Workforce Development in the Grampians Region

Prepared for Regional Development Australia – Grampians region by:

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Regional Development Australia Grampians

The Regional Development Australia (RDA) Grampians Committee, an Australia Government initiative, works in partnership with community, business and all three levels of government to strengthen and grow the Grampians region. We are local people developing local solutions to local issues.

This report was prepared by the Centre for Regional Innovation & Competitiveness—University of Ballarat for Regional Development Australia Grampians.

The report is available in PDF from Regional Development Australia Grampians region website www.rdv.vic.gov.au/regional-development-australia/committees/grampians or contact the office below.

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Executive Summary

A key challenge for business and industry, and tertiary education providers in the Grampians region is to identify, plan for and provide the workforce skills and knowledge which will be relevant in future years.

This report presents emerging trends for business and industry in the Grampians region, and the workforce skills and knowledge which will be required to ensure regional competitiveness, prosperity and growth. In particular, the project focuses on developments in the following four industries: Agriculture, Health Care and Social Assistance, Manufacturing, and Tourism. The project examined both general and regional trends in these industries and how education providers can meet emerging workforce development needs in these four sectors.

Regional Trends

Over the last several decades, industrial economies based on Manufacturing have shifted to economies driven by services, electronic technologies and information, and have become reliant on higher levels of cognitive and interactive skills. The Grampians region is no exception. Trends suggest the region's economy and jobs will continue to be oriented in this direction. All four industries are affected by globalisation, the pace of technological change, an ageing workforce, and there is a strong need for labour force diversification, both in terms of labour and skill needs.

Employment in the region is expected to rise with an estimated 7,100 jobs to be generated until 2018. Employment opportunities will differ considerably across the four industries of focus. In line with broader trends across the State, the Health Care sector will see the strongest employment growth over the next 5 years. Despite global pressures, manufacturing still dominates the regional economy. However, the sector is expected to experience negative employment growth to 2018. Future trends in employment in the Grampians region illustrate that employment in Agriculture is expected to decrease by 2018. Tourism is also expected to experience negative growth.

While the Grampians population is forecast to grow by 9 per cent until 2018, population growth will predominantly be concentrated in the region's eastern LGAs and forecast to decline in four LGAs in the Wimmera Southern Mallee sub-region. Population forecasts indicate that 20 per cent of the population across the Grampians will be 65 and over by 2018, creating considerable employment challenges for all four industries, but in particular for Health Care. Based on 2010 enrolment figures, the Health, Tourism and Agricultural industries all appear to be somewhat over-serviced in terms of employment needs to 2018, whereas Manufacturing enrolments are not likely to meet future workforce needs.

Replacement labour is in part expected to come from migration into the region through population growth and in part from skilled migration through mechanisms such as the Regional Sponsored Migration Scheme (RSMS). Parts of the endogenous regional population (e.g., women, people from culturally diverse backgrounds, the unemployed, and people with a disability) are under-utilised in the labour force, providing opportunities for the region to take a more inclusive approach to workforce development.

Changing Skill Needs

In line with national and state-wide trends, all four industries require both a broader and deeper skill base, with technological and cognitive components needed for the majority of job roles. A key trend associated with changing skill needs is the increase in industry demand for in-house and on-the-job training. A related and pervasive trend reported across all four industries is that the training system does not produce workplace ready graduates.

While there is an upward enrolment trend pertaining to Foundation Skills, there is considerable disconnect between workplace ready graduates and employer expectations. This trend points to a significant skills gap (in addition to skill shortages), which restrains the region's labour workforce ability and productivity.

Changes to the training market have had a significant impact on the region, with the majority of enrolment growth now coming from Private RTOs. Technology, increased choice, current funding models and thin training markets are all impacting on education and training provision. A wide range of education and training providers are now operating in the region, offering study opportunities from higher degrees to diploma and certificate level courses to non-accredited and foundation skills training. While there is increased choice of providers, there is general industry distrust of qualifications and (Private) RTOs' ability to deliver quality education, suggesting opportunistic entrants into the regional training market may perpetuate skill gaps. Providers of flexibly-delivered (online) degrees are predominantly external to the region, pointing to increased pressure on established regional providers in terms of retaining market share. The impending rollout of the NBN to (part of the) Grampians region is likely to further expand skilling choices for employers and students, representing both an opportunity and a threat for regional training providers.

Location & Remuneration

The attractiveness, or otherwise, of the Grampians location, demonstrated by a general preference to live and work in metropolitan areas as opposed to regional and rural areas, is clearly at play in the region. Industry stakeholders report a poor perception of rural living by metropolitan residents with perceptions of rural decline contributing to a widening gap between 'the city and the country'. Remuneration is generally lower in rural areas, with pay and conditions often affected by profit margins, which makes it difficult for employers, especially in the Wimmera Mallee, to attract and retain staff. This is compounded by more attractive remuneration being offered by competing employers and industries, such as the Mining industry.

Industry Image

Stakeholders in all four industries reported low levels of understanding of the career options and opportunities within their industry. Agriculture and Manufacturing industries are still viewed as manual, physical or dirty work that is inferior to other careers and actively discouraged by parents, teachers and peers. Tourism is generally seen as an industry without a clear career path. All industries have the potential to increase their graduate supply of labour by augmenting their industry profile and associated career paths.

Effective Workforce Planning

Effective workforce planning is the key to ensuring the region has a workforce that underpins the competitiveness of regional businesses, is socially inclusive and delivers regional prosperity and growth. Changing skill needs, participation rates, employment conditions, location and industry image are all determinants of the ability of the four industries to attract and retain workers.

The changing structure of the economy requires new levels of adaptability of the part of enterprises and their workforce. This means improving capacity to match workers and jobs, promoting skills development in the workplace and fully using existing skills. Improving capacity and adaptability is closely aligned with appropriate education provision, government policy, funding structures and other support. If workforce participation and productivity are to improve, a collaborative approach to workforce planning by industry, education and government is imperative.

Industry needs to confident that graduates have the skill depth and breadth they require. Close and continual engagement between education providers and industry will help provide broad workforce development services. Shifting the focus from increasing enrolment numbers to catering to the region's training needs is one way forward. The latter can be accomplished through curriculum development in collaboration with industry and the rollout of flexible degrees that include workplace adaptability, communications and social skills. Industry-based train-the-trainer models and aggregation of demand are other ways to close the gap between demand and supply. When this approach is underpinned by intergovernmental collaboration and support on the regional level, targeted training and cost-effective regional workforce development can take place. For example, the four industries would benefit from industry-specific toolkits on effective workforce planning, which could be made available through education, government and industry channels, networks and trade centres.

Recommended Actions

In considering the trends, drivers and barriers across each industry in the Central Highlands and the Wimmera, a number of practical actions were proposed by stakeholders for consideration.

- *Increase intra- and inter-sector collaboration;*
- *Develop regional training packages;*
- *Improve access/visibility of regional training opportunities;*
- *Promote better business through workforce planning;*
- *Increase the influence of industry on course development and delivery;*
- *Raise the profile of four sectors as career building;*
- *Improve use of refugees/skilled migrants;*
- *Influence education and training policies, programs and practices;*
- *Engage students early – primary and secondary level;*
- *Establish a Grampians Workforce Forum;*
- *Raise the profile of regional and rural living.*

As pointed out in the international literature (Holstein, 2011), there is a need for strong relationships on the regional level between business, education providers and government that have the institutional flexibility and convergences of interest to build a healthy regional ecosystem.

Throughout this project, and in particular during stakeholder engagement, it is has become clear that there is a strong sense of place in the Grampians region and there is already great commitment and active engagement between industry, education and government. Despite the considerable size of the Grampians region, there are strong linkages and networks in each sub-region, across the entire Grampians region, and well beyond. As such, the region has a demonstrated ability to collaborate, build purposeful relationships, strengthen its networks and alliances to create a workforce infrastructure that assists its industries to grow and diversify for the greater good of the region. Building on these conditions, there is also potential to a set a best practice example for other regions in Australia on tripartite collaboration for effective workforce development, regional competitiveness, prosperity and growth.

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1. Background

A key challenge for business and industry, and tertiary education providers in the Grampians region is to identify, plan for and provide the workforce skills and knowledge which will be relevant in future years. Effective workforce planning and development is the key to ensuring the region has a workforce that underpins competitiveness of regional businesses, social inclusion and ultimately, regional prosperity and growth.

Whilst there has been considerable discussion about the growing problem of skills shortages, there is still much to be learned about the type of skills and knowledge actually required in the future workforce, and how best to meet these requirements. Linked to this, questions remain around the most effective ways for business and industry to identify and communicate these needs to education and training providers.

In Victoria and in the Grampians region, the future includes a more service-orientated economy, emerging new technologies and greater constraints on resources. Understanding the impact of these and other factors on the regional workforce is critical to effective workforce planning and development.

1.1 Aims and objectives

This study identifies emerging trends for business and industry in the Grampians region, and the workforce skills and knowledge which will be required to ensure regional competitiveness, prosperity and growth. In particular, the project focuses on developments in the following four industries: **Agriculture, Health Care and Social Assistance, Manufacturing, and Tourism.** The project looks at both general and regional trends in these industries and how education and training providers can meet emerging workforce development needs in these four sectors.

Key research questions

The research addresses the following key questions:

- What are the emerging directions for the four industries in the Grampians region?
- What are the future workforce skills sets and knowledge requirements in these industries?
- How can the education and training sector best meet these needs?

Additional sub-questions

In addition, the research seeks to answer the following sub-questions:

- What trends in skills gaps exist in these key sectors in the region and how are they best rectified?
- How can business and industry communicate their market needs to education providers?
- Who are the providers comprising the tertiary (education and training) system?
- How can education and training providers best anticipate and meet needs of business and industry for appropriately educated and trained staff?

2. Methodology

Below Table 1 reflects the components and methods utilised throughout the project. This report synthesises key findings from the various project components (component 5).

Table 1 – Project Components & Methods

Project Component	Method
1. Government and industry information session	• 1 forum each in the Wimmera and Central Highlands focusing on: ○ Project briefing ○ Existing knowledge
2. Online Panel - Stakeholder Engagement	• Online moderated interactive forum (launch December 2011) focusing on ○ Key trends, both general and industry-specific ○ Capture opinions on skills & education gaps ○ Continued engagement of stakeholders
3. Education and Training sector	• Map size and scope of sector, providers and program offerings in Wimmera and Central Highlands RDA sub-regions; • Review and synthesis of education trends, key issues & gaps
4. Industry & Education Forums	• 4 sector specific forums in Central Highlands & Wimmera each with industry and education providers focusing on: ○ Education provision in industry; ○ Existing trends, drivers, skills gaps and barriers; ○ Actions for reduce skill shortages and strengthening alignment between industry and training providers
5. Existing and future workforce	• Assemble and review relevant secondary data ○ Future workforce skills and knowledge needs; ○ Synthesis of key findings from various project components; ○ Future Directions

To determine existing and future workforce trends, the project adopted a broad to region specific literature review framework (see Figure 1). Based on this framework an extensive search was conducted in online, academic, education, training and professional databases. Within the scope of the project, general trend, education and industry literature as well as population and socio-economic datasets were reviewed for relevance and/or to illustrate a trend.

Key words and Boolean search techniques were used pertaining to high level, industry-specific and region-specific trends, such as 'future manufacturing Victoria', 'gaps between education and industry in Victoria', inquiry into Agricultural Education and Training in Victoria', 'key trends and issues for regional Victoria', bridging the gap between education and industry in Victoria', 'industry in the Grampians', 'workforce, etc. The search focused on publicly available documents that were no more than three years old. Older reports and literature are included where it was deemed particularly relevant for the review, and/or recognised as a guiding document within one of the four industries.

Figure 1 –Literature Review Structure

The literature search was complemented by secondary data – such as municipal strategic development plans, industry and consultancy reports, and discussion papers – sourced via federal, state and local government representatives, regional development agencies, industry bodies and regional stakeholders. While over 200 resources were identified and reviewed for this project, key documents were selected for inclusion in this study.

The four industries for this report (Agriculture, Health, Manufacturing and Tourism) are frequently grouped within broader industry 'categories' that differ, depending on the type of industry structure adopted, e.g., the Australian and New Zealand Standard Industry Classification ANZSIC 2006 structure (ABS cat 1292.0) used by the Australian Bureau of Statistics (ABS) differs from the Victorian Industries Training Advisory Bodies (ITAB) structures. Unless otherwise indicated, data sourced from government is based on ANZSIC industry definitions.

Table 2 – Industry Definitions

Industry	Victorian ITAB category	ANZSIC Industry Structure	Regional Scope (Qualitative)
Agriculture	Primary Industries	Agriculture, forestry and fishing	Agriculture, production
Health	Community Services and Health	Health Care and Social Assistance	Primary & Allied Health Care
Manufacturing	Manufacturing and Engineers	Manufacturing	Metals & Engineering; food manufacturing
Tourism	Services (wide range of services, including hairdressing, retail)	Accommodation and Food Services, Arts & Recreation	Accommodation & Food services

For the Higher Education mapping component, the report adopted the 2001 Australian Bureau of Statistics (ABS) Australian Standard Classification of Education (ASCED*)*, using the widely accepted ASCED broad 'fields of education' classified under the agriculture, health, manufacturing and tourism sectors. Higher Education data was sourced via the Department of Education, Employment and Workplace Relations (DEEWR) and the University of Ballarat.

Vocational Education and Training (VET) data was sourced via the Victorian Government Department of Education and Early Childhood Development (DEECD) Higher Education and Skills Group (HESG - formerly Skills Victoria). Where possible the latest Victorian Training Market Quarterly Report - Full Year 2011 (DEECD, 2012) data is used to map course enrolments and training providers in the Grampians region. Region-specific training data included in this report is extracted from the Skills Victoria Training System (SVTS) database and the project acknowledges the generous assistance of the HESG Training Market Intelligence and Performance Unit. Data is limited to enrolments in courses classified to the four industries in focus: Agriculture (enrolment data includes Forestry and Fishing), Health Care and Social Assistance, Manufacturing, Accommodation and Food Services (substituted for Tourism). It should be noted that all charts include both government funded and fee for service VET enrolments in nationally recognised qualifications (Certificate I and above).

In addition to the aforementioned quantitative and secondary data collection, the project methodology also included a qualitative stakeholder engagement component in the form of face-to-face forums. Table 1outlines the industry scope that was adopted for qualitative data collection in the region. The forums were designed to bring together industry and education providers in each sector to (1) validate the relevance of state wide trends, (2) identify sub-regional trends driving skills shortages and skills gaps; (3) identify existing barriers to workforce development, and (4) suggest actions to enhance future workforce development. Forums were attended by between 10-20 stakeholders per forum.

At the start of the project two stakeholder information sessions were also conducted, one in the Central Highlands and one in the Wimmera Southern Mallee sub-regions, to inform stakeholders about the project. Findings of the qualitative component are included in Regional Trends (Section 4.3) and in Future Directions (Section 5).

Lastly, an online panel (www.cecc.com.au/rdagrampians) was set up as a complementary stakeholder engagement mechanism. The aim of the online panel was to provide a convenient (own time, own place) opportunity for stakeholder interaction and feedback throughout the project. The online panel was organised into two general questions relevant to all industries and stakeholders and four industry-specific questions. Relevant online panel data is included in the qualitative findings.

3. Literature Synthesis

3.1 General Trends

Since the 1960s, Australia has undergone significant change in the nation's economy, and employment. In 1966, 47 per cent of the Australian workforce was employed in either manufacturing (26 per cent) or wholesale and retail trades (21 per cent). In contrast, Health Care and Social Assistance (12 per cent) is now the largest industry of employment in Australia, followed by the Retail Trade (12 per cent) and Construction (11 per cent). Manufacturing contributes a much smaller component of the Nation's economy and employs about 8 per cent of the population (ABS, 2011a). The differences that have occurred over the last 45 years reflect a move away from more physically demanding, blue collar jobs, to jobs that require workers with higher skill sets and post school education.

The 4 largest occupation groups in Australia :

- *Professional (2.4 million = 25% workforce)*
- *Technicians and trade workers (1.7 million = 15% workforce)*
- *Clerical and Administrative Workers (1.7 million = 15% workforce)*
- *Managers (1.4 million = 13% workforce)*

DEEWR, 2011a

A range of factors account for the changes in national workforce trends and the growing demand for 'educated' workers. The move to a global economy and, with it, technological advances including the use of new materials and the introduction of enhanced business processes, create an increasingly competitive business environment and reduce our reliance on labour intensive occupations, so prominent in the past. Changes to population demographics (an ageing population; a more diverse labour force population) are also markers for future change and will impact on workforce skills and education in the future. (McKinsey & Company, 2011).

Global & National Trends impacting Australia

Globalisation *– Fast growing developing economies present both opportunities and challenges for Australia. Investment capital and products of the world's most dynamic industries such as biological formulas, computers, financial services, microchips and software are more mobile than ever, traversing borders and seeking the most productive economies. Communication and transportation costs have plummeted. Global financial uncertainty and the high Australian dollar add to trade and workforce challenges.*

The Pace of Technological Change *– Automation will continue to displace low-skilled and unskilled workers in Australia's industries, in particular in Manufacturing. Machines and lower paid workers in other countries will substitute increasingly more sophisticated forms of human labour.*

Australia is getting older *– People are living longer and having fewer children. The baby boom generation is reaching retirement, creating fewer workers to support retirees and young dependants. This will affect economic growth and is driving rising living standards. Ageing population leads to greater demand (and expenditure) for government services and rising health system costs. The protection of older, low-wage industries benefits owners more than workers, raises consumer prices throughout the economy and slows the dissemination of new knowledge through the market. Efforts to slow the application of labour-saving technology limit the competitiveness of regions.*

Labour force diversification *– with the need to increase the supply of skilled labour in the long term, who will replace the retiring workforce? Women, migrants and ethnic minorities will likely be new entrants into the labour force – how to prepare for labour force diversification?*

By 2020 significant workforce skill gaps are anticipated coinciding with the retirement of baby boomers from the Australian workforce. This has obvious and broad economic implications, and is expected to lead to significant gaps in occupations traditionally dominated by this generation of workers, such as nurses and teachers, farmers and truck drivers (Huntley & Salt, 2010). Such workforce losses will lead to a void in workforce capacity and place added strain on occupations in industries where employment demand is set to grow. As shown in Table 3, this is especially relevant for occupations in the health field, construction, telecommunications and education (DEEWR, 2011a).

Table 3 – Projected employment growth by occupation clusters for 2015-2016

Top 5 Occupational Clusters[1]	Projected Employment growth ('000) to 2015-16
1. Carers and Aides	112.6
2. Medical Practitioners & Nurses	85.5
3. Construction Trades	68.9
4. Electrotechnology & Telecommunication Trades	68.7
5. Education professionals	63.8

Source: DEEWR, 2011, p. 25.

Skills shortages are already apparent today and predictions for Australia to 2050 prepared by The Treasury for the Commonwealth of Australia (2010) identify the following intergeneration challenges for Australia that will have significant workforce implications, including:

- Slower economic growth (GDP growth is about 3.3 per cent - this will decrease by 2050 to 2.7 per cent) – currently influenced by the global financial crisis and rising Australian dollar;
- Rising living costs will occur due to population ageing with fewer workers to support retirees and young dependants. The ageing population leads to greater demand (and expenditure) government services and rising health system costs;
- Slower population growth – placing pressure on infrastructure, services and the environment;
- Threats to living standards through climate change and its impact on the environment and the economy.

These current and predicted trends will influence both workforce development and the short and long-term training and education needs for the nation, the states and the regions.

[1] Note*:* the term 'clusters' has been used by DEEWR to cluster 'like occupations', such as *Carers and Aides*.

3.2 Workforce Development Trends

Combining global and national influences, the key factors driving demand for and supply of skills in the Australian labour market to 2025 may be summarised as:

- *Social, demographic and cultural trends,*
- *Economic and financial trends and globalisation,*
- *Labour force, industrial and workplace trends,*
- *Science, technology and innovation,*
- *Governance and public policy,*
- *Sustainability (focus on water, energy, population)*

Keating & Smith, 2011

The changing structure of the economy requires new levels of adaptability on the part of employers and their workforce. Workforce development will ensure that all Australian industries have access to appropriate numbers of skilled workers, to address demand into the future, and contribute to the growth and development of productive and sustainable industries that enrich the wellbeing of the wider Australian community. This, in turn, will ensure that industries have the right people with the right skills, at the right time. Thus, workforce development aims to tackle the skill shortages that occur as a result of trends, such as the ageing population, by increasing levels of workforce participation and developing the skills of the current workforce (Service Skills Australia, 2011).

Skills Australia (2010) has identified improving workforce participation as an important component of national output and social inclusion. Since there is a clear association between the level of educational achievement and labour force participation, the Council of Australian Governments (COAG) has committed to a 50 per cent increase in qualifications of people aged 24-64 at Certificate III level or above (Skills Australia, 2010).

Organisational, individual and community perspectives on economic security, growth and productivity may all be present in workforce development. In addition, the concept of workforce development may also factor in income support structures, human resource management concerns, career planning, education systems and outcomes, wider logistical infrastructure, social systems and cultural and social norms (Haralson, 2010). In terms of the latter, the literature points to the need for strong relationships on the regional level between business, education providers and government that have the institutional flexibility and convergences of interest to build a healthy regional ecosystem (Holstein, 2011).

Education and training trends for Australians in 2011:

- ***3 million (20%) Australians aged 15-64 years were enrolled in a course of study;***
- ***More females than males were enrolled in study (53% females; 47% males);***
- ***Enrolments in non school qualifications show 39% were studying for a bachelor degree (Management and Commerce was the most popular area of study: 27%);***
- ***226,500 15 – 64 year olds were employed as apprentices or trainees (79% were male);***
- ***60,300 of all apprentices and trainees worked in the construction field of trade.***

ABS, 2011c.

There is general acceptance that workforce development deals with the momentum and direction of skill development. It is, however, important to note the distinction between workforce development aimed at reducing skill shortages – where employers are unable or have difficulty filling vacancies – and workforce development aimed at reducing skill gaps, where not enough qualified workers are available to perform particular job roles. The latter may reflect the shifting need for higher and more complex skills by industries. Evidence from 2007 ABS data indicates that the most common barrier to employment by unemployed people is their lack of training, skills or experience (Skills Australia, 2010). While a gap in generic skills is noted widely in the literature, the source of this gap is difficult to ascertain.

> ***The term 'foundation skills' is used interchangeably with other terms and there is no single definition for the term.***
>
> ***It is proposed that all future definitions of this term should encompass both (a) the core skills identified by the Australian Core Skills Framework (ACSF): learning, reading, writing, oral communication, and numeracy, and (b) employability skills: education, teamwork, problem solving, initiative and enterprise, planning and organising, self-management, learning, technology***
>
> *Roberts & Wignall, 2011*

Building an educated workforce has many benefits. Not only is education (and the foundational skills of literacy and numeracy) one of the fundamental drivers for developing and improving human capital, there also is clear evidence linking education with national economies and the labour market. A report by the Productivity Commission (2010) found education had a positive effect on both participation in the labour market and on wages. While the report cautions against over interpretation of the findings, it suggests that improving numeracy and literacy skills (as a component of educational attainment) produces better outcomes for the labour market.

