Goulburn
Regional Skills Demand Profile
2023

Victorian Skills Authority

VICTORIA State Government | Jobs, Skills, Industry and Regions

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The Victorian Skills Authority (VSA) has a critical role to play in understanding and communicating the skills needed to ensure Victoria can meet current, emerging, and future skills and industry demands that enable inclusive growth and prosperity for all Victorians. Working together with key stakeholders across industry, employers, providers, unions, communities, and learners – the VSA seeks to deliver skills-led solutions, drive reform and collaborate to improve skills and employment outcomes.

The Goulburn Regional Skills Demand Profile is complementary to the Goulburn Regional Economic Development Strategy (REDS). The profile draws on the REDS in addition to other sources. Due to the specific focus and need of the profile, alternative data has been required for aspects of the analysis. As a result, some data and information may differ between the REDS and the profile. The data and information provided in the profile has been validated and adjusted with a taskforce comprised of industry leaders and education providers from across the region.

Data in this profile

The Victorian Skills Plan provides the Victorian Government and skills and training system with high-quality information to best meet industry and community needs. The VSA is committed to building data and insights year on year through the annual Victorian Skills Plan and updates to the employment forecast dashboard.

This profile reflects the most up-to-date data and statistics available in 2022, during the period of taskforce meetings and profile development. The data is aligned to the 2022 Victorian Skills Plan and various reputable sources were incorporated, as referenced throughout the profile.

The projections reflect the economic outlook and uncertainty of the time. The pace of the pandemic recovery, return of migration, supply chain issues, inflationary pressures and the Russian invasion of Ukraine have all contributed to a rapidly changing economic and labour market outlook in the last 18 months.

The VSA is currently updating its data for the 2023 Victorian Skills Plan. The update will reflect the changed economic conditions noted above, as well as improvements in the modelling techniques used to estimate employment across the regions. For this reason, the data in the profiles is likely to change with the release of the new Victorian Skills Plan, set to be released in late 2023.

To access the latest data, readers are directed to the Victorian Skills Authority employment forecast dashboard: www.vic.gov.au/victorian-skills-plan and the Regional Economic Development Strategies (REDS) interactive data dashboards: https://www.rdv.vic.gov.au/resources/regional-economic-development-strategies

# Contents

Executive summary

About the Goulburn region

The Goulburn region is situated in the heart of regional Victoria with a population of more than 175,000 people.[1] The region is home to the Yorta Yorta, Taungurung and Wurundjeri Nations peoples.

Goulburn is a diverse region that extends from the fringe of Greater Melbourne around Kilmore and Wallan, through to Victoria's border with New South Wales (NSW) along the Murray River.[2] Greater Shepparton is the largest local government area (LGA) within the region in terms of population, making up 39% of the region's population, and is the fifth largest regional city in Victoria.[3] To the south, Mitchell Shire is part of the growing number of peri-urban areas facing rapid population growth as metropolitan Melbourne continues to grow. Between 2020 to 2021, the shire was the third largest growing regional LGA in Victoria, and fifth largest in Australia.[4]

The strong economy of the Goulburn region makes it attractive for population growth and industry expansion. In 2021, the region had a gross value added (GVA) of $6.5 billion,[8] making it the fifth largest regional economy in Victoria. The local economy was largely founded upon agricultural activity, and this is a legacy that continues today with Goulburn recognised as one of the largest food bowls of Victoria. Economic activity and industry growth is supported by strong transport connectivity to metropolitan Melbourne, NSW and other regional hubs by arterial passages such as the Hume Freeway, Goulburn Valley Highway and Midland Highway. Freight rail corridors also provide the Goulburn region with access to key markets and metropolitan hubs, including Melbourne, Geelong and their respective seaports.

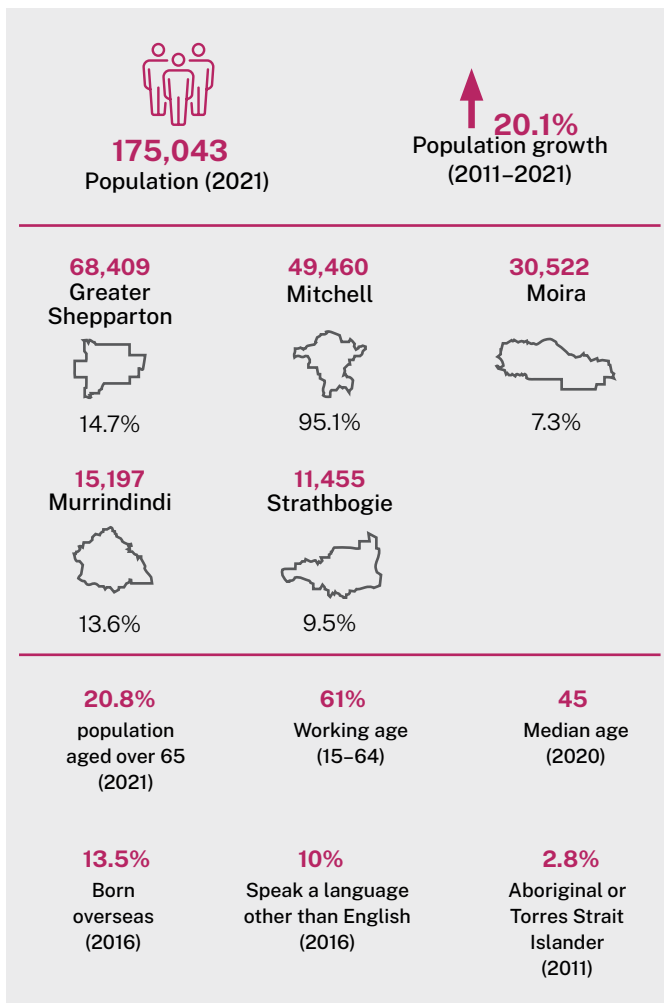Figure 1a: Overview of the Goulburn region
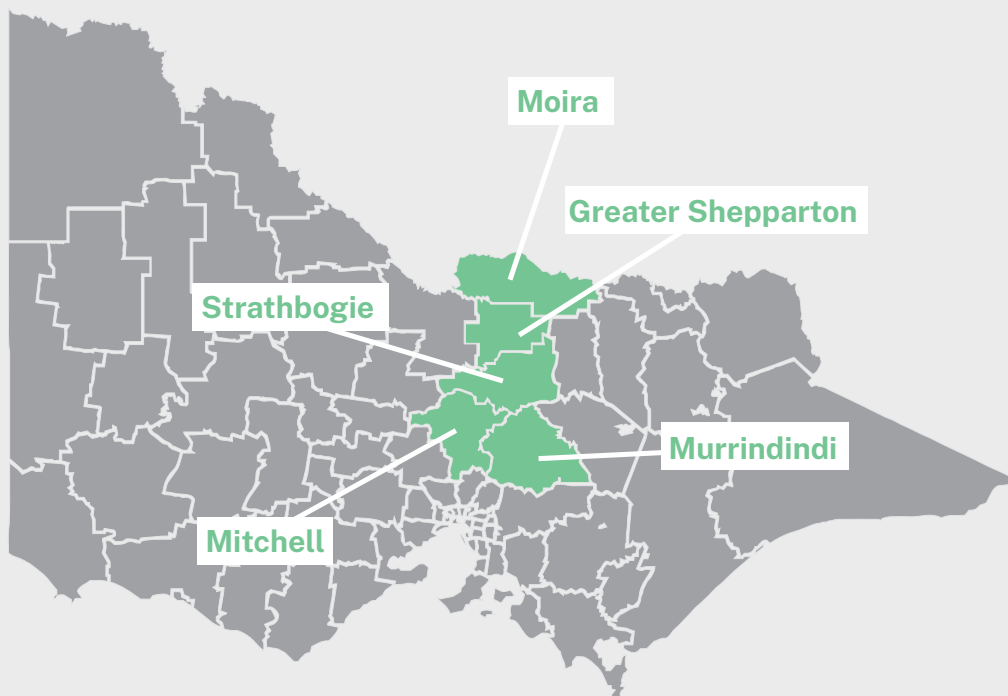
There is growing industry investment and a desire for growth within Goulburn among current and emerging industries, particularly in the clean energy sector. This sector is developing at a rapid pace due to favourable climate conditions, geography, and new investment across business, government, and local communities. Investment in the clean energy sector generates dual benefits for the region as it supports the future energy needs of a rising population and drives industry activity and productivity. Supporting investment in this space will benefit the region's broader economy and inevitably change the nature of skills and training required in the region.

Figure 1b: Overview of the Goulburn region[5,6,7]

175,043
Population (2021)

↑ **20.1%**
Population growth
(2011–2021)

68,409
Greater
Shepparton

14.7%

49,460
Mitchell

95.1%

30,522
Moira

7.3%

15,197
Murrindindi

13.6%

11,455
Strathbogie

9.5%

20.8%
population
aged over 65
(2021)

61%
Working age
(15–64)

45
Median age
(2020)

13.5%
Born
overseas
(2016)

10%
Speak a language
other than English
(2016)

2.8%
Aboriginal or
Torres Strait
Islander
(2011)

Economic activity will also be driven by significant population growth in the Goulburn region. It is estimated that the region's population will increase by approximately 35% between 2021 to 2036, reaching an estimated population of 236,800 by 2036.[9] Mitchell Shire is set to experience a 98% population growth between 2021 to 2036, an annual increase of about 4.7%.[10] This significant growth trajectory means that the Goulburn region overall will outpace the growth of other parts of regional Victoria, which are set to experience an average of 1% annual population growth.[11]

Goulburn's strong economic outlook, coupled with accelerated population growth, will require greater investment in social infrastructure and services and a skilled workforce to support current and emerging industry growth. This highlights the continued importance of higher and vocational education in the Goulburn region to ensure its population is equipped with the right skills to support this significant growth trajectory and create a thriving local economy.

There are a range of factors and initiatives at a local, state, and federal level informing and driving the strategic directions for the region.

The Goulburn Regional Economic Development Strategy (REDS) released by Regional Development Victoria (RDV) in May 2022 sets out 4 strategic directions for driving socioeconomic growth and development across the region as follows:

- enhance productivity and resilience in the agricultural and food product manufacturing sectors

- focus on continued growth and development of the visitor economy, leveraging natural assets and Aboriginal heritage

- strengthen renewable energy generation and the role of the circular economy

- leverage the role of Shepparton as the regional capital and industry hub.

These 4 strategic directions are a starting point for creation of a broader set of focus areas currently underway and identified for the region in coming years.

Continued supply of local, skilled workers is vital to support industry growth, drive innovation and grow productivity in most of the region's industries.

Key to Goulburn's continued success is a skilled, future-proof, local workforce that can evolve to support future industry and community needs.

Approach to developing the Goulburn Regional Skills Demand Profile

This profile has been developed in consultation with the Goulburn Regional Skills Taskforce, which is comprised of local representatives from industry, local government, and higher education and vocational training providers. The profile is based on research, qualitative and quantitative data analysis and a wide program of consultation with local industry through dedicated industry roundtables about the region's economy, population, workforce, and education and skills environment. Further detail about the Regional Skills Taskforce is included in the acknowledgements section of the introduction.

Outlook on jobs growth

The 3-year employment projections of the Victorian Skills Authority (VSA) show that there is significant demand for workers in the region – with over 4,080 additional new workers required in the 3 years between 2022 and 2025[12] and a further 3,600 workers needed to replace those workers expected to retire during the period.[13]

Table 1 provides estimates of job growth across the 7 key industries of the region. These forecasts have been extensively tested with the Regional Skills Taskforce, and it is suggested that the number of additional workers may be under-estimated. This profile contains further analysis of current labour shortages and vacancies, recent government policies and industry investment across the region which are likely to drive higher demand.

Table 1: Estimated baseline job demand outlook for 2022–25 by industry

Industry[1]	Estimated current workers 2022[14]	Minimum new workers to fill new jobs[15]	Minimum new workers to fill retirements[16]	Total estimated new workers needed[2]
Agriculture sector	~7,900	-90	400	+330
Clean energy3	~2,130	+100	70	+180
Construction and housing	~8,930	+450	370	+830
Education and training	~6,810	+520	330	+850
Health care and community services	~11,670	+1,020	470	+1,500
Manufacturing	~9,010	+120	290	+430
Visitor economy	~12,760	+1,020	570	+1,620
Other	~22,970	+950	1,110	+2,170
TOTAL Please note totals may not add due to rounding	~82,180	+4,080	+3,610	+7,900

1 See Appendix C for details on the mapping of Goulburn's key industries to ANZSIC industry classifications.
2 Note that total new workers needed may not necessarily be the sum of new workers to fill new jobs and new workers to fill retirements. Totals may not add due to rounding.
3 Note that the employment forecasts are likely to be understated for the clean energy sector as the data only includes the ANZSIC industry classification for electricity, gas, water and waste.

Priority skills needs for Goulburn

The types of skills required by industry are becoming more complex. Most industries are reporting the need for higher skill levels, driven by the increasing use of digital and automation technologies to respond to clean economy adaptation, new markets, and higher consumer expectations. Many of these emerging skills can be transferred across occupations and industries requiring a new approach to skilling that will be important to regions like Goulburn.

Higher, vocational and industry-based training organisations also need the flexibility to be able to design and deliver these skilling interventions. While each industry has sector-specific skills and capabilities, common capability needs have been identified across all major industries in the region.

Core competencies	Leadership skills
Core competencies and interpersonal proficiency have been identified as critical complementary skills to technical industry knowledge. Common personal and social skills include communication skills, emotional intelligence, conflict resolution skills and an ability to collaborate and work in teams.	There is an identified need to uplift capabilities of existing workforces to meet current gaps in leadership and management positions, ranging from younger workers with limited experience, to empowering capable workers to transition into more senior management positions.

Digital and technology skills	Strategic thinking and planning skills
Proficient literacy skills are vital for an effective workforce that can deliver on its roles and responsibilities. Supporting all individuals across the region to continuously develop these skills empowers workers to prioritise continual learning as job requirements evolve. Uplifting digital literacy will increase business productivity and enable the transition to more innovative ways of working.	There is a need for new the workforce to have innovation and growth-focused mindsets, including problem-solving skills, a capacity to think critically, a commitment to continual learning and aspirations to push boundaries and take advantage of emerging opportunities. This is critical for the ongoing growth of Goulburn given the opportunities for new and emerging industries in the region.

Key challenges and opportunities

This profile has been prepared in a complex and challenging period. Like other parts of Victoria, Goulburn is facing cost-of-living pressures and significant labour shortages, while the continued recovery from the pandemic and 2022 floods has exacerbated many underlying challenges in the region. These underlying challenges include housing accessibility, access to child care, teacher and trainer shortages and access to public transport.

At the same time, feedback indicates that the education and skills system, as well as industry itself, also need to transform to meet the changing needs of students, workers, industry, and community.

Discussions with the taskforce and industry roundtables have uncovered a set of common challenges related to workforce skills development and training[4] in Goulburn. This has revealed a clear set of opportunities that are targeted towards addressing the cross-cutting workforce and skills needs of industry to drive continued growth and improve economic and social outcomes across the region.

Challenge	Opportunity area
Barriers to accessing vocational and higher education	**1. Identify and address barriers to participation in post-school education and the transition to employment**
Understanding the challenges for Goulburn's current and prospective learners will help identify how to address the barriers to participation in vocational and higher education and successful transition to employment in the region.	
Alignment between higher and vocational education and workforce needs	**2. Enhance inter and intra-sector collaboration and coordination to address Goulburn's workforce challenges**
Galvanising existing connections and energy across the region, opportunities for greater collaboration and coordination of existing programs and initiatives can help to address Goulburn's workforce challenges at the required pace and scale. While there are several programs on offer in the region, the Regional Skills Taskforce reflected on the limited number of participants who can benefit from such activities. The geographically dispersed workforce highlights existing funding and scaling challenges, particularly in areas outside major cities or towns in the region. Facilitating more streamlined collaboration between government, industry and education and training providers presents an opportunity to accelerate solutions that address current labour shortages and future workforce needs that are unique and critical to Goulburn.	
Scale and reach of existing programs and initiatives	**3. Leverage industry experience to develop innovative training approaches**
Employers and industry representatives can play a more active role in the design, planning and delivery of innovative higher and vocational education training approaches, such as greater use of transferable and future skills, for easier movement between jobs in the region.	
Risk of low-skilled future workforce	**4. Increase opportunities for continual learning and development**
Advocating, promoting, and facilitating opportunities for life-long learning through micro-credentials[5] short courses and personal and professional skills development has been identified as a key solution to address skills gaps. This is particularly important in an environment where labour shortages are leading employers to recruit under-qualified employees and, or employees with no experience or relevant qualifications.	

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4 In this profile, 'training' refers to vocational education. It can also include other types of less formalised learning, such as peer-to-peer or internal workplace delivered training.

5 Micro-credentials are shorter style courses (and in some instances accredited qualifications or skill sets) that demonstrate skills, knowledge, and, or experience in each subject area or capability.

Next steps to address regional skills and workforce needs

The specific actions across the 4 opportunity areas are summarised below. The Goulburn Regional Skills Taskforce identified the timeframe for each action (immediate, medium, or long-term), and how complex each action may be to implement (low, medium, or high).

Some are actions the Victorian Skills Authority (VSA) will seek to address over the coming year, while others will require coordinated action by industry, government, and the education sector. An action plan will be developed in collaboration with the community.

		Immediate impact (1–2 years)	Complexity
Opportunity area	1.	Undertake explorative research to better understand the data, trends and factors affecting participation in education and training	Medium
		Targeted engagement with current and prospective learners – including under represented and vulnerable communities, and their support networks to build awareness of higher and vocational education, skills development and employment opportunities	Low
		Develop a clear pathway for prospective students to transition from non-traditional training[6] opportunities into higher and vocational education	Medium
	2.	Provide data and insights to support the Goulburn region's workforce planning	High
		Actively support and bolster initiatives of the Shepparton Education Plan	Low
		Collaborate to increase reach of programs and initiatives that showcase the diverse range of career opportunities and employment trajectories in the Goulburn region	Low
		Increase access to mentoring opportunities for businesses and workers, including through peer-to-peer learning and cross-business programs	Medium
	3.	Publish industry data and trends for current and prospective students, parents and career counsellors	Medium
		Provide wider access to existing industry-specific training materials and facilities to prepare students and prospective employees for employment	Medium
	4.	Promote micro-credential courses that can meet industry and employee skill development needs	Low
		Collaborate across industry and education and training institutions to design and deliver industry-recognised short courses, including micro-credentials	High
		Review and redesign recruitment processes to prioritise core skills, alongside technical competency	Medium

6 'Non-traditional' refers to training and upskilling that occurs outside of formal training programs such as at school or TAFE. They can include be peer to peer, community or local government provided programs, and internal employee training programs.

Medium-term impact (2–5 years)			Complexity
Opportunity area	1.	Support the Senior Secondary Pathways reform agenda through facilitation of local opportunities to improve vocational education and training (VET) within the region	Medium
	2.	Implement the Clean Economy Workforce Development Strategy	Medium
		Expand engagement activities with students and their networks	Medium
		Advocate for simplifying participation pathways for workers in transition across industries or mature and retiring cohorts	High
		Support the Goulburn Tourism Partnership to accelerate planning and delivery of a more coordinated tourism plan for Goulburn	Medium
		Explore opportunities for shared recruitment pools across organisations where appropriate or feasible	High
	3.	Work with the VET Development Centre (VDC) and industry experts to support skills development for the teacher workforce	Medium
		Support industry and education providers to continue to take a place-based approach to course design and delivery	Medium
	4.	Increase access and provision of support for Aboriginal people to enter education, training and employment through working closely with Traditional Owners	Medium
		Support and promote an attitude of lifelong learning through organisational and industry-based initiatives	Medium

Longer-term impact (in 5+ years)			Complexity
Opportunity area	1.	Review and refine the Australian Qualifications Framework (AQF) to ensure that education and training offerings are accessible, aligned and tailored to Goulburn learner and local industry needs	High
		Empower and equip businesses to employ and create positive working environments for under-represented cohorts	Medium
		Advocate and support local initiatives to address housing, transport and childcare accessibility that impact participation in higher and vocational education, and the employment and upskilling of current and prospective learners and workers	High
	2.	Partner with regional, community and other industry bodies to improve access to a holistic suite of support services for new and prospective learners and workers	Medium
		Incentivise trainers to gain accreditation and enter the education system	Medium
	3.	Provide local insights to support the development of the Victorian Skills Plan	Low
		Facilitate a smooth flow of teachers between industry and training	Medium
	4.	Future skills requirement planning and mapping	High

This profile acknowledges the issues facing the region and industry that go beyond the identified workforce and skills challenges. Industry roundtables identified that broad responses are required to support future growth in the region, including state and federal government policies and funding. The Victorian Skills Authority will continue to raise these with relevant areas of the Victorian Government.

Acknowledgements

Acknowledgement of Country

The Victorian Skills Authority (VSA) acknowledges and recognises the Traditional Owners of the land, in particular the Yorta Yorta, Taungurung and Wurundjeri Nations, who are the recognised Traditional Owners of the Goulburn region, who have lived, worked and cared for their country and its resources for many thousands of years. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples.

Acknowledgement of support to undertake this work

The Regional Skills Demand Profiles have been prepared with support from Regional Development Victoria. The profiles are a valuable resource for regional Victoria, the Department of Jobs, Skills, Industry and Regions, and broader government. The VSA will work closely with stakeholders to address the opportunities and issues identified in the profiles.

The Goulburn profile complements and draws on the Goulburn REDS and other sources. Due to the specific focus and needs of the profile, alternative data has been required for some aspects of the analysis. As a result, some data and information may differ between the REDS and the profile. The data and information provided in the profile has been validated and adjusted with a taskforce comprised of industry leaders, education providers and other stakeholders from across the region.

The analysis and insights gathered throughout the development of this profile have also served as critical input to the development of the inaugural Victorian Skills Plan.

Refer to the Introduction for further information on the Regional Skills Demand Profile and connection to the Victorian Skills Plan.

Victorian Skills Authority

Acknowledgement of Regional Skills Taskforce members

The VSA acknowledges the time, contribution, and insights of the Goulburn Regional Skills Taskforce (Table 2) and additional representatives from industry, local government, registered training organisations, and related agencies who contributed to the development of this profile.

The findings in this profile would not be possible without their openness, generosity, expertise, and commitment to the regional economy and community.

Table 2: Goulburn Regional Skills Taskforce members

Member	Organisation	Member	Organisation
Adam Katsoutas	KB Transport	Leanne Hulm	GROW Shepparton
Austin Ley	Moira Shire Council	Linda Nieuwenhuizen	Committee for Greater Shepparton
Brett Luxford	Mitchell Shire Council	Melva Tyson	Murray Dairy
Christina Bassani	Goulburn Valley Water	Neil Maher	Rumbalara Aboriginal Co Op
Elaine Mallows	Yarrawonga Health	Neville Atkinson	Outback Academy
Elizabeth Capp	La Trobe University	Peta Langbehn	Puckapunyal Army Base
Elizabeth Duggin	Karingal Aged Care	Peter Harriot	Greater Shepparton City Council
Geraldine Christou	Greater Shepparton City Council	Rachael Frampton	Strathbogie Shire Council
Jacinta Russell	Connect GV	Richard Speed	La Trobe University
Jason Cox	Hansen and Yuncken	Robert Tanti	SPC
Jenny Pena	Victorian Forestry Plan	Ros Gall	Melbourne University
Jenny Wilson	Murray Dairy	Sam Fairgray	Yulong Stud
Julie Salomon	Strathbogie Shire Council	Shivaun Brown	Murrindindi Shire Council
Karen Abberfield	Cobram Growers Victoria	Tess Simkin	Goulburn Valley Health
Kate Siebert	Murrindindi Shire Council	Tim Russell	Regional Development Victoria
Lachlan Barnes	Murray Dairy	Travis Heeney	GOTAFE

The VSA also acknowledges and thanks all representatives who have participated in the industry roundtables to provide direction and guidance in the development of this profile.

Introduction

Purpose and scope of the regional skills demand profile

The Victorian Skills Authority (VSA) has a role in understanding and communicating the skills needed to ensure Victoria can meet current, emerging, and future skills and industry demands that enable inclusive growth and prosperity for all Victorians.

A strong, regional Victoria is an integral contributor to fostering a thriving Victoria, and the Regional Skills Demand Profiles are an important element of setting the regions up for success.

The purpose of the profiles is to provide a robust evidence base that draws on a wide range of data and information that is supplemented by the valuable insights and experience of key stakeholders, brought together through dedicated taskforces and industry roundtables.

The profiles are developed through a collaborative process, with a focus on providing local insights and a tailored and actionable response to support decision-makers to understand broad workforce trends, challenges, and opportunities. This profile has been established with the intention of being accessible, practical and valuable to a range of stakeholders, including government departments and agencies, employers, higher and vocational training providers, local industry and the region.

This profile focuses on the 3-year outlook for the Goulburn region, and the education and training opportunities that can assist in developing the required workforce. While the profile acknowledges that many factors contribute to economic development, this work is centred on the skills responses (to engage, train and retain the workforce) rather than other levers that are also essential to secure labour and ensure the region's prosperity

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Figure 2: Victorian Regional Partnerships map
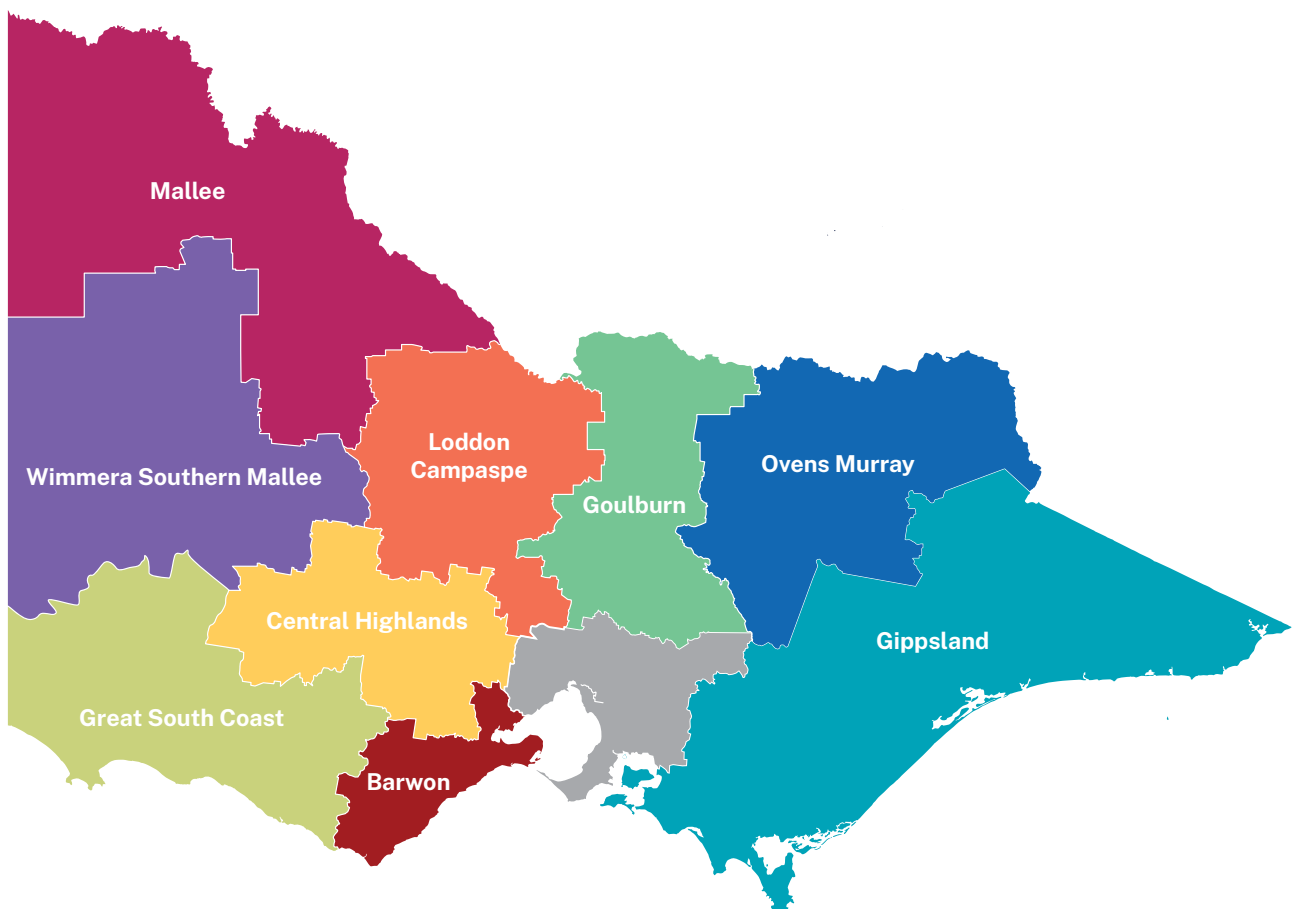
Connection to the Victorian Skills Plan

The Victorian Skills Plan outlines current and emerging skills needs and labour market shortages across the state, at both industry and local levels, to direct more targeted investment so the Victorian skills system can meet the current and emerging demands of industry and the community.

The plan, alongside the profiles, highlights the need for ongoing conversation and collaboration to address current and emerging skills requirements. While the plan covers the current landscape of the Goulburn region and industry needs, this profile focuses more deeply on the localised challenges and opportunities for the region.

Figure 3: Connections between the profiles and the plan
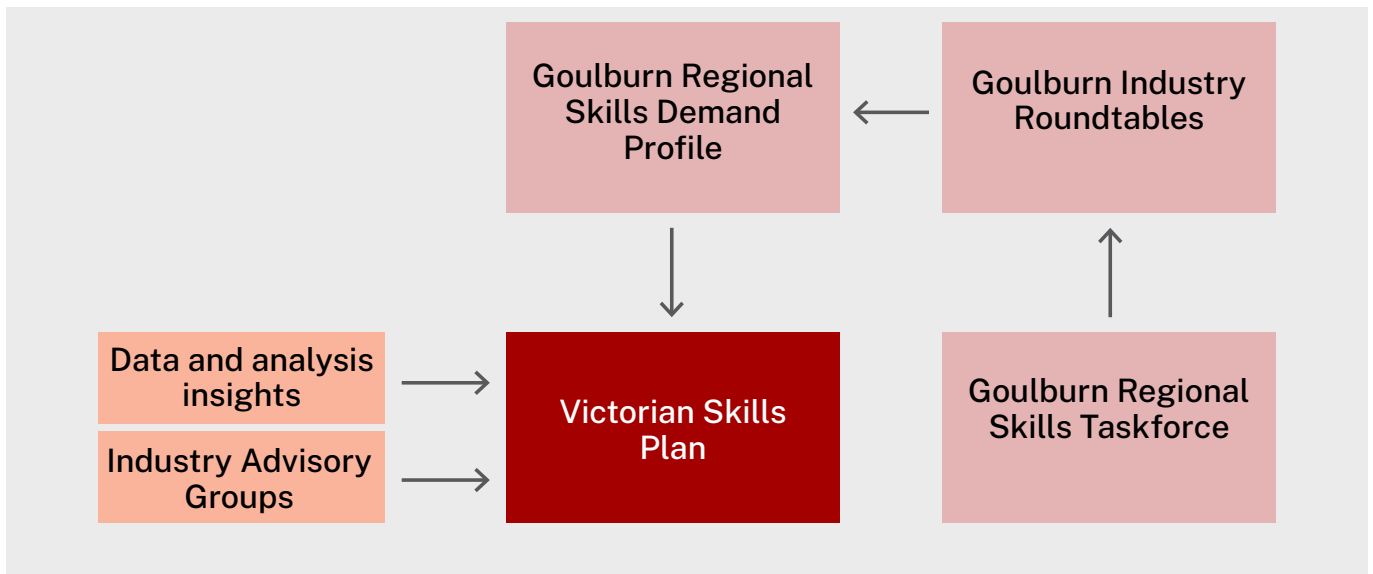
The data used in this profile is based on the latest available information at the time of its development. Updated data and insights can be accessed via the Victorian Skills Authority website where appropriate or through various data sources, as referenced throughout the profile.

Goulburn's strategic context

A connected regional heart

The Goulburn region is located in the heart of regional Victoria, stretching from the peri-urban areas of metropolitan Melbourne in the south and extending directly north to the New South Wales (NSW) border. Comprised of the local government areas (LGAs) of Moira, Greater Shepparton, Strathbogie, Mitchell and Murrindindi, Goulburn has a population of more than 175,000 people.[17]

Goulburn is a name given to the traditional lands of people from the Yorta Yorta, Taungurung and Wurundjeri Nations, and the strength of the continuing culture, heritage and future is reflected, in part, with the region having the largest Aboriginal population in Victoria outside of metropolitan Melbourne. There are several sites of spiritual, social, environmental and economic significance across the region and there is an ongoing priority to embed Indigenous experience and culture in new investments throughout the region. The Goulburn Murray Regional Prosperity Plan[18] outlines an actionable strategy to 'restore, re-establish and sustain' a robust Yorta Yorta and First Nations economy throughout the region by way of collaboration, self-determination, and empowering leaders.

Greater Shepparton is the largest LGA in the region making up 39% of the region's population and is the fifth largest regional city in Victoria.[19] The local economy was largely founded upon agricultural activity, and this strength continues today with Goulburn recognised as one of the key food bowls of Victoria, and Shepparton is home to several prominent food product manufacturing companies, including SPC. Tourism activities continue to develop in the region with the Shepparton Art Museum (SAM) and redevelopment of the Museum of Vehicle Evolution (MOVE) cementing their status as 2 defining attractions of the regional city.

Outside of Shepparton, Goulburn supports several pockets of concentrated industry activity. These include industrial enterprise in Seymour, equine industries, Australian Defence Force activity in Puckapunyal, tourism around the Lake Eildon area, and National Parks and border town communities in the north of Moira Shire. The specialised nature of many of these operations means there are unique skills needs and workforce and education challenges associated with each. For example, cross-border areas such as Cobram-Barooga face challenges in relation to course or service eligibility for students, and there are considerations for managing continuity of training for people temporarily stationed in Puckapunyal.

Figure 4: Map of the Goulburn region

The Victorian Government is committed to investing, planning and delivering strategic initiatives that have a positive and sustainable impact

The Skills for Growing Victoria's Economy Review by Jenny Macklin (the Macklin Review) and the Review into Vocational and Applied Learning Pathways in Senior Secondary Schooling by John Firth (the Firth Review) highlight the need for sector reforms and transformation to ensure the system can deliver the skills of the future. In line with key recommendations from the Macklin Review, government is prioