has potential for growth**

<b>Snapshot</b>	<p><b>~8,450</b> workers currently employed in 2016-17</p> <p><b>+500-1,100</b> new workers required by 2021</p>	<p><b>31%</b> share of workforce</p> 	<p><b>27%</b> workers aged 60 and over</p> 	<p><b>99%</b> of employers have less than 20 staff</p> 
<b>Profile</b>	<p>Agriculture is central to the region's economy and is characterised by significant dairy and livestock production sectors, where wool, beef and lamb are key commodities and exports for the region. This is in addition to smaller agricultural and horticultural activities such as cropping, vineyard, market gardens (vegetables) and poultry (broilers). While relatively niche, the region is also home to a thriving aquaculture industry, particularly in abalone production, rock lobster and king crab.</p>			
<b>Outlook</b>	<p>The outlook on livestock production, dairy farms and aquaculture is stable and with potential for growth if export demand continues. For example, significant investment has already been planned for expanding Yumbah Aquaculture's operations, which export to Asian and North American markets. Despite the volatility of commodity markets and increased global competition, a lower Australian dollar, lower oil prices, lower interest rates, recent free trade agreements and access to inputs (e.g. fertiliser) should support export demand over the short-term. However, critical challenges such as labour shortages, biosecurity threats and internet blackspots require management if industry is to unlock its potential.</p>			

Top three occupations (ANZSCO)	2016-17 workforce (FTE)	Preliminary estimate of growth rate (CAGR)	Taskforce estimate of additional demand 2021 (FTE)
Livestock Farmers	~5970	-4%	-250-240
Livestock Farm Workers	~940	-4%	-40-40
Mixed Crop and Livestock Farmers	~570	-5%	-20-20

### Training and skills in data, management, biosecurity and quality assurance is in demand

<b>Training and skills</b>	<p>Entry level roles across agriculture and aquaculture require diverse skill sets that are often developed on the job and differ on a farm to farm basis. Staff are mostly ongoing employees with some seasonal hires. A Certificate III in Agriculture (Dairy Production) can be a useful pathway for dairy farmhands to build competencies in animal health and nutrition, milking and related competencies. Specific licences to operate tractors and special work vehicles (e.g. quad bike) are also valuable to machine operators. Diesel mechanics, refrigeration technicians and other technicians may look at broader courses to gain skills for their role on the farm. Leading hands, supervisors, owner operators and specialists may undertake a Certificate IV or higher (e.g. Diploma of Agriculture) to upskill in areas such as agronomy, environmental science or marine biology for aquaculture. Training demand should remain strong due to shortages and pressures at the field staff and middle management level. Employers have highlighted a greater need for training in biosecurity and quality assurance, particularly as international market protocols tighten and the risk of biosecurity threats grow. There is also demand for skills in the comprehension and application of farm data to support decision making and farm productivity.</p>
----------------------------	---


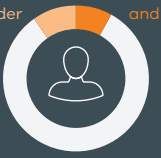
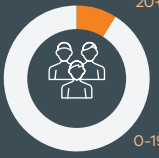
Industry situation	Opportunities for the VET system
Better supply of local skills can unlock the region's potential.	Increase enrolment numbers to address shortages in field staff and specialists (e.g. farmhands, shearers and machine operators).
Local training options for supervisors and owner operators is limited.	Provide a short and flexible onsite program in management and leadership for supervisors, managers and owner operators.
Demand for skills to use data to inform decision making is unmet.	Deliver a short course for leading hands and owner operators in agriculture on the use of data to lift farm productivity. This is distinct from general use of software.
International market protocols are tightening, and biosecurity risks are growing.	Review units of competency in biosecurity and quality assurance to ensure they are current and suited to the skills required by the industry.





## Food manufacturing

### Dairy, meat and seafood processing is anticipated to stabilise after a period of investment

<b>Snapshot</b>	<p><b>~2,100</b> workers currently employed in 2016-17</p> <p><b>+50-450</b> new workers required by 2021</p>	 <p><b>2%</b> share of workforce</p>	 <p><b>9%</b> workers aged 60 and over</p>	 <p><b>91%</b> of employers have less than 20 staff</p>
<b>Profile</b>	<p>The Great South Coast has an active food manufacturing industry due to close linkages with agriculture and aquaculture sectors. It is largely characterised by significant dairy, meat and seafood processing businesses. Key products in dairy include milk, cheese, butter, cream, skim milk powder, cream cheese, lactoferrin and whey protein concentrate. Other key exports and commodities for the Great South Coast include wool, grains, beef, lamb and a variety of seafood produce.</p>			
<b>Outlook</b>	<p>The outlook on milk, meat and seafood processing appears stable after a period of growth and private investment. For instance, Fonterra Australia announced its \$165m expansion to increase its capacity and meet global demand for milk and related dairy products. Similarly, Warrnambool Cheese and Butter Factory (WCB) upgraded the capacity of its cheese plant by 20K tonnes to accommodate an additional 200m litres of milk in 2017. While Saputo's acquisition of all remaining ordinary shares in WCB in early 2017 further reflects the region's potential dairy and food manufacturing, the immediate implications for industry are less clear and dependent on Saputo's strategic plans following the takeover.</p>			

Top three occupations (ANZSCO)	2016-17 workforce (FTE)	Preliminary estimate of growth rate (CAGR)	Taskforce estimate of additional demand 2021 (FTE)
Factory Workers	~200	-2%	+0-20
Metal Fitters and Machinists	~120	-2%	+0-20
Meat Process Workers	~120	+0%	+0-20

### Training can better address critical skills needs and geographic barriers

<b>Training and skills</b>	<p>Demand for training in food manufacturing should remain strong due to existing workforce pressures and challenges (e.g. entry level turnover rates). For example, The Midfield Group currently has significant workforce shortages at entry level roles, including demand for up to 500 staff across roles including meat process workers, dairy farm hands, truck drivers, maintenance staff and quality assurance officers*. Programs such as the Certificate II or Certificate III in Meat Processing, Food Processing and Seafood Processing are useful pathways for packers and process workers to build entry level exposure and skills within food manufacturing industries. Supervisors and managers may undertake a short course, Certificate IV or Diploma in Food Processing to develop more advanced competencies in areas such as quality assurance and supply chain. Training in WH&amp;S is also critical across all levels due to work with animals, machines and equipment.</p>
----------------------------	---




\* Please note: The estimates in this Profile of additional workforce requirements for the industry reflect predicted level of industry growth, and therefore do not include existing vacancies. Hence, these 500 existing vacancies are not included in the estimates of additional workforce requirements in 2021.

Industry situation	Opportunities for the VET system
Heavy machinery and work with animals can be dangerous if WH&S standards are not understood.	Review training in WH&S (including existing units) to ensure workers are appropriately trained or upskilled to understand, follow and apply WH&S guidelines.
Dairy processors express demand for local training to support managerial and specialist skills.	Foster local expertise in dairy processing, dairy technology and manufacturing management.
International market protocols are tightening and biosecurity risks are growing.	Review units of competency in biosecurity and quality assurance to ensure they are current and suited to industry needs.





### Continued export demand will support the Green Triangle's forestry industry

<b>Snapshot</b>	<p><b>~350</b> workers currently employed in 2016-17</p> <hr/> <p><b>+50-100</b> new workers required by 2021</p>	 <p><b>&lt;1%</b> share of workforce</p>	 <p><b>27%</b> workers aged 60 and over</p>	 <p><b>99%</b> of employers have less than 20 staff</p>
<b>Profile</b>	<p>The Green Triangle enjoys almost 200,000 hectares of hardwood blue gum and softwood pine, where timber processing, wood and fibre production, and forest management are important sectors for the Great South Coast. Primary production and processing include products such as sawn timber, wood chips, pulp and paper. Raw softwood plantation materials are supplied to mills, particleboard plants and timber treatment plants across regions such as in Mount Gambier, Tarpeena and Tantanoola. There is also strong export demand for pine wood chip and round wood logs via the Port of Portland.</p>			
<b>Outlook</b>	<p>The outlook for forestry industries appear stable due to continued export demand. Many hardwood and softwood businesses in the Green Triangle reported that they are likely to invest in new capital equipment and/or business systems to support or expand business operations. The outlook is reflected in seed plantations and forest regenerations underway to facilitate anticipated demand. However, challenges to growth include land affordability and accessibility, resource security and rising input and labour costs. Furthermore, increases in government regulation, particularly around business reporting requirements as well as limited public investments in industry have created challenges to operations.</p>			

Top three occupations (ANZSCO)	2016-17 workforce (FTE)	Preliminary estimate of growth rate (CAGR)	Taskforce estimate of additional demand 2021 (FTE)
Plant Operators	~100	-20%	+0-20
Scientists	~40	-17%	+0-10
Forestry and Logging Workers	~40	-15%	+0-10

### The Green Triangle can be a national leader in forestry training across levels

<b>Training and skills</b>	<p>Forestry's demand for VET is strong due to reported shortages at the operator and management level. Employers rely on seasonal or transient workers for planting but need skilled and capable harvesters who can work year-round. Training is particularly critical for machine operators as industry is highly mechanised and dependent on large and expensive machinery for operations. Staff will often undertake training to obtain the licences such as the Forest Operators Licence (FOL) to operate machinery and equipment. For high value machinery employers will often choose to train employees themselves or engage specialist training providers on a fee for service basis due to the specialised nature of the training. Employers stressed the importance of training and 'seat time' to minimise WH&amp;S risk and risk of damage to assets. Leading hands, crew bosses and forest managers may pursue further training to develop management, negotiation and delegation skills. Forest managers in the past often travelled to metropolitan Victoria for tertiary training in forestry management. However, many of these programs have since been terminated due to viability and small class sizes. Qualifications are less relevant for other entry level roles (e.g. planters, manual labourers, etc.), where skills are often learned on the job.</p>
----------------------------	---

Industry situation	Opportunities for the VET system
Shortage of skilled operators can increase WH&S risk and risk of damage to expensive assets.	<p>Increase traineeship numbers to support the future supply of skilled operators across the Green Triangle.</p> <p>Access to specialised training for tickets to ensure operators are better equipped to use modern machinery, plant equipment and technologies.</p>
Forestry training options are limited across the Green Triangle and Australia more generally, particularly for skilled roles.	<p>Investigate feasibility for the Great South Coast to become the preminent location for forestry industry training and education in Australia and internationally.</p>



## Heavy manufacturing and construction

### Heavy manufacturing and construction is diverse with some sectors positioning for growth

<b>Snapshot</b>	<p><b>~4,600</b> workers currently employed in 2016-17</p> <p><b>+450-950</b> new workers required by 2021</p>	<p><b>8%</b> share of workforce</p>	<p><b>10%</b> workers aged 60 and over</p>	<p><b>99%</b> of employers have less than 20 staff</p>
<b>Profile</b>	<p>The region is characterised by a diverse heavy manufacturing and construction industry with some of the region's largest employers. This includes residential and industrial constructions to support local housing and infrastructure requirements, as well as aluminium ingot production and general engineering/manufacturing activities (e.g. fabrication). Furthermore, the region has also become home to one of the largest series of wind farm developments in the Southern Hemisphere, where manufacturers in wind turbine systems fabrication and assembly can be found in Portland.</p>			
<b>Outlook</b>	<p>The outlook on the region's construction industry is stable due to planned infrastructure and residential projects. Occupied private dwellings for instance have grown at ~0.6% p.a. over the last decade. Heavy manufacturing activity is anticipated to grow due to major projects in wind generation. This includes Keppel Prince Engineering's contract to supply turbine towers to the Salt Creek Wind Farm. More broadly, demand for general engineering is positive and likely to follow activity in neighbouring industries (i.e. agriculture, transport, etc.). In contrast, the outlook on aluminium smelting is more conservative due to prior setbacks such as the power outages and rising input costs. However, the Federal Government will provide \$30m to Alcoa of Australia to support the sector.</p>			

Top three occupations (ANZSCO)	2016-17 workforce (FTE)	Preliminary estimate of growth rate (CAGR)	Taskforce estimate of additional demand 2021 (FTE)
Engineering Trades Workers <sup>23</sup>	~360	+2%	+60-120
Steel and Welding Workers	~380	-2%	+40-60
Engineering Production Systems Workers	~270	-3%	+20-40

### Employers require timely and accessible training to address critical skill shortages

<b>Training and skills</b>	<p>Demand for VET is forecast to remain strong as apprenticeships are the central pathway into trade, technician and machine operating roles in construction, engineering and manufacturing industries. It is common for students to complete work experience or school-based apprenticeships to gain exposure to careers with local industry. Students with a high potential and strong work ethic may transition into an apprenticeship. Machine operators should also hold the required licence (e.g. forklift licence) to support business needs. Similarly, experienced operators, supervisors, subcontractors and managers may pursue a Certificate IV in Building and Construction, short courses or similar pathways to build further skills in people management, financial management and negotiation. However, certain skills remain in shortage. This includes diesel, hydraulics, pneumatics, computer numerical control, programmable logic control, WH&amp;S, quality assurance, industrial coating and non-destructive testing. Some of these skill sets (e.g. pneumatics) require further training post-apprenticeship.</p>
----------------------------	--




Industry situation	Opportunities for the VET system
Several skill sets are critical to industry and are currently in shortage.	<p>Accelerate development and provision of new courses to supply high priority skills (e.g. industrial coating, hydraulics, etc.).</p> <p>Increase apprenticeship numbers across trades (i.e. electricians etc.).</p> <p>Investigate options to improve local access to required training.</p>
Electrical apprentices do not always have the skills to work in industrial settings.	Explore education options to strengthen an electrical apprentice's ability to work in industrial settings.
There is demand for management skills training for experienced operators.	Create a unit of competency to develop leading hand and supervisory skills for experienced operators.

<sup>22</sup> Engineering trades include Plumbers, Electricians, Metal Fitters and Machinists



## Transport, automotive and port operations

### The transport, automotive and port operations industries are gateways to the Great South Coast economy

<b>Snapshot</b>	<p><b>~2,750</b> workers currently employed in 2016-17</p> <hr/> <p><b>+150-650</b> new workers required by 2021</p>	 <p><b>5%</b> share of workforce</p>	<p>24 and under</p>  <p><b>19%</b> workers aged 60 and over</p>	<p>60 and over</p>  <p><b>96%</b> of employers have less than 20 staff</p> <p>0-19</p>
<b>Profile</b>	<p>The region's transport, automotive and port industries are gateways for and enablers of the Great South Coast economy. Its rail and road corridors support transport industries for freight, dairy product, wood chips, civil materials and quarry products. Similarly, the Port of Portland is a deep-water bulk port and provides services in shipping, storage, wharfage and towage across commodities such as mineral sands, forestry products and smelter products. Linkages with agriculture, transport and related industries, as well as the region's dependence on private transport, also creates strong commercial and retail demand for the region's automotive industry.</p>			
<b>Outlook</b>	<p>The transport and port operations industries have potential for growth over the next few years. This is in part attributed to the anticipated growth in exports of logs, blue gum harvests and other commodities such as fertiliser. Proposed regional road upgrades for key corridors such as the Hamilton Highway should also contribute to the sector's productivity and potential. Similarly, while the region's population growth is low, the positive outlook in the region's agriculture, forestry and transport, and dependence on private transport should support demand for both retail and commercial automotive services.</p>			

Top three occupations (ANZSCO)	2016-17 workforce (FTE)	Preliminary estimate of growth rate (CAGR)	Taskforce estimate of additional demand 2021 (FTE)
Truck Drivers	~650	+0%	+0-120
Mechanics	~380	+3%	+0-60
Bus and Coach Drivers	~160	1%	+0-20

### Better access to training for apprenticeships and licences can address workforce challenges

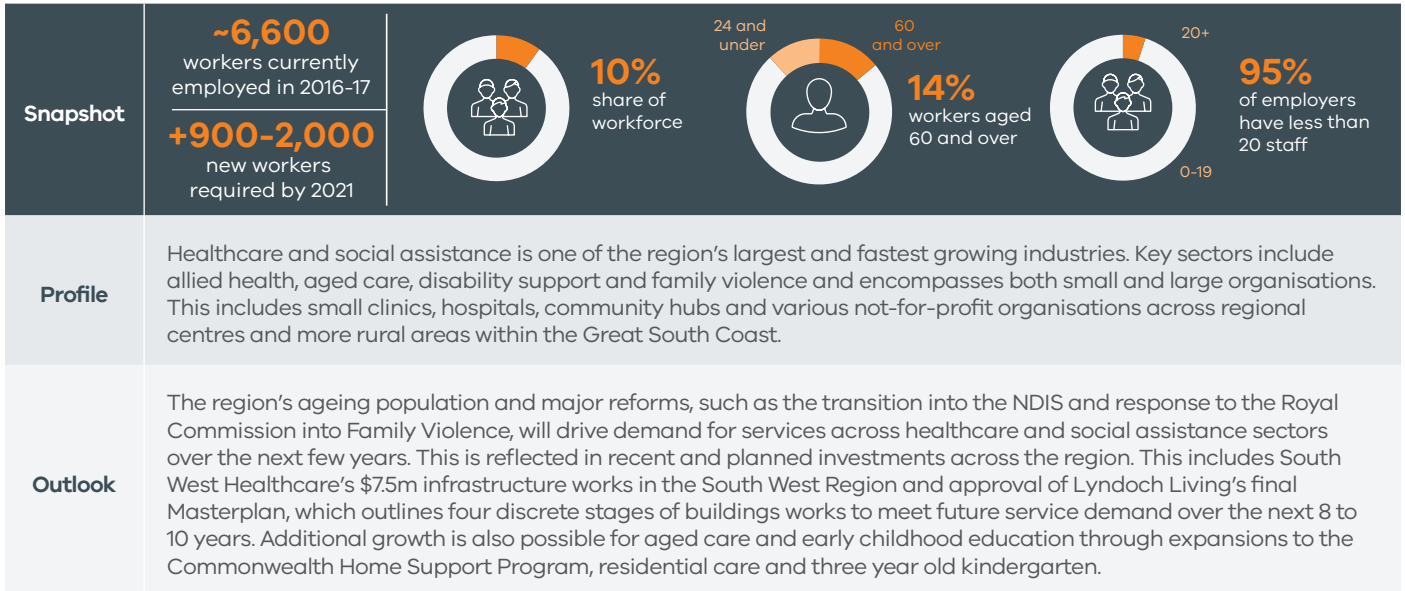
<b>Training and skills</b>	<p>The region's transport, automotive and port operations sectors rely on apprenticeships and training for entry level workers. In automotive, students will typically complete an apprenticeship to become a technician. Post-apprenticeship, it is common for employers to send technicians away for further training and/or to obtain their Licenced Vehicle Tester Registration as there is limited opportunity to complete these courses locally. In transport, it is common for young workers (under 23 years old) and packers to first obtain their medium rigid licence (as a freight hauler) before undertaking the necessary steps to obtain more advanced licences (e.g. heavy rigid, heavy combination, etc.). Key roles include tanker drivers for dairy, log truck drivers and wood chip haulers in forestry, general freight haulers and oversized truck drivers for construction. In contrast, it is common for entry level workers to join the Port of Portland as a deckhand or packer without formal qualifications. Prospective technicians, coxswains and related roles may pursue apprenticeships and qualifications in engineering and maritime to operate deck machinery and electrical systems and/or as mandated by regulation. Demand for training will remain strong due to the reported shortage of diesel mechanics, automotive electricians, detailers, panel beaters and truck drivers across the region.</p>
----------------------------	---

Industry situation	Opportunities for the VET system
Diesel mechanics, automotive electricians and related roles are in shortage across all industries.	Improve apprenticeship numbers of automotive electricians, panel beaters and detailers. Strengthen school pathways to generate awareness in and support careers in automotive and transport.
Demand for truck drivers with a multi combination licence exceeds supply.	Create or strengthen structured opportunities for truck drivers to train and upskill locally, noting the challenges for youth under the age of 23 in this industry.
Local training options for entry level roles, licences and courses to maintain skills currency are limited.	Explore options to improve access to training and reduce travel requirements in automotive studies for students residing outside of Warrnambool. Enhance access to non-accredited training for completing Licenced Vehicle Tester Registration and similar tickets.



## Healthcare and social assistance

### Major reforms and the region's ageing population will drive industry growth



Top three occupations (ANZSCO)	2016-17 workforce (FTE)	Preliminary estimate of growth rate (CAGR)	Taskforce estimate of additional demand 2021 (FTE)
Registered Nurses	~1,500	+6%	+180-540
Aged and Disabled Carers	~830	+5%	+100-300
Child Carers	~450	+4%	+60-160

### Training is required to support industry growth, reforms and changing skill needs

<b>Training and skills</b>	<p>VET will play an important role in supporting industry growth and major reforms across all levels of the region's workforce. The Certificate III in Individual Support is an important pathway for new workers in aged care, community care and disability support. Similarly, allied health assistants, enrolled nurses, dental assistants and related health services will draw on Certificate III, Certificate IV and Diploma level training. Many entry level roles share common skill set requirements. This includes cultural empathy, manual handling, hygiene protocols and assisting with, administering and/or monitoring medications. However, employers will also look for workers that are increasingly mobile and adaptable as sector boundaries become less defined due to major reforms. Team leaders, supervisors and managers require competencies in people management, customer service and leadership.</p>
----------------------------	--

Industry situation	Opportunities for the VET system
The ageing population and major reforms in disability, aged care and early childhood education will contribute to workforce growth.	Improve enrolment and traineeship numbers to address key shortages (e.g. allied health assistants, early childhood workers, case workers).
	Target students underrepresented in the current workforce, particularly males.
	Refer impact of incentives and loadings on willingness of workers to remain in regional centres to the Department of Health and Human Services.
Increased presentation of children with complex needs and trauma related behaviours.	Embed trauma practices in the Certificate III in Individual Support and related qualifications.
The availability and/or proximity of training has contributed to certain skills shortages.	Address current training gaps to provide local pathways for dental assistants and allied health assistants.
	Improve accessibility to training to support students on work experience, placements and Support Based Apprenticeships and Traineeships.



## Tourism, retail and hospitality

### International demand and investment will support tourism, retail and hospitality in the long term



Top three occupations (ANZSCO)	2016-17 workforce (FTE)	Preliminary estimate of growth rate (CAGR)	Taskforce estimate of additional demand 2021 (FTE)
Sales Assistants (General)	~2,200	-1%	+0-280
Retail Managers	~640	+0%	+0-80
Waiters	~560	+1%	+0-80

### Employers require innovative training options to address current skills needs

<b>Training and skills</b>	<p>Pathways into tourism, retail and hospitality are diverse. Entry level workers may enter the sector as an unskilled casual hire or via a traineeship if they demonstrate a good attitude and work ethic. Workers may take short courses and certifications such as the Responsible Service of Alcohol (RSA) to support workplace needs. Increasingly, there is a need for entry level staff to have the skills required to provide service to international visitors. There is also need for courses such as the Certificate III in Commercial Cookery due to current shortages of local cooks, chefs and kitchen hands. Lastly, supervisors, managers and owner operators require a diverse skill set but express difficulties with accessing opportunities to upskill due to trading hours and proximity to onsite training. Demand for training is stable in the near term but has potential to increase over a broader horizon if the benefits from planned investments in tourism and growth in export demand are realised.</p>
----------------------------	---

Industry situation	Opportunities for the VET system
Local businesses seek workers with strong people skills.	Emphasise skills development in customer service and cultural awareness in the classroom and in the workplace.
Employers seek skills to better reach and connect with their customers.	Ensure that modules to upskill in digital marketing are available as short courses or as part of existing courses.
Managerial skills are in shortage due to the sector's young and transient workforce.	Explore innovative options for managers, supervisors and owner operators to access training outside trading hours. Alternate models need to minimise time away from the workplace and generate immediate returns from new knowledge.



## 9. Implementation should occur at a local level

Industry, TAFE, other training providers, schools and government will play an essential role in aligning the VET system with local industry demand and realising benefits for the local economy. It is expected that key leaders across the region will continue the conversation within and between their industries to support implementation.

Key success criteria for implementation include:

- 1. Industry focused collaboration provides opportunities to address workforce challenges.** The ability to address localised training needs will be strengthened by collaboration between local employers.
- 2. Sustained collaboration with RTOs, schools and government is important.** To sustain ongoing collaboration with key stakeholders, engagement with representatives from RTOs, schools and government is critical.
- 3. Better data can support planning and policy.** There is an opportunity to leverage the richness of training and workforce data to support planning and policy for industry, schools, RTOs and government. The development and maintenance of tailored career planning materials can facilitate this requirement. Industry driven input and validation processes can ensure joint ownership and accountability of materials developed.

The OVSC is committed to working with the region to address the opportunities identified in this report. This includes supporting the development of career advice that is contextualised towards the skilling demands of the region. However, the unique employer and industry profile of the region indicates that collaboration at an industry level is likely to offer greater success rather than a coordinated regional response.



# 10. A one-year implementation is proposed

The Regional Skills Taskforce and this report represents a step in aligning the VET system with the current and future needs of industry. The onus remains on industry, government, schools, TAFE and other training providers to sustain ongoing collaboration and ensure implementation success. A series of next steps is proposed over the next 12 months to address the challenges and opportunities in training for industries across the region (Figure 7).

Some initiatives will take longer to implement, and broader challenges will be referred to Great South Coast Regional Partnership for consideration and action. An appropriate governance structure will also be established to monitor implementation and support the preparation and maintenance of a regional economic prospectus for the region.

Industry will advise training providers on the recommendations identified and collaborate with the OVSC and government to progress projects supported by WTIF and RSTF. Priority recommendations for implementation include existing funding proposals currently underway. Broader training opportunities in agriculture, healthcare and social assistance, tourism, automotive and transport are high priorities due to the immediacy and/or scale of required workforce growth/shortages.

Figure 7: Roadmap for implementation

Key actions	2018		2019				2020	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Refer priority issues to the Great South Coast Regional Partnership.								
Establish local governance mechanisms to support implementation.								
Advise RTOs on focus of the Regional Skills Demand Profile.								
Progress funding proposals under WTIF and RSTF.								
Scheduled implementation review.								
Provide access to an OVSC staff member to support implementation.								

## Appendix A: Skills demand profiles by industry

This section synthesises the consultation outcomes, employment projections and broader research to date for key sector groups in the region. Commentary is provided on the industry outlook and implications for the workforce and training requirements over the short to medium term. This includes an outline of the challenges and opportunities in VET unique to the industry. The following industries are addressed:



**Agriculture and aquaculture**



**Food processing**



**Forestry**



**Healthcare and social assistance**



**Heavy manufacturing and construction**



**Tourism, retail and hospitality**



**Transport, automotive and port operations**

## Agriculture and aquaculture

Agriculture is central to the region's economy and is characterised by significant dairy and livestock production sectors, where wool, beef and lamb are key commodities and exports for the region. Smaller agricultural and horticultural activities such as cropping, vineyard, market gardens (vegetables) and poultry (broilers) can also be found in the region. While relatively niche, the region is also home to a thriving aquaculture industry. The outlook for industry is relatively positive due to strong international export demand and the relatively lower Australian dollar.

However, employers across both agriculture and aquaculture industries have expressed existing labour shortages as a barrier to growth. Key roles in shortage or in demand at the field staff level include farmhands, shearers, milkers, machine operators, aquaculture attendants and supports for animal husbandry. Potential industry growth and an ageing workforce will also contribute to demand for middle management staff and specialists. This includes leading hands, supervisors, agronomists, veterinarian assistants, diesel mechanics and technicians in hydraulics and refrigeration.

Demand for entry level and specialist training, from the Certificate II to Diploma level, is anticipated to grow in line with current and expected workforce needs. Industry are also looking for short onsite programs in management to support supervisors, leading hands, managers and owner operators with skills development in people and business management.

Furthermore, employers have expressed strong demand for more skills and knowledge in biosecurity and quality assurance, particularly as international market protocols tighten, and the risk of disease outbreaks grow. There is also an opportunity for training to support leading hands and owner operators to better comprehend and leverage the richness of farm data to inform strategic and operational decision making.

### **Agriculture is central to the region's economy and has potential for growth**

Agriculture is central to the Great South Coast's economy and accounts for approximately 24% of the region's gross value added. The region's agriculture industry is characterised by significant dairy and livestock production sectors, where wool, beef and lamb are key commodities and exports for the region. Smaller agricultural and horticultural activities such as cropping, vineyard, market gardens (vegetables) and poultry (broilers) can also be found in the region.

There are approximately 1,300 dairy farms at an average herd size of 300 cows across the western dairy region in Victoria.<sup>23</sup> The region accounts for approximately 22% of the nation's milk production and corresponds to an annual export volume and value of 223K tonnes and \$775m respectively.<sup>24</sup> The dairy sector anticipates greater volumes of acquisitions and consolidations as farms pursue higher profitability, productivity and sustainability. This is likely to translate to a decrease in farms and an increase in average farm size, herds and stocking rates.<sup>25,26</sup>

While relatively niche, the Great South Coast is also home to a thriving aquaculture industry. Yumbah Aquaculture for instance is renowned for its production of greenlip and tiger abalone across its South Australian and Victorian hatcheries.<sup>27</sup> With onsite freezing facilities and in proximity to Melbourne's major airfreight hubs, almost 80 percent of Yumbah Aquaculture's harvest is exported to Asian and North American markets.<sup>28</sup> Other produce across the region includes rock lobster, king crab, jig squid, pipies, tuna and various shellfish.<sup>29,30</sup> Proposed expansion of Yumbah Aquaculture in the region is estimated to provide 140 jobs during construction and an additional 160 jobs ongoing.

The outlook on livestock production, dairy farms and aquaculture is stable with potential for growth if existing barriers, including existing labour shortages (discussed below) and telecommunication infrastructure are addressed. For instance, the degree of connectivity blackspots across the region has discouraged the sector from rapid uptake of emerging technologies.

Other risks and barriers include water availability, asset utilisation, ageing power and transport infrastructure, and existing biosecurity issues require management.<sup>31</sup> However, the availability and diversity of land types, established irrigation districts and stable access to key inputs such as fertiliser and grain should contribute to the sector's potential.<sup>32</sup>

The industry's outlook is linked closely to export demand and is subject to the volatility of commodity markets. Global food demand should remain stable due to a lower Australian dollar, lower oil prices and interest rates, recent free trade agreements and improvements in purchasing power parity across key markets such as Thailand and Vietnam.<sup>33</sup> However, global supply has surged due to increased milk production in Europe and is creating greater competition for local producers.<sup>34</sup>

<sup>23</sup> WestVic Dairy Strategic Plan 2017-2020, WestVic Dairy – Dairy Australia, 2017 Note that the WestVic Dairy Region accounts for farms around Portland, Hamilton, Warrnambool, Camperdown, Colac, Ballarat and Mount Gambier.

<sup>24</sup> *ibid.*

<sup>25</sup> Great South Coast – Regional Growth Plan Background Report, Victorian Government, 2014

<sup>26</sup> Filling the glass – Impact Study, WestVic Dairy, 2012

<sup>27</sup> Our story – Our places, Yumbah Aquaculture, accessed 2018, <<http://www.yumbah.com/our-story/our-places>>

<sup>28</sup> Snail's pace is fast money in Yumbah's coastal agribusiness game, Farm Online National, 2018;

<sup>29</sup> The Great South Coast Regional Strategic Plan, Regional Development Victoria, accessed Jan 2018

<sup>30</sup> Our Story, Yumbah Aquaculture, accessed Feb 2018

<sup>31</sup> WestVic Dairy Strategic Plan 2017-2020, WestVic Dairy – Dairy Australia, 2017

<sup>32</sup> *ibid.*

<sup>33</sup> Great South Coast Food and Fibre Strategy 2020, Great South Coast Group, 2015

<sup>34</sup> Dairy Situation and Outlook, Dairy Australia, 2018

Lastly, both the region's agriculture and aquaculture industries are exposed to potential virus outbreaks. In the past, the ganglioneuritis virus has increased abalone mortality rates and contributed to the 63% decline in Victorian abalone production between 2001 and 2012.<sup>35</sup> Declines in research capacity might limit time to market innovations in disease prevention, treatment and containment. Biosecurity and quality assurance will become increasingly important as global competition increases and international market protocols tighten.

Table 6: Key labour market indicators 2017-2021<sup>36</sup>

Current share of region GVA	Current share of total workforce	% of workers aged 15-24	% of workers aged 60 and over	Current workforce size	Estimated workforce demand	Estimated annual workforce growth
16.1%	16.7%	10%	27%	~8,450	+500-1,100	-1.0%-1.0%

### Demand for field staff, leading hands, managers and specialists is strong

Operations in agriculture are driven by a variety of field staff. Common roles include farmhands, shearers, milkers and machine operators. The wool, lamb and beef industries tend to employ field staff on a full-time basis and backfill vacancies on short-term contracts via labour hire firms and backpackers. Farms in horticulture and cropping require a more seasonal workforce, particularly around the harvest periods. The agriculture industry is also supported by specialists and support staff. This includes agronomists, diesel mechanics, truck drivers, refrigeration technicians, electricians, accountants and administrative staff.

The Great South Coast's agriculture industry enjoys a mix of large corporate farms and family-owned farms. Field staff and farmhands on corporate farms that exhibit potential and have sufficient experience will often transition into supervisory and leading hand roles. Vacancies at the managerial level are filled by a mix of internal and external recruitment. In contrast, the owner operators of small and family-owned farms will often perform a blend of on-farm, managerial and business duties. They may recruit or contract additional field staff to support operations as needed. Contract roles include shearers and sowers.

The profile of entry level workers in aquaculture is often attributed to the location of employers and proximity to potential sources of labour. One employer noted that they drew on the unskilled or low-skilled workers such as gap-year students or backpackers to fill entry level vacancies for aquaculture attendants, animal husbandry support staff and seafood process workers. Another cited a greater dependence on recent tertiary graduates on a short-term basis due to close proximity to a local university.

Like agriculture industries, experienced workers in aquaculture may transition into leading hand or managerial roles in areas such as processing, animal husbandry and research and development. However, since turnover in the senior and middle management level is relatively static, attrition at the entry level can be quite high as young workers move between businesses or into other sectors.

As one of the region's largest workforces, forecast workforce demand across all roles is relatively high due to potential growth and an ageing workforce. Employers have expressed that the challenges to find, recruit and retain workers at the entry, middle management and specialist level is the greatest barrier to sector growth. Recruitment challenges are most pronounced for milkers, machine operators and shearers.

Increased demand for core roles in agriculture will also translate into increased demand for support and specialist roles. This includes agronomists, veterinarian assistants, diesel mechanics and specialists in hydraulics and refrigeration. Likewise, high turnover rates in aquaculture at the entry level means that employers can face challenges finding and retaining aquaculture attendants and process workers.

Local employers have highlighted that many assets and sites remain underutilised due to existing labour shortages. Dependence on unskilled workers, backpackers and labour hire firms can increase operational pressures due to higher workforce turnover rates and the cost of retraining. The sector will also begin to feel the impact of its ageing workforce over the next few years as many baby boomers transition to retirement. It is estimated that almost 30% of workers in the industry are aged 60 years or over.

<sup>35</sup> Great South Coast Food and Fibre Strategy 2020, Great South Coast Group, 2015

<sup>36</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018



Table 7: Top occupations and forecast demand 2017-2021 - FTE<sup>37</sup>

Top occupations (based on ANZSCO 4 digit classifications)	Workers in 2016-17	Preliminary estimate of 2017-2021 workforce growth (CAGR)	Taskforce estimate of 2017-2021 additional workforce required
Livestock Farmers	~5,970	-4%	-250-240
Livestock Farm Workers	~940	-4%	-40-40
Mixed Crop and Livestock Farmers	~570	-5%	-20-20
All other occupations	~270	+16%	-20-20
Crop Farmers	~190	-1%	-10-10
Agricultural, Forestry and Horticultural Plant Operators	~100	+11%	-10-10
Crop Farm Workers	~60	+2%	-10-10
Shearers	~50	+11%	-10-10
Mixed Crop and Livestock Farm Workers	~40	-5%	-10-10

**Training and skills in data, management, biosecurity and quality assurance are in demand**

Entry level roles across agricultural industries require a diverse skill set and are often developed on the job. This can differ on a farm to farm basis. Common competencies in dairy include general repair and maintenance, animal health and nutrition, machine operations, quality assurance, feeding, milking, stocking and workplace health and safety. Specific licences might be required for tractor and special work vehicle (i.e. quadbike) driving.

In aquaculture, this might include the basics of animal husbandry and tank management. In most cases, employers are looking for entry level workers that demonstrate a positive attitude, strong work ethic and a willingness to learn. However, strong communication skills, language, literacy and numeracy skills, and a basic understanding of biology is highly desirable.

Digital literacy skills are increasingly important across all roles as the industry’s adoption rate of emerging technologies grows. In addition to baseline skills with software packages such as Microsoft Word, Excel and Outlook, employees should be comfortable with understanding, using and learning various technologies. This can range from the use of agriculture drones to electronic identification for livestock. Employers have also identified an opportunity to provide training for leading hands and owner operators to teach them the skills required to leverage the increasing richness of on-farm data to make informed decisions.

Leadership and business skills are important at supervisory and managerial positions. However, many owner operators do not have formal training in areas such as people management, financial management, project management, supply chain analysis and marketing. This is often attributed to their available capacity and the proximity and timing of available training programs. Local aquaculture operators for instance may send leading hands to Werribee to complete training.

Employers have also expressed demand for greater workforce competency in biosecurity and quality assurance, particularly as international market protocols tighten, and the threat of disease outbreak continues to grow. Employers in agriculture and aquaculture require staff who understand the elements of biosecurity and can follow best practice (e.g. managing disease risk when working dogs are transported between farms).

The Certificate II in Agriculture, Certificate III in Agriculture and Certificate III in Agriculture (Dairy Production) are useful pathways into field staff roles within agriculture to build baseline skills and knowledge (e.g. quadbike driving). Leading hands, supervisors and owner operators may also pursue a Certificate IV in Agriculture or Diploma of Agriculture to gain training to better support enterprise production. Specialists may undertake a diploma or tertiary level qualification in agronomy, environmental science or marine biology for aquaculture.

<sup>37</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

Table 8: Key qualifications and anticipated training requirement<sup>38</sup>

Occupation groups (ANZSCO 6 digit)	Top qualifications	2017 enrolments	Anticipated training requirement
Farm, Forestry and Garden Workers	Certificate III in Agriculture	180-200	No change
Dairy Cattle Farm Workers	Certificate III in Agriculture (Dairy Production)	180-200	No change
Mixed Crop and Livestock Farm Workers	Certificate II in Agriculture	140-160	No change
Farmers and Farm Managers	Certificate IV in Agriculture	80-100	Increase
	Diploma of Agriculture	30-50	Increase
Garden Labourers	Certificate II in Horticulture	110-130	No change
Wool Classers	Certificate IV in Wool Classing	40-60	Increase
Wool Handlers	Certificate II in Shearing	30-50	No change
Shearers	Certificate III in Shearing	20-40	Increase
Arborists	Certificate III in Arboriculture	10-30	No change

### Training can better address critical skills needs and address geographic barriers

Industry leaders and employers in the region have identified specific opportunities for the sector with regards to VET. The table below provides an outline of key findings, as well as training projects that are already underway in response. Identified opportunities will be referred to relevant stakeholders for action and implementation.

Table 9: Identified opportunities

Situation	Opportunity
Employers have expressed that access to local skills, across all levels, can unlock the region's potential in agriculture.	<b>Increase enrolment numbers to address shortages</b> in field staff (including farmhands, shearers and machine operators) and specialists (including agronomists and technicians in hydraulics and refrigeration). Programs should be contextualised to local industry (e.g. food science, supply chain, WH&S, dairy technology, introductory biology, etc.).
While demand is across a disperse geographic area,, most training is provided at centralised locations.	<b>Provide a short onsite program in management</b> and leadership for supervisors, managers and owner operators across local agriculture industries. Skills include people management and business management. This may be delivered out of hours.
Demand for skills to use data to inform decision making in agriculture is currently unmet.	<b>Deliver a short course on using data to make decisions</b> to lift farm productivity for leading hands and owner operators in agriculture. This is distinct from general use of software.
International market protocols are tightening and the risk of biosecurity outbreaks is growing.	<b>Review units of competency in biosecurity and quality assurance</b> to ensure they are current and suited to industry needs. A short module can also be provided to upskill existing workers. The module should help students and workers to understand the importance of these topics and approaches to best practice.
Employers in aquaculture have expressed demand for entry level workers with greater background knowledge of their local industry.	<b>Improve the industry readiness of entry level workers in seafood</b> processing and aquaculture. <i>The OVSC is working with Yumbah Aquaculture to develop a 5-day custom induction package for the region.</i>

<sup>38</sup> Department of Education and Training, Training Activity in the Great South Coast, 2017; Office of the Victorian Skills Commissioner and Nous Group (in consultation with the Regional Skills Taskforce and industry representatives), Anticipated Training Requirements in the GSC, 2017

## Food manufacturing

The outlook on the Great South Coast's dairy, meat and seafood processing industry is positive, where industry is now looking to stabilise after a period of growth and private investment. This will create demand for a variety of roles, including process workers, production operators, machine operators, quality controllers, commercial cleaners and butchers. Some employers have reported workforce challenges due to high turnover rates at the entry level.

This will contribute to demand for entry level training and competencies in areas such as food safety, equipment handling, packaging processes and supply chain processes. Employers have also stressed the importance of training in WH&S, biosecurity and quality assurance to manage workplace risks and meet international standards. Dairy businesses have also expressed demand for training to upskill operators and processors within areas of dairy processing, technology and manufacturing management.

### Industry is anticipated to stabilise after a period of growth and private investment

The Great South Coast has an active food manufacturing industry due to close linkages with its agriculture and aquaculture sectors, and is largely characterised by significant dairy, meat and seafood processing businesses. Dairy products account for 25% of industry output with milk food processing occurring in regions such as Warrnambool, Cobden and Colac.<sup>39</sup> Key products include milk, cheese, butter, cream, skim milk powder, cream cheese, lactoferrin and whey protein concentrate. Other key exports and commodities for the Great South Coast include wool, grains, beef and lamb.

The outlook on milk, meat and seafood processing appears stable after a period of growth and private investment. Fonterra Australia announced its \$165m expansion to increase its capacity and meet global demand for milk and related dairy products. The new expansion includes \$22.1m in capital expenditures for new projects at its manufacturing sites at Cobden and Dennington.<sup>40</sup> Similarly, Warrnambool Cheese and Butter Factory (WCB) upgraded the capacity of its cheese plant by 20K tonnes to accommodate an additional 200m litres of milk in 2017.<sup>41</sup>

Furthermore, Saputo's acquisition of all remaining ordinary shares in WCB in early 2017, following its contested takeover in 2014 (valued at A\$519m), further reflects the unique value of WCB and the region's position in the dairy industry.<sup>42</sup> However, the implications for industry is less clear and dependent on Saputo's strategic plans following the takeover.

### Industry faces challenges to workforce supply due to turnover rates at the entry level

The region's food manufacturing industries employ a variety of dairy, meat, poultry and seafood process workers and packers. Operations are then supported and enabled by metal fitters, machinists, electricians, welders, production operators, machine operators (e.g. forklift drivers), quality controllers, commercial cleaners and butchers.

Experienced staff will typically transition into roles as leading hands, shift supervisors, production managers and manufacturing managers. Businesses may also employ specialists and administrative staff, such as accountants, process engineers and quality assurance officers.

The industry has reported a shortage of workers across all levels of its workforce. Shortages in packers and process workers at the entry level is attributed in part to high workforce turnover rates. This has led to a greater dependence on backpackers and the contract workforce to fill entry level vacancies. This challenge is reportedly more pronounced in the region's meat processing industry where turnover can be as high as 50% over a 6-month period for certain roles.

Table 10: Key labour market indicators 2017-2021<sup>43</sup>

Current share of region GVA	Current share of total workforce	% of workers aged 15-24	% of workers aged 60 and over	Current workforce size	Estimated workforce demand	Estimated annual workforce growth
3.3%	4.1%	13%	9%	~2,100	+50-450	0.0%-3.5%

\* The estimates of additional workforce demand reflect predicted level of industry growth, and therefore do not include existing vacancies.

<sup>39</sup> Great South Coast – Regional Growth Plan Background Report, Victorian Government, 2014

<sup>40</sup> Strong show of confidence in \$165 million Australian expansion, Fonterra Australia, Jan 2017; <<https://www.fonterra.com/au/en/news-and-media/announcements/strong-show-of-confidence-in-165-million-australian-expansion.html>>

<sup>41</sup> WCB going further afield to get extra milk, The Standard, June 2017, <<https://www.standard.net.au/story/4703959/wcb-going-further-afield-for-extra-milk/>>

<sup>42</sup> WCB announces recommended \$8.85 per share cash takeover offer from Saputo; Warrnambool Cheese and Butter Factory; accessed May 2018; <<http://www.wcbf.com.au/en/Our-Company/Newsroom/WCB-announces-recommended-8-85-per-share-cash-takeover-offer-from-Saputo>>

<sup>43</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

For example The Midfield Group, one of the largest employers in Warrnambool with approximately 1,300 staff, has significant workforce shortages at entry level roles. This includes demand for up to 500 staff across roles including meat process workers, dairy farm hands, truck drivers, maintenance staff and quality assurance officers. The lack of entry level personnel is also causing a shortage of staff through to the supervisor levels and management roles.

The Midfield Group have identified low unemployment rates in the region as a contributing factor to challenges in filling vacancies in unskilled roles in their workforce. In addition, the overall lack of available skilled meat processor and dairy farmers throughout the region has created a shortage which is unlikely to change over the next 5 years.

These workforce pressures at the entry level can increase the cost of training for employers and create challenges to succession planning. Consequently, employers have expressed a shortage of production and manufacturing managers with expertise in dairy technology, manufacturing management and quality assurance.

Table 11: Top occupations and forecast demand 2017-2021 - FTE<sup>44</sup>

Top occupations (based on ANZSCO 4 digit classifications)	Workers in 2016-17	Preliminary estimate of 2017-2021 workforce growth (CAGR)	Taskforce estimate of 2017-2021 additional workforce required
Food and Drink Factory Workers	~200	-2%	+0-20
Metal Fitters and Machinists	~120	-2%	+0-20
Meat, Poultry and Seafood Process Workers	~120	+0%	+0-20
Bakers and Pastry Cooks	~100	+6%	+0-20
Truck Drivers	~90	-4%	+0-20
Packers	~90	-2%	+0-20
Meat Boners and Slicers, and Slaughterers	~90	-2%	+0-20
Livestock Farm Workers	~80	+2%	+0-10
Production Managers	~70	-2%	+0-10
Electricians	~70	-6%	+0-10

\* The estimates of additional workforce requirements for the industry reflect predicted level of industry growth, and therefore do not include existing vacancies. Please note that The Midfield Group have up to 500 vacancies across their organisation but this current demand has not been included in the estimates of additional workforce requirements in 2021.

### Training in food processing is required to support existing workforce pressures

Programs such as the Certificate II or Certificate III in Meat Processing, Food Processing or Seafood Processing are useful pathways for packers and process workers to build entry level exposure and skills in food manufacturing industries. Important competencies include food safety, equipment handling, packaging processes and a broader understanding of their employer's supply chain. Demand for training in food manufacturing is anticipated to remain strong due to existing workforce pressures and challenges (e.g. turnover rates).

Production and manufacturing supervisors and managers may undertake a short course or a Certificate IV in or Diploma of Food Processing to develop more advanced competencies. This includes understanding and managing quality assurance practices, safe work policies, food safety programs and related operations within their supply chain. Employers have expressed demand for more experience and training in dairy technology, quality assurance and manufacturing management for workers at the middle and senior management level.

Furthermore, industry has expressed the importance of WH&S in the workplace. Last year, more than 150 people in the south-west experienced a work related injury to the hand due to the use of equipment and machinery or an animal related incident.<sup>45</sup> It is critical that workers at all levels are trained to follow and apply WH&S requirements appropriately.

Lastly, employers have also expressed interest in school related programs to build exposure and interest of young workers in food manufacturing. For instance, the Adrian Meade Dairy Innovation Program is a local five-day workplace learning program for Year 10 and Year 11 students to gain exposure to the region's entire dairy industry supply chain (i.e. from paddock to plate) and the wide variety of career opportunities that are available to them.<sup>46</sup> The program includes factory tours, farm visits and post-program mentoring to help students develop skills and enter pathways in the dairy industry.

<sup>44</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

<sup>45</sup> Help close at hand for the injured, The Standard, 2018, < <https://www.standard.net.au/story/5283370/help-close-at-hand-for-injured-photos-videos/>>

<sup>46</sup> Adrian Meade Dairy Innovation Program, Warrnambool Cheese and Butter Factory, accessed 2018, < <http://www.wcbf.com.au/en/Our-People/Adrian-Meade-Program>>

Table 12: Key qualifications and anticipated training requirement<sup>47</sup>

Occupation groups (ANZSCO 6 digit)	Top qualifications	2017 enrolments	Anticipated training requirement
Meat Process Workers	Certificate II in Meat Processing (Abattoirs)	80-100	Increase
	Certificate II in Meat Processing (Food Services)	0-20	No Change
Butchers or Smallgoods Makers	Certificate III in Meat Processing (Retail Butcher)	60-80	No Change
Food and Drink Factory Workers	Certificate II in Food Processing	20-40	No Change
	Certificate III in Food Processing	0-20	No Change
Meat Boners and Slicers	Certificate III in Meat Processing (Boning Room)	30-50	Increase
Bakers	Certificate III in Baking	0-20	No change
	Certificate III in Bread Baking	0-20	No change
Slaughterers	Certificate III in Meat Processing (Slaughtering)	10-30	Increase
Pastry Cooks	Certificate III in Cake and Pastry	0-20	No change

### Training can better address critical skills needs and address geographic barriers

Industry leaders and employers in the region have identified specific opportunities for the sector with regards to VET. The table below provides an outline of key findings, as well as training projects that are already underway in response. Identified opportunities will be referred to relevant stakeholders for action and implementation.

Table 13: Identified opportunities

Situation	Opportunity
The use of heavy machinery and equipment, and work with animals can be dangerous if WH&S requirements are not followed or understood.	<b>Review local training in WH&amp;S (including existing units of competencies)</b> to ensure new workers are appropriately trained in WH&S. A short module should also be delivered to upskill existing workers, across all levels, to follow and apply WH&S requirements appropriately.
Employers in dairy processing have expressed demand for a local training product to support operators and processors to upskill in managerial and more specialist capabilities.	<b>Foster local expertise in dairy processing, dairy technology and manufacturing management.</b> The OVSC is currently working with Saputo to map the features of a Certificate IV in Food Processing to suit local needs.
International market protocols are tightening. Likewise, the risk of outbreaks in aquaculture remains prevalent.	<b>Review units of competency in biosecurity and quality assurance</b> to ensure they are current and suited to industry needs. A short module can also be provided to upskill existing workers and address unique requirements where needed.

<sup>47</sup> Department of Education and Training, Training Activity in the Great South Coast, 2017; Office of the Victorian Skills Commissioner and Nous Group (in consultation with the Regional Skills Taskforce and industry representatives), Anticipated Training Requirements in the GSC, 2017



## Forestry

The Green Triangle is a central part of the nation's forestry industry. While the industry's positive outlook is reflected in current and expected capital investments, many employers have cited existing labour shortages as a challenge to operations. Most significantly, employers have expressed demand for traineeships and higher quality training for entry level tickets to support the supply of skilled machine operators and ensure entry level workers are prepared for work in a highly mechanised industry. There is also an opportunity for the region to become the preeminent location for forestry education and training in Australia as both local and state training options for leading hands, crew leaders, supervisors and forest managers have declined over recent years.

### Strong export demand will support the Green Triangle's forestry industry

Victoria enjoys almost 200,000 hectares of hardwood blue gum and softwood pine within the Green Triangle. As such, timber processing, wood and fibre production, and forest management are important sectors for the Great South Coast. Primary production and primary processing include products such as sawn timber, wood chips, and pulp and paper and are common inputs for other end users in industries such as construction or secondary processing sectors such as cabinet, furniture and paper packaging production.

In 2015-16, the direct value of primary processed production of the Green Triangle forest industry was valued at approximately \$1.2b and at approximately \$1.9b when flow-on benefits and spending are counted.<sup>48</sup> Raw softwood plantation materials are supplied to mills, particleboard plants and timber treatment plants across regions such as in Mount Gambier, Tarpeena and Tantanoola. There is also strong international export demand for pine wood chip and round wood logs via the Port of Portland.<sup>49</sup> While most processing activities occur in South Australia, large timber processing facilities are also located in Portland and Colac.<sup>50</sup>

The growth outlook for forestry and timber industries appears stable. Employers have noted that several seed plantations and forest regenerations are underway to facilitate anticipated demand for forestry products over the medium term. More than 70% of surveyed hardwood and softwood businesses in the Green Triangle reported that they are likely to invest in new capital equipment and/or business systems to support or expand business operations.<sup>51</sup> However, challenges to growth include land affordability and accessibility, resource security and rising input and labour costs. Furthermore, increases in government regulation, particularly around business reporting requirements, as well as limited public investments in industry, have created challenges to operational efficiency.

### Employers express strong demand for skilled machine operators

*Forest & Wood Products Australia* estimates that there were ~2,300 employed in direct forestry across the Green Triangle in 2017, with ~23% of direct jobs based in Victoria.<sup>52</sup> The forestry workforce is diverse and includes a variety of machine operators, planters, harvesters, scalers, manual labourers and truck drivers. Machine operators and harvesters are often employed locally and on a full-time basis. Other roles such as planters are employed on a more seasonal basis and attract a larger contract workforce. Work in forestry is relatively intensive and it is common for operators and labourers to work long hours due to the time it takes to travel to plantations. This is subject to fatigue management legislation.

Experienced staff may transition to a leading hand or crew boss role. They may supervise operations and manage a team of 4-6 staff onsite. Senior staff include foresters and forest managers. Length of service in senior and middle management roles is relatively static. Businesses in forestry are also supported by administrative staff and specialists. This includes receptionists, accountants, fire fighters, koala spotters and forestry experts.

Table 14: Key labour market indicators 2017-2021<sup>53</sup>

Current share of region GVA	Current share of total workforce	% of workers aged 15-24	% of workers aged 60 and over	Current workforce size	Estimated workforce demand	Estimated annual workforce growth
1.3%	0.7%	10%	27%	~340	+50-100	0.0%-3.5%

<sup>48</sup> Socio-economic impacts of the forest industry – Green Triangle, Forest & Wood Products Australia, 2017

<sup>49</sup> The Great South Coast Regional Strategic Plan, Regional Development Victoria, 2015

<sup>50</sup> The Great South Coast Regional Growth Plan – Background Report, Department of Transport, Planning and Local Infrastructure, 2014

<sup>51</sup> Socio-economic impacts of the forest industry – Green Triangle, Forest & Wood Products Australia, 2017

<sup>52</sup> *ibid*

<sup>53</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

As the outlook on growth is relatively stable, demand for new workers is concentrated at the entry level for managing general turnover and seasonal patterns. 100% of hardwood businesses and 80% of softwood businesses across the Green Triangle have reported moderate or significant challenges to obtaining labour.<sup>54</sup> In particular, employers have reported challenges to finding skilled machine operators and staff to support harvests and production on a more consistent basis. Currently, it is common for employers to draw from neighbouring industries (e.g. agriculture, fishing, etc.) or the 457 Visa workforce to fill vacancies in entry level roles.

Over a broader horizon, labour intensity may fall if processing demand falls and as new technologies and machineries are introduced. However, employer emphasis and fatigue management legislation may affect longer term workforce utilisation rates and translate to an increase in demand for staff. Demand for leading hands, crew bosses and forest managers are also anticipated due to expected retirements and workforce exits over time.

Table 15: Top occupations and forecast demand 2017-2021 - FTE<sup>55</sup>

Top occupations (based on ANZSCO 4 digit classifications)	Workers in 2016-17	Preliminary estimate of 2017-2021 workforce growth (CAGR)	Taskforce estimate of 2017-2021 additional workforce required
Agricultural, Forestry and Horticultural Plant Operators	~100	-20%	+0-20
Agricultural and Forestry Scientists	~40	-17%	+0-10
Forestry and Logging Workers	~40	-15%	+0-10
Truck Drivers	~30	-20%	0-10
Livestock Farmers	~20	-31%	0-10
Production Managers	~10	-18%	0-10
Metal Fitters and Machinists	~10	-16%	0-10
Gardeners	~10	-20%	0-10
Earthmoving Plant Operators	~10	-20%	0-10
Motor Mechanics	~10	-17%	0-10

### Training and licences are needed to prepare workers for a highly mechanised industry

The Green Triangle's forestry industry is highly mechanised and relies extensively on large and expensive machinery for operations. Staff will often undertake training to obtain the appropriate licences, such as the Forest Operators Licence (FOL), to operate required machinery and equipment. This may occur prior to formal employment or during employment with their manager's support.

While training and licences are critical for building exposure and understanding WH&S requirements, employers have expressed the importance of 'seat-time' to ensure operators are able to use machinery and equipment competently and in the context of their business need. Building competency in machine operations can take between 6 and 18 months, depending on the aptitude of the prospective operator. This investment is critical as improper or insufficient training may increase safety risks and risk of damage to assets. For instance, an employer reported that due to the need for specialised training to minimise damage while learning, the average onboarding cost of employing a new machine operator is estimated at \$70,000.

Qualifications are less relevant for other entry level roles (e.g. planters, manual labourers, etc.) but are viewed as a signal of interest if held by a prospective employee. Skills are often learned on the job for these roles. However, employers do look for prospective workers with a good attitude and a strong work ethic, and ideally have some exposure to STEM and/or are mechanically minded.

Leading hands, crew bosses and forest managers require interpersonal, negotiation and delegation skills. They need to be adaptable and apply a more strategic approach to supporting and leading business operations (e.g. how the team should respond to changing weather conditions). Basic foundations in accounting, human resources and asset management are also valuable. Forest managers in the past often travelled to metropolitan Victoria for tertiary training in forestry management. However, many of these programs have since been terminated due to viability and small class sizes.

<sup>54</sup> ibid

<sup>55</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

Table 16: Key qualifications and anticipated training requirement<sup>56</sup>

Occupation groups (ANZSCO 6 digit)	Top qualifications	2017 enrolments	Anticipated training requirement
Sawmilling Operators	Certificate III in Sawmilling and Processing	0-20	No change
Logging Plant Operators	Certificate III in Harvesting and Haulage	0-20	Increase
Saw Makers and Repairers	Certificate III in Sawdoctoring	0-20	No change

### The Green Triangle can be a national training leader and support skills needs across all levels

Industry leaders and employers in the region have identified specific opportunities for the sector with regards to VET. The table below provides an outline of key findings, as well as training projects that are already underway in response. Identified opportunities will be referred to relevant stakeholders for action and implementation.

Table 17: Identified opportunities

Situation	Opportunity
Operators in forestry use expensive equipment and machinery. There is a shortage of skilled operators and inexperience at the entry level which can increase WH&S risk and risk of damage to assets for employers.	<b>Increase traineeship numbers</b> to support the future supply of skilled operators across the Green Triangle. Develop forestry related pre-traineeship programs to prepare students in school to build exposure to industry and access subsequent pathways.
	<b>Improve the quality of training for tickets</b> to ensure that operators are better equipped to use machinery and plant equipment. It is imperative that training is refreshed to provide students with access and exposure to modern equipment and technologies.
The Green Triangle is central to the nation's forestry industry. However, there are limited training options to support skills development for forestry workers. Likewise, training options in forestry management have diminished as many universities no longer offer the program.	Investigate feasibility for the Great South Coast to become the <b>preeminent location for forestry industry training and education</b> in Australia and internationally.

<sup>56</sup> Department of Education and Training, Training Activity in the Great South Coast, 2017; Office of the Victorian Skills Commissioner and Nous Group (in consultation with the Regional Skills Taskforce and industry representatives), Anticipated Training Requirements in the GSC, 2017

## Heavy manufacturing and construction

The region is characterised by an active and diverse heavy manufacturing and construction industry. The outlook on both residential and industrial construction is stable due to significant infrastructure projects underway and prior growth in private dwellings. The region's geographic competitive advantage for wind generation will contribute to growth in wind turbine systems fabrication and assembly. Likewise, close linkages with agriculture, forestry and transport industries will support the region's general engineering and manufacturing businesses more broadly. In contrast, the outlook on aluminium production is more conservative due to prior outages and rising input and labour costs at Portland's aluminium smelter.

While the industry's outlook is positive, critical roles remain in shortage. This includes electricians, plumbers, carpenters and bricklayers in residential settings, and electricians and various plant operators (excavators, loaders, etc.) in industrial settings. Similarly, employers in heavy manufacturing and engineering have reported shortages of machine operators, electricians, diesel technicians, hydraulic technicians and support staff (e.g. accountants, IT specialists, etc.). Both heavy manufacturing and construction industries have also expressed challenges with attracting and retaining middle managers and specialists. This includes supervisors, leading hands, project coordinators and various engineers (e.g. civil, electrical, environmental, etc.).

VET and apprenticeships will have a central role in addressing existing shortages in heavy manufacturing and construction. There is an opportunity to accelerate development and provision of new and tailored courses to supply high priority skills. Technical skills in diesel, hydraulics, pneumatics, computer numerical control (CNC), programmable logic control (PLC), workplace health and safety, quality assurance, industrial coating and non-destructive testing remain in shortage and can be addressed through local training.

### Heavy manufacturing and construction is diverse with some sectors positioning for growth

The Great South Coast is characterised by a diverse and active heavy manufacturing and construction industry. It accounts for approximately 6% of the region's annual gross value added. This includes residential and industrial constructions to support local housing and infrastructure requirements, as well as aluminium ingot production and general engineering activities. Portland's aluminium smelter in particular, contributes to approximately 20% of Australia's total aluminium production, and is an important export for the region and Victoria.<sup>57</sup>

Furthermore, due to consistent winds across the coast, the region has also become home to one of the largest series of wind farm developments in the Southern Hemisphere.<sup>58</sup> Key sites include commercial wind farms at Codrington and Yambuk, as well as the Portland Wind Energy Project at Cape Bridge Water, Cape Nelson North, Cape Nelson South and Cape Sir William Grant.<sup>59</sup> Manufacturers in wind turbine systems fabrication and assembly can be found in Portland.<sup>60</sup>

The outlook on the region's construction industry is relatively stable and is in part attributed to planned infrastructure projects over the next few years. For instance, government will invest a share of the \$64m commitment to modernise, upgrade and regenerate primary and secondary schools across regional and rural Victoria in the Great South Coast.<sup>61</sup> Targeted schools include Branxholme-Wallacedale Community School, Portland South Primary School and Warrnambool East Primary School.

In addition to expansions in tourism and healthcare (discussed later), significant regional road upgrades are also proposed for the next few years. This includes upgrades for Hamilton Highway, Henty Highway – Green Triangle and Princess Highway West – Colac to the South Australian border.<sup>62</sup> A further \$65.8m is committed to provide geotechnical remediation and maintenance to improve key transport corridors and stabilise the land under the South West Victoria Road Improvement Package.<sup>63 64</sup>

Furthermore, several housing developments are also underway and should support the residential construction market in the medium term despite low population growth. Occupied private dwellings have grown at approximately 0.6% per annum, from 38.4K in 2006 to 41.3K in 2016.<sup>65</sup> This trend is anticipated to continue, at least over the next five years.<sup>66</sup>

Heavy manufacturing activity in wind related projects is anticipated to grow. Renewable energy generation targets of 25% by 2020 and 40% by 2025 will encourage growth in the Great South Coast's renewable energy sector.<sup>67</sup> The \$650m Dundonnell Wind Farm project near Mortlake has obtained all planning and environmental approvals.<sup>68</sup> The project comprises up to 88 turbines with a maximum capacity of 250MW and represents one of the largest wind farm approvals in Victoria's history.<sup>69</sup> Construction may commence at the end of 2018, pending various bids, plans and approvals.<sup>70</sup>

Keppel Prince Engineering also secured a contract to supply 15 Vestas V126 - 3.6MW turbine towers locally to Tilt Renewable's Salt Creek Wind Farm at Woorndoo.<sup>71</sup> To support this, government has supported a \$2m expansion of Keppel Prince Engineering's wind tower fabrication facility at Portland.<sup>72</sup> Tilt Renewable's \$105m project will generate an annual output of 172GWh, with construction expected to be completed around July 2018.<sup>73</sup>

<sup>57</sup> Portland Aluminium Smelter Fact Sheet, Alcoa, Dec 2017

<sup>58</sup> Visiting Our Wind Farms – Great South West, Pacific Hydro, accessed Feb 2017

<sup>59</sup> Portland Wind Energy Project (PWE), Pacific Hydro, accessed Feb 2017

<sup>60</sup> The Great South Coast Regional Growth Plan – Back Ground Report, Department of Transport, Planning and Local Infrastructure, 2014

<sup>61</sup> State Budget, Great South Coast Regional Partnership, 2017

<sup>62</sup> ibid

<sup>63</sup> ibid

<sup>64</sup> Country Roads – Great South Coast, VicRoads, 2017

<sup>65</sup> Occupied Private Dwellings – Great South Coast, ABS Census (TSP, Table 14a) and Regional Development Victoria, 2018

<sup>66</sup> Occupied Private Dwellings Forecast – Great South Coast, Regional Development Victoria and Victoria in Future 2016, 2018

<sup>67</sup> Victoria's Climate Change Framework, Department of Environment, Land, Water and Planning, accessed 2018

<sup>68</sup> Dundonnell Wind Farm, Tilt Renewables, 2018

<sup>69</sup> Victorian Government approves one of the biggest wind farms in state's history, ABC News, 2016

<sup>70</sup> Newsletter Jan 18 - Dundonnell Wind Farm, Tilt Renewables, 2018

<sup>71</sup> Salt Creek Wind Farm, Tilt Renewables, 2018

<sup>72</sup> Job Boom for Portland Manufacturer – Media Release, Victorian State Government, 2018

<sup>73</sup> Salt Creek Wind Farm, Tilt Renewables, 2018

The outlook on general manufacturing and engineering sectors is also strong due to linkages with the region's agriculture, manufacturing, forestry and transport industries. Demand for general machinery and equipment maintenance and repair, machining, fabrication and installation services is likely to grow in line with cross-sector growth.

In contrast, the outlook on aluminium smelting in Portland is more conservative. This is attributed in part to prior setbacks, such as the power outage in late 2016 which led operations to fall to a third of true capacity,<sup>74</sup> and rising costs to labour and input. However, the Federal Government will provide \$30m to Alcoa of Australia as part of a broader rescue package for the sector.<sup>75</sup>

Table 18: Key labour market indicators 2018-2021<sup>76</sup>

Current share of region GVA	Current share of total workforce	% of workers aged 15-24	% of workers aged 60 and over	Current workforce size	Estimated workforce demand	Estimated annual workforce growth
7.8%	9%	15%	10%	~4,600	+450-950	2.0%-4.0%

### The sector faces a shortage of traditional trades, machine operators and technicians

The construction, manufacturing and general engineering sector is significant and accounts for approximately 8% of the region's workforce. Portland's aluminium smelter for instance is also one of the region's largest employers, with 465 direct employees and approximately 140 contractors, most of whom live in the local Portland community.<sup>77</sup>

The construction industry is a significant employer of traditional trades workers. This comprises electricians, plumbers, carpenters, bricklayers, joiners, plasterers, fencers, riggers, doggers, concreters and related trades workers, production workers and technicians. Various machine operators are also required across both civil and residential construction markets. This includes plant operators, excavator operators, loader operators, dozer operators, forklift drivers and crane drivers.

Similarly, general engineering and heavy manufacturing firms are large employers of machine operators, fitters, fabricators, machinists, electricians, diesel technicians, hydraulic technicians and pneumatic technicians. Machine operators tend to begin their career as a plant operator at the entry level before transitioning onto other machines and equipment (e.g. excavators). Both construction and manufacturing industries will also employ a variety of support staff, including receptionists and accountants.

Trades workers and operators with high potential and experience will transition into management or specialist roles. This includes roles as leading hands, supervisors, managers, subcontractors, graders and experienced or specialist operators. Others may transition into a variety of service roles, including consulting, sales, estimation and accounts management. Senior or specialist roles across manufacturing and construction industries will include a variety of civil, process, mechanical, electrical and environmental engineers.

Employers note that the stable outlook on the construction industry means that demand for traditional trades will remain strong. This is particularly so for electricians, plumbers, carpenters and bricklayers. While large infrastructure and civil construction projects are also planned, a share of this work might be contracted to metropolitan and interstate providers. This has the potential to crowd out provision by local councils, builders and contractors, and subsequent demand for local workers in civil related works.

Growth in heavy manufacturing and engineering industries will also increase demand for staff across all levels. Employers have already expressed a shortage of machine operators, electricians, diesel technicians, hydraulic technicians and support staff (e.g. accountants, IT specialists, etc.). Industry is also facing challenges attracting and retaining skilled supervisors, leading hands and project coordinators.

These challenges are more pronounced for organisations that anticipate workforce growth over the medium term. Construction of Tilt Renewable's Salt Creek Wind Farm near Woorndoo will generate 100 jobs with Circa Constructions during the construction phase and four full time equivalent staff positions post-construction.<sup>78</sup> Likewise, Keppel Prince Engineering will look to double its workforce over a four to eight-year horizon due to planned and anticipated projects in the pipeline.

The Portland aluminium smelter anticipates demand for new workers due to workforce attrition should its future be secured over the medium term. The smelter has offset the natural attrition of workers over recent years through better utilisation of inputs and various productivity gains.

<sup>74</sup> Alcoa's Portland smelter: Is the facility viable and what does the government bail-out mean?, ABC, 2017

<sup>75</sup> Alcoa's Portland smelter: PM, Premier Andrews announce deal to secure plant's future, ABC, 2017

<sup>76</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

<sup>77</sup> Portland Aluminium Smelter Fact Sheet, Alcoa, Dec 2017

<sup>78</sup> Salt Creek Wind Farm, Tilt Renewables, 2018



Table 19: Top occupations and forecast demand 2017-2021 - FTE<sup>79</sup>

Top occupations (based on ANZSCO 4 digit classifications)	Workers in 2016-17	Preliminary estimate of 2017-2021 workforce growth (CAGR)	Taskforce estimate of 2017-2021 additional workforce required
Structural Steel and Welding Trades Workers	~380	-2%	+40-60
Plumbers	~360	+2%	+20-60
Engineering Production Systems Workers	~270	-3%	+20-40
Electricians	~210	+6%	+20-40
Carpenters and Joiners	~210	+3%	+20-40
Construction Managers	~190	+4%	+20-40
Painting Trades Workers	~140	+1%	+20-40
Metal Fitters and Machinists	~130	-5%	+20-40
Earthmoving Plant Operators	~130	+2%	+20-40
Cabinetmakers	~90	-2%	+0-20

### Employers value apprenticeships as entry level pathways but several skills remain in shortage

Apprenticeships are the central pathway into trade, technician and machine operating roles in construction, engineering and manufacturing industries. Many students will complete work experience or school-based apprenticeships to gain exposure to careers in the local industry. High potential students with a strong work ethic may transition into an apprenticeship.

Employers look for apprentices and entry level workers with the willingness and aptitude to learn and apply the techniques of their trade in the context of their operations responsibly. This is in addition to strong communication skills and language, literacy and numeracy skills. A strong understanding of WH&S is also vital across all levels of industry. Machine operators should also hold the required licence (e.g. forklift licence) to support business needs.

The current industry and workforce outlook suggests that demand for apprenticeships should remain strong. Relevant training programs will include Certificate III in Engineering – Fabrication Trade, Engineering – Mechanical Trade, Plumbing, Electrotechnology Electrician and Carpentry. Pre-apprenticeship pathways, along with taster programs such as Certificate II in Electrotechnology Studies, are valuable in building the exposure and interest of school students in heavy manufacturing and construction.

However, local employers have stressed that several skills remain in shortage. This includes technical skills in diesel, hydraulics, pneumatics, computer numerical control (CNC), programmable logic control (PLC), workforce health and safety, quality assurance, industrial coating and non-destructive testing (e.g. magnetic-particle inspection, visual inspection, etc.). Certain skill sets such as hydraulics and pneumatics are post-apprenticeship studies and often require workers to pursue further training to upskill appropriately.

Experienced operators, supervisors, subcontractors and managers require a broader range of skill sets. This includes skills in people management, financial management and negotiation. They will also require a broader knowledge in areas such as WH&S and legislation to support business operations. Programs such as Certificate IV in Building and Construction or short courses in industry-specific management are potentially useful pathways.

<sup>79</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

Table 20: Key qualifications and anticipated training requirement<sup>80</sup>

Occupation groups (ANZSCO 6 digit)	Top qualifications	2017 enrolments	Anticipated training requirement
Earthmoving Plant Operators (General)	Certificate III in Civil Construction Plant Operations	700-800	No change
Electricians (General)	Certificate III in Electrotechnology Electrician	100-120	No change
	Certificate IV in Electrical - Photovoltaic systems	170-190	No change
Mechanical Engineering Trades Workers	Certificate IV in Engineering	150-170	No change
Plumbers (General)	Certificate III in Plumbing	90-110	No change
	Certificate IV in Plumbing and Services	40-60	No change
Carpenters	Certificate III in Carpentry	100-120	No change
Building Associates	Certificate IV in Building and Construction (Building)	70-90	No change
Other Miscellaneous Technicians and Trades Workers	Certificate II in Engineering Studies	50-70	Increase
Sheetmetal Trades Workers	Certificate III in Engineering - Fabrication Trade	40-60	Increase

### Employers require timely and accessible training to address critical skills shortages

Industry leaders and employers in the region have identified specific opportunities for the sector with regards to VET. The table below provides an outline of key findings, as well as training projects that are already underway in response. Identified opportunities will be referred to relevant stakeholders for action and implementation.

Table 21: Identified opportunities

Situation	Opportunity
Local employers have reported challenges sourcing skills in critical areas of need. This is in part attributed to student interest and limited training options for courses and tickets.**	<b>Accelerate development and provision of new courses to supply high priority skills.</b> This includes industrial coating, wind turbine maintenance, hydraulics, pneumatics and, non-destructive testing.*
	<b>Investigate options to improve local access to training</b> for courses and licences to lower the opportunity and travel costs of training for employers, support currency of skills for existing workers, and reduce barriers to entry for prospective workers. This may entail a mobile training model that cycles between selected programs where ongoing demand for skills development is thin but required on a cyclical basis.
	<b>Increase apprenticeship numbers across traditional trades</b> (i.e. electricians, plumbers, carpenters and bricklayers). Opportunities to undertake school-based apprenticeships in traditional trades should be reviewed and improved if required.
Electrical apprenticeship pathways and courses tend to focus on skills for the residential market and are not always directly relevant in industrial settings.	<b>Explore education options to strengthen an electrical apprentice's ability to work in industrial settings.</b> This may require a review of local training programs to ensure course content caters to both pathways. Similarly, the system should ensure that students have opportunities to gain on the job learning with employers in either or both markets.
Employers have expressed appetite to provide experienced operators with entry level management training.	<b>Create a module to develop leading hand and supervisory skills</b> for experienced operators. This might be a 3-day workshop to introduce concepts in financial management, people management, mentoring and training of others, and negotiation.

\* The OVSC is working with Keppel Prince Engineering and South West TAFE to deliver an accredited service to address local skill shortage in competencies such as non-destructive testing. The OVSC is also collaborating with Rodger Constructions to understand local civil construction requirements.

\*\* The Certificate III in Industrial Coating for instance is still in its development phase with employers sourcing training from Federation University (Ballarat) instead.

<sup>80</sup> Department of Education and Training, Training Activity in the Great South Coast, 2017, Office of the Victorian skills Commissioner and Nous Group (in consultation with the Regional Skills Taskforce and industry representatives), Anticipated Training Requirements in the GSC, 2017

## Transport, automotive and port operations

The region's transport, automotive and port industries are gateways to and enablers of the Great South Coast economy. Forecast growth in annual throughput and planned investments in both road and rail signals a positive outlook for these sectors. However, several occupations remain in shortage across the region. This includes diesel mechanics, automotive electricians, panel beaters, detailers and truck drivers. Demand for apprenticeships and training for licences is anticipated to increase due to existing supply challenges and forecast sector growth.

Industry and local training providers will need to explore opportunities to improve the availability and accessibility of training to ensure that both entry level pathways and options to maintain currency of skills are available locally. Currently, many young people outside Warrnambool will travel long distances to complete their automotive apprenticeships. Likewise, it is common for employers to send workers to metropolitan regions to obtain or renew a Licenced Vehicle Tester Registration (LVTR) and/or to maintain their currency of skills via training with manufacturers.

### The transport, automotive and port operations industries are gateways to the Great South Coast economy

The Great South Coast's road system forms part of Victoria's radial road network between Melbourne, Geelong and Ballarat. Major highways include the Princes Highway and Hamilton Highway in the east-west, the Henty Highway and Hopkins Highway in the north-south and the Great Ocean Road across the coast.<sup>81</sup>

The region contains two significant railway corridors. A broad-gauge line, spanning Warrnambool, Geelong and Melbourne, carries both freight and passengers. Another standard gauge line links Maroona with Portland and is a branch of the Australian Rail Track Corporation corridor between Melbourne and Adelaide. It is used primarily for freight transportation.<sup>82</sup>

These rail and road corridors facilitate significant road transport industry transportation of inputs and outputs in agriculture, aquaculture, forestry, manufacturing and construction. This includes freight, dairy product, wood chips, building materials and quarry product. There are also several airports throughout the region and the broader Green Triangle for commercial, emergency and tourism related services.

Table 22: Key labour market indicators 2017-2021<sup>88</sup>

Current share of region GVA	Current share of total workforce	% of workers aged 15-24	% of workers aged 60 and over	Current workforce size	Estimated workforce demand	Estimated annual workforce growth
4.8%	5.4%	6%	19%	~2,750	+150-650	0.0%-4.0%

<sup>81</sup> Transport and Access, Great South Coast Regional Growth Plan, 2014

<sup>82</sup> *ibid*

<sup>83</sup> Facilities and Operations, Port of Portland, 2017

<sup>84</sup> Future Growth, Port of Portland, 2017

<sup>85</sup> *ibid*

<sup>86</sup> State Budget, Great South Coast Regional Partnership, 2017

<sup>87</sup> *ibid*

<sup>88</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

The Port of Portland is a deep-water bulk port, located between the ports of Melbourne and Adelaide. As an international gateway for the Green Triangle Region, the Port handles approximately \$2.5b in trade annually and forms an important part the Great South Coast's economy.<sup>83</sup> This includes activity in shipping, storage, wharfage, towage and infrastructure related services across commodities such as grain, fertiliser, mineral sands, forestry products and smelter products.

The transport and port operations industries anticipate growth over the next few years. This is in part attributed to the anticipated increase exports of logs and harvesting of blue gum plantations across the Green Triangle Region. The Port of Portland estimates blue gum wood chip throughput to grow from 2.7m tonnes to 3.5m tonnes over the next few years and is anticipated to require an additional 18 ships at the Port each year.<sup>84</sup>

Future trade in commodities such as forestry products, smelter products, fertilisers and mineral sands have potential for growth and may further boost the region's port and transport industry. Average annual throughput of grain through the Port of Portland is anticipated to grow from 82,000 tonnes in 2016 to between 300,000 and 560,000 tonnes in the coming years.<sup>85</sup>

Proposed regional road upgrades will also contribute to the sector's productivity and growth. This includes upgrades for the Hamilton Highway, Henty Highway – Green Triangle and Princes Highway West – Colac to the South Australian border.<sup>86</sup> Furthermore, under the South West Victoria Road Improvement Package, \$65.8m is committed to provide geotechnical remediation and maintenance to improve key transport corridors and stabilise the land.<sup>87</sup>

Lastly, activity in agriculture, transport and related industries creates strong commercial demand for the region's automotive industry, which plays an important role in servicing and supporting the motor vehicle and mechanical requirements. The region's geographic positioning and dependence on private transport also creates strong retail demand for motor vehicles and automotive services. While the region's population growth is low, the strong economic outlook in the region's agriculture, forestry and transport industries will translate to demand in automotive services.

### Pressures persist due to shortages in diesel mechanics, truck drivers and other key roles

The transport, automotive and port operations industry accounts for approximately 5% of the region's gross value added and total workforce. The automotive industry employs diesel mechanics, automotive electricians, diagnostic technicians, detailers, panel beaters and various specialists. The Port of Portland will employ a variety of deckhands, general purpose hands, packers, coxswains, electricians and engineers and technicians for repair and maintenance.

The transport sector employs a variety of truck drivers, machine operators (e.g. forklift drivers) and packers. Driving roles are very diverse in that a variety of light rigid, medium rigid, heavy rigid, heavy combination and multi combination truck drivers are required across the region. This includes tanker drivers for dairy, log truck drivers and wood chip haulers in forestry, and general freight haulers. Oversized truck drivers are also required for significant infrastructure and civil projects.

Experienced staff across these sectors may transition into leading hands, shift supervisors, operations managers, skippers (in port operations) and schedulers (in transport). Transport, automotive and port operations are also supported by a variety of staff. This includes receptionists, accountants, information technology technicians and finance specialists.

Expected industry growth will increase demand for workers and contribute to workforce pressures. Employers in automotive have expressed a significant shortage of diesel mechanics, automotive electricians, panel beaters and detailers. Similarly, employers in transport have reported a shortage of truck drivers across the spectrum of vehicle types (i.e. from medium rigid to multi combination) and roles (e.g. tanker drivers). Employers have attributed this to a combination of accessibility to local training and pathways in schools and VET, and the awareness and interest of young people in automotive and transport related careers.

Table 23: Top occupations and forecast demand 2017-2021 - FTE<sup>89</sup>

Top occupations (based on ANZSCO 4 digit classifications)	Workers in 2016-17	Preliminary estimate of 2017-2021 workforce growth (CAGR)	Taskforce estimate of 2017-2021 additional workforce required
Truck Drivers	~650	+0%	+0-120
Motor Mechanics	~380	+3%	+0-60
Bus and Coach Drivers	~160	1%	+0-20
Metal Fitters and Machinists	~120	+1%	+0-20
Couriers and Postal Deliverers	~100	-1%	+0-20
Automobile Drivers	~70	-1%	+0-20
Panel beaters	~60	+2%	+0-20
Air conditioning and Refrigeration Mechanics	~50	-2%	+0-10
Freight and Furniture Handlers	~50	-2%	+0-10
Electricians	~50	-3%	+0-10

### Apprenticeships and licences are important pathways into industry and will increase in demand

The region's transport, automotive and port operation sectors rely on apprenticeships and training for licences as pathways for entry level workers. For instance, many students will complete an apprenticeship and corresponding qualification (e.g. Certificate III in Light Vehicle Mechanical Technology) to enter the automotive industry as a technician.

Post-apprenticeship, it is common for technicians to travel to Melbourne for training with manufacturers (e.g. Toyota, Mercedes, etc.) to maintain the currency of their skill sets. Likewise, employers may also send workers away from the region to obtain or renew their Licenced Vehicle Tester Registration (LVTR).

Pathways into the transport industry are not dissimilar. It is common for young workers, packers and related entry level staff to first obtain their medium rigid licence and transition into a role as a freight hauler. These drivers may then complete the necessary steps to obtain more advanced licences, from heavy rigid to heavy combination and multi combination, to work as a tanker driver or wood chip hauler. There can be some difficulty for young entry level workers due to high insurance expenses for drivers under the age of 23.

It is common for entry level workers to join the Port of Portland as a deckhand or packer without formal qualifications if they demonstrate a good work ethic, positive attitude and capacity for physical work. Prospective technicians, coxswains and related roles may pursue apprenticeships and qualifications in engineering and maritime to operate deck machinery and electrical systems and/or as mandated by regulation.

<sup>89</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

Strong demand for technicians and truck drivers will increase demand for apprenticeships, VET and licences. Qualifications such as Certificate III in Automotive Electrical Technology, Certificate III in Agricultural Mechanical Technology, Certificate III in Light Vehicle Mechanical Technology, Certificate III in Motorcycle Mechanical Technology, Certificate III in Heavy Commercial Vehicle Mechanical Technology, Certificate III in Automotive Body Repair Technology, Certificate III in Automotive Refinishing Technology and Certificate IV in Automotive Mechanical Diagnosis are likely to increase in demand due to existing shortages in diesel mechanics, automotive electricians, panel beaters, detailers, truck drivers and related roles.

Efforts to address current shortages are also reflected in existing pathways and local programs. Porthaul for instance has partnered with South West TAFE to deliver the *Freight Mate* program to help new and experienced workers access fully paid work and on-site training in the transport industry as they complete their Certificate III in Driving Operations.<sup>90</sup>

Similarly, work experience and school-based apprenticeships are also useful pathways to help students build exposure to opportunities in automotive, transport and port operations. Courses include Certificate II in Automotive Vocational Preparation and Certificate II in Driver Operations. These pathways are particularly important to the transport sector where many young workers have not yet obtained their driver's licence and are not eligible to operate a truck.

Table 24: Key qualifications and anticipated training requirement<sup>91</sup>

Occupation groups (ANZSCO 6 digit)	Top qualifications	2017 enrolments	Anticipated training requirement
Truck Drivers (General)	Certificate III in Driving Operations	900-1,100	No change
	Certificate IV in Driving Operations	140-160	No change
Marine Transport Professionals	Certificate II in Maritime Operations (Coxswain Grade 1 Near Coastal)	20-40	No change
	Certificate III in Maritime Operations (Marine Engine Driver Grade 2 Near Coastal)	20-40	No change
	Certificate III in Maritime Operations (Master up to 24 metres Near Coastal)	20-40	No change
Mechanic's Assistants	Certificate II in Automotive Vocational Preparation	60-80	Increase
Motor Mechanics (General)	Certificate III in Heavy Commercial Vehicle Mechanical Technology	10-30	Increase
	Certificate III in Light Vehicle Mechanical Technology	40-60	Increase
Automobile Drivers	Certificate II in Driving Operations	40-60	Increase
Store Persons	Certificate III in Warehousing Operations	20-40	No change

<sup>90</sup> FM – Freight Mate, Port Haul, accessed 2018, < <http://www.porthaul.com/freightmate-program/>>

<sup>91</sup> Department of Education and Training, Training Activity in the Great South Coast, 2017; Office of the Victorian Skills Commissioner and Nous Group (in consultation with the Regional Skills Taskforce and industry representatives), Anticipated Training Requirements in the GSC, 2017



## Better access to training for apprenticeships and licences can address workforce shortages

Industry leaders and employers in the region have identified specific opportunities for the sector with regards to VET. The table below provides an outline of key findings, as well as training projects that are already underway in response. Identified opportunities will be referred to relevant stakeholders for action and implementation.

Table 25: Identified opportunities

Situation	Opportunity
<p>Skills and training options for diesel mechanics, automotive electricians and related roles are in shortage across all industries. For instance, there are currently no direct pathways for diesel mechanics in Warrnambool, Portland or Hamilton.</p> <p>There is a shortage of truck drivers across the Great South Coast. This includes freight haulers, tanker drivers, log truck drivers and wood chip haulers, and across a variety of vehicle types (i.e. from medium rigid to multi combination).</p>	<p><b>Improve apprenticeship numbers of diesel mechanics</b>, automotive electricians, panel beaters and detailers. This may require new courses currently not offered in the region.</p> <p><b>Create or strengthen opportunities for truck drivers to upskill locally.</b> This includes structured pathways for packers and dock workers to transition into driving roles, and structured support for experienced drivers to pursue their next licence (i.e. medium rigid to heavy rigid to heavy combination to multi combination).</p> <p><b>Strengthen school pathways to generate awareness in and pathways</b> to careers in automotive and transport. This may require more work experience, school-based apprenticeships and pre-apprenticeship opportunities in schools, and closer partnerships between schools and the automotive and transport industries. Careful note should be given to the complexities faced by young people under the age of 23 (e.g. higher insurance premiums).</p>
<p>Automotive apprentices from Timboon, Hamilton, Portland, etc. can face challenges completing their automotive studies due to required travel to and from Warrnambool for training.</p> <p>Employers will send workers to Melbourne or Ballarat to upskill in areas of business need. For instance, mechanics may travel to Melbourne for training with manufacturers (e.g. Toyota, Mercedes, etc.) to maintain their currency of skills.</p> <p>Similarly, local options to obtain or renew a Licenced Vehicle Tester Registration (LVTR) are limited. Local employers for instance must send workers to complete their bus tester course in Melbourne to obtain their bus LVTR.</p>	<p><b>Explore options to improve access to training and reduce travel requirements in automotive studies</b> for apprentices residing outside Warrnambool. This might involve mobile training sites and virtual classrooms for specific aspects of training.</p> <p><b>Investigate options to bring training locally</b> to support employee obtainment of LVTRs and related competencies and tickets. This may lower the opportunity and travel costs of training for employers, support the currency of skills for existing workers, and reduce barriers to entry for new workers. This will be referred to the regional partnership</p>
<p>Automotive employers have expressed strong preference for entry level training that is practical and exposes students to the most current methods and technologies.</p>	<p><b>Refresh local training in automotive to better reflect the current methods</b> and technologies of local industry. This should involve a greater focus on competencies that are in demand (e.g. diagnostics, electronics, wiring diagrams, air-conditioning, etc.) and ensuring training plans are adapted to meet the needs of both the employer and apprentice.</p>
<p>The current training package does not offer blended skills development in maritime and engineering related competencies that are tailored to the local needs of the Port of Portland.</p>	<p><b>Scope feasibility for a hybrid maritime-engineering qualification</b> to suit local needs in port operations. <i>The OVSC is collaborating with the Port of Portland to explore this opportunity.</i></p>

## Healthcare and social assistance

The region's ageing population and major reforms, such as the transition into the National Disability Insurance Scheme (NDIS) and response to the Royal Commission into Family Violence, will drive demand for services across healthcare and social assistance industries over the next few years.

Local VET and traineeships will be important in supporting the future supply of skilled aged-care workers, disability support workers, personal care workers, allied health assistants, dental assistants and related roles. Key qualifications will include Certificate III in Individual Support and Certificate III in Allied Health Assistance. Similarly, employers have expressed demand for modular training in people management, particularly as the need for team leaders, supervisors and managers increases with industry growth.

Competencies such as cultural empathy, manual handling, infection control and administering and monitoring of medications will remain essential across the roles. Furthermore, the workforce will need to be increasingly mobile and adaptable as sectors become increasingly blended due to industry growth and change.

### Major reforms and an ageing population will drive industry growth

Healthcare and social assistance is one of the region's largest and fastest growing industries and currently accounts for 6% of the region's gross value added. Key sectors include allied health, aged-care, disability support, early childhood education and family violence, and encompasses both small and large organisations. This includes small clinics, hospitals, community hubs and various not for profit organisations across regional centres and more rural areas within the Great South Coast.

The region's ageing population, transition to the NDIS, consumer directed care and reforms in family violence will increase demand for healthcare and social assistance services. Required industry and workforce growth is reflected in recent investments and expansions across the region. For instance, demand for NDIS services in the Western District is estimated to grow from \$110m in 2015/16 to \$180m by 2019/20. The volume of participants is anticipated to reach 3,500 in this period (~10% growth).<sup>92</sup> Response to the Royal Commissioner into Family Violence will also create demand for related support services and programs. The Great South Coast will receive a share of Victoria's \$448m commitment to establish Support and Safety Hubs to eliminate family violence.<sup>93</sup>

Similarly, government will provide \$7.5m to South West Health in Warrnambool to undertake planning and preliminary infrastructure works in the south west region.<sup>94</sup> This is intended to help advance the hospital's \$112m project to expand the emergency department and operating theatres, upgrade the short stay units and pathology blocks, and to construct another multi-storey carpark.<sup>95</sup> In aged-care, Lyndoch Living's final Masterplan and Feasibility Study was approved in 2016 and outlines four discrete stages of building works to meet future service demand over the next 8 to 10 years. Stage 1 includes refurbishments, new residential beds and buildings and improvements to the external façade of their Primary Healthcare Centre.<sup>96</sup>

Table 26: Key labour market indicators 2017-2021<sup>97</sup>

Current share of region GVA	Current share of total workforce	% of workers aged 15-24	% of workers aged 60 and over	Current workforce size	Estimated workforce demand	Estimated annual workforce growth
7.8%	12.9%	8%	14%	~6,600	+900-2,700	3.0%-8.0%

<sup>92</sup> Victorian Market Position Statement, National Disability Insurance Agency, 2015

<sup>93</sup> Family violence - Victorian Budget 2017/18, State Government Victoria, 2017

<sup>94</sup> State Budget, Great South Coast Regional Partnership, 2017

<sup>95</sup> State Budget commits \$7.5m to our Warrnambool Base, South West Healthcare, 2017;

<sup>96</sup> Annual Report, Lyndoch Living, 2017

<sup>97</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

### Employers anticipate strong demand for workers in aged-care, disability care and allied health

The healthcare and social assistance workforce is significant, accounting for 12.9% of the region's current workforce and comprising a variety of health professionals, carers and support workers. Health professionals include registered nurses, general practitioners, midwives, dentists, physiotherapists, occupational therapists and related roles. They are often supported by allied health assistants, enrolled nurses, personal care workers and dental assistants.

Aged-care workers, personal care workers and disability support workers are also important roles across aged-care, residential care, community care and in-home care settings. The sector also employs a variety of social workers, child carers and teaching aides to support schools, communities and families more broadly.

Social services and hospitals will also employ kitchenhands, cleaners, receptionists, book keepers and related roles to support operations. The mix between professional, support and administrative staff may differ between allied health, aged-care, disability support and related services.

An ageing population and forecast growth in service demand across allied health, aged-care and disability support industries will increase demand for professionals and support workers. Employers in allied health have already reported significant challenges to recruitment of physiotherapists, occupational therapists, surgeons and support staff, including dental assistants, personal care workers and allied health assistants.

The National Disability Insurance Agency (NDIA) estimates that the Western District's disability support workforce is forecast to grow by ~50% to meet estimated demand for NDIS services.<sup>98</sup> Similar challenges are anticipated in aged-care as the region transitions into consumer directed care and the population ages.

Employers have also noted that the challenge of finding skilled workers is anticipated to intensify as industry emphasises greater client centred care and becomes increasingly complex and resource intensive due to major reforms and growing operational pressures. Employers also note that the workforce is becoming increasingly mobile, where workers are required to work across different sites, locations, sectors, specialisations and roles. This is reflected in lower workforce utilisation rates, growing resource pressures and greater demand for in-home and client centred care.

The early childhood education and care sector is expected to grow in the region, with an expected population growth of more than 500 children under 4 years of age by 2023. In addition, changes in government requirements are also likely to mean an increase in the number of qualified early childhood staff required within services, such as the recent announcements indicating an intention to expand three year old kindergarten, supported by new investment. This is likely to exacerbate existing shortages in the workforce at all levels in the early childhood sector. Current workforce shortages are largely due to a lack of ability to attract workers because of relatively low wages and higher travel distances associated with regional positions.

Table 27: Top occupations and forecast demand 2017-2021 - FTE<sup>99</sup>

Top occupations (based on ANZSCO 4 digit classifications)	Workers in 2016-17	Preliminary estimate of 2017-2021 workforce growth (CAGR)	Taskforce estimate of 2017-2021 additional workforce required
Registered Nurses	~1,500	+6%	+180-540
Aged and Disabled Carers	~830	+5%	+100-300
Child Carers	~450	+4%	+60-160
Nursing Support and Personal Care Workers	~320	+5%	+40-120
Receptionists	~290	+3%	+40-100
Generalist Medical Practitioners	~210	+3%	+20-80
Welfare Support Workers	~130	+3%	+20-40
Enrolled and Mothercraft Nurses	~120	+4%	+20-40
Ambulance Officers and Paramedics	~110	+1%	+20-40
Medical Technicians	~100	+9%	+20-40

<sup>98</sup> Victorian Market Position Statement, National Disability Insurance Agency, 2015

<sup>99</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

### Demand for entry level training and workers that are adaptable will increase

The Certificate III in Individual Support is a common pathway, either via direct entry or a traineeship, into the aged-care, community care and disability support workforce. Likewise, Certificate III in Allied Health Assistance, Diploma of Nursing, Certificate III in Dental Assisting and Certificate III Health Service Assistance are common entry pathways for allied health assistants, enrolled nurses, dental assistants and related health service assistants respectively. Forecast workforce growth suggests that demand for training will increase across these qualifications.

Many roles at entry level share common skill requirements. This includes cultural empathy, manual handling, application of WH&S practices, hygiene protocols, infection control and assisting with, administering and/or monitoring medications. Employers also emphasised that skill sets in customer service are increasingly important as the Great South Coast transitions to the NDIS and consumer directed care.

Similarly, demand for competencies to work flexibly and adaptably across aged-care, disability support and community care will grow as the workforce becomes increasingly mobile under major reforms and changing client needs. Required workforce mobility is coupled with increased job responsibilities.

For instance, employers have reported that allied health assistants are now more likely to take on the more administrative duties of allied health professionals due to resourcing and regulatory constraints to employment ratios. It is important that training is current to reflect the changing nature of roles and skills needs across these roles.

The existing workforce shortages and ageing workforce demographic in the early childhood education and care sector means that there is significant demand for people with entry level qualifications such as the Certificate III in Early Childhood Education and Care, Diploma of Early Childhood Education and Care, Bachelor in Early Childhood Education and qualified Maternal Child Health Nurses. A lack of courses available locally often means that people looking to gain qualifications relocate to metro areas and choose not to return to work in the region. RTOs will have an important role to play in filling this gap by providing localised opportunities, embedding current practices into training and broadening the applicability of qualifications to a range of entry level roles.

Team leaders, supervisors and managers require competencies in people management, customer service and leadership. Employers have noted that a foundational understanding of business planning and human resources can help experienced hires to perform more effectively in their role.

Table 28: Key qualifications and anticipated training requirement<sup>100</sup>

Occupation groups (ANZSCO 6 digit)	Top qualifications	2017 enrolments	Anticipated training requirement
Personal Care Assistants	Certificate III in Individual Support	800-1,000	No change#
Child Care Workers	Certificate III in Early Childhood Education and Care	140-160	Increase
	Diploma of Early Childhood Education and Care	110-130	Increase
Welfare Support Workers	Certificate III in Community Services	40-60	No change
	Diploma of Community Services	130-150	No change
Disabilities Services Officers	Certificate IV in Disability	160-180	No change
Enrolled Nurses	Diploma of Nursing	130-150	No change
Teachers' Aides	Certificate III in Education Support	110-130	Increase
Aged or Disabled Carers	Certificate IV in Ageing Support	60-80	Increase
	Certificate IV in Mental Health	30-50	Increase

#The number of enrolments significantly exceeds the current demand for personal care assistants. This estimate relies on the accuracy of training activity data, and numbers should be monitored in future to confirm this assumption.

<sup>100</sup> Department of Education and Training, Training Activity in the Great South Coast, 2017; Office of the Victorian Skills Commissioner and Nous Group (in consultation with the Regional Skills Taskforce and industry representatives), Anticipated Training Requirements in the GSC, 2017

### Training is required to support industry growth, major reforms and changing skills needs

Industry leaders and employers in the region have identified specific opportunities for the sector with regards to vocational training. The table below provides an outline of key findings, as well as training projects that are already underway in response. Identified opportunities will be referred to relevant stakeholders for action and implementation.

Table 29: Identified challenges and opportunities

Situation	Opportunity
The region's ageing population and major reforms in disability, aged-care and early childhood education will require significant growth across all levels of the workforce.*	<b>Improve enrolment and traineeship numbers</b> to address shortages in personal care workers, disability support workers, aged-care workers, early childhood workers, case workers, enrolled nurses and allied health assistants.
	<b>Target underrepresented students in the current workforce</b> , particularly males.
	<b>Refer impact of incentives and loadings</b> on willingness of workers to remain in regional centres to the Department of Health and Human Services.
Increase presentation of children with complex needs and trauma related behaviours.	<b>Embed trauma related practices in the curriculum.</b>
Limited local training options in areas of specific skills needs and the proximity of training to employers can create challenges to skills development and supply.	<b>Address current training gaps at the Certificate III level</b> to provide local pathways for prospective dental assistants and allied health assistants in the region.
	<b>Identify approaches to improve accessibility to training</b> to support students undertaking work experience, school-based traineeships and mandatory placements as part of their VET course.
	<b>Explore options for an on the job model</b> for nurses working in midwifery to upskill in maternal child health.
	<b>Adopt alternative delivery approach</b> to support modular training for team leaders, supervisors and managers to upskill in business and people management.
The region's aged-care, disability and community care workforce may become increasingly blended due to major reforms and workforce growth.	<b>Strengthen training to promote workforce mobility.</b> This includes building an understanding of the importance of being adaptable and flexible, and providing students with an opportunity to build cross-sector experience during their placement(s) and/or school-based traineeship.**

\* The OVSC is working with Lyndoch Living to pilot an accredited NDIS skill set in the Great South Coast to ensure prospective workers are NDIS ready upon entry into the disability support workforce.

\*\* Harnessing these skills may also require changes to the terms and conditions of employment set out in enterprise awards to enable greater workforce mobility and adaptability.



## Tourism, retail and hospitality

While forecast population growth is low, positive economic conditions, international export demand and the visitor economy suggests that there is potential for growth in tourism over a broader horizon. This is reflected in planned investments such as the Twelve Apostles Improvement Program underway.

The outlook on retail and hospitality is stable, due largely to low population growth rates. However, growth in online competition, increased customer expectations and new business models (e.g. Airbnb) will affect how local operators maintain their competitive advantage. Some services may grow while others consolidate across regional centres as a result.

This potential, as well as natural workforce turnover, will translate into continued demand for sales assistants, commercial cleaners, chefs and related roles. Similarly, demand for entry level licences and qualifications such as the Responsible Service of Alcohol training and a Certificate III in Commercial Cookery should continue.

Employers across tourism, retail and hospitality industries have expressed demand for more skills in customer service, cultural awareness and digital marketing as local and online competition grows. Opportunities also exist for the delivery of innovative training models to support small businesses and owner operators to upskilling outside of business hours. Any proposed alternate model should minimise time away from work and generate immediate returns from the newly acquired knowledge.

### International demand and investment will support tourism, retail and hospitality in the long term

The Great South Coast's tourism industry is iconic, where its environmental assets, landscapes, cultural heritage and attractions have contributed to the region's thriving visitor economy. Key touring routes and experiences include the Great Ocean Road, Volcanic Drive, Mary Mackillop Trail, Grampians National Park and Great Otway National Park.<sup>101</sup> The Twelve Apostles attracts nearly 2.2 million visitors annually, where the Great Ocean Road accounts for more than half of all international overnight stays in Victoria.<sup>102</sup> Local flagship events such as the Warrnambool Racing Festival and Wunta Fiesta provide regular boosts to the regional economy due to increased spending from locals and patronage from neighbouring towns.<sup>103</sup>

Growth over a broader horizon is anticipated for the Great South Coast's tourism industry, due particularly to potential demand from visitors from China, India, South Korea and Malaysia. This potential is reflected in planned investments such as the Shipwreck Coast Master Plan, which is a program to protect the coastline between Princetown and the Bay of Islands, improve opportunities for visitors and strengthen the local economy through sustainable tourism. Stage one of this project outlines \$9.8m of investment to this highly visited stretch of the Great Ocean Road. Key investments include \$1m for the Twelve Apostles Improvement Program, \$2.4m for improvements to Castle Rock Lookout, \$1.2m for a new blowhole lookout at Loch Ard Gorge precinct and \$3.2m for Port Campbell National Park to rebuild its pedestrian bridge and trail connectivity.<sup>104 105</sup> Future stages of the Plan outline a \$130m of further investment through projects in the area.

The Great South Coast economy is also supported by an active retail and hospitality sector. These sectors are characterised largely by family-owned shopfronts, boutiques, cafes, restaurants and motels, as well as several large retailers and hotel chains. Demand for suppliers of essential goods and services, such as grocery stores, pharmaceutical outlets and hairdressers, should remain stable. This is attributed to low but stable population and workforce growth. Growth in tourism and the contract workforce should also contribute to demand for retail and hospitality.

However, growth in online competition, volatility in commodity prices, increased customer expectations and new business models (e.g. Airbnb) will affect how local operators maintain their competitive advantage and conduct their business. Freight providers have reported strong growth in parcel delivery due to shifts to online shopping reflecting the growing competition that local retailers will face across the region. Collectively, these factors suggest that some services in retail and hospitality may grow whilst others consolidate across regional centres as a result.

Table 30: Key labour market indicators 2017-2021<sup>106</sup>

Current share of region GVA	Current share of total workforce	% of workers aged 15-24	% of workers aged 60 and over	Current workforce size	Estimated workforce demand	Estimated annual workforce growth
8.6%	21.2%	35%	9%	~10,800	+350-1,700	0.0%-3.0%

<sup>101</sup> The Great South Coast – Regional Growth Plan Background Report, The Department of Transport, Planning and Local Infrastructure, 2014

<sup>102</sup> The Twelve Apostles are really 17, Herald Sun, 2016

<sup>103</sup> Events and Festivals, Wonderful Warrnambool, accessed 2018, <<http://www.wonderfulwarrnambool.com.au/events-and-festivals>>

<sup>104</sup> \$50M upgrades for Great Ocean Road, G21 – Geelong Region Alliance, 2017

<sup>105</sup> Shipwreck Coast Master Plan – Stage 1 Projects, State Government Victoria, accessed 2018, <<https://www.shipwreckcoast.vic.gov.au/shipwreck-coast-master-plan-stage-1-projects>>

<sup>106</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

### Demand for workers is strong due to potential growth and high turnover rates

The tourism, retail and hospitality workforce is large and diverse, currently accounting for approximately 21% of the region's workforce. Common roles include waiters, bar attendants, baristas, chefs, cooks and kitchenhands. Receptionists, commercial cleaners, sales assistants, bookkeepers and related positions provide support to business operations. Tourism businesses may also employ tour guides, bus drivers and related roles.

At the entry level, retail and food accommodation services are characterised by a large share of young workers, backpackers and migrants on 457 Visas. Many young locals pursue part time or casual work in the sector during or between completing their studies in secondary school and/or further study. Owner operators of small and/or family businesses will often perform managerial duties and a blend of roles to support operations. Increasingly, there is a need for entry level staff to have the skills required to provide a high level of service to international visitors. The ability of the region to provide visitors with a high level of service in the hospitality sector will be an important aspect of increasing the length of time visitors choose to stay in the region, rather than returning to the Melbourne area.

Growth in tourism and high turnover rates due to a young and casualised workforce will contribute to ongoing demand for workers. Employers have reported challenges with workforce retention and turnover as many young workers often pursue opportunities in retail and hospitality as a short term opportunity. Shortages in chefs, kitchenhands and cleaners have led to a greater dependence on contract and international hires from markets such as New Zealand.

Employers note that the region's potential in tourism, retail and hospitality is dependent on the its scale and timing of planned investments, ability to establish and market its competitive advantage, and capacity to source high quality labour to support operations. Hence, it is potentially over the medium term or broader horizon before the sector begins experience increased workforce demand due to industry growth.

Table 31: Top occupations and forecast demand 2017-2021 - FTE<sup>107</sup>

Top occupations (based on ANZSCO 4 digit classifications)	Workers in 2016-17	Preliminary estimate of 2017-2021 workforce growth (CAGR)	Taskforce estimate of 2017-2021 additional workforce required
Sales Assistants (General)	~2,200	-1%	+0-280
Retail Managers	~640	+0%	+0-80
Waiters	~560	+1%	+0-80
Checkout Operators and Office Cashiers	~490	+1%	+0-60
Kitchenhands	~460	-2%	+0-60
Chefs	~430	+1%	+0-60
Bar Attendants and Baristas	~340	+0%	+0-40
Hairdressers	~330	+0%	+0-40
Retail Managers	~310	-3%	+0-40
Shelf Fillers	~220	-3%	+0-20

### Skills in customer service, digital marketing and small business are in shortage

Pathways into tourism, retail and hospitality are diverse. Entry level workers may enter the sector as an unskilled casual hire or via a traineeship if they demonstrate a good attitude and work ethic. Workers may take short courses and certifications such as the Responsible Service of Alcohol (RSA) or Barista Coffee Course to support workplace needs. It is also common for workers to move between workplaces and industries due to transferable skill sets that the tourism, retail and hospitality sector shares.

Demand for courses in tourism, retail and hospitality (e.g. Certificate III in Retail, RSA, etc.) should remain stable due the sector's outlook and expected turnover of entry level staff. However, demand for the Certificate II in Kitchen Operations and Certificate III in Commercial Cookery may increase to address the current shortage of local cooks, chefs and kitchen hands.

Employers have also expressed strong demand for competencies in customer service across tourism, retail and hospitality industries. Anticipated growth in tourism, customer expectations, online shopping and competition from neighbouring regions requires businesses across the region to foster their competitive advantage with visitors and patrons. Increased tourism from markets such as China, India and South Korea require local workers to have strong cultural awareness and empathy to ensure all visitors feel welcome.

<sup>107</sup> Office of the Victorian Skills Commissioner, Nous Group and Deloitte (in consultation with the Regional Skills Taskforce and industry representatives), 2017-2021 Workforce Forecast Growth by Industry in the GSC, 2018

Similarly, skill sets in digital literacy are increasingly important in tourism, retail and hospitality as local businesses look for better opportunities to strengthen branding and connect with customers. Employers have expressed demand for skills in areas such as social media marketing, digital merchandising, web development and search engine optimisation. At present, digital opportunities with small businesses are either underutilised or outsourced to providers outside the region.

Lastly, supervisors, managers and owner operators require a diverse skill set due to the blend of roles they perform. In addition to customer service, marketing and digital literacy, skills in people, financial and business management are important. Experienced hires and owner operators have expressed difficulties with accessing opportunities to upskill due to trading hours and proximity to onsite training.

Table 32: Key qualifications and anticipated training requirement<sup>108</sup>

Occupation groups (ANZSCO 6 digit)	Top qualifications	2017 enrolments	Anticipated training requirement
Hospitality Workers	Certificate II in Hospitality	200-240	Decrease
	Certificate III in Hospitality	120-140	No change
Cooks	Certificate III in Commercial Cookery	120-140	Increase
Sales Assistants (General)	Certificate II in Retail Cosmetics	20-40	No change
	Certificate II in Retail Services	20-40	No change
	Certificate III in Retail	20-40	No change
Hairdressers	Certificate III in Hairdressing	60-80	No change
Beauty Therapists	Certificate III in Beauty Services	40-60	No change
ICT Support Technicians	Certificate III in Information, Digital Media and Technology	20-40	No change
Hair or Beauty Salon Assistants	Certificate II in Salon Assistant	20-40	No change

### Employers require innovative training options to address current skills needs

Industry leaders and employers in the region have identified specific opportunities for the sector with regards to VET. The table below provides an outline of key findings, as well as training projects that are already underway in response. Identified opportunities will be referred to relevant stakeholders for action and implementation.

Table 33: Identified challenges and opportunities

Situation	Opportunity
Strong people skills are required to foster the region's natural competitive advantage in tourism and quality of service in retail and hospitality. This is particularly important as the visitor economy from China, India and Korea grows.	<b>Emphasise skills development in customer service and cultural awareness</b> in the classroom and in the workplace across VET programs in tourism, retail and hospitality.
Employers seek skills to better reach and connect with their customers, particularly as competition from neighbouring regions, online shopping and new business models (e.g. Airbnb) grows.	<b>Ensure that modules to upskill in digital marketing</b> are available as discrete short courses or as part of existing VET courses. Competencies include digital merchandising and social media marketing.
Managerial skills are in shortage due to the sector's dependence on a young and transient workforce at the entry level. Similarly, local owner operators can find it difficult to access training due to trading hours and available training options locally.	<b>Explore innovative options for managers, supervisors and owner operators</b> to access training in business and people management locally and outside standard trading hours. Alternate models need to minimise time away from the workplace and generate immediate returns from new knowledge.

<sup>108</sup> Department of Education and Training, Training Activity in the Great South Coast, 2017; Office of the Victorian Skills Commissioner and Nous Group (in consultation with the Regional Skills Taskforce and industry representatives), Anticipated Training Requirements in the GSC, 2017

## Appendix B: Current training projects underway

In collaboration with government, industry, training providers and related agencies, the OVSC has established several training programs in response to challenges identified across the region. These programs are likely to receive support from WTIF and RSTF and are already in conceptual planning stages, seeking approval and/or in formal development. An outline of key programs underway are summarised below.

1. **Worked with Warrnambool Cheese and Butter Factory** to map the requirements of a Certificate IV in Food Processing and accreditation of specific qualifications for the industry.
2. **Collaborated with Port of Portland** to explore a hybrid maritime-engineering qualification to suit local workforce needs.
3. **Worked with Keppel Prince Engineering** and South West TAFE to deliver an accredited service to address local skills shortages in competencies such as non-destructive testing.
4. **Collaborated with Lyndoch Living** to pilot an accredited NDIS skill set in both Gippsland and the Great South Coast to ensure new workers are NDIS ready upon entry into the workforce.
5. **Collaborating with Rodger Constructions** to understand local civil construction requirements. The region will pilot the delivery of a specialised civil construction skill set that is not readily available in current training packages.
6. **Working with Yumbah Aquaculture** to develop a custom induction package. The five-day short course will cover several skill sets not covered by the current Seafood Industry Training Package.
7. **Engaging in preliminary discussions to scope additional products** that are tailored to local industry needs. This includes an induction package type approach for local retail businesses in the Great South Coast.











**Office of the  
Victorian Skills Commissioner**

Level 1, 21 Degraeves Street  
Melbourne VIC, 3000

PO Box 354, Flinders Lane  
VIC, 8009

**T:** (03) 8892 1602

**E:** [enquiries@vsc.vic.gov.au](mailto:enquiries@vsc.vic.gov.au)

[www.vsc.vic.gov.au](http://www.vsc.vic.gov.au)

Level 1, 21 Degraeves Street  
Melbourne VIC, 3000