Labour market readiness requires the development of core skills to underpin the productivity and efficiency of businesses. To support this approach Skills Australia (2009) propose a renewed national focus on adult literacy, numeracy and foundation workplace skills to ensure effective workforce participation and skill utilisation. Not only is this important to improve engagement and productivity of current workers and future workforce participants, a 'well-skilled future' also means having good relationships and information flows between government, education providers and industry.

In the main, the vocational training and education (VET) sector has been identified as pivotal in filling a perceived gap in generic skills in order to maintain growth in the supply of labour overall, although the Higher Education sector is also being asked to engage more directly in workforce development concerns and needs. While the expectation of VET having a role in generic skill acquisition is clear, how VET should achieve this goal is less clear. Furthermore, the definitional link between 'generic' skills and 'technical' skills also remains poorly defined.

What is recognised is that to compete with the growth economies of the world, Australia needs a greater proportion of well qualified people. To achieve this, increases in the proportion of the workforce with a degree qualification is paramount, as is increasing participation rates in higher education for under-represented groups in the population such as migrants, indigenous people, people from low socio-economic backgrounds, and people from rural and regional areas (DEEWR, 2008).

3.3 Agriculture, Health, Manufacturing & Tourism Sector Trends

Current and future (until 2015-16) national workforce projections for the four industries of focus in this report show that Australia-wide Health Care and Social Assistance currently has the largest number of employees compared with the other three industries. Given the ageing population trend, Health Care and Social Assistance is also the industry with the greatest predicted growth over the next five years and, in comparison to all 19 national industry groups, its growth is second only to the Mining industry (being the largest industry of growth) for this same time period. The manufacturing industry is currently still shown as a large employer and the only one of the four industries expected to decline in the next four years. The remaining two industries (Agriculture, Forestry and Fishing; and the Arts and Recreation Services component of Tourism) show varying, though relatively small levels of growth to 2015-16.

Table 4 – Current and projected national workforce employment across the 4 industries

Industry	Employment Nov 2010 '000	% of total workforce %	Projected growth to 2015-16 %
Agriculture, Forestry and Fishing	373.6	3	7.3
Health Care and Social Assistance	1298.7	11	24.9
Manufacturing	992.5	9	-3.1
Arts and Recreation Services	189.1	2	3.2

Source: DEEWR, 2011a, p. 13.

The current economic climate and other societal, technological, environmental and political drivers of change pose varying labour force, industrial and workplace challenges for each of the four industries in focus. State-based challenges for agriculture, health, manufacturing and tourism are outlined below.

Primary Industries (Agriculture): Victoria 2011

Skills Need for this industry is being driven by: Climate variation and environmental impacts are driving skill and training needs for the region. Primary businesses (horticulture) need skills to support issues of water supplies (treatment/filtration; delivery/irrigation). Heightened industry concern over bio-security threats and quality assurance for food supply has resulted in an increased demand for bio- and quality assurance skills.

New Opportunities: demand for skills to adapt, implement and operate new technologies in agriculture, with the decline in owner-operator farms. As farm sizes increase there is demand for skills in operations and management, including managers and contractors, and for workers with advanced business skills. Revival in the wool market has led to a demand for wool handlers; shearers.

Implications for Training and the Industry: New workers are deterred by perceptions of low wages and undefined careers paths. Greater enrolment in apprenticeships will respond to this and increase workforce numbers.

Occupations experiencing critical skills shortages: **animal technician; arborist/tree surgeon; agricultural consultant / agronomist.**

Source: Deloitte Access Economics/Skills Victoria, 2011

Community and Health Services: Victoria 2011

Skills Need for this industry is being driven by:

- State government policy, legislation and regulation: need for general and specific skills (e.g.., training and assessment)
- New COAG/State government initiatives (e.g., *Closing the Gap in Indigenous Health Outcomes Strategy)*: greater demand for skilled / trained workers in Aboriginal health care. Additional workforce skills includes: cultural awareness, leadership, student supervision, hospital liaison.
- Recruitment and retention difficulties especially for nurses, allied health professionals, aged care.
- Ageing population: demand on health services leading to an increased health and allied health workforce.

New opportunities: technology and e-health; senior health professionals (oversee new industry service models).

Regional Areas: Skills shortages exist for professional and allied health staff

Occupations experiencing critical skills shortages: **Aged care workers; enrolled nurses; children's services workers; child protection workers; disability & community care service workers**
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Source: Deloitte Access Economics/Skills Victoria, 2011

Manufacturing and Engineering: Victoria 2011

Significant labour supply issues across the industry: demand for apprentices but fewer, appropriate applicants. Image of trades such as welding 'dirty, dark and dangerous'

New Opportunities: new technologies and materials in the sector - demand for workers with advanced skills (e.g., computer aided design); provision of training for businesses operating in the current environment. There is demand for research and development to adjust for new levels of skill in technologies in the sector to advance levels of training to skills the manufacturing workforce in computer aided design.

Implications for Training System: Continual updating of VET to meet current and future industry skill needs and aligned with continuously changing technologies.

Regional Areas: Lack of foundation skills (language, literacy, numeracy) for workers in some industries prevents them from formal education and training options such as VET.

Occupations experiencing critical skills shortages: **Sheet metal trades workers; Aircraft maintenance engineers; metal machinists; locksmith; air conditioning & refrigeration mechanic; jeweller; fabrication tradesperson; metal fitters and turners**.

Source: Deloitte Access Economics/Skills Victoria, 2011

Services (Tourism): Victoria 2011

The industry has difficulty in attracting and retaining staff. Provision of qualifications to facilitate career pathways for the industry are needed. Tourism services are in demand but influenced by the higher Australian dollar.

The Victorian Tourism Workforce Development Plan 2010-2016 (2010) identifies challenges to the tourism industry in attracting staff and retention of staff to the industry, especially attracting workers with the required skills and experience. There is also a perceived lack of recognition of skills transfer in the industry and lack of investment (particularly by small business) in workforce training and professional development.

New Opportunities: Technology developments and changing consumer behaviour towards the internet necessitating to skills in e-marketing, e-communications.

Regional Areas: Delivery of more training in the services industry in parallel with regional population growth.

Occupations experiencing critical skills shortages:
Chefs, retail store managers, restaurant managers.

Source: Deloitte Access Economics/Skills Victoria, 2011

Note: The Services industry in Victoria covers a range of areas in addition to tourism, including cookery, hospitality, beauty, funeral, hairdressing retail and wholesale. As such specific reference to tourism is limited.

3.4 Education and Training Trends

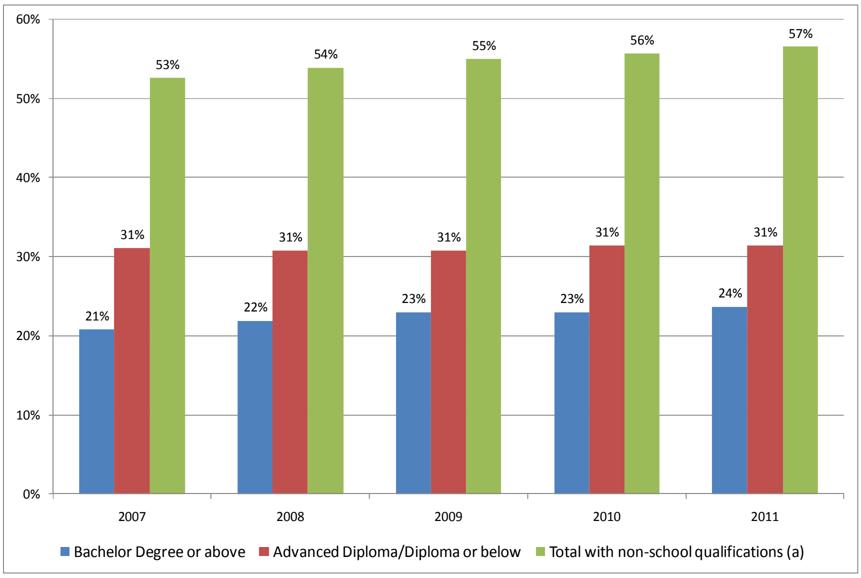
This section commences with a brief national overview of qualifications of workers Australia wide. Since Victorian education and training trends are most relevant to the Grampians region, the remainder of this section comprises predominantly Victoria-specific trend data.

3.4.1 Current Qualifications of Australian Workers

Current Australian workforce data (ABS, 2011b) shows an increase in the number of Australian workers with an advanced, post school qualification (diploma and bachelor degrees), as shown in Figure 2. It is estimated that in 2011, more than half of all Australian workers (57%) had a post-school qualification, ranging from certificate to post graduate degree (ABS, 2011b).

Overall, Australian workforce data between 2007 and 2011 shows only a slight increase in the percentage of the Australian workforce holding a post-school qualification (Bachelor qualification), reflecting a static trend in qualifications over the past five years.

Figure 2 – Highest non-school qualifications of 15-64 year olds, 2007 - 2011



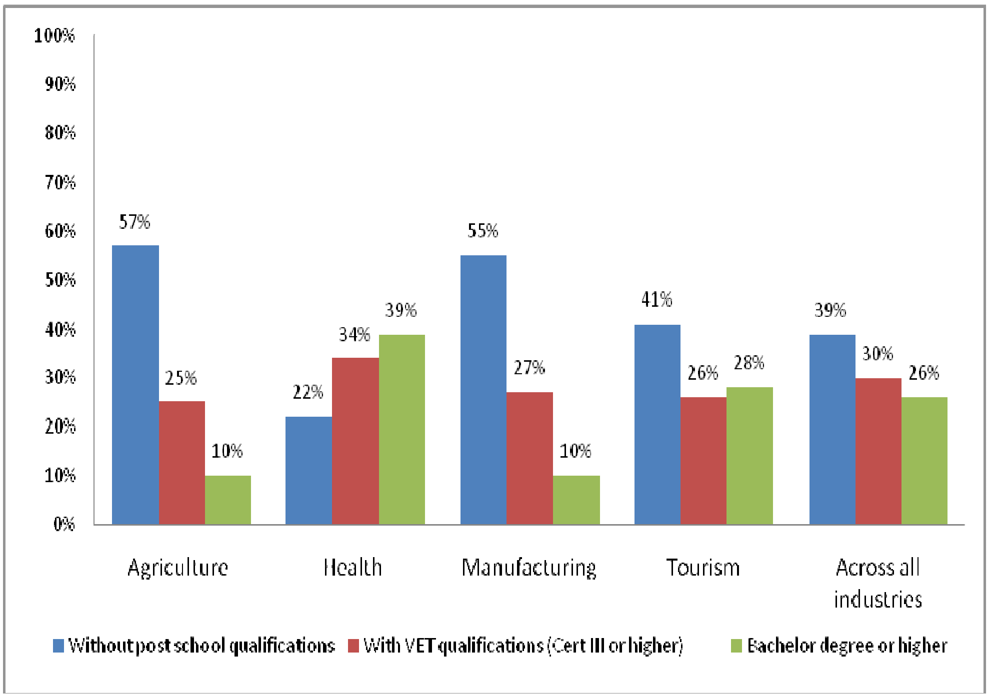
Source: ABS, 2011b [2]

In 2009 educational level by occupation indicated that 92 per cent of professionals (44 per cent with bachelor degree; 28 per cent with a post graduate degree) and 71 per cent of Technical and Trade workers have a non-school qualification (non-school qualifications refer to educational attainments other than those of pre-primary, primary or secondary education). The highest number of workers by occupation without non-school qualifications is labourers, machine operators and drivers.

[2] Note: Total includes people whose qualification level could not be determined

Current levels of post secondary education and training for employees within each of the four industries of focus in this report (Figure 3) shows considerable variation in educational attainment for employees by industry, with Health showing the lowest percentage (22 per cent) of workers without post school qualifications.

Figure 3 – Educational attainment by industry (Figure excludes 'non stated' responses).



Source: ABS Labour Force Survey, cited in DEEWR, 2011a

The largest proportion of post-school qualified (VET/BA degree) employees work in Health Care and Social Assistance and Arts and Recreation services (incorporating the Tourism industry). A large proportion of employees in the Agriculture and Manufacturing industries in Australia do not have post school qualification. These percentage levels are higher than the non post-school qualifications across all industries in Australia.

3.4.2 Victorian Education & Training Trends

To support a thriving economy in Victoria, demand for skilled workers will continue to grow, and the types of skills needed by industry will continue to change as reflected below.

Workforce Skill Needs to Support Victoria's Future Economy

Growth in the consumption of household services and the culture, leisure and health industries: *Traditional industries in Victoria (manufacturing, agriculture and older service industries such as utilities, wholesale and retail trade, transport and storage) will play a smaller, less prominent role in the new, emerging Victorian economy.*

Growth in the information and finance sectors - and corresponding demand for workforce skills: *This will lead to a corresponding demand for workforce skills in these sectors and will mirror similar changes throughout Australia and other high income economies in the world (USA, Canada, UK).*

Demand for deeper skilling: *This will entail higher demand for graduates and current employees with high education levels. Skills deepening is measured within a particular occupation by the increase in the proportion of people with qualifications over and above that which is due to employment growth. By 2022, the labour market will demand 78 percent of the workforce to hold a post school qualification, comprising 36 percent with a higher education qualification and 42 percent with a VET qualification.*

Slightly slower employment growth overall: *this will correspond with a rise in demand for more highly skilled workers. In the last decade, professionals and associate professionals have accounted for the bulk of Victoria's job growth.*

Higher education Training: *this will be necessary to achieve the qualification profile for new entrants into the workforce, as well as existing workers.*

DIIRD, 2008

In 2008, projections indicated that the workforce was likely to grow by 14 per cent by 2022. To support this, Victoria would need to deliver undergraduate and postgraduate higher education qualifications to approximately 694,000 people (DIIRD, 2008). More recent economic forecasts for Victoria in terms of employment creation indicate that an additional 287,800 jobs could be added to the economy between 2011 and 2018 (a growth of 10 per cent) with all sectors bar Manufacturing forecast to experience employment growth (DEECD, 2012).

The Victorian government has been aiming to improve its education system to make it less fragmented, address information gaps, foster relationships between providers and stakeholders, raise student aspirations of participation and attainment, and support improved access points for students to move between vocational and higher education (Skills Victoria, 2011).

'Opening Doors for All Victorians: The Tertiary Education Access Plan' identifies 7 priorities to support higher education & VET providers to improve tertiary education completions and to secure Victoria's economic future. These include:

- *Increase tertiary attainment for low SES students;*
- *Increase attainment for rural and regional students;*
- *Support existing workers to obtain tertiary qualifications;*
- *Strengthen Victoria's tertiary education sector, in collaboration with the Commonwealth;*
- *Strengthen global connections;*
- *Build a knowledge driven economy;*
- *Integrate the tertiary sector within the economic and social fabric of the community.*

DIIRD, 2010a

3.4.3 Higher Education Trends

Higher education enrolments in Victoria have increased in recent years. Between 2008 and 2010 there was an 11 per cent jump in undergraduate enrolments in Victorian higher education institutions. In 2010, the total number of undergraduate students in Victoria's University sector was close to 208,000 (see Table 5). The growth in enrolments is particularly noticeable in dual sector institutions (offering both TAFE and Higher Education) such as the University of Ballarat and Swinburne University of Technology with 15 percent and 20 per cent increases respectively in enrolment between 2008 and 2010. The reason behind this growth is attributed to "the well established pathways between higher level VET and higher education" (DEECD, 2012, p. 22). Of note is the increase in number of full time students enrolled in higher education degrees at private universities and other higher education providers.

MAJOR CHALLENGES FOR TERTIARY EDUCATION PROVIDERS IN REGIONAL AND OUTER URBAN AREAS:

- *Increasing the numbers of young people in regional areas attaining a higher education degree (currently there are lower levels of young people in rural Victoria attaining a Higher Education degree);*
- *Retaining degree education people within regional areas of Victoria;*
- *Stemming the exodus of young people in rural and regional areas moving to metropolitan regions for work and education*

Skills Victoria, 2010

Note. Commonwealth supported places at regional universities has risen from 62,600 in 2007 to 76,550 in 2012

Table 5 – Undergraduate enrolments at Victorian Higher Education Institutions

Tertiary Institutions	Undergraduate Students (*n*) 2008 - 2010			
	2008	2009	2010	% change 2008 - 2010
Monash University	39,806	42,486	44,461	12%
University of Melbourne	27,903	27,673	27,311	-2%
Deakin University	25,152	25,111	25,991	3%
La Trobe University	21,026	22,045	23,489	12%
RMIT	34,427	35,823	37,523	9%
Victoria University	16,312	17,538	19,001	16%
Swinburne University	13,215	14,542	15,921	20%
University of Ballarat	5,807	6,064	6,675	15%
Other Providers	4,360	5,807	7,490	72%
TOTAL	188,008	197,089	207,862	11%

Source: DEEWR, via Skills Victoria, 2011, p. 22

3.4.4 Vocational Education and Training (VET)

More people than ever are engaged in the Victorian training system and the latest Victorian Training Market Quarterly Report (DEECD, 2012) reflects strong growth in VET enrolments in Victoria following the first full year of the student entitlement system. Comparison data between 2010 and 2011 show enrolments have increased by 23 per cent with an overall increase of 38 per cent since 2008.

The Victorian Training Guarantee (VTG) has been designed to improve the responsiveness of the training system and improve the employability of individuals. It expands the capacity of the training system and, according to the Victorian government, delivers students improved access and greater choice where they elect to study.

Victoria's market based reforms have led to a greater number of providers offering government funded training. As shown in

Table 6, the TAFE sector still holds a 48 per cent share of the government funded training market, while ACE providers hold 12 per cent. Noteworthy is the fact that by the end of 2011 private providers were holding a 40 per cent, up from 14 per cent in 2008 (DEECD, 2012).

Victorian Training Guarantee (VTG)

The Victorian Training Guarantee (VTG) which came into effect in February 2012 to upgrade skills in response to the changing labour market.

Eligibility of government funding is limited to those people training at higher level qualifications. The Victorian Government funds students to commence a maximum of two government subsidised courses at any time.

Any young person from 15 - 19 years is eligible for the VTG for all qualifications.

Applicants are eligible for funding if the course applied for is higher than the qualification already held.

DIIRD, 2009

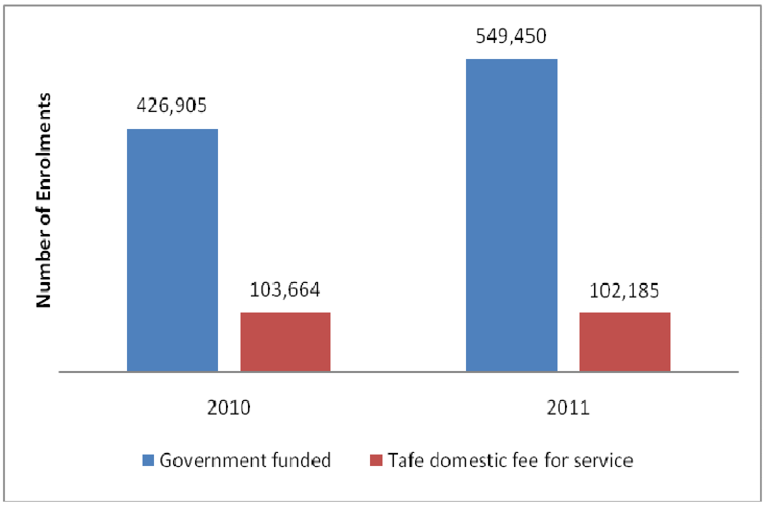
Table 6 – Govt funded market share by provider type (enrolments)

	2008	2009	2010	2011
ACE	19%	18%	15%	12%
PRIV	14%	15%	23%	40%
TAFE	66%	67%	62%	48%

Source: DEECD Victorian Training Market Quarterly Report, 2012

The Victorian training system has shown strong growth following the first full year of the VTG student entitlement system. The following Figure 4 shows that VET enrolments in government funded and TAFE fee-for-service courses have experienced a steady increase over the previous year.

Figure 4 – VET enrolments by funding type 2010-2011



Source: DEECD Victorian Training Market Quarterly Report, 2012

Enrolment numbers across all broad age groups have seen growth in 2011 as part of recent trends. As Table 7 demonstrates, the strongest growth has occurred among 25-44 year olds, which increased by 24 per cent in 201.

A notable trend is the increase in student numbers in the 45-64 age group, reflecting increased engagement by this cohort in education and (re)training. The latter represents a positive trend in terms of increasing workforce participation levels across all age groups to support the Victorian economy over the next decade. (DEECD, 2012).

Table 7 – VET enrolments by age group (2008-2011)

	2008	2009	2010	2011	% change 2008-2011	% change 2010-2011
15 to 19	97,301	102,393	117,053	137,100	41%	17%
20 to 24	68,103	70,320	82,802	98,342	44%	19%
25 to 44	129,419	137,197	147,097	182,802	41%	24%
45 to 64	67,568	71,241	79,551	96,670	43%	22%
Under 15, over 64[3]	12,737	11,545	8,744	10,260	-19%	17%
Total	375,128	392,696	435,247	525,260	40%	21%

Source: DEECD Victorian Training Market Quarterly Report, 2012

In 2011 Service Skills Australia identified that a number of education providers were not meeting workplace requirements and, as such, are providing inadequate exposure to authentic workplace conditions. An encouraging trend is the significant increase in enrolment in Foundation courses, showing a growth of 74 per cent between 2008 and 2011 (DEECD, 2012). While public data could not be sourced on the effectiveness of Foundation courses, qualitative data (see Section 4.2.2) ,suggests these courses are not effective enough.

Table 8 – VET government funded enrolments in foundation courses

	2008	2009	2010	2011	% change 2008-2011	% change 2010-2011
15 to 19	6,687	6,458	7,864	14,190	112%	80%
20 to 24	3,344	2,920	3,651	7,416	122%	103%
25 to 44	13,386	11,488	12,124	20,059	50%	65%
45to 64	6,426	5,923	6,250	10,846	69%	74%
Under 15, over 64	1,066	1,105	834	1,352	27%	62%
Total	30,909	27,894	30,723	53,863	74%	75%

Source: DEECD, Victorian Training Market Quarterly Report, 2012

[3] Figures in this category in Table 7 and Table 8 include 'Not Stated'

3.4.5 Apprenticeships and Traineeships

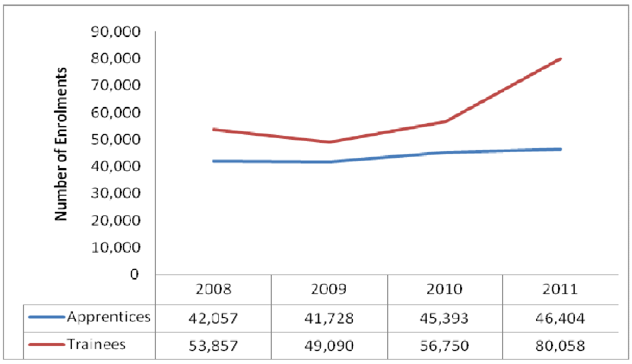
Government funded enrolments for apprenticeships and traineeships in Victoria have increased, as with national trends. Between 2008 and 2011 apprenticeships grew 32 per cent (see Figure 5), indicating a shift away from the 2009 stagnation that was driven by economic slowdown. The top three apprenticeship courses in 2011 were Certificate III courses in Plumbing, Carpentry, and Electro-technology Electrician. The top three traineeship courses in 2011 were Certificate III in Retail, Hospitality, and Process Manufacturing (DEECD, 2012).

NATIONAL DATA ON APPRENTICESHIPS AND TRAINEESHIPS 2011 REVEALS:

- *226,500 people were employed as apprentices and trainees;*
- *Nearly 50% (n = 108,000) commenced their employment as an apprentice/trainee within the last 12 months;*
- *79% of apprentices and trainees are male;*
- *The highest number (60,300) of apprentices/trainees work in the construction trade.*
- *21,600 had gained a position as an apprentice/ trainee but were not undertaking it;*
- *36,400 people had unsuccessfully applied for an apprenticeship/ traineeship in 2011*

Source: ABS, 2011c.

Figure 5 – Enrolments in traineeships and apprenticeships (2008 – 2010)



Source: DEECD, Victorian Training Market Quarterly Report, 2012.

Despite overall improvements in enrolments, (See Figure 5) a number of major challenges remain that are or will impact on the current Australian apprenticeship system.

These include: (a) a skills shortage by 2015 of trades people and engineers; (b) the low rate of apprenticeship completions (currently 48 percent), and (c) economic fluctuations and downturns (DEEWR, 2011b).

3.4.6 Lifelong Learning and eLearning Trends

Lifelong learning has been an educational trend since the middle of the last decade. It refers to ongoing learning which is ideally delivered in a systemic approach across a country and aims to provide an initial education and training process which becomes the foundation for future learning during adulthood. There is widespread agreement in the literature that individuals need to become proactive life/career managers who evolve through lifelong learning and adaptation to change (McMahon et al., 2006). Lifelong learning is in part facilitated by the rapidly growing trend in eLearning.

Men and Women: Connected Learning Relationships

Learning styles are important contributors to eLearning and characterise the ways students obtain, store and retrieve information. Evidence suggests men and women have different learning styles and different ways of knowing. Men prefer individualistic and competitive learning environments. Women prefer connected, socially-based knowledge with cooperative, less individualistic and competitive means of learning, making them prime candidates for online courses. This has implications in terms of fast-tracking women into the workforce. *Braun, 2010*

With the application of eLearning becoming increasingly popular, there is a growing national trend towards student seeking out institutions where learning is conducted online.

eLearning in VET was recently examined by the Australia Government Flexible Learning Advisory Group. Three distinct ways in which eLearning can enhance workforce development were identified:

a. Overcomes traditional challenges to undertaking learning;
b. Overcomes motivation of workers to engage with VET;
c. Overcomes the sometimes negative, past learning experiences of some workers (Commonwealth Government of Australia, 2011, p. 21).

eLearning trends for VET students

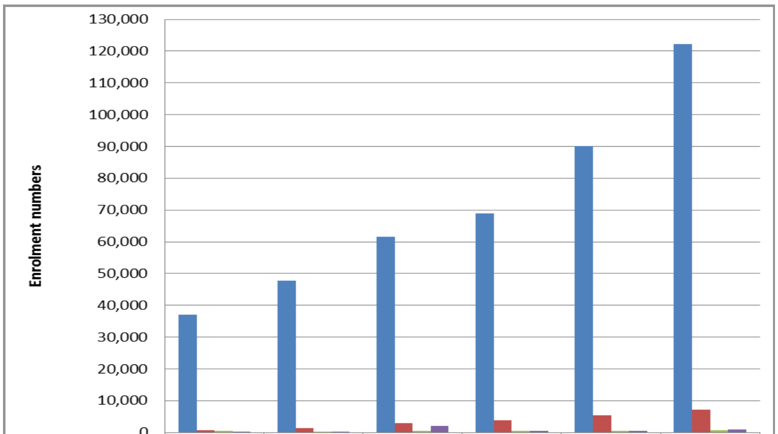
- *82% had components of eLearning in their course;*
- *Two thirds used interactive learning resources both on and off site;*
- *40% had experience with eLearning technologies including web-based seminars (webinars) and presentations; virtual classroom environments and web 2.0 technologies.*
- *60% attributed their eLearning experience to an increase in skills and confidence.*

Source: Australian Flexible Learning Framework: eLearning Benchmarking 2011 Survey

Open Universities Australia (OUA), a consortium of 11 Australian universities, offers low fee undergraduate, post graduate, VET and non-award preparatory online qualifications. According to the OUA website, qualifications are identical to those being delivered on campus with the flexibility of doing 'just in time' units and the ability to mix and match units to meet career needs.

Between 2005 and 2010 enrolments at OUA across all unit types increased 36 per cent (see Figure 6), 30 per cent of which came from Victoria in 2010.

Figure 6 – Open Universities Australia Enrolments by course type, 2005 – 2010



	2005	2006	2007	2008	2009	2010
Undergraduate	37,123	47,681	61,548	68,822	90,049	122,261
Postgraduate	634	1,310	2,841	3,723	5,418	7,184
VET	353	105	529	415	505	670
Non Award Prep	23	3	1,967	364	490	861

Source: Open University of Australia, 2010, p. 12.

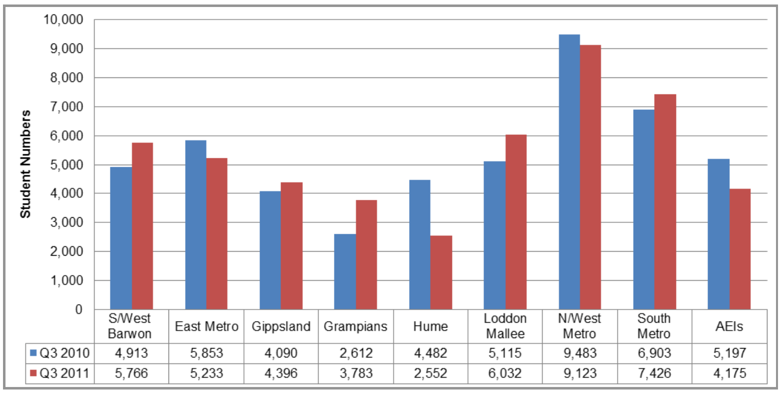
3.4.7 Pathways to Education and Training

There are a range of pathways into education and training for students and workers from hard to reach groups. Opportunities to assist hard to reach people into learning and education provide a mechanism for building inclusiveness, which is closely associated to human capital. The section briefly explores adult education as well as pathways for disengaged youth and people from disadvantaged backgrounds.

Adult Education

While there was a steep decline in the number of ACE students in some regions of Victoria, including the Grampians region, between 2008 and 2010 (which was largely attributable to changes in pre-accredited delivery locations), enrolments in Adult Community and Further Education (ACFE), and Adult Community Education (ACE) in Victoria have increased in the last two years (as shown in Figure 7). ACE enrolments in 2011 increased 14 per cent compared with the previous year, with regional data showing significant increases in enrolments occurring in the Barwon South Western, Grampians and Loddon Mallee regions (Skills Victoria, 2011).

Figure 7 – ACE students by ACFE region (comparison Third Quarter 2010 and 2011)



Source: Skills Victoria, 2011.

Pathways for disadvantaged groups

The Review of Australian Higher Education (2008) identified that people from disadvantaged backgrounds (low socio-economic status (SES), indigenous people and rural and remote Australians) are under-represented within the qualified, national workforce. It was proposed that increased participation from this group could help meet the anticipated workforce shortfall in the future. This is complemented by a recent Federal government drive – as part of the Building Australia's Future Workforce Package – to improve employment outcomes for people with a disability, through the new *Disability Employment Brokers* program (see DEEWR, 2012).

Victorian Employers' Chamber of Commerce and Industry (VECCI) research suggests one and a half million Australians are ready to enter the workforce but multiple barriers prevent these potential workers from participating in the paid workforce (DEECD, 2012, p.34). Recent data indicates that more people from disadvantaged backgrounds are gaining access to the Victorian training system (see Table 9). Enrolments in VET for culturally and linguistically diverse (CALD) students increased 38 percent in 2011 compared with the same time in 2010.

Enrolments in training for students with a disability and for indigenous students increased by 25 percent and 16 percent respectively, between 2010 and 2011 (DEECD, 2012).

Table 9 – VET government funded students by equity group

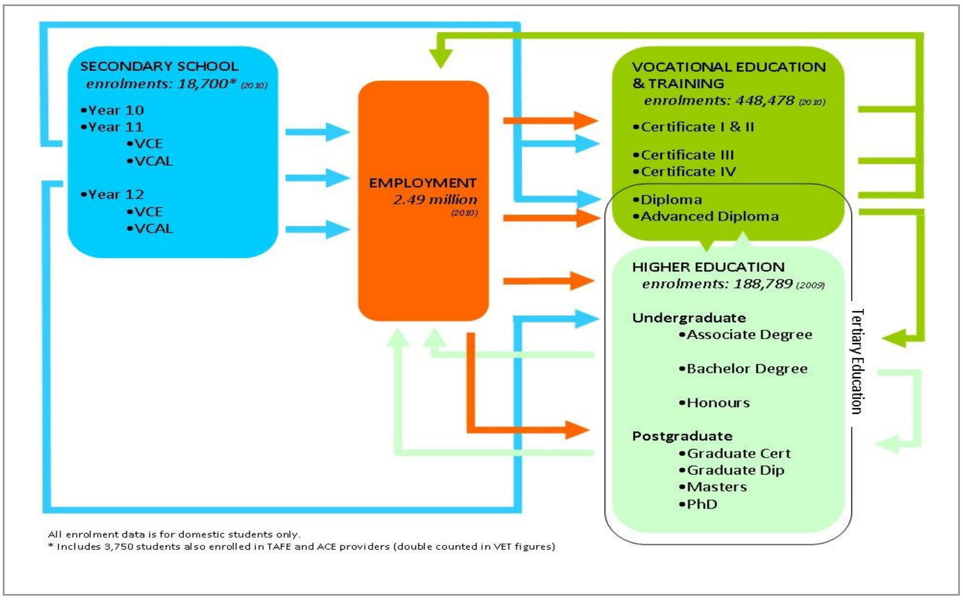
	2008	2009	2010	2011	% change 2008-2011	% change 2010-2011
Indigenous	4,356	4,317	4,801	5,584	28%	16%
Persons with a disability	23,947	23,619	27,230	32,148	43%	25%
CALD	58,145	62,128	70,613	97,670	68%	38%

Source: DEECD, Victorian Training Market Quarterly Report, 2012

Pathways for Youth

Pathways in 2009 and 2010 from secondary school into employment and education are presented in Figure 8 below. It shows a large proportion of enrolments for VET training, which includes ACE.

Figure 8 – Youth Pathways into Employment

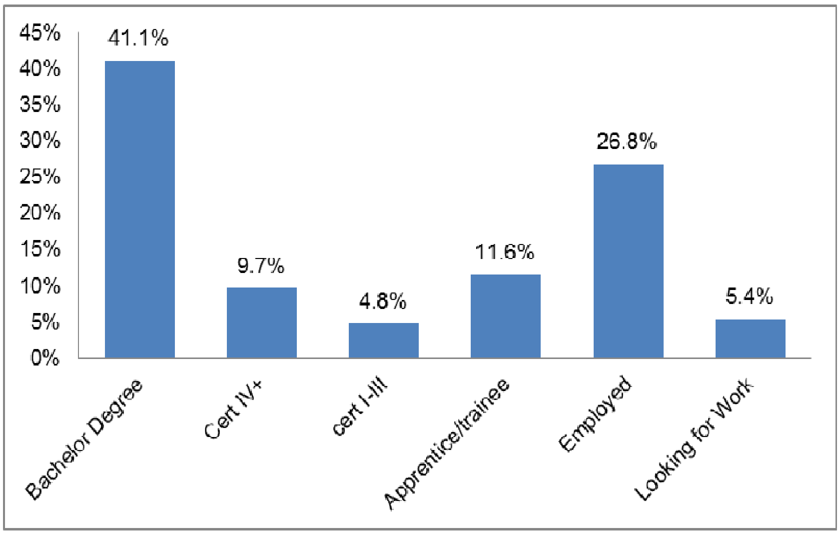


Source: Skills Victoria presentation, 2011b

ABS (2009) data indicates that 81 percent of 15-24 year olds are either fully engaged with education or work. The remaining 19 percent (*n* = 561,000) of young people in this age cohort were either not engaged, or only partially engaged in study or work.

A 2010 snapshot across Victoria (Skills Victoria, 2011b) indicates that in the Grampians 67.2 percent of Year 12 completers were fully engaged in education (with 26.1 percent in VET) and 32 percent was employed. Figure 9 shows the relatively high percentage (41.1 per cent) of Year 12 completers' destination to a Bachelor degree, 9.7 per cent to Certificate IV+, 4.8 per cent to Certificate I-III, 11.6 per cent to Apprenticeships, 26 per cent to Traineeships, 6 per cent to full time employment, with 6.2 per cent looking for work or not in the labour force, education or training (NILFET).

Figure 9 – Post School destination Grampians Region



Source: Skills Victoria Dataset, December 2011.

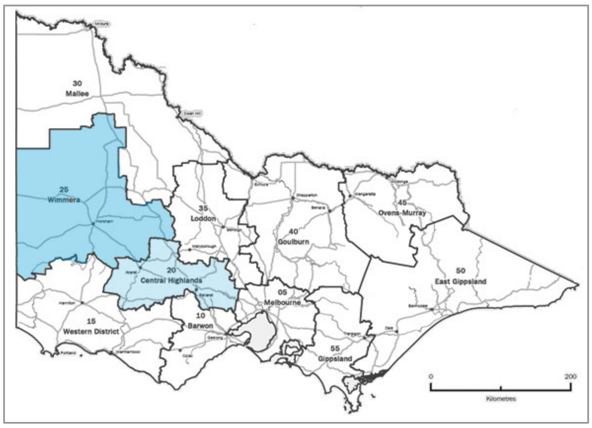
While the 2010 snapshot reflects a high regional average of a fully engaged youth cohort, the most recent labour market report (ABS, 2012) indicates that 15-19 year olds are particularly affected by Australia's rising unemployment due to the global financial crisis and the coinciding freeze on hiring and structural shift away from traditional retail, driven by both technological change and the strong Australian dollar. Grampians-specific demographic, labour market and training trends are discussed in depth in Section 3.4 below.

3.5 Regional Trends: Grampians

3.5.1 Geographic Context

The Grampians Region is a large area of Western Victoria that covers almost 48,000 square kilometres. It spans the southern Central Highlands to the broad expanse of the Wimmera Mallee to the South Australian border in the west.

The Grampians region includes 11 Local Government Areas (LGAs), covering in alphabetical order the municipal areas of Ararat, Ballarat, Golden Plains, Hepburn, Hindmarsh, Horsham, Moorabool, Northern Grampians, Pyrenees, West Wimmera and Yarriambiack.



Given the economic, geographic and social diversity of the Grampians region, this study provides both Grampians-wide data and where possible provides sub-region level data pertaining to the Central Highlands (CH) – comprising Ararat Rural Council (RC), Ballarat City Council (C), Golden Plains Shire (S), Hepburn Shire (S), Moorabool Shire (S), Pyrenees Shire (S) – and the Wimmera Southern Mallee (WSM), comprising Horsham Regional Council (RC), Hindmarsh shire (S), Northern Grampians Shire (S), West Wimmera Shire (S) and Yarriambiack Shire (S).

3.5.2 Population Trends

The region's population, which makes up approximately 4 per cent of Victoria's total population, is estimated at 212,300 in 2011, with more than half living in the regional cities and towns of Ararat, Ballarat, Bacchus Marsh, Bannockburn, Edenhope, Horsham, Nhill, Stawell, St Arnaud and Warracknabeal A forecast population growth of 9 per cent until 2018 will take the region's population to 230,000 (DEECD, 2012).

Table 10 reflects LGA based population trends to 2026. The majority of growth (around 72 per cent) is expected to come from net migration to the region, with areas closer to Melbourne (such as Hepburn, Moorabool, Ballarat) projected to experience significant growth (DEECD, 2012). As shown, population is likely to increase for all LGAs in the Central Highlands and decline across most of the Wimmera LGAs

Table 10 – Population Projections Grampians LGAs

Local Government Area	Current population (ABS, 2010)	Population Projections (2008)			Direction of population change 2014 – 2026
		2014	2020	2026	
Ararat (RC)	12,026	11,909	12,046	12,178	↑
Ballarat (C)	96,097	100,416	109,710	118,752	↑
Golden Plains (S)	18,625	20,100	22,232	24,278	↑
Hepburn (S)	14,974	15,395	16,262	17,159	↑
Hindmarsh (S)	6,150	5,757	5,405	5,124	↓
Horsham (RC)	20,232	19,874	20,366	20,829	↑
Moorabool (S)	28,606	29,606	32,095	34,710	↑
N Grampians (S)	12,316	11,754	11,326	10,980	↓
Pyrenees (S)	6,924	7,302	7,647	7,982	↑
West Wimmera (S)	4,591	4,157	3,774	3,474	↓
Yarriambiack (S)	7,614	7,125	6,650	6,310	↓

Sources: ABS, 2012; DPCD, 2011.

Note: Since population projections are based on 2008 statistics, there is some variation between current and projected population numbers.

The projected decline in population in the Wimmera region is attributable to an ageing population, an Australia wide trend flagged in Section 3.1. In 2011, 17 per cent of the region's population was already aged 65 and over (the Victorian average is 14 per cent) and this is expected to increase to 20 per cent by 2018 - the second highest proportion aged 65 and over in Victoria. Table 11 demonstrates that LGAs in the Wimmera Southern Mallee sub-region have a higher than average proportion of people aged 65 years and older and a lower proportion of young people (aged 15-24 years). This changing demographic will create considerable challenges for the health care industry, and related services such as aged care, and result in increased demand for health care workers with relevant skills (DEECD, 2012).

Table 11 – LGA population (%) by age group

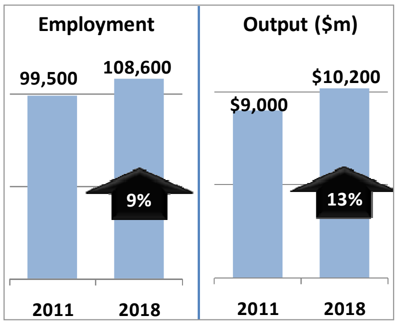
Local Government Area	Age Group % (ABS 2010 data)				
	0-14 Years	15-24 Years	25-44 Years	45-64 Years	65 yrs +
Ararat (RC)	17.2	10.9	23.4	29.5	19.1
Ballarat (C)	18.9	16.4	26.3	24.1	14.4
Golden Plains (S)	22.8	11.2	25.5	30.4	10.1
Hepburn (S)	17.6	10.1	21.7	32.5	18.2
Hindmarsh (S)	17.2	9.3	20.1	27.9	25.5
Horsham (RC)	19.4	12.6	24.9	26.1	17.1
Moorabool (S)	21.0	12.9	26.4	27.6	12.2
N Grampians (S)	17.4	11.5	22.1	29.6	19.4
Pyrenees (S)	16.2	9.8	22.1	31.1	20.8
West Wimmera (S)	17.9	10.9	21.1	29.5	20.6
Yarriambiack (S)	16.3	9.9	19	30.1	24.7

Source: National Regional Profiles , ABS, 2012

3.5.3 Labour Force Trends

The 2011 economic output of the Grampians region is estimated at $9.0 billion or around 3 percent of Victoria's total output, making it the smallest regional contributor. The existing labour force averaged just under 100,000 in 2011 with a modest 9 per cent employment growth forecast to 2018 (DEECD, 2012). The unemployment rate (5.7 per cent) is amongst the highest in regional Victoria.

Figure 10 – Output Forecast



Source: DEECD, Victorian Training Market Quarterly Report, 2012.

Based on 2010 ABS data, compared to Wimmera LGAs, residents in Central Highlands LGAs had a higher level of post-school qualifications and income compared to Wimmera LGAs. Conversely, the rate of unemployment was generally higher in the Central Highlands, with the exception of growth areas such as Golden Plains and Moorabool. While unemployment was generally lower across the Wimmera, Ararat, the Northern Grampians and Yariambiack still cope with relatively high unemployment rates (See Table 12). The latter may reflect the fact that theregion has a higher than average proportion of blue-collar workers (DEECD, 2012).

Table 12 also includes Socio-Economic Index for Areas (SEIFA) scores, which reflect the socio-economic conditions within a particular region, such as low income and low educational attainment, unemployment, skilled/unskilled occupations. Scores below 1000 indicate an area is relatively more disadvantaged; areas with scores above 1000 are relatively less disadvantaged (ABS, 2008). Based on 2006 Census data, SEIFA scores for the LGAs in the Central Highlands and Wimmera indicate that all but two Grampians LGAs (Golden Plains, Moorabool), are experiencing relatively more disadvantage with Yarriambiack Shire experiencing the highest level of disadvantage.

Table 12 – Key demographic characteristics Grampians LGAs

LGA	% of Persons with Post School Qualifications (ABS, 2006)	% Unemployment Rate Estimates (ABS, 2010)	Average Taxable Income (ABS, 2009)	SEIFA Score (ABS, 2008)
Ararat (RC)	47.4	7.5	$44,166	956
Ballarat (C)	50.3	8.0	$48,366	983
Golden Plains (S)	48.5	4.1	$47,901	1025
Hepburn (S)	51.8	7.9	$47,870	980
Hindmarsh (S)	39.0	4.6	$43,332	955
Horsham (RC)	46.0	5.6	$46,014	993
Moorabool (S)	48.0	5.2	$50,620	1012
N Grampians (S)	42.9	7.2	$44,613	946
Pyrenees (S)	44.4	8.1	$42,608	944
West Wimmera (S)	40.0	4.2	$43,674	981
Yarriambiack (S)	41.0	6.1	$43,505	953

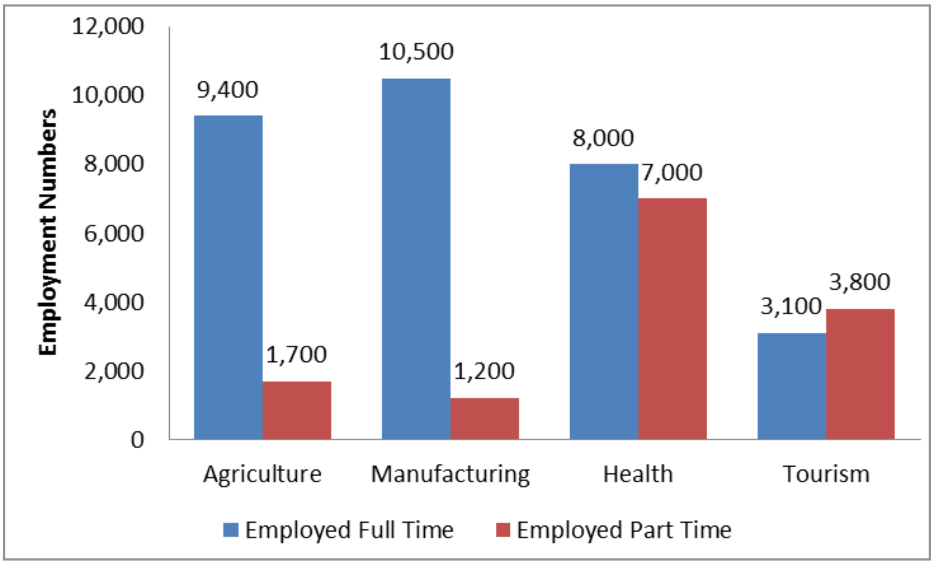
Source: National Regional Profiles, ABS, 2012; SEIFA scores for disadvantage, ABS, 2008

Agriculture, Health, Manufacturing, Tourism

Apart from Construction, three of the four industries in focus -- Agriculture, Health Care and Manufacturing – are the key output industries for the Grampians region. The latter industry still dominates the regional economy although business confidence of manufacturers is guarded given the impact of trends such as increased international competition and the strong Australian dollar. Agriculture and Mining (gold and mineral sands) continue to be key industries in the western part of the Grampians (Wimmera Mallee), while the Healthcare and Education industries are forecast as growth industries across the entire region (DEECD, 2012).

Health Care and Social Assistance was the region's largest employer in 2011, with almost as many full time as part-time workers, followed by Manufacturing and Agriculture, which had the largest proportion of full-time workers (ABS, 2011). Tourism has the highest proportion of part time workers (See Figure 11).

Figure 11 – Employment across the four industries.



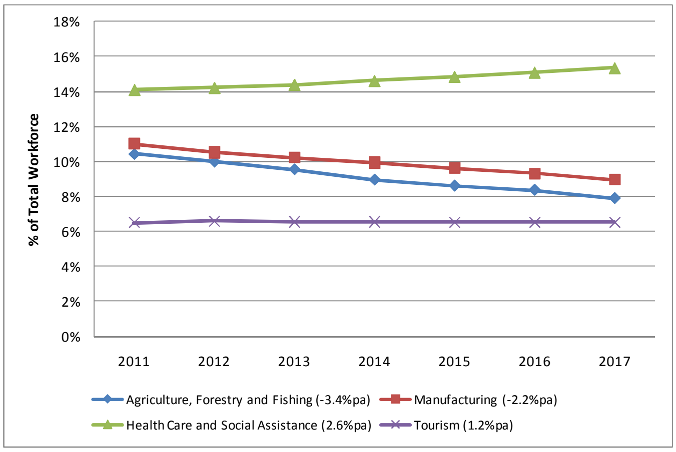
Source: ABS, 2011.

Figure 11 shows the projected proportion of the total workforce in the Grampians for each industry to 2017. The proportion of the total workforce in Health is expected to rise, whereas the proportion of the total workforce in Agriculture and Manufacturing are expected to decrease.

The proportion of the total workforce in tourism is expected to remain static until 2017. The chart legend reflects the actual growth percentages per annum for each industry.

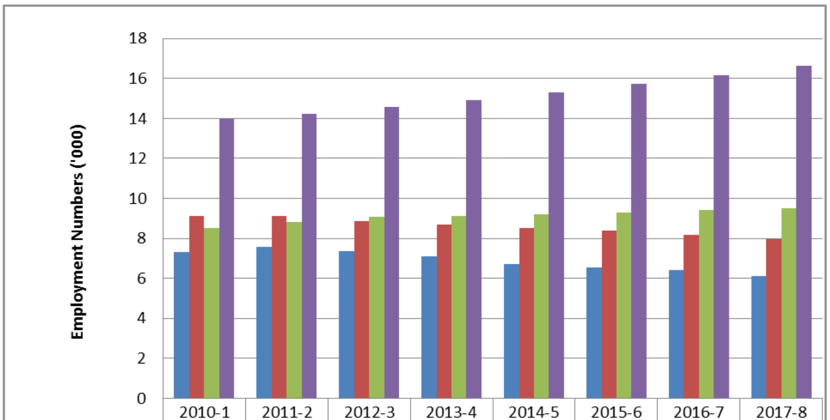
Figure 13 translates these percentages into workforce numbers.

Figure 12 – Industry employment projections to 2017



Source: ABS, 2012

Figure 13 – Workforce projections (n) across the four industries, to 2017.



	2010-1	2011-2	2012-3	2013-4	2014-5	2015-6	2016-7	2017-8
Agriculture	7.33	7.56	7.35	7.09	6.72	6.54	6.42	6.13
Manufacturing	9.12	9.13	8.86	8.69	8.54	8.37	8.18	7.97
Tourism	8.53	8.82	9.07	9.12	9.2	9.29	9.4	9.5
Health	13.95	14.25	14.57	14.9	15.3	15.74	16.17	16.64

Source: ABS, 2012

In line with above industry growth projections, the Health Care sector will see the strongest growth in employment numbers to 2017-2018 (ABS, 2012).

A Location Quotient (LQ) technique was used to determine the level of employment within the Grampians region. This formula allows for an assessment of the ratio of each LGA share of the four industries compared to the share of the Grampians region economy. A Location Quotient of more than 1.00 indicates that the LGA has a relatively high share of employment within that sector and is an indicator that the industry is a relative strength for the LGA.

As indicated by the Table 13 below, all LGAs in the Grampians region, apart from Ballarat, have a high relative share of employment in Agriculture, with the West Wimmera (5.01), Pyrenees (3.40) and Yarriambiack (3.18) LGAs being particularly strong employment areas in Agriculture. In terms of manufacturing, in the Central Highlands sub-region Ballarat (1.27) is strongest, while in the Wimmera Southern Mallee sub-region Ararat (1.15) and the Northern Grampians (1.26) meet or exceed the average. The proportion of employment in Health Care is strongest in Ballarat (1.10) for the Central Highlands, followed by Horsham (1.03) in the Wimmera. In the Central Highlands region Hepburn (1.93), Ballarat (1.08) and Moorabool (1.04) exceed the Grampians region average in Tourism. In contrast, employment within the tourism industry in the Wimmera is well below average, with the exception of the Northern Grampians (1.17).

Overall, In terms of the four specific industry sectors, the location quotients suggest that the Central Highlands region is more competitive than the Wimmera region in Tourism and Manufacturing and the Wimmera region is stronger in the Agricultural industry. In relation to Health Care, both areas have similar levels of employment.

Table 13 – Location Quotients for the four industries within the Grampians Region

Central Highlands LGA's	Agriculture	Manufacturing	Health	Tourism
Ballarat (C)	0.11	1.27	1.10	1.08
Golden Plains (S)	3.11	0.74	0.24	0.40
Hepburn (S)	1.27	0.59	0.94	1.93
Pyrenees (S)	3.40	0.97	0.54	0.74
Horsham (RC)	0.99	0.45	1.03	0.92
Moorabool (S)	1.17	0.65	0.75	1.04
Central Highlands Total	**0.61**	**1.03**	**1.00**	**1.07**
Wimmera LGA's				
Hindmarsh (S)	2.79	0.73	1.28	0.45
N. Grampians (S)	1.36	1.26	0.94	1.17
West Wimmera (S)	5.01	0.19	0.70	0.39
Yarriambiack (S)	3.18	0.41	1.27	0.48
Ararat (RC)	1.87	1.15	0.89	0.78
Wimmera S. Mallee Total	**2.43**	**0.89**	**1.01**	**0.75**

Source: ABS,2012.

3.5.4 Regional Education Trends

Driven by anticipated workforce changes such as an ageing population, increased demand for health workers and reduced employment and opportunities in the agriculture and manufacturing industries, the education and training system will play a central role in supporting the region's economic growth and stemming the population decline.

Identifying education opportunities and pathways for regional areas such as the Grampians region has gained momentum in recent years and is firmly on the radar of both state and regional level stakeholders.

The Department of Education and Early Childhood Development Grampians Regional Management Forum (2011) identified current issues for the primary and secondary education sector in the region relating to access to education and training (particularly for youth). This is closely tied to the rural environment in which the education system is working within (including declining populations; altered economic prospects).

REPORT ADVISING ON THE DEVELOPMENT OF THE VICTORIAN TERTIARY EDUCATION PLAN:

- *By 2025 each non metropolitan administrative region should obtain a 10% increase in the proportion of 25 – 34 year olds who attain a bachelor degree;*
- *By 2020 each 2025 each non metropolitan administrative region should achieve a minimum 5 percentage point increases in the proportion of higher education undergraduate enrolments of people from low SES backgrounds.*

*Skills Victoria, **2010, p. 82***

Education Access and Provision: Current Issues (primary and secondary schooling)

Access Issues: *Youth pathways/ unemployment; retention/ engagement; market share; teacher capacity and supply; quality & depth of leadership.*

Rural Issues: *Declining population; education access (breadth/depth); small schools; rural economy and social issues; youth aspirations and expectations; student mobility.*

Regional Priorities for Grampians:

1. *Support high performance (build capacity to strengthen student achievement & engagement)*
2. *Develop a high quality workforce;*
3. *Reduce disadvantage;*
4. *Integrate services (for 0 – 8 yrs);*
5. *Develop partnerships (school and families of children 0–8 yrs; school and young people and community to enhance young people's engagement);*
6. *Contribute to system improvements.*

Grampians Regional Management Forum, DEECD, 2011

A number of challenges have also been identified by Skills Victoria (2010) pertaining to tertiary education in regional areas and outer urban settings, include:

- Lower levels of young people in rural Victoria attaining a higher education degree. Retaining those people who complete a degree, within regional areas of Victoria.
- Retaining those people who complete a degree within regional areas of Victoria.
- Exodus of young people in rural and regional areas to Melbourne for work or education and then never returning to regional areas after gaining experience or qualifications.

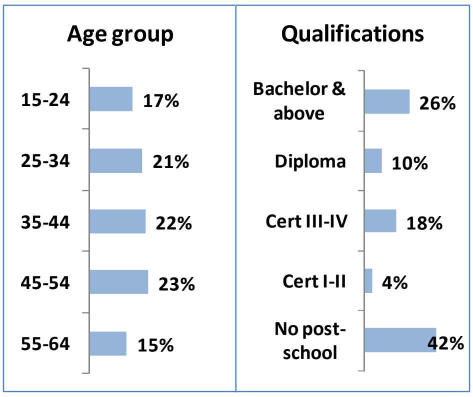
The Higher Education Skills Agenda (2011) reinforces the higher education agenda for the region, emphasizing the importance of fostering post secondary education and training, including vocational training opportunities.

Regional Labour Force Qualifications

In 2011, an estimated 42 per cent of the Grampians workforce had no post-school qualifications. By 2018 the lack of post-school qualifications is forecast to decrease by 35 per cent as the regional workforce increases its skill levels (DEECD, 2012).

While the Grampians region is currently the smallest training market in Victoria (3 per cent of total VET enrolments) increased demand for skilling will likely see the regional training market grow.

Figure 14 – Existing Workforce



Source: DEECD, Victorian Training Market Quarterly Report 2012

Regional Training Market

There are a wide range of education and training providers operating in the region that offer study opportunities ranging from higher degrees to diploma and certificate level courses to non-accredited and foundation skills training. A comprehensive list of training providers in across the Grampians region may be found in Appendix 1 (Central Highlands) and Appendix 2 (Wimmera Southern Mallee). Providers are listed by LGA and industry. Appendix 2 also lists Foundation skills providers across the Grampians region.

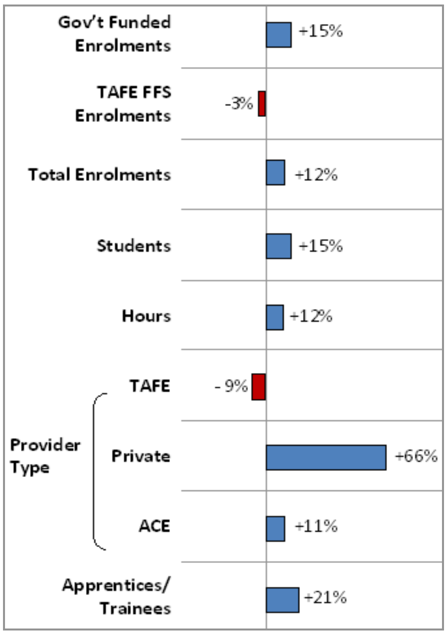
When higher education course enrolment data for the region was being compiled, it quickly became apparent that there is a significant gap in publicly available region-specific data on higher education. Below higher education data (see Table 15) provides course enrolments for 2009 and 2010 for the University of Ballarat (UB) in the four sectors. Enrolment data in the Grampians region for other universities, such as Australian Catholic University which delivers nursing degrees, could not be obtained as their main campus is located outside of the region. It should be noted that Higher Education degrees in tourism fall under commerce and management; food and hospitality courses fall under VET. The UB data indicate a significant increase in enrolment in health.

Table 14 – 2009-2010 University of Ballarat enrolments in 4 sectors

	Enrolment Count (n)		Enrolment % Change (From previous year)	
	2009	2010	2009	2010
Engineering and Related Technologies	333	322	-4.9%	-3.3%
Health	1016	1098	-3.7%	8.1%
Management and Commerce	805	782	1.5%	-2.9%
Total	2114	2176	-1.3%	2.9%

Source: DEEWR uCube Higher Ed Statistics, 2011c.

Figure 15 – Regional Training Dashboard 2011 vs. 2010



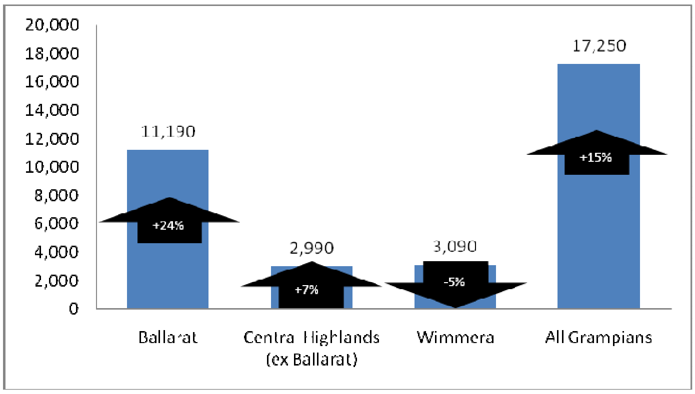
Source: DEECD, Victorian Training Market Quarterly Report, 2012.

In line with state-wide trends, the Grampians' VET market saw a considerable increase of private RTOs entering the regional training market.

The majority of enrolment growth in 2011 came from private RTOs (up by 2,500)[4]. TAFE accounted for 41 per cent of enrolments in 2011, down from 52 per cent in 2010, resulting in provider share of government funded training now being almost evenly split. A total of 83 training providers delivered government funded training in 2011, 22 more than in 2010 – the largest increase in provider numbers outside metropolitan Melbourne. At 22 per cent ACE hold the largest share of government funded training in Victoria.

Figure 16 provides an overview of VET enrolments for the Grampians as well as by sub-region, showing both enrolment numbers and the significant increase (up by 15 per cent) in Government funded enrolments. Ballarat, Victoria's third most populous regional city, is the largest contributor to enrolment growth, representing over 95 per cent of total growth (DEECD, 2012).

Figure 16 – VET Enrolment 2011 across Grampians and by Sub-Region

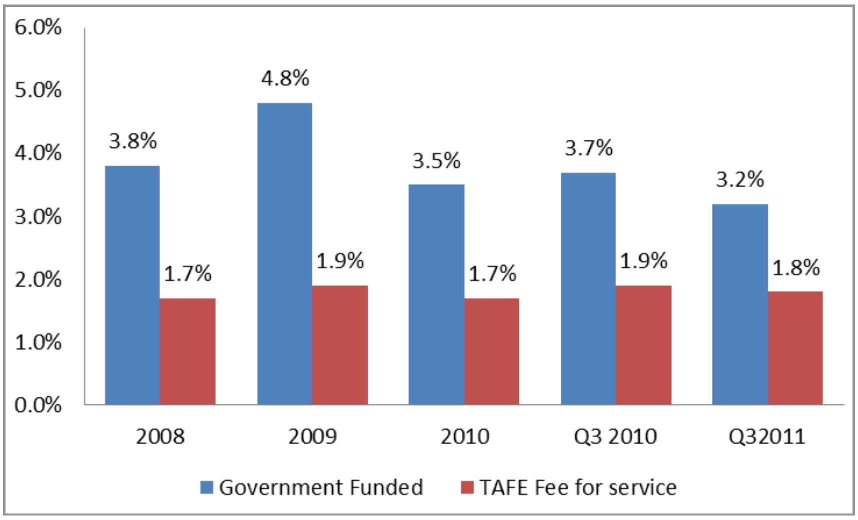


Source: DEECD, Victorian Training Market Quarterly Report, 2012.

[4] Note: Private RTOs are not required to report fee for service delivery. Consequently there is no full record of fee for service delivery by Private RTOs in the Grampians.

The Grampians is the smallest regional training market in Victoria, making up 3 per cent total Victorian enrolments – in line with its share of economic output. Third quarter 2011 percentages indicate that the Grampians share of Victorian enrolment decreased slightly since the third quarter 2010 (see Figure 17).

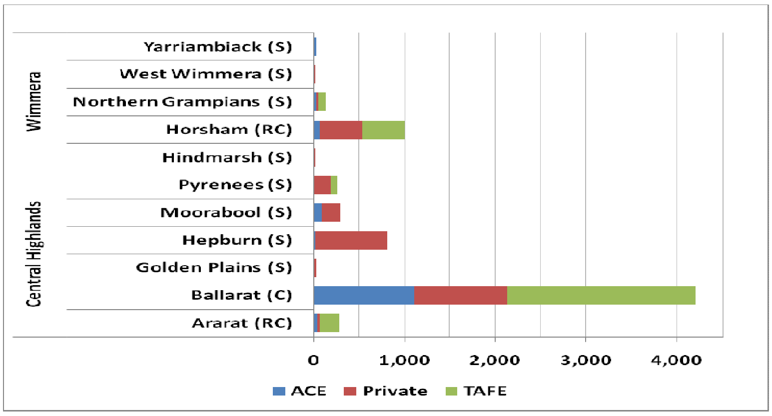
Figure 17 – Grampians Share of Victorian Enrolments (3rd Quarter, 2011)



Source: Skills Victoria, 2011a

Below Figure 18 provides an overview of VET enrolments across the four industries. Not surprisingly, Ballarat and Horsham have the highest enrolments in the region.

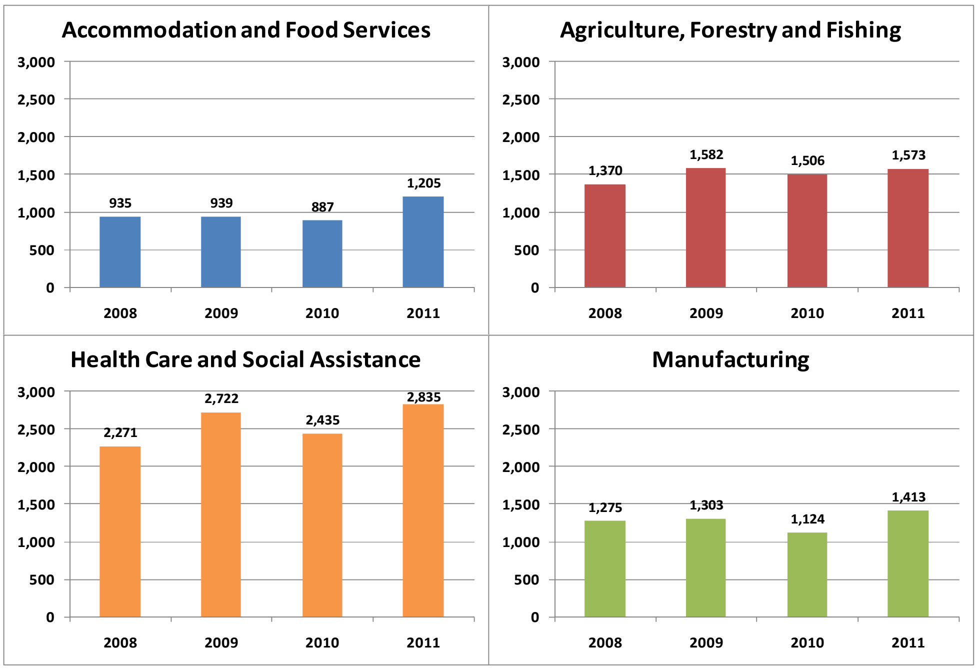
Figure 18 – 2011 VET enrolments in 4 focus industries by provider type and LGA of delivery.



Source: DEECD, Victorian Training Market Quarterly Report, 2012.

Within the Grampians region, Health Care has seen the biggest increase in enrolment, followed by Accommodation and Food Services. While Health Care enrolment increased by 31 per cent since 2008 (with the Diploma of Nursing being a key course), there was actually a slight fall in industry share of overall VET enrolments in the region, which is contrary to employment trends with Health Care employment forecast to grow over the next few years. Manufacturing and agriculture have seen little increase in enrolment since 2010 (see Figure 19). Nonetheless, Manufacturing (along with Health Care) remains among the top five employment sectors in terms of VET course enrolments (DEECD, 2012).

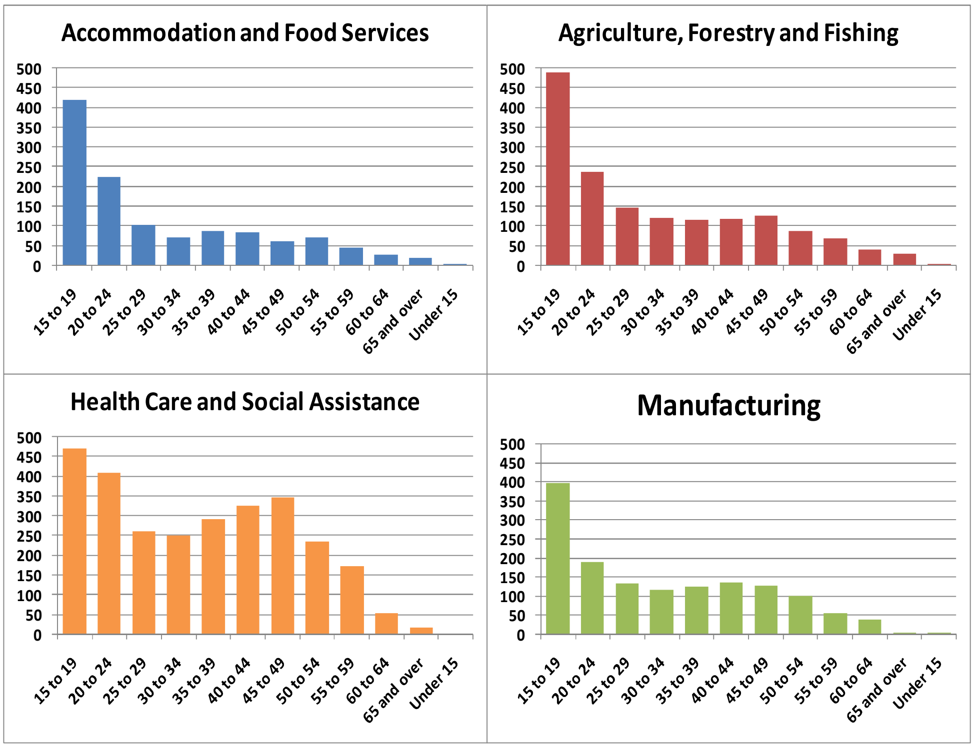
Figure 19 – Growth in VET enrolment in Grampians by industry 2008-2011



Source: DEECD, Victorian Training Market Quarterly Report, 2012.

As reflected in Figure 20, all four industries have students enrolled across a range of age groups from 15 to 65, although the highest number of students enrolled is aged 15-19 and 20-24 years of age.

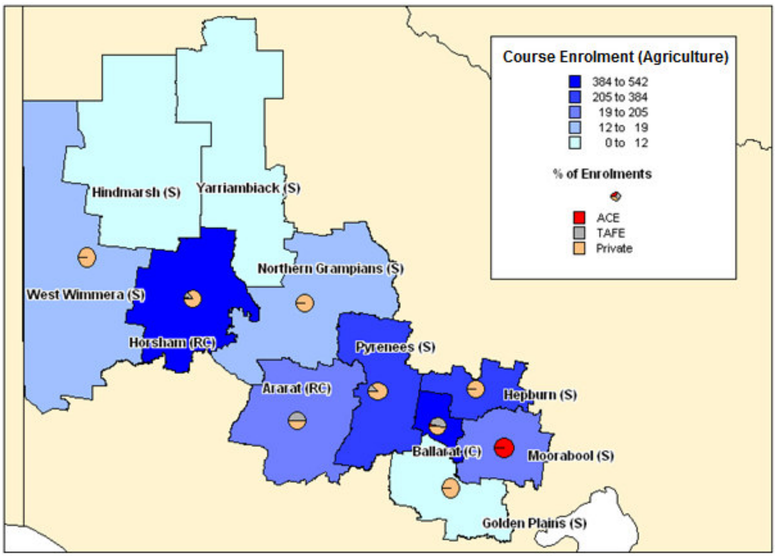
Figure 20 – 2011 VET enrolments in the Grampians region by industry and age group



Source: DEECD, Victorian Training Market Quarterly Report 2012.

Health Care had the largest number of enrolments across the age groups 15-19 and 20-24 years, although enrolment declines in the 25-29 and 30-34 age groups and showing a significant rise in the 35-49 age group (see Figure 20). The latter may be a reflection of growing employment demand in the Health industry and women (who make up a large part of the Health workforce) interested in re-entering the workforce.

Map 1 – Agriculture Enrolment and Share of Enrolment by Provider Type

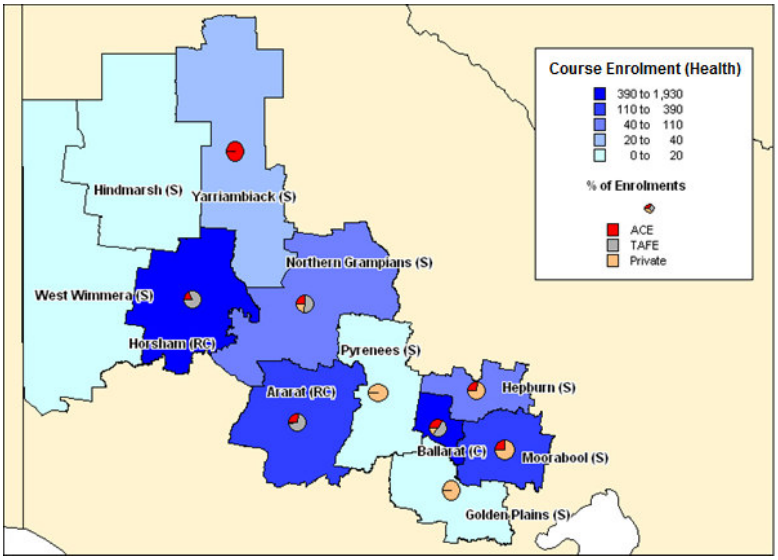


The highest number of course enrolments in Agriculture was in Ballarat (542) and Horsham (384), with Hepburn (334), Pyrenees (205) and Ararat (67) also showing relatively high numbers of student enrolment. All other Shires had low student enrolment number for Agriculture.

The main provider type for Agriculture in Ballarat is TAFE and Private RTOs. In Horsham, Private RTOs are the dominant provider type. Private RTOs also dominate with the Hepburn and Pyrenees Shires, while Ararat showed an even percentage of TAFE and Private RTO enrolments.

Data source: DEECD, Victorian Training Market Quarterly Report, 2012.

Map 2 – Health Enrolment and Share of Enrolment by Provider Type

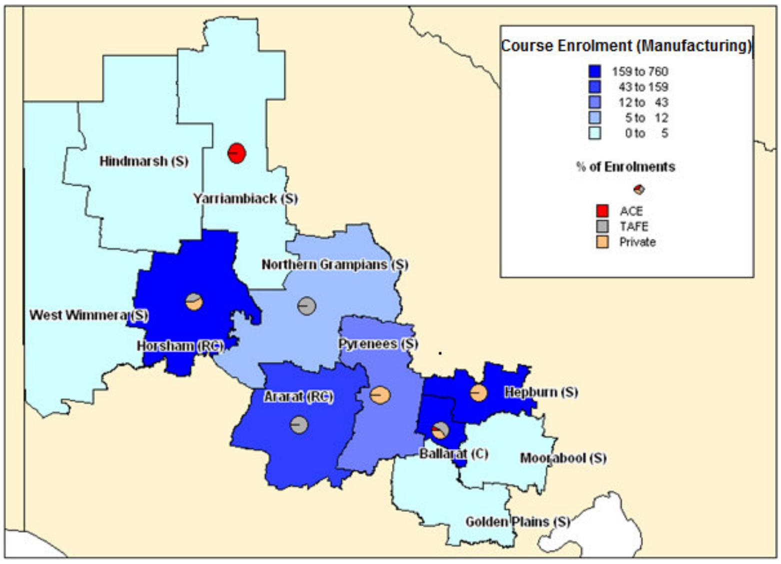


The highest number of course enrolments in Health was in the LGAs of Ballarat (1,925) and Horsham (391), with Moorabool (247), Ararat (111), Northern Grampians (80) and Hepburn (42) also showing relatively high numbers of course enrolments in Health.

TAFE is the primary provider for student enrolment in Health in Ballarat, Horsham and Ararat and the northern Grampians, whilst Private RTOs dominate in the Moorabool and Hepburn Shires.

Data source: DEECD, Victorian Training Market Quarterly Report, 2012.

Map 3 – Manufacturing Enrolment and Share of Enrolment by Provider Type



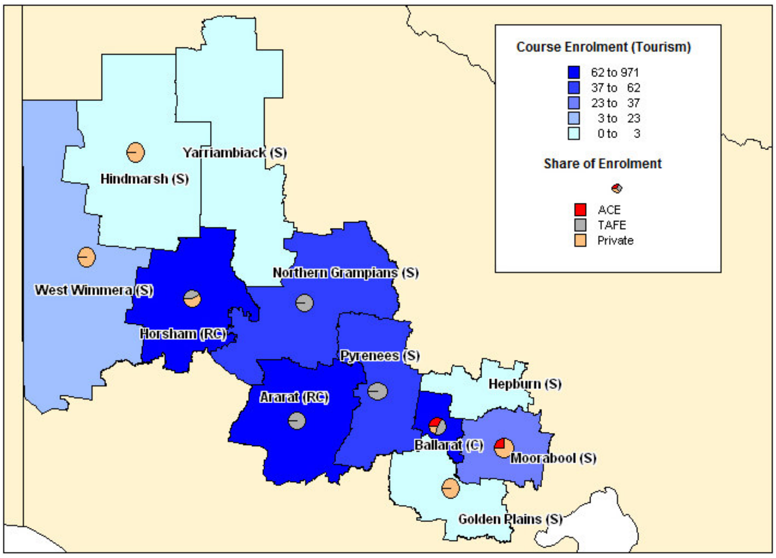
The majority of course enrolment in Manufacturing was in the Ballarat (760), followed by Hepburn (434) and Horsham (159). The Ararat region had a small density of enrolments in Manufacturing courses, whereas the outlying regions within the Wimmera have little to no course enrolments.

Within Ballarat and Ararat areas, TAFE is the dominant provider and within the Hepburn, Pyrenees and Horsham LGAs Private RTOs dominate in Manufacturing course delivery.

Data source: DEECD, Victorian Training Market Quarterly Report, 2012

Map 4 – Tourism Enrolment and Share of Enrolment by Provider Type

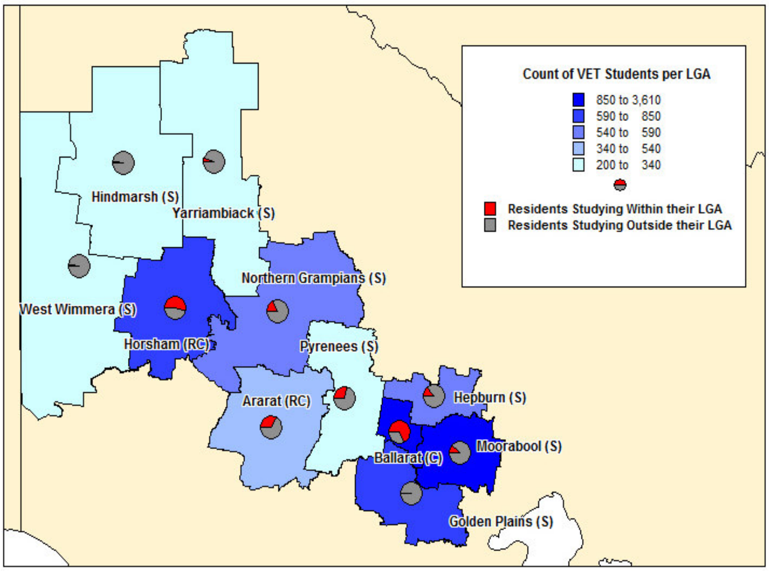
In 2011, the largest number of VET course enrolments in Tourism (e.g., Accommodation and Food Services) was in Ballarat (971). Horsham (62) and Ararat (62) had a moderate number of course enrolments in Tourism, whilst all other regions had low numbers of Tourism enrolment.



The main provider types for Tourism in Ballarat are TAFE and ACE. In Horsham the main providers were TAFE and Private RTOs, with the latter holding the larger share of enrolments. TAFE was the only provider of Tourism courses in Ararat, Northern Grampians and Pyrenees. Private RTOs were the only providers of Tourism courses in the other shires.

Data source: DEECD, Victorian Training Market Quarterly Report, 2012.

Map 5 – 2011 Student 'Leakage' by LGA



Data source: DEECD, Victorian Training Market Quarterly Report, 2012.

As Map 5 illustrates, Ballarat and Horsham are the only LGAs that have a higher proportion of students studying within their LGA than outside their region of residence (e.g., student 'leakage'). Students are also opting to study online, which doesn't necessarily mean they leave their LGA of residence, but for the purposes of this report are included in 'leakage' as course enrolment is likely to be external to the region (e.g. via Open University).

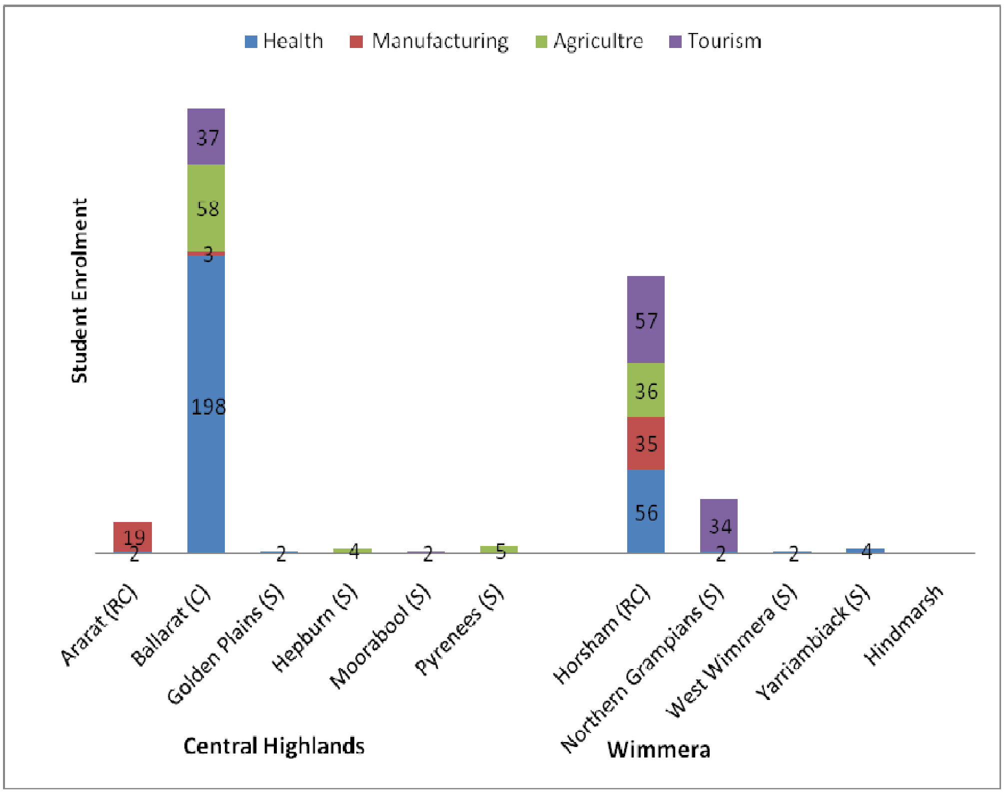
Looking at student 'leakage' in percentages, large proportions of students in particular in the Golden Plains (99.6%), West Wimmera (99%), Hindmarsh (99%) and Yarriambiack (95%) leave their region of residence to study.

Below overview outlines the regional (e.g., non-metropolitan*)* locations students go to study.

- *Students residing in Yarriambiack leave to study in Greater Geelong (39%) and Horsham (30%),*
- *Students residing in Hindmarsh leave to study in Horsham (39%), Greater Geelong (26%) and online (12%),*
- *The majority of students residing in the West Wimmera study in Horsham (37%),*
- *Students residing in the Northern Grampians leave to study in Southern Grampians (19%), Horsham (13%), Ballarat (12%), Ararat (8%), and online (9%),*
- *Students residing in the Pyrenees leave to study in Ballarat (20%) and Horsham (8%),*
- *Students residing in Hepburn study mostly in Ballarat (45%),*
- *Students residing in Moorabool study in Ballarat (16%), Greater Geelong (11%) and online (11%),*
- *Students residing in the Golden Plains Shire study in Greater Geelong (38%), Ballarat (30%), and online (5%).*

Ballarat and Horsham have the largest number of secondary school VCAL enrolments across the four industries. In Ballarat, enrolment in Health is dominant, whilst in Horsham Health and Tourism (Hospitality) are dominant. VCAL enrolments in the four industries are generally low in most of the other shires, with enrolment numbers ranging from below 10 to under 40. Ararat and Northern Grampians have a small number of students enrolled in Manufacturing and Tourism (Hospitality) respectively. LGA shires such as West Wimmera, Yarriambiack and Hindmarsh which are located some distance from campuses such as Horsham or Ballarat have no or few VCAL enrolments (see Figure 21).

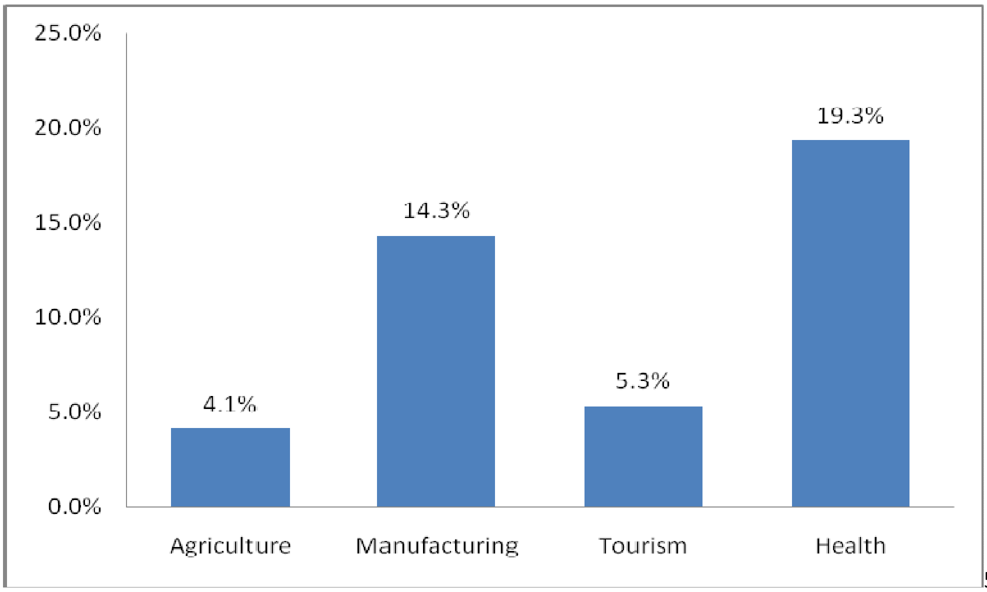
Figure 21 – Secondary School VCAL enrolment Central Highlands and Wimmera Regions



Source: Skills Victoria, Skills Victoria Student Data Collection, 3rd Quarter, 2011a.

Given that the education and training system will play a central role in developing the skilled employees needed to support the region's goals of growth and diversification, it is of interest to track where graduates are employed after training. NCVER data shows University of Ballarat TAFE graduates are predominantly employed in Health Care (19.3 per cent), Manufacturing (14.3 per cent) and Construction (12.4 per cent, not reflected on chart). Table 15 shows employment after training in the four industries of focus.

Table 15 – 2011 UB TAFE graduate employment after training



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Source: NCVER Student Outcomes, 2011

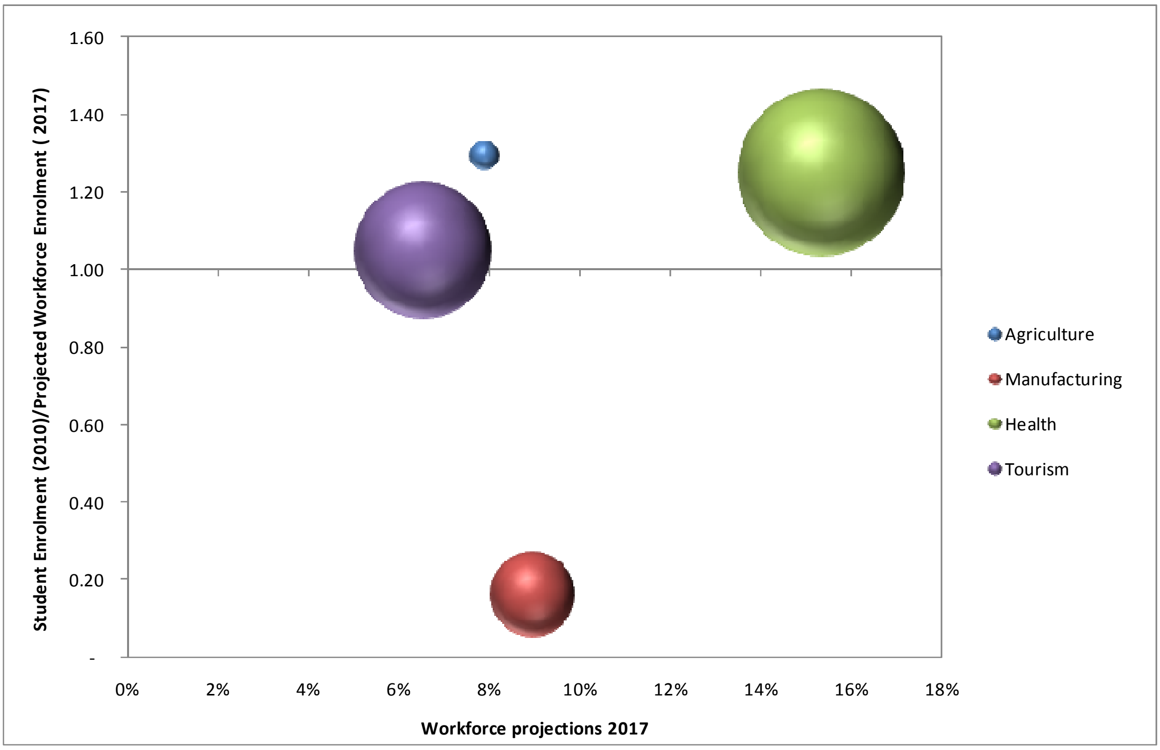
An Enrolment/Workforce (EW) quotient technique was used to predict the future workforce/training needs within the Grampians region (see Figure 22). An EW Quotient of greater than 1.00 as shown for Agriculture (1.3), Health (1.25) and Tourism (1.05) indicates there is a potential over-supply of enrolments vs. future workforce needs, whereas an EW Quotient under 1, as is the case for Manufacturing (0.16), signifies a potential under-supply of enrolments in relation to future workforce needs.

An over-supply could lead to graduates sourcing employment in other industries or outside the region, while an under-supply means that the industry's workforce needs will have to be met by graduates from other disciplines, migration from outside the region and/or by up-skilling under-utilised segments of the regional population, e.g., women, unemployed and disadvantaged groups.

In 2017, of the four industries, Health Care is projected to make up 15 per cent of the workforce, with manufacturing being the next highest (9 per cent), followed by agriculture (8 per cent) and tourism (7 per cent). The bubble size indicates that the health industry has the highest projected growth rate in the area followed by tourism, manufacturing and agriculture.

Based on 2010 enrolment figures, the Health, Tourism and Agricultural industries all appear to be somewhat over-serviced in which case graduates will likely migrate out of the region for employment opportunities in their field of training or for reasons related to family and lifestyle. It can be assumed that VET sector enrolment in Manufacturing will not be meeting workforce needs.

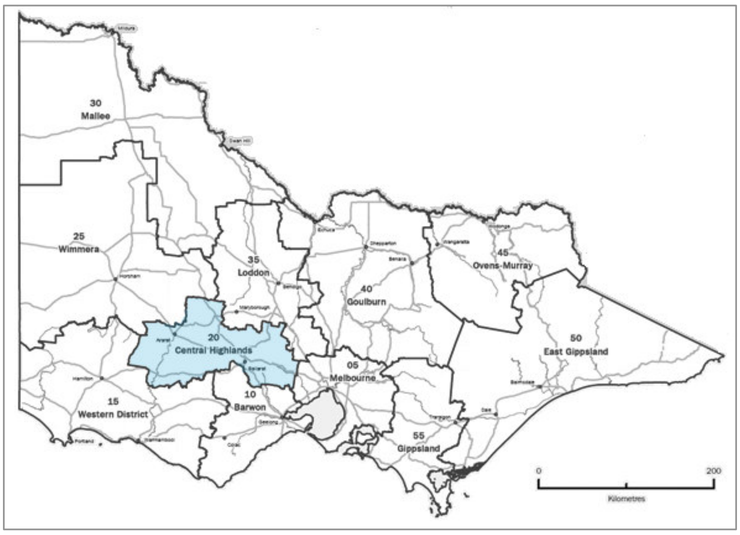
Figure 22 – EW Quotient (enrolment/workforce)



Data Source: ABS, 2012, Skills Victoria 2011

Central Highlands Trends

The Central Highlands Regional Strategic Plan (2010) identifies the current strengths within the region and focuses on its directions and challenges for the immediate and longer term (to 2030) and beyond. The Central Highlands is identified as having a strong economy, along with regional growth areas and an educated workforce, across a range of industries.



The Central Highlands Plan highlights opportunities for industry diversification as the region restructures and grows its economy. Growth opportunities have been identified in tourism, renewable energy generation and sustainable primary production. Ballarat has a focus on developing its research and innovation capacity, building on its status as an employment cluster in IT and computing (Skills Victoria, 2012). One of the major challenges for the region over the next 20 years is facilitating education and training, workforce planning and job creation to meet the different workforce needs.

Central Highlands Regional Strategic Plan (extract)

The Plan outlines an integrated strategy to position the region to 2030 and beyond:

- ***Identify and manage population growth**: Coordination of key facilities and services to be undertaken at a regional scale.*
- ***Economy and Workforce**: Understanding and planning for a significantly different and diversified economy with new workforce needs;*
- ***Transport Infrastructure and Services**: Increasing the range, convenience, quality, flexibility, inter-connectedness and service level of public transport and broadband service levels across the region,*
- ***Settlement Development and Managed Land Use**: Including Horticulture, Securing Water and Energy and providing for Planned Rural Living, revitalisation of Ballarat CBD and Education and Training Facilities;*
- ***Expanded and Better Health Services**: Including IT development, broadband provision and access to services such as patient monitoring at home;*
- ***Positioning the Region's heritage at the national level**: Including regional gold heritage towns, attractions, events and festivals;*
- ***Leadership, Capacity Building and Regional Planning Implementation and Governance**: Enhanced region-wide leadership and skills enhancement program to drive change.*

Regional Strategic Planning Initiative, 2010

As outlined in the methodology section of this report (Section 2), the project methodology also included a qualitative stakeholder engagement component in the form of industry and forums.

"In respect to training and delivery and the acquisition of skills it needs to be noted that there are clearly two distinct clients, the first is the existing workforce and the second are those entering through traditional school and VET pathways.

The pedagogy required to deliver training to these two groups are totally different with full training packages qualifications suited to the latter cohort".

Participant response, RDA online forum:.
Posted: 20/12/2011

The forums were designed to bring together industry and education providers in each sector to (1) validate the relevance of state wide trends, (2) identify sub-regional trends driving skills shortages and skills gaps; (3) identify existing barriers to workforce development, and (4) suggest actions to enhance future workforce development.

Forums were attended by between 10-20 stakeholders per forum. Central Highlands forums were held in Ballarat in late February and early March, 2012. Below tables provide an industry-specific overview of trends, drivers and barriers for each of the four industries in focus.

The Deloitte 2011 report on industry trends and occupations in demand in Victoria (see industry trend boxes, page 20) was used to gauge relevance of Victoria-wide trends to the Central Highlands region (occupations followed by an asterisk (*) have been identified state-wide as occupations in demand or experiencing critical shortages). Key industry informant data and relevant online panel data are included in these findings.

Table 16 – Central Highlands: Agriculture

<table>
<tr><th>Trends/Drivers</th><th>Barriers</th></tr>
<tr><td>

Business Environment

- Ageing Workforce: Fewer young people in farming.
- Increased income from outside farming (e.g., crop farmers are sharing time in the mines) & increased contracting services
- Increasingly competitive trading environment;
- Increased training competition in market;
- Skill shortages and skill gaps;
- Increased diversification of farm /district.
- Changes to water policy
- Increasing input costs (e.g. energy costs, machinery)
- Fragmentation of the industry

Farm Ownership:

- Increase in lifestyle buyers;
- International farming ownership;
- Increase in corporate farming (excluding young local farmers).

Labour market:

- Decrease in skills and labour supply – particularly in livestock (affected by mining industry);
- Difficulty attracting trainers.

Employment Pay and Conditions:

- 12-month contracts (difficulties of committing to on-going contracts);
- Casual, part-time, seasonal workers;
- HR issues.

Technology:

- Increased technology on farms;
- Increased preference for technology.

Training & Training Quality:

- Devaluation of qualifications;
- Increased training partnerships;
- Increased one-on-one and on-the-job training;
- Lack of trust in qualifications;
- Preference for in-house rather than formal training (e.g., field days, conferences; industry groups).

</td><td>

Industry Profile:

- Sustainability of small agriculture businesses;
- Farm debt;
- Farmer attitudes to training (high cost/low return);
- Lack of business growth decisions;
- Business management skills;
- Time poor.
- Rural decline;
- No positive 'agriculture' role models;
- Seasonal farming reduces job security (many jobs are now being filled by contract workers, e.g., agricultural machinery operators).
- Lack of specialist agricultural support.

Skill Shortages:

State-wide skill shortages only moderately relevant for region:

- Skilled positions are difficult to fill, e.g. arborist/tree surgeon; agricultural consultants/agronomist
- Key areas of need are around:
  - Temporary labourers who can understand and adapt
  - Some positions are being filled by contractors, e.g. agricultural machinery operators
  - Biosecurity officers*; farm hand*; shearers, wool classers; foremen, milkers, header drivers, R &D officers;

Skill Gap (wide ranging) + Lack of Skilled /experienced workers;

- Farm workers need to be multi-skilled, including farm managers.
- Lack of skilled workers to meet need (i.e., Agronomists; agricultural consultants);
- Lack of other, experienced workers (such as labourers).

Poor Industry Image & Career Advice:

- Lack of industry understanding (career teachers; job agencies).
- Career in Agriculture often promoted as best suited to 'difficult' kids.

Education & Training Issues:

- Thin markets & restrictive funding policies:
- Restraints affecting returning/transferring agriculture workers (VTG & training for small cohorts).
- Low levels of industry engagement; education industry fragmentation.

</td></tr>
<tr><td colspan="2">

Industry insight:

Strong need to change industry image and perceptions of career in agribusiness (not necessarily just farming) and get young people to understand they are entering a profitable industry that provides a good future

</td></tr>
</table>

Table 17 – Central Highlands: Health

<table>
<tr><th>Trends/Drivers</th><th>Barriers</th></tr>
<tr><td>
Business Environment:

Clients are ageing – more people will be needing aged care
Clients are coming into the aged care setting older, and with higher and more complex needs (are not transitioning through lower care settings)
Percentage of workforce close to retirement
Difficulties in attracting and retaining health professionals (specialists; allied health);
Increased overseas recruitment;
Increased focus on allied health training;
Increase in the number of short term contracts for professionals;
Decline in job readiness.

Opportunity:

NBN rollout – delivery of eHealth care and eLearning for professional development, attraction & retention

Relationships:

Policy environment to work in partnership;
Extended scope of practice – Div 2 nurses

Education & Training Quality:

Increase job opportunities to match training being offered (Cert 4);
Local providers in traditional markets are impacted by external players without same level of commitment to region;

</td><td>
Industry Profile:

Thin job market – job poaching
Difficult to attract and retain allied health professionals in specialised areas such as health sciences, mental health, drug and alcohol
Lack of job prospects at Cert IV level
Short-term health worker contracts driven by funding – restricts recruitment;
Resources available to compensate for + skills;
Commercial ‘reality’ associated with delivering to thin markets;
Impact of off-site training.
Partnership limitations;

Skill Shortages/Gaps:
State-wide skill shortages are relevant for health sector in CH region:

Aged care is a major challenge
Enrolled nurses are also a challenge – particularly in aged care setting
Doctors, particularly in specialist areas are very difficult to attract
Skills shortages magnify with extent of regional/remoteness
Very difficult to attract younger nurses into aged care – existing workers are aging – key workforce planning issue
Key areas of need are around:
Enrolled nurses*, community care workers*, aged care workers*, children’s services workers*, midwifery, community care workers*, management staff, nurse practitioners, rehabilitation and mental health, midwifery, allied health workers; nurse educators.
Decline in job readiness

Education & Training Issues:

Retaining trainer currency;
Time to increase scope of registrations, decreased flexibility;
Flexibility of management training;
Uncertainty and complexity of the training system (so many players).

</td></tr>
<tr><td colspan="2">Industry insight:
A combination of lack of available workers and small resource base for skilling and ongoing professional development. Gap in skills & employability. Clinical placement a growing issue in future.</td></tr>
</table>

Table 18 – Central Highlands: Manufacturing

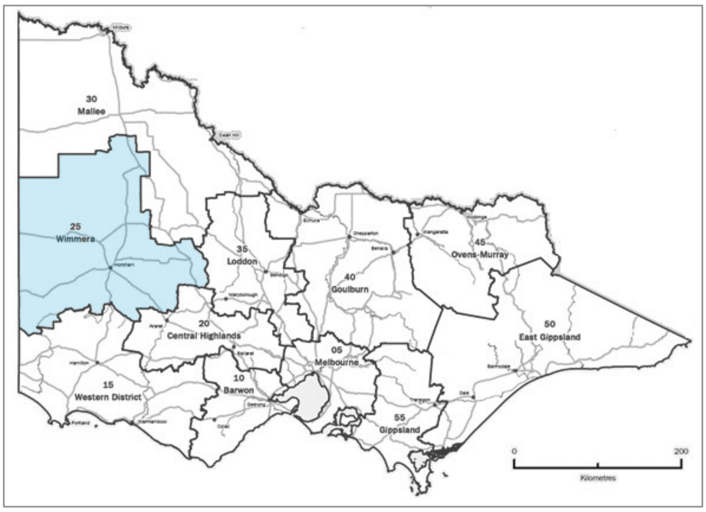
Trends/Drivers	Barriers
Business environment: • Ageing population • Quickening of market cycles; • Decreased responsiveness; • Increased supermarket power; • High Aus$ and low cost o/s manufacturing; • Increased multi-tasking in SMEs. • Increased labour shortages; • Dominance from mining and mining investment; • Decrease in apprenticeship offers and numbers. • Increased poaching of staff; ***Technology & Innovation*** • Increased technological solutions/innovation. • Skilled workforce to meet emerging trends, including niche and special products associated with new technologies; • Skills in innovation; knowledge in applied scientific principles (e.g., chemistry, physics). • Ballarat West Employment Zone (BWEZ) • New UB manufacturing training facility; • NBN rollout – technological improvements, business models, online training models ***Recruitment and Training:*** • Decreasing foundational skills; • Increased word-of-mouth recruitment; • Increased assessment on to the job; • Relationships between education and training and the industry; • Increased education and training sector compliance; • Decrease investment by education and industry in training; • Increased VET and VCAL	***Industry Profile:*** • Ageing workforce and loss of organisational knowledge • Long term employment restricts innovation. • Macro Environment Pressures; • High Australian dollar; • High turnover rates of ownership (corporate hyperactivity); • Market changes. • Media promotes a negative perception of manufacturing; • Poor perceptions of manufacturing (from parents); • Industry not proactively presenting positive, media image ***Skill Shortages/Gaps:*** State-wide skill shortages are relevant for manufacturing sector in CH region. • Employees with the right skills and qualifications are difficult to source and recruit (even labourers); • Mining industry poaching local manufacturing workers; • High industry costs to recruit and retain skilled staff; • Specialised post-trade technical skills, e.g. hydraulics, CAT design • Professionals difficult to recruit: accountants, HR, OH&S professionals. Considerable 'churn' in these • Key areas of need: • Draftsperson*, welders*, sheet metal workers*, metal machinist/tool maker, metal fitters and turners, sheet metal workers, fabrication tradesperson, metal fitters and turners, ***Education & Training Issues*** • Funding cuts – VCAL coordination; • Restraints of VTG (on training, apprenticeships) • Private, low quality RTOs external to region; • Capacity of education sector to meet the needs of the manufacturing sector (small cohort restrictions). • On-the-job training is inadequate • Lack of Foundation Skills
Industry insight: **The industry has a combination of workforce and image issues to resolve. The education & funding system prevent timely adaptation to fast-paced industry needs and rapidly changing technologies.**	

Table 19 – Central Highlands: Tourism

Trends/Drivers	Barriers
Business Environment: • Ageing population; • Increased Global Competition: • Decrease in disposable income due to GFC; • Demographic changes: more volunteers, increased number of older workers, increase in older travellers; • Increase in on-line marketing, services etc. • Increased overseas travel = high service standards. ***Changes in consumer preferences:*** • Increase in international visitors (Chinese language and culture); • Short international visits; • Small group drive; • Increase in backpackers – Grampians; • Increase in 'event-driven' tourism. ***Technology/Opportunity:*** • Increased online applications both an opportunity and a threat to the industry • Increased opportunities for up-skilling workers, i.e., 'earn as you learn models'; tourism internships. ***Recruitment & Training:*** • Increase in skilled migration; • Poaching staff from larger business by smaller business; • High turn-over of staff; • Low unemployment. • Casual workforce are not eligible for traineeships. • Increased online, digital service provision, NBN opportunities.	***Industry profile:*** • Competitive landscape – tourism not united; • Large proportion of micro-businesses - small tourism variety; • Ageing tourism infrastructure; • Budget/cheap marketing by tourism operators to cut costs; • High Australian $; • Lack of professionalism in the industry; • High staff turnover in industry (especially in customer service; hospitality) ***Skill Shortages/Gaps:*** State-wide skill shortages are broadly relevant for the tourism sector in CH region. • Issue is more about quality/professionalism of available personnel • Chefs are particularly difficult to attract • There are high turnover levels in the industry, i.e. 'churn' • 'Regional' environment exacerbates challenges for recruitment • Key areas of need include: • Front of house, chefs and bakers*, baristas, waiters*, housekeeping/cleaners*, Cooks*, marketing, management, customer service, workers with appropriate IT skills ***Poor Industry reputation and career prospects:*** • Low wages; • Lack of a career path; • Lack of people training in the tourism industry (saving VGT entitlement for a 'real' career'); • Parents dissuading their children from entering tourism industry; • No time to undertake training. ***Education & Training issues:*** • VTG/Traineeships are not available for casual workers; • Weekend pay loadings decrease profitability; • Thin training market; • Complex training needs. • No entry level training for cleaners, housekeepers
Industry insight: **The industry has a combination of image and skill gap issues to resolve, in particular on the part of tourism operators. Education & funding systems exclude opportunities for casual workers, which is the majority of tourism workers.**	

Wimmera Southern Mallee

Primary production – Agriculture and Mining (gold and mineral sands) – are key industries in the Wimmera Southern Mallee sub-region. The area has been identified as particularly exposed to the effects of climate change due to its relatively undiversified economy (DEECD, 2012).



The Wimmera Southern Mallee Regional Plan (2010) provides a framework for future direction, in consideration of challenges in the region such as changes in farming practices and declining populations. The plan supports increased education and training to meet future growth and address regional change. The report identifies health and community, transport and storage, construction and other human services as future growth industries for the region. It has also identified the following complementary strategies:

- Increase locally accessible post-secondary education and training opportunities;
- Attract and retain workers to meet immediate workforce needs.

Wimmera Southern Mallee Regional Strategic Plan (extract)

The Plan outlines strategies and directions to position the region to 2030 and beyond::

- ***Strengthening the Regional Economy:*** *Strengthen the farming sector's capacity to prosper in a changing climate; Facilitate regional industry clusters and build on regional strengths. Attract and retain workers to meet immediate workforce needs;*
- ***Economic and Community Infrastructure:*** *Innovative and sustainable energy options; Broadband and mobile telephone coverage for regional competitiveness and liveability; Transport infrastructure to support the regions needs in industry and community;*
- ***Education and Training:*** *Provide access to comprehensive and contemporary range of learning programs (K – Yr 12); increase local accessibility to post secondary education and training opportunities;*
- ***A Healthy & Resilient Environment:*** *Sustainable management and use of water; a healthy catchment; a community which lives more sustainably;*
- ***Community Wellbeing:*** *Strengthen local communities; Health and community services delivery which responds to population change;*
- ***Build the region's nature-based and outback tourism industry:*** *Develop local tourism associations.*

Regional Strategic Planning Initiative, 2010

Wimmera Southern Mallee forums were similarly designed to bring together industry and education providers in each sector to (1) validate the relevance of state wide trends, (2) identify sub-regional trends driving skills shortages and skills gaps; (3) identify existing barriers to workforce development, and (4) suggest actions to enhance future workforce development. Forums were held in Horsham in late February, 2012. Forums were attended by between 10-20 stakeholders per forum.

Below tables provide an industry-specific overview of trends, drivers and barriers for each of the four industries in focus. Again, the Deloitte 2011 report on industry trends and occupations in demand in Victoria (see industry trend boxes, page 20) was used to gauge relevance of Victoria-wide trends to the Wimmera Mallee region (occupations followed by an asterisk (*) have been identified state-wide as occupations in demand or experiencing critical shortages).

Key industry informant data and relevant online panel data are included in these findings.

> ***"There is a lack of suitable candidates to fill many of the local job ads especially in the apprenticeship areas.***
>
> ***Many of the employers are complaining that job ads are ignored weeks on end and when finally successful, many of the candidates are not job ready".***
>
> **Participant response, RDA online forum**
> **Posted: 16/12/2011**

Table 20 – Wimmera Southern Mallee: Agriculture

Trends/Drivers	Barriers

Business Environment/Competition:
• Competitions from other industries (such as mining);
• Food security – world needs food and fibre;
• Ageing workforce: Increase age of business owners;
• Generation succession issues.
• Poaching of mechanics/skilled and unskilled labour
• Increase use of contractors, on the farm (e.g., harvesting, seeding);
• Increase in farm size and corporate farms although not as quick as report
• Public perception of rural living: Increasing gap between city and rural people:
• Increased bio-security and quality assurance requirements.
• Pay conditions deteriorate as distance from city increases.
• Regional migration program too complex
• Need for skilled and semi-skilled labour;
• Increased full-time opportunities for qualified staff;
• Farmers are doing their own grain marketing;
• Visa issues with overseas workers;
• Trend towards trade occupations and away from agriculture science;
• Completion rates are higher for apprentices in rural areas
• Education trend away from Ag science enrolment
Technology & Innovation:
• Increased trend towards technology use;
• Increase towards 'buying-in' advice;
Recruitment & Training :
• Decrease in city students undertaking agriculture training;
• Skills sets for farmers needs to be flexible;
• Consideration of merging sustainability and environmental science within agriculture;
• Need flexible/double degrees in Ag science & economics
	Industry profile:
	• Demographics – loss of 2-30 yr olds
	• Farmers time poor, especially family run farms.
	• Poor perception of rural living by metro residents;
	• Pay and conditions are affected by agricultural profit margins;
	• Perceptions of rural decline = reduced pertaining to social/community, and services;
	• Perception that farmers are not good employees.
	Skill Shortages/Gaps:
	State-wide skill shortages accurate to a degree but region more narrowly focused
	• Biosecurity officer*, farm hand, agricultural consultant/agronomist*, diesel mechanics, plumbers, precision & electronic engineers, truck drivers, HR, Ag trainers/teachers; grain marketers & sales people, R&D
	• Skilled positions are difficult to fill;
	• Farm workers need to have broad skills; Key areas of need are around:
	    • Higher level skills;
	    • Planning & Management skills
	    • Extension & Communication skills
	    • Demand for both semi-skilled and skilled farm workers
	Industry Career Promotion:
	• Agricultural careers are considered 'low end careers' by schools;
	• Low level understanding of agricultural career options;
	Education & Training issues:
	• Lack of "short courses" advertised – especially broad acre region.
	• Insufficient participant numbers prevents courses from running;
	• Demand for Ag workers leaves few interested in being Ag teachers/trainers
	• Concerns about the capacity of RTOs to meet the needs of the farming industry.
	• VTG/apprenticeship issues
	• Distance to education.

Industry insight: **Need to increase migration and training to levels of skills and broad knowledge required to ensure ongoing regional competitiveness & prosperity; need to increase both rural image & industry image/perceptions of career in agribusiness.**	

Table 21 – Wimmera Southern Mallee: Health

Trends/Drivers	Barriers

Business Environment:
• Ageing Population
• Ageing Workforce
• Evolving service delivery models, including care in home
• Rolling demand in allied health professionals
• Increase competition and provider choice
• Changing labour market: Difficulties in attracting and retaining health professionals (specialists; allied health);
• Increased overseas recruitment;
• Difficulty associated with o/trained doctor qualifications;
• Increased focus on allied health training;
• Increase in the number of short term contracts for professionals;
• Increase in flexible funding models (multi-purpose service funding model)
• Policy environment increases looks for work in partnership;
• Extended scope of practice – Div 2.
Technology & Innovation:
• Increased trend towards technology use online patient care and online learning;
Recruitment & Training:
• Demand not proportional to supply;
• Closeness to the market is good in health (in-house training)
• Increase job opportunities to match training being offered (Cert 4);
• Rolling need for professional development and skills certification;
• Push for academic creep;
• Decline in job readiness.
	Industry profile:
	• EBA restructure and union agreements - short-term contracts driven by funding – restricts recruitment;
	• Resources available to compensate for + skills;
	• Impact of off-site training
	• Attractiveness to young people to enter aged care
	• Overseas recruitment short term and costly strategy
	• Lack of childcare;
	• Geographic isolation – reduced access to housing, transport, training, etc.
	• Skills shortages magnify with extent of regional/rural remoteness.
	• Levels of partnership (management) skills not compatible;
	Skill Shortages/Gaps:
	State-wide skill shortages list very community health services focused. Critical shortages in the area of specialist doctors and clinical nursing staff.
	• Enrolled nurses*, community care workers*, aged care workers*, children's services workers*, community care workers*, management staff, clinical/nurse practitioners, paramedics, maternal health, rehabilitation and mental health, midwifery, nurse educators/trainers, IT workers .
	• Thin job market – job poaching & less churn;
	• Key areas of need are around:
	  • Allied Health Professionals
	  • Lack of Specialised Skills across a number of areas
	  • Skilled Professional Care Assistants (PCAs)
	  • Flexible funding models (multi-purpose service funding model) with rurality overlay as part of attraction/retention and training
	Education & Training Issues:
	• Commercial 'reality' associated with delivering to thin markets;
	• Retaining trainer currency;
	• Time to increase scope of registrations, decreased flexibility;
	• Flexibility of management training;
	• Complexity in the training system.
	• Improved pathways
	• VTG issues problematic in rural areas; affect women re-entering the workforce
	• Greater VTG 'upskill' requirements in rural areas.
	• Low SES in rural areas – less capacity to pay for training;
	• Pathways to degree level

Industry insight: **Some contradiction in skills shortages and skills gaps vs. thin labour market. Opportunity to train locally and improve training pathways as industry attraction and retention strategy**	

Table 22 – Wimmera Southern Mallee: Manufacturing

Trends/Drivers	Barriers

Business Environment:
• Uncertain economic climate;
• Competition from low-cost labour countries;
• Ageing workforce;
• Enhanced communication technologies;
• Value of Australian dollar;
• Resurgent mining boom;
• Casualisation of the workforce;
• Increased on-the-job training;
• Labour intensive low-cost production disappearing;
Technology:
• Increased drive for use of technology;
• Increased need for technological solutions and appropriate training.
Recruitment and Training:
• Increased cost of training;
• Rural location pay premium to attract labour;
• Decrease in foundation/job readiness skills – particularly in unskilled workers;
• Move away from apprenticeships to trainees (production engineering);
• Increase in partnerships between education and training and companies;
• Decrease in applicants (need for more employees to grow business) – larger number of unfilled positions;
• Increased need for cross-skilling;
• Increased need to do more with less people
• Best practice in migrant employment
	Industry Profile:
	• Lack of competitive pay rates;
	• Poor industry perception: workers have low level qualifications;
	• Language barriers for overseas workers;
	• Time taken to process RSMS application;
	• High industry costs to recruit and retain skilled staff;
	• Red tape associated with trade recognition;
	• Labour supply issues vs. training issues;
	• Social Exclusion;
	• Labour poaching.
	Skill Shortages/Gaps:
	State-wide skill shortages list are generally relevant but do not focus on food manufacturing. Critical shortages in the area include:
	• Civil engineering draftsperson*, sheet metal workers*, metal fitters and turners*, tool maker, fabrication personnel. middle management, logistics, butchers, slaughterers, boners; food technologies; industry controllers; quality assurance; OH&S professionals; engineering support staff.
	• Key areas of need are around:
	  ◦ Shortage of middle management & higher level skills (management level);
	  ◦ Technical Skills;
	  ◦ Quality of skill base – including at labourer level
	  ◦ Skilled employees – difficult to recruit;
	  ◦ Difficulties in attracting local, unskilled workers to the industry;
	Education & Training Issues:
	• Pre Apprenticeships and apprenticeships completions for manufacturing and engineering poor
	• Better use of VET, VCAL and VTG – rurality overlay

Industry insight: **Industry suffers from supply issues rather than training issues although access to training needs improvement. Rural and industry image both need boosting to improve attraction & retention**	

Table 23 – Wimmera Southern Mallee: Tourism

Trends/Drivers	Barriers

Business Environment:
• Increase in competition (especially destination located 1 hour from Melbourne);
• High AU$ leads to more Australians going overseas.
• Changes in technology;
• Increased insurance costs;
• Ageing population;
• Ageing accommodation stock;
• Changes in consumer awareness and preferences - Consumers are more discerning;
• Increased interest in niche tourism: 'cultural' tourism experience: Koori, festivals, new infrastructure.
• Increase in nature-based tourism;
• Increase in event based tourism (opportunity);
• Businesses are lease-hold and rely on landlord to update.
• Employment reality doesn't match employment experience;
• Volunteer burn out;
• Lack of succession planning.
Technology & Innovation:
• Online booking and information systems (opportunity and threat)
Recruitment and Training:
• Weekend loading expensive for small operators;
• No clear career path;
• Customer service gap in hospitality;
• Combination of skills needed – cross skilling opportunities;
• Casual workforce with high churn.
	Industry Profile:
	• Dominance of small business;
	• Tourism and hospitality are indistinguishable in region – in Grampians-Halls Gap most positions are hospitality related (not specialist tourism);
	• High turn-over of staff;
	• Business owners are fatigued;
	• Business owners are influenced by location-based issues.
	• Isolation of government planning – tourism does not extend beyond the Grampians;
	• No regional tourism planning;
	• Tourism not seen as career opportunity;
	• Segmentation and marketing too narrowly focused (on Halls Gap).
	Skill Shortages/Gaps:
	State-wide skill shortages list is service oriented. Majority of positions are hospitality related in the region, not specialist tourism. Shortages in the area include: front of house, hospitality, reception, customer service, housekeeping/cleaners*, chefs and bakers*. Cooks*, marketing, management, business and customer relations skills, IT skills.
	• Key areas of need are around:
	    • Chefs and bakers – high turnover
	    • Quality of skill base
	    • Supporting professions, accountants, tourism management, etc.
	    • Lack of cross-skilled people
	    • Technology (social media) skills.
	Education & Training Issues:
	• Availability of degree courses in the region (business, marketing, tourism);
	• Tourism delivery disjointed – no logical progression of training or skills building with particular units
	• IT barriers that includes low level communication network to support on-line training;
	• Many industries are small, family run businesses where owners have limited training.
	• Lack of volume in regional markets to attract quality RTOs;
	• Eligibility of VTG places prevents up- and cross skilling;
	• Hard to change attitude to education.

Industry insight: **Tourism in the region is narrowly focused and not seen as career path. The industry needs to augment both stock and skills (including technology and social media skills) to be a player in a highly competitive regional and global market.**	

4. Summary of Findings

This section starts with broad findings across industries first and then looks at each of the industries across the region and by sub-region for trends and issues that may differ from national and state-wide trends.

4.1 Regional Trends

Over the last several decades, industrial economies based on Manufacturing have shifted to economies driven by services, electronic technologies and information, and have become reliant on higher levels of cognitive and interactive skills. The Grampians region is no exception. Trends identified by DEEWR, Huntley & Salt (2010), Keating and Smith (2011) and others suggest our economy and jobs will continue to be oriented in this direction.

All four industries are affected by globalisation, the pace of technological change, an ageing workforce due to changing demographics coinciding with the retirement of baby boomers from the regional workforce. Of the four industries, trade-exposed industries such as Agriculture and the Manufacturing are particularly affected by uncertain economic and financial global conditions, the high Australian dollar, quickening of market cycles, technological innovation, and competition for labour with the dominant Mining industry. Tourism is also affected by the high Australian dollar as well as by the rapid evolution of online technologies.

4.2 Employment Trends

Employment in the region is expected to rise with an estimated 7,100 jobs to be generated until 2018. Employment opportunities will, however, differ considerably across the four industries of focus.

In line with broader trends across the State (Deloitte, 2011), the Health Care sector will see the strongest employment growth over the next 5 years and will hence be the region's major new job generator. Health care employment is currently strongest in the Ballarat and Horsham LGAs and it is reasonable to expect that these areas will experience the highest levels of growth.

Despite global pressures, Manufacturing still dominates the regional economy. However, the sector is expected to experience negative employment growth to 2018, and based on current industry strength, it is reasonable to expect this will affect the Central Highlands LGA of Ballarat and the Wimmera Southern Mallee LGAs of Ararat and the Northern Grampians.

Most LGAs in the Grampians region, apart from Ballarat, have a relative high share of employment in Agriculture. Future trends in employment in the Grampians region illustrate that employment in Agriculture is expected to decrease by 2018.

Tourism is also expected to experience negative growth and based on current industry strength it is reasonable to expect that this will affect the Ballarat, Hepburn and Moorabool LGAs in the Central Highlands and the Northern Grampians Shire in the Wimmera region.

4.2.1 Replacement of Labour

While the Grampians population is forecast to grow by 9 per cent until 2018, population growth will predominantly be concentrated in the region's eastern LGAs, with the majority of growth expected in Central Highlands LGAs and forecast to decline in four LGAs in the Wimmera Southern Mallee. The latter is attributed to a higher than average proportion of people aged 65 years and older and a lower proportion of young people aged 15-24 years in these LGAs. Population forecasts indicate that 20 per cent of the population across the Grampians will be 65 and over by 2018.

Changing demographics will create considerable employment challenges for all four industries, but in particular for Health Care, and related services such as aged care. Increased demand for health care workers with relevant skills will require action from both industry and the region's training system.

With Health Care projected to make up a considerable portion of the future workforce, it is encouraging to note that Health Care has seen a substantial increase in Higher Education and VET enrolments. While VET enrolments in Health Care increased by 31 per cent since 2008, there was actually a slight fall in industry share of overall VET enrolments in the region, which is contrary to employment trends in Health Care and therefore a trend to be watched. Tourism (Accommodation & Food) has seen an increase in enrolment despite negative growth predictions, which some ascribe to the influence of popular reality TV shows. Commensurate with industry growth predictions, Agriculture and Manufacturing have seen little increase in enrolment since 2010, even though Manufacturing still remains among the top five employment sectors in the region.

Based on 2010 enrolment figures, the Health, Tourism and Agricultural industries all appear to be somewhat over-serviced in terms of employment needs, whereas in the future Manufacturing enrolments are not likely to meet workforce needs. Conversely, graduates are not necessarily employed in their industry of training and other factors such as location, lifestyle and remuneration all impact on employment choices. Nor does industry rely solely on graduates for their future labour force.

Replacement labour is in part expected to come from migration into the region through population growth and in part through mechanisms such as the Regional Sponsored Migration Scheme (RSMS), which allows employers allows employers in regional or low population growth areas of Australia, to sponsor employees who are foreign nationals for a permanent visa to work in Australia. While there are some best practice examples of employment under the RSMS in the Grampians, there are also indications that the process is considered too complex and that slow the trade recognition process impacts on the region's productivity.

There are a number of potential other groups in the regional population that are currently not employed or under-employed in the labour force, e.g., women, people from culturally diverse backgrounds, the unemployed, and people with a disability. With below State average participation rates (63.2 per cent vs. 65.8 per cent elsewhere in the State) and an above average unemployment rate of 5.7 per cent (DEECD, 2012), there are opportunities to increase the workforce participation rate for the Grampians region by taking an inclusive approach to workforce development.

4.2.2 Changing Skill Needs

Findings confirm national and state-wide trends that the nature of the workplace is changing and that the workforce across all four industries is required to have both a broader and deeper skill base, with technological and cognitive components required for the majority of job roles. One of the major challenges for the Grampians region over the next twenty years is facilitating education and training, workforce planning and job creation to meet the four industries' workforce and skills needs. The latter requires a relevant and responsive education and training system that ensures an adequate supply that matches industry demand. When there is a mismatch between labour supply and demand it contributes to labour shortages.

A key trend associated with changing skill needs is the increase in industry demand for in-house and on-the-job training. Of the four industries, the Health Care industry appears to be closest to the education system with good examples in the region of training successfully being delivered in situ. All industries show propensity towards in situ delivery, but with rapid technological change and quickening of market cycles, training packages are reportedly failing to keep pace with industry needs. The latter is in part attributable to policy and funding restraints within the training system itself, which will be discussed in more detail below.

A related and pervasive trend reported across all four industries is that the training system does not produce workplace ready graduates. While there is an upward trend pertaining to enrolment in Foundation Skills, there is still considerable disconnect between workplace ready graduates and employer expectations. This trend points to a significant skills gap (in addition to skill shortages), which impacts the region's labour workforce ability and productivity. The skills gap is a broad educational challenge and reflects a strong need for 'higher order skills development' to ensure both sufficient quantity and quality workers able to negotiate new technologies and new approaches to agribusiness, healthcare, tourism and manufacturing. It also reinforces the need for in-situ training and close communication between industry and training providers to ensure training needs and expectations are met.

4.2.3 Changing Education System

Changes to the VET training system have had a significant impact on the region. The system has been designed to improve access and employability and is providing students with more options. Today there are a wide range of education and training providers operating in the region that offer study opportunities ranging from higher degrees to diploma and certificate level courses to non-accredited and Foundation skills training.

Education findings show the educational supply and distribution in the region as predominantly in the VET and private sector. In 2011, the majority of enrolment growth came from Private RTOs (up by 2,500) with TAFE accounted for 41 per cent of enrolments in 2011, resulting in provider share of government funded training now being almost evenly split between TAFE and Private RTOs (DEECD, 2012).

TAFE and Private RTOs are the most prominent providers of Agriculture and Manufacturing courses. All three provider types (TAFE, ACE, and Private RTOs) offer Health education. Tourism has traditionally been TAFE based in the hospitality and food sub-sectors, but in several shires tourism is delivered entirely by Private RTOs. While Grampians strategic and action plans call for increased access to higher education, pathways and skills development, it proved difficult to identify clear education pathways between qualifications or regional providers. Notable exceptions are pathways between TAFE and Higher Education at the University of Ballarat, and Longerenong Agricultural College, which have pathways in place to other institutions.

Increased choice, current funding models and thin training markets (e.g., low training cohorts) are not proving to be cost-effective for traditional training providers in the region and especially outlying areas this is resulting in training market opportunities for Private RTOs external to the region. There is, however, general industry distrust of qualifications and (Private) RTOs' ability to deliver quality education. Although employers and students now have more choice, stakeholders across all four industries expressed concern about the quality of training being provided by 'fly-by-night 'private RTOs, suggesting opportunistic entrants into the regional training market may perpetuate skill gaps.

Findings also point to on-the-ground dissatisfaction with the recently implemented Victorian Training Guarantee (VTG) system with stakeholders across industries suggesting that the push for 'academic creep' restrains (Government funded) re-training and apprenticeships. It was further suggested that the VTG system requires more flexibility and a 'rurality overlay' for an inclusive approach to workforce development since rural areas need to 'grow' their endogenous workforce and up-skilling requirements are often greater.

In this time of rapid technological change and evolving technology platforms, regional providers experience another level of competition in the form of online training providers. Education findings indicate that the majority of providers of flexibly-delivered (online) degrees are external to the region, pointing to increased pressure on established regional providers in terms of retaining market share. The impending rollout of the NBN to (part of the) Grampians region is likely to further increase skilling choices for employers and students, representing both an opportunity and a threat for regional training providers.

4.2.4 Location & Remuneration

Skill shortages are often compounded by a location mismatch between the demand and supply of labour. The attractiveness, or otherwise, of the Grampians location, demonstrated by a general preference to live and work in metropolitan areas as opposed to regional and rural areas, is clearly at play in the region. Industry stakeholders in the Wimmera Mallee sub-region report a poor perception of rural living by metropolitan residents with perceptions of rural decline contributing to a widening gap between 'the city and the country'.

Remuneration issues in terms of employers' ability to pay competitive wages also impacts on workforce development in the Grampians region. Remuneration is generally lower in rural areas, with pay and conditions often affected by profit margins, which makes it difficult for employers, especially in the Wimmera Mallee, to attract and retain staff. This is compounded by more attractive remuneration being offered by competing employers and industries (such as the Mining industry) and all industries except Tourism (which is predominantly made-up of part time workers) experience staff poaching.

4.2.5 Industry Image

Adverse perceptions of an industry's attractiveness can often result in fewer people seeking career opportunities in that field. Stakeholders in all four industries reported low levels of understanding of the career options and opportunities within their industry.

Agriculture and Manufacturing stakeholders report that their industries are still viewed as manual, physical or dirty work that is inferior to other careers and actively discouraged by parents, teachers and peers. Tourism is generally seen as an industry without a clear career path.

All industries have the potential to increase their graduate supply of labour (subject to a time lag effect from training to employment status) by improving their industry image and augmenting their industry profile and associated career paths.

4.2.6 Agriculture

Agri-business and with it the agricultural workforce is changing. Seasonal farming reduces job security and many jobs are now being filled by short-term contract workers, e.g., temporary labourers who can operate agricultural machinery and have a broad skill base and can adapt to the needs of the farm (job ready skills). Apart from the demand for semi-skilled workers, there is a growing need for (the buy-in of) higher level skills, e.g., (middle) management skills, marketing and sales skills, agricultural consultants, agronomists, biosecurity officers, etc. (see Deloitte, 2011, SED Consulting, 2010a). The identified State-wide skills shortages (Deloitte, 2011) are only moderately relevant to the region, which is more narrowly focused. Skills needs differ somewhat in the Central Highlands and Wimmera Southern Mallee based on sub-regional foci.

4.2.7 Health Care

The Health Care and Social Assistance industry may be the ‘healthiest’ industry of the four industries in terms of forecast growth, but being a significant employing sector for the region also means supply will need to keep up with demand. Filling aged care and allied health care positions will be major challenges for the industry. The identified State-wide skills shortages (Deloitte, 2011) are relevant to the Grampians, but the list is far from complete, with skills needs ranging from specialist skills, to IT and support services across community, mental health, disability and child care. While Health enrolments are up, job readiness is down and with a large proportion of the workforce retiring, there is a shortage of workers at the experienced level required to train graduates. Location and housing issues, especially in the Wimmera Southern Mallee sub-region, exacerbate attraction and retention issues.

4.2.8 Manufacturing

Much like Agriculture, the Manufacturing industry, and its various sub-sectors, is experiencing skills shortages as well as skills gaps. In addition to the traditional semi-skilled labour shortages, the industry has a growing need for skill sets in non-traditional occupations as a result of technological change and innovation, e.g., specialist skills in hydraulics, CAT design, etc. Employees with the rights skills and qualifications are difficult to source and recruit as competition for both skilled and semi-skilled labour is high. The identified State-wide industry issues and skills shortages (Deloitte, 2011, see also SED Consulting, 2010b) are generally relevant to the Central Highlands sub-region, but have little relevance for the Wimmera Southern Mallee sub-region, where skills needs are centered around food processing.

4.2.9 Tourism

The Tourism industry is dominated by small business and part time employment. Tourism and hospitality are indistinguishable in the Grampians region. The identified State-wide skills shortages (Deloitte, 2011) are generally relevant to the region, although it is too ‘services’ oriented. While there is an acute shortage of chefs and bakers, the issue is generally more about the limited training available and the level of professionalism of both business owners and a high churn workforce. Negative perception of the industry and the ‘regional’ environment exacerbate recruitment challenges.

5. Future Directions

This study has identified emerging directions for business and industry in the Grampians region, and the workforce skills and knowledge which will be required to ensure regional competitiveness, prosperity and growth. In particular, the project focused on developments in the Agriculture, Health Care and Social Assistance, Manufacturing, and Tourism industries. The project examined both general and regional trends in these industries and how education and training providers can best meet emerging workforce development needs in these four sectors.

This section provides both broad future directions, which have emerged from the study, as well as specific recommended actions which were generated through stakeholder engagement during the project.

5.1 Effective Workforce Planning

Effective workforce planning and workforce development is the key to ensuring the region has a workforce that underpins the competitiveness of regional businesses, is socially inclusive and ultimately, leads to regional prosperity and growth. Changing skill needs within the four industries, participation rates, employment conditions, location and industry image are all determinants of the ability of the four industries to attract and retain workers.

Effective workforce planning does not hinge on industry alone. Improving capacity and adaptability is closely aligned with appropriate education provision, government policy and support. Therefore a collaborative approach between industry, education and government to the region’s workforce development is desirable if workforce participation and productivity are to improve.

What is the role of industry in workforce development? The changing structure of the economy requires new levels of adaptability of the part of enterprises and their workforce. This will mean improving capacity to match workers and jobs, promoting skills development in the workplace and fully using existing skills. Evidence from the study suggests that workforce planning is often neglected and employers need to improve their understanding of workforce development and planning. The four industries would benefit from industry-specific toolkits on effective workforce planning, which could be made available through industry channels, networks and trade centres.

What is the role of education? Despite the significant increase in enrolment, the Victorian VET system faces conflicting expectations and it is often criticised by industry for not being responsive to industry needs. Rapidly changing conditions in the relevant industry and variation in the demands of individual employers make this a difficult task. Industry needs to be confident that graduates have the skill depth and breadth they require and close and continual engagement between education providers and industry will help provide broad workforce development services. Shifting the focus from increasing enrolment numbers to catering to the region’s training needs is one way forward. The latter can be accomplished through curriculum development in collaboration with industry and the rollout of flexible degrees that can, for example, combine components such as agriculture, IT, and business, provide vocational pathways with different entry and exit points and include workplace adaptability, communications and social skills. Industry-based train-the-trainer models and aggregation of demand are other ways to close the gap between training demand and supply.

What is the role of government in workforce development? From the sheer volume of literature reviewed for this study, it is clear that a number of government departments on the national and state level have a stake in workforce planning and development. This creates a level of complexity and duplication of resources. Clarification of who is responsible for what, and increased intergovernmental collaboration on all levels will improve implementation of regulatory requirements and a more cost-effective approach to workforce planning, education, industry incentives and support. Moreover, regional collaboration between government departments provides a useful feedback mechanism for regional/rural effectiveness of policy and programs (such as the RSMS and VTG). Working in collaboration with government, industry and education, the RDA Grampians Committee is ideally placed to liaise across federal and state government departments and lobby on behalf of the region for flexible programs and funding models that increase the effectiveness of the region's workforce development initiatives.

5.2 Recommended Actions

In considering the trends, drivers and barriers across each industry in the Central Highlands and the Wimmera, a number of practical actions were proposed for stakeholder consideration. These actions do not include the generation of more reports which end up on the shelf (although there are clear gaps in region-specific public data that could be addressed). Rather, they are designed as solutions that set best practice examples and lay the foundation for evidence-based workforce planning and future decision making. Recommended actions are outlined below and, where appropriate, illustrated with examples (for a full list of recommended actions by industry and by sub-region see Appendix 3 for recommended actions suggested for the Central Highlands, and Appendix 4 for recommended actions for the Wimmera South Mallee. Note these actions have been used in the formulation of the recommendations below and are not endorsed at this point. They will be valuable input into the implementation planning to be undertaken as an important next step).

5.2.1 Increase intra- and inter-sector collaboration

Increasing intra- and inter-sector collaboration should be focused on creating purposeful relationships that build on existing relationships and optimise regional resources and networks. For example, the Australian Industry Group (AIG) has a good understanding of Manufacturers' needs, Primary Care Partnership (PCP) offices in the sub-regions are well placed to assist with mapping the scope of services in Health, while industry associations (e.g., Grampians Tourism Board) could assist with the aggregation of demand to gain training efficiencies in Tourism.

5.2.2 Develop Regional Training Packages

This action builds on the above action and can be accomplished by closer collaboration between education and industry as illustrated in Section 5.1. This action also includes widening the scope of interaction to include Industry Skills Councils and other relevant industry bodies (e.g., Central Highlands Agricultural Forum; Tourism Accreditation Board of Victoria) to align education outcomes with the needs of industry to accomplish targeted and progressive skills building. The strongest theme in relationship to the supply and demand for skills was the need for generic skills and region-specific training packages should include Foundation skills as well as capabilities that apply to ICT platform technologies and social media.

5.2.3 Improve access/visibility of regional training opportunities

Given the growing demand for skills and the rapidly expanding education market, there is a need to improve the access and visibility of regional training opportunities. The development of a business and industry skills training portal that is relevant to the region in terms of availability of training in the region could be developed in collaboration with and linked to the Higher Education and Skills portal under development by the State government (DEECD). The region would benefit from aggregated information on both face-to-face and online training as well as from a rating system that indicates the quality of the RTO.

5.2.4 Promote Better Business through Workforce Planning

Evidence suggests that there is a need for best practice and benchmarking in workforce development and planning. There was a call for the development of case studies on return on investment on workforce training and utilising local leaders and programs (e.g., Central Highlands and WDA Leadership programs) to mentor businesses on workforce and career planning.

5.2.5 Increase the influence of industry on course development and delivery

For industry to be confident that graduates have the skill depth and breadth they require, close and continual engagement between education providers and industry needs to be in place. Best practice examples such as in the Health industry (e.g., in situ training at Wimmera Health) and the Manufacturing Industry (e.g., an industry representative sits on the curriculum committee at UB) should be widely duplicated across all four industries. Other forms of best practice from both industry and education should be collected and disseminated as part of future workforce development initiatives.

5.2.6 Raise the profile of four sectors as career building

This action requires the engineering of social change vis-à-vis the perception of the four industries and making them more respected and desirable as career paths. Efforts should be collaborative – in a recent newspaper article, the Australian Financial Review (April 2, 2012, p.27) reported that universities have called on industry to help address the crisis in agriculture education by funding a PR campaign similar to that employed in the Mining sector – and build on existing initiatives and networks (e.g., liaise with the LLENs, tap into careers info bus to attract students and adults to learning) to create cohesive messages and economies of scale. Career brochures, social media, high profile scholarships and showcasing companies are all strategies to improve the image and profile of the four industries.

5.2.7 Improve use of refugees/skilled migrants

Skilled migration is seen as an important strategy to increase the employment pool in the Grampians region through mechanisms such as the Regional Sponsored Migration Scheme (RSMS). To increase awareness of the RSMS and inform industry on visas and other RSMS requirements, it has been proposed that an RSMS forum for business and industry be run in the region in collaboration with the Department of Immigration and Multicultural Affairs (DIMA). This will also allow for targeted feedback on the scheme. It is further proposed that best practice case studies on migrant employment, such as the Luv-a-Duck firm in Nhill which has taken the step to employ migrants and refugees as part of its labour pool.

Whereas once the use of migrants was seen as topping up available skills, there is a danger for it to become the main avenue for filling skilled vacancies to the detriment of under-utilised segments of the existing regional population. While no specific actions were put forward in this regard, improvement of training and employment opportunities for casual workers, women, people from culturally diverse backgrounds, the unemployed, and people with a disability, should also be considered.

5.2.8 Influence education and training policies, programs and practices

Actions in this area fall predominantly in the lobbying arena and will again be most successful if they build on existing forums (e.g., the Regional Managers Forum) and agencies (e.g., RDA) that are in a position to make representations on behalf of the region to relevant government/governance bodies (e.g., lobby for VTG recognition of rural places in critical shortage areas to enable multi skilling pathways; free access to broadband for students; travel subsidy on VLine) etc.

5.2.9 Engage students early – primary and secondary level

This action ties into Action 5.26 in terms of re-engineering career perceptions of the four industries as plausible career paths. Efforts should start on the primary level and involve both students and career teachers through ambassador programs, on-site visits to firms and farms, replication of best practice such as the 'gateway' programs at Horsham North Primary School by the WorkCo program and the expansion of VET in Schools (VETiS) program.

5.2.10 Establish Grampians Workforce Forum

Collaboration across all sectors would benefit from the establishment of a Grampians Workforce Forum as an active industry engagement taskforce to build the nexus between workforce development and each of the industries, establish closer links with bodies such as BIWDS, GRDC, CHAF and ITAB, and foster ongoing communication between regional stakeholders.

5.2.11 Raising the profile of regional and rural living

The region has significant locational advantages in terms of housing affordability, access to education, leisure, national parks and a reasonable transport infrastructure, yet its distance from metropolitan and regional centres is not conducive to attracting labour. Proposed actions in this area include promoting rural living opportunities in collaboration with existing initiatives (e.g. Rural Living Expo, Raisin Dust Leadership Group) and increase positive industry and regional stories through metropolitan, regional and local media outlets.

5.3 Conclusion

As pointed out in the international literature (Holstein, 2011), there is a need for strong relationships on the regional level between business, education providers and government that have the institutional flexibility and convergences of interest to build a healthy regional ecosystem.

Throughout this project, and in particular during stakeholder engagement, it is has become clear that there is a strong sense of place in the Grampians region and there is already great commitment and active engagement between industry, education and government.

Despite the considerable size of the Grampians region, there are strong linkages and networks in each sub-region, across the entire Grampians region, and well beyond. As such, the region has a demonstrated ability to collaborate and strengthen networks, relationships and alliances to build a workforce infrastructure that assists its industries to grow and diversify for the greater good of the region. Building on these conditions, there is also potential to a set a best practice example for other regions in Australia on tripartite collaboration for effective workforce development, regional competitiveness, prosperity and growth.

Appendix 1 – Education Providers Central Highlands

✓= MANUFACTURING ✓= AGRICULTURE ✓=HEALTH ✓=TOURISM (HOSPITALITY)

	ACACIA LEARNING SOLUTIONS PTY LTD				✓H					
Central Highlands location		C I	C II	C III	C IV	Dip	Adv Dip	Non Award courses	Statement of attainment	Degree/Post grad
	AUSTRALIAN VOCATIONAL TRAINING			✓T						
	CUSTOMISED TRAINING PTY LTD			✓H	✓H	✓H	✓H			
	THE MALKA GROUP			✓H						
Pyrenees (S)	**PRIV** / **ACE**									
	SCAA SHEARER WOOLHANDLER TRAINING INC / BRACE		✓A	✓A ✓H	✓H					
	TAFE / **PRIV**									
	UNIVERSITY OF BALLARAT-TAFE / ARARAT NEIGHBOURHOOD HOUSE			✓A				✓A		
	BENDIGO REGIONAL INSTITUTE OF TAFE / FUTURUM AUSTRALIA		✓M	✓A✓M ✓H		✓A✓M				
	SCAA SHEARER WOOLHANDLER TRAINING		✓A	✓A						
	TAFE									
	NORTH MELBOURNE INTSTITUTE OF TAFE			✓M		✓M				
	UNIVERSITY OF BALLARAT		✓A✓H✓T	✓A✓H	✓A✓H					
Ballarat I	**ACE**									
	BEST COMMUNITY DEVELOPMENT	✓M	✓T	✓H✓T	✓H	✓H		✓H✓T	✓H✓T	
	BRACE EDUCATION TRAINING AND EMPLOYMENT		✓H✓T	✓H✓T	✓H					
	PRIV									
	AMBULANCE VICTORIA			✓H	✓H					
	BALANCE TRAINING SERVICES PTY LTD							✓H		
	BGT TRAINING		✓H✓T	✓M✓H✓T						
	CONSIDER THIS TRAINING		✓H							
	CUSTOMISED TRAINING PTY LTD			✓H		✓H	✓H			
	DEPARTMENT OF PRIMARYINDUSTRIES, KNOXFIELD			✓A						
	EDUCATION TRAINING &EMPLOYMENT AUSTRALIA			✓A	✓H					
	FUTURUM AUSTRALIA		✓M	✓M	✓M					
	RURAL INDUSTRIES SKILLL TRAINING					✓A		✓A		
	SCAA SHEARER WOOLHANDLER TRAINING INC		✓A	✓A						
	THE MALKA GROUP		✓H							
	TRACY THE PLACEMENT PEOPLE		✓T		✓H					
	TAFE									
	UNIVERSITY OF BALLARAT-SMB CAMPUS	✓A✓M	✓A✓H✓T	✓A✓M✓H✓T	✓A✓M✓H✓T	✓A✓M✓H✓T	✓H✓T			
	HIGHER EDUCATION									
	UNIVERSITY OF BALLARAT-MT HELEN CAMPUS									✓H
	AUSTRALIAN CATHOLIC UNIVERSITY									✓H
Golden Plains (S)	**ACE**									
	MEREDITH COMMUNITY HOUSE								✓H	
	PRIV									
	CUSTOMISED TRAINING PTY LTD					✓H				
	SCAA SHEARER WOOLHANDLER TRAINING		✓A	✓A						
	SKILLS TRAINING AUSTRALIA			✓H		✓H				
Hepburn (S)	**ACE**			✓A						
	DAYLESFORD NEIGHBOURHOOD CENTRE			✓H	✓H					
	PRIV									
	CUSTOMISED TRAINING PTY LTD			✓H	✓M✓H	✓H				
	TIMBER TRAINING CRESWICK LTD		✓A	✓A	✓A	✓A				
Moorabool (S)	**ACE**		✓T							
	BACCHUS MARSH COMMUNITY COLLEGE			✓H						
	PRIV									

✓= MANUFACTURING ✓= AGRICULTURE ✓=HEALTH ✓=TOURISM

Appendix 2 – Education Providers Wimmera Southern Mallee

✓= MANUFACTURING ✓= AGRICULTURE ✓=HEALTH ✓=TOURISM (HOSPITALITY)

WELL & NLLP program delivers in & outside of Grampians region	BRACE, Djerriwarrh Employment AMES LLN Consortium, Bendigo Institute of TAFE, Chisholm Institute of TAFE, and Education Services, DPI, East Gippsland Institute of TAFE, Goulburn Ovens Institute of TAFE, Northern Melbourne Institute of TAFE, Northern LLANS Consortium SkillsPlus Ltd, Swinburne Uni, OTEN (NSW) distance learning, South West Institute of TAFE, UB TAFE,Trustee for Ascent Training Trust									✓✓✓✓	
Across regional Victoria	Training for Work PRIV		✓	✓	✓	✓	✓				
	CUSTOMISED TRAINING PTY LTD			✓							
	RURAL INDUSTRIES SKILLS TRAINING					✓					
	THE MALKA GROUP				✓						
	TRAINING FOR WORK PTY. LTD.			✓		✓					
	WORKCO LIMITED	✓	✓	✓	✓	✓					
	TRUSTEE FOR ACCENT TRAINING GROUP									✓✓✓✓	
	TAFE										
	UNIVERSITY OF BALLARAT-TAFE	✓	✓✓✓	✓✓✓	✓✓✓	✓✓					
	LONGERENONG COLLEGE					✓	✓				
	SOUTH-WEST INSTITUTE OF TAFE									✓✓✓✓	
	GOULBURN OVENS INSITUTE OF TAFE									✓✓✓✓	
	BENDIGO REGIONAL INSTITUTE OF TAFE									✓✓✓✓	
	HIGHER EDUCATION										
	UNIVERSITY OF BALLARAT										✓
	LATROBE RURAL HEALTH										✓
Northern Grampians (S)	**ACE**										
	ST ARNAUD COMMUNITY RESOURCE CENTRE		✓								
	PRIV										
	RIVALEA (AUSTRALIA) PTY LTD		✓								
	TAFE										
	UNIVERSITY OF BALLART-TAFE		✓	✓	✓✓		✓				
West Wimmera (S)	**ACE**										
	WIMMERA HUB INC		✓								
	PRIV										
	SCAA SHEARER WOOLHANDLER TRAINING INC		✓	✓							
Hindmarsh (S)	**ACE**										
	NHILLNEIGHBOURHOOD HOUSE			✓					✓		
Yarriambiack (S)	WIMMERA HUB INC			✓							
	GATEWAY BEET								✓		
Open universities/ Online providers	Major providers include: RMIT, Curtin Uni, Macquarie Uni, Swinburne , Uni of Western Aus, Polytechnic West, TAFE SA, ACU, Charles Darwin, Griffith Uni, Rural Skills Victoria		✓✓✓✓	✓✓✓✓	✓✓✓	✓✓✓	✓✓✓✓				✓✓✓✓

✓= MANUFACTURING ✓= AGRICULTURE ✓=HEALTH ✓=TOURISM

Appendix 3 – Recommended Actions for Central Highlands suggested by Industry

CENTRAL HIGHLANDS AGRICULTURE	
Recommendations	**Actions**
To build strong connections within the local agriculture sector.	Investigate Ballarat Food Cluster re-establishment.
Encourage multi skilling of farmers – preference for 'in house' rather than formal training options.	Create customised solutions and training packages for agriculture workers (especially farmers). Move away from the 'one size fits all' and recognise that farmers want 'skills' not qualifications.
Improve access/visibility of regional training opportunities.	Develop a skills training portal relevant to the region and linked with the Skills Victoria portal. Promote on-line learning and education opportunities facilitated through industry forums for farmers and employees.
Improve workforce development and improve better business practices	Establish social media forums that engage key industry about the issues. Implement benchmarking to employers in the agriculture industry to facilitate adjustment (CHAF – potato farmers). Encourage informal learning's through use of peer support groups and discussion groups etc. Education and training to tailor its programs to respond to the learning styles and interests and needs of farmers (i.e. take E&T to farmers, not vice versa).
Improve public awareness and promote career pathways.	Establish a robust and appealing marketing campaign to raise the profile of Agriculture – especially for school-aged males and females.
Identify and access larger pool of potential workers within industry.	Establish a case study based on successful migrant/refugee employment models (such as Luv-a-Duck migrant/refugee employment). Work closely with cultural and language diverse (CALD) organisations (such as BRMC; Victorian Multicultural Commission) to promote jobs and careers in agriculture to new migrants, to increase the employment pool in Agriculture for the local region.
Engage with primary and secondary school students to promote industry-related careers.	Arrange farm tours and site visits for agriculture teachers and careers advisors.
Establish a Grampians Workforce Forum.	Build greater links with industry bodies such as CHAF and ITAB. Develop an industry consultative committee for Central Highlands.
Raise the profile of regional and rural living to residents in metropolitan areas.	Develop a lifestyle/country living feature for the regional expo in 2013.

CENTRAL HIGHLANDS HEALTH	
Recommendations	**Actions**
increase the attractiveness of the aged care industry especially for the younger generations (those in the 20 – 40 year age group)	Develop regional training packages in health that is informed by the industry sector. Promote the benefits of working in the health sector (including alternative reward packages) through targeted marketing strategies to students at local schools.
Improve the number of staff that are 'job ready'.	Enhance the skills-base of short term contract employees through career planning (CH Health);
Attract and retain more skilled health workers (such as nurses) to the region	Facilitate and promote secondments to the health industry across regions.
Develop strategies to influence education and training policies, programs and practices to better support the needs of the region.	Lobby the VTG to make changes that enable multi skilling pathways for health workers in the region.
Establish a Grampians Workforce Forum.	Lobby professional groups locally (including politicians) to address the restraints of regional training.
Raise the profile of regional and rural living to residents in metropolitan areas 9and city fringe dwellers).	Develop a health industry profile for CH to attract greater number of health workforce professionals.

CENTRAL HIGHLANDS MANUFACTURING:	
Recommendations	**Actions**
Increase public awareness of successful manufacturing businesses in the region.	Support annual School of Manufacturing connections dinner with awards to showcase and promote regional capabilities in manufacturing. Promote 'good news' stories from industry to the broader community, through the media/YouTube.
Encourage greater communication and networking within the broader manufacturing industry.	Establish a 'Grampians Manufacturing' group with broad representation from manufacturing industry across the region as a means of both networking, and discussing the issues affecting the industry.
Improve workforce development and better business practices.	Promote online tools to enhance skills for manufacturing managers.
Improve public awareness and promote career pathways.	The University of Ballarat to continue working with AIG and other industry leaders to address and improve training partnerships for manufacturing.
Develop strategies to influence education and training policies, programs and practices to better support the needs of the region.	Lobby Regional Managers Forum on VTG and other adverse policies. Identify manufacturing 'champions' (especially those with a strong media presence) for education & training within the local industry.
Engaging with primary and secondary school students to promote industry-related careers.	Improve knowledge and scope of the manufacturing industry to secondary school students. Arrange site-visits for students and career teachers to manufacturing organisations. Promote the scope and variation of work within the manufacturing at local career fairs (for primary, secondary and tertiary students). Investigate the development of manufacturing careers through the ambassador program to keep young people in schools and focused on a manufacturing career.
Establish a Grampians Workforce Forum.	Promote the achievements of BIWDS. Convene Central Highlands Workforce Forum – extension of BIWDS.
Raise the profile of regional and rural living to residents in metropolitan areas.	Identify and promote positive manufacturing stories within the CH media outlets.

CENTRAL HIGHLANDS TOURISM	
Recommendations	**Actions**
Establish stronger links between tourism industry and education providers.	Coordinate employment service providers to gain training efficiencies.
Examine the nexus between the needs of tourism industry and employee skills.	Develop a training package that meets the needs of tourist operators and that aligns with industry accreditation and includes foundation skills.
Improving workforce development and improve better business practices	Develop cast studies on return on investment (ROI) in training.
Improve public awareness and promote career pathways.	Promote community awareness about careers in the tourism industry. Showcase tourism and hospitality occupations in the region that are rewarding, innovative and are exciting to prospective students /future employees. Develop strategies to better promote the local industry by highlighting - through the media - tourism awards, role models in the tourism industry, vocational training support from employers etc..
Develop strategies to influence education and training policies, programs and practices to better support the needs of the region.	Develop a project proposal for funding from the National Workforce Fund. Lobby VTG for regional representation and for the provision of casual traineeships. Consult/liaise with the Job Support Agency (JSA) to support local training to support industry needs.

Appendix 4 – Recommended Actions for Wimmera Southern Mallee suggested by Industry

WIMMERA SOUTHERN MALLEE AGRICULTURE	
Recommendations	**Actions**
Improve workforce development and improve better business practices	Facilitate half day courses for farmers and other agriculture workers on strategies and principles for becoming a good employer (with input from the Australia Institute of Management).
Improve public awareness and promote career pathways.	Prepare and disseminate industry brochures about careers in the industry and promote and show case industry successes (and careers pathways). Industries that could be highlighted: Luv-a-Duck, Bayor, Gasons.
Access larger pool of potential workers within industry.	Investigate Regional Skilled Migration Scheme (RSMS) and employing/up skilling refugees (WM Ag);
Engaging with primary and secondary school students to promote industry-related careers.	Provide professional development opportunities for careers teachers within the agriculture industry. Introduce 'gateway' programs in secondary schools to encourage future careers in the industry. Introduce agriculture-based programs at primary school children such as that at Horsham North Primary School. Develop similar programs in metropolitan areas to promote rural lifestyles and careers, for city children. Extend the pilot program with Horsham North PS.
Establish a Grampians Workforce Forum.	Invite the Australian Institute of Agriculture science team with Wimmera GRDC to host an industry roundtable – and one-day conference for farmers and local industry workers.
Raise the profile of regional and rural living to residents in metropolitan areas.	Promote rural living opportunities through Raisin Dust Leadership group. Develop a YouTube promotion of rural living.

WIMMERA SOUTHERN MALLEE HEALTH	
Recommendations	**Actions**
Build connections between health service providers and educational providers.	Strengthen connections between University and other providers within the health industry, such as through greater representation and involvement in industry through research and development. Further develop the connections that already exist. Primary Care Partnerships to coordinate aggregation of services for industry (mapping/directory and scope of services.
Ensure training and education closely matches the needs of the local industry.	Identify strategies to engage the higher education sector pertaining to industry gaps. Identify strategies whereby industry representatives become members on curriculum/course committees within the local area.
Improve public awareness and promote career pathways.	Initiate applied (research based) post graduate degrees (Masters by Research; PhD) in health institutions in the local region to attract and retain skilled health professionals. Increase involvement in the clinical placement program. Enable first year degree training in the Wimmera region to enable pathways into higher education training. Prepare a platform that increases public awareness of, and information about, health careers and education and training in the health industry. Examine opportunities for scholarships in health for rural residents; develop opportunities for business bonding in the health industry.
Develop strategies to influence education and training policies, programs and practices to better support the needs of the region.	Lobby for rural places and VTG recognition of rural places in critical shortage areas. Advocate for continued travel subsidy (VLine) for health workers in rural areas. Establish access to free broadband for students in the health discipline.
Engaging with primary and secondary school students to promote industry-related careers.	Increase students' course awareness through Trade Training Centre (TTC) participation
Raise the profile of regional and rural living to residents in metropolitan areas.	Examine and promote affordable housing options for health professionals that are considering moving to the region.

WIMMERA SOUTHERN MALLEE MANUFACTURING	
Recommendations	**Actions**
Provide access to larger pool of potential workers within industry.	Organise a forum with Department of Immigration and Multicultural Affairs (DIMA) and RSMS to explain visa and RSMS requirements to local manufacturing organisations considering employing overseas workers. Improved access to refugees/skilled migrants by lobbying the Commonwealth government for easier RSMS processes (WM Manufacturing); Lobby for the continuation of RSMS coordinator in Horsham (local government).
Engaging with primary and secondary school students to promote industry-related careers.	Establish more trade schools at primary level schooling (such as the program run at Horsham North Primary School Work Co program) Support and expand VET in Schools (VETiS) program and re-instate coordinator funding in the Wimmera.

WIMMERA SOUTHERN MALLEE TOURISM	
Recommendations	**Actions**
Develop region-specific training package for tourism.	Engage with tourism industry skills councils and boards to lobby for development of training package for Wimmera (WM tourism).
Improve workforce development and improve better business practices	Develop a regional mentoring program for tourist operators by expanding/utilising WDA leadership program. Conduct free workshop on social media with links to an online community forum/discussion site for sharing knowledge; staff-swap program with a sister city enabling/facilitating best practice – link to visitor information centre network.
Improve public awareness and promote career pathways.	Liaise with Ballarat Learning Exchange to increase access to training and technology in tourism, especially for young people. Examine the feasibility of a careers information bus to attract students, their parents and other adults to learn about new and innovative careers in tourism.

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Glossary of Terms

ABS	Australian Bureau of Statistics
ACE	Adult Community Education
ASCED	Australian Standard Classification of Education
ACFE	Adult Community and Further Education
ACSF	Australian Core Skills Framework (ACSF): learning, reading, writing, oral communication, and numeracy, and (b) employability skills: education, teamwork, problem solving, initiative and enterprise, planning and organising, self-management, learning, technology.
Attainment	A skill or educational achievement
CALD	Culturally and linguistically diverse
COAG	Commonwealth of Australian Governments
Completion Rate	The amount of students who complete rather than drop out of a course
DBI	Department of Business and Industry (formerly DIIRD)
DEECD	Department of Education and Early Childhood Development (State Government of Victoria)
DEEWR	Department of Education, Employment and Workplace Relations (Australian Government)
DIIRD	Department of Innovation industry and Regional Development (State Government of Victoria) – Department has been renamed to DBI
Dual Sector Education	Tertiary education system that includes both vocational (skills-based) and higher (academic-based) education within the same institution
EBSCO	Academic Research Database Host
EFTSL	Equivalent full time student load
ERIC	Education Resources Information Centre
E-Learning	The delivery of a learning, training or education program by electronic means
Fee for service	A charge made from a professional activity
Foundation	Language, literacy, numeracy and employability skills in the information age (see ACSF for

Skills	employability skills)
HESG	Higher Education and Skills Group (part of DEECD)
Highest post-school Qual	The highest post secondary education that a person has achieved
GDP	Gross Domestic Product
Government subsidised enrolment	A government system where the government pays part of the enrolment costs for a student
Knowledge Economy	Describes the trends in advanced economies towards greater dependence on knowledge, information and high skill levels, and the increasing need for ready access to all of these by the business and public sectors.
LLNP	Language, Literacy and Numeracy Program
LGA	Local Government Area
NCVER	National Centre for Vocational Education Research
Non-school qualification	Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education
Online	Controlled by or connected to another computer or to a network
OECD	Organization for Economic Cooperation and Development
Open University	Online Higher Education Providers
Private University	Private universities are universities that are not operated by government
RDA	Regional Development Australia
RSMS	Regional Sponsored Migration Scheme.
RSPI	Regional Strategic Planning Initiative
Skills Deepening	The shifting need for higher and more complex skills by industries
Skills Shortage	Skill shortages exist when employers are unable to fill or have considerable difficulty filling vacancies for an occupation, or significant specialised skill needs within that occupation, at current

	levels of remuneration and conditions of employment, and in reasonably accessible locations
Skills Gap	A skills gap is the difference between the workforce required to perform a current or prospective operation and the workforce available. Skills gaps may include the number of qualified workers available to perform particular job roles, or the specific skills that workers need to perform a job role (DEEWR).
Transferable Skills	Abilities, attributes and personal qualities a worker can use in more than one occupation
UB	University of Ballarat
WDA	Wimmera Development Association
Workforce Development	A long-term commitment by a company to continually train its members as part of mission critical, vision, and strategic goals
WELL	Workplace English Language and Literacy
VET	Vocational Education and Training - education that prepares trainees for jobs that are based on manual or practical activities
VCAL	Victorian Certificate of Applied Learning
VTAC	Victorians Tertiary Admissions Centre
VTG	Victorian Training Guarantee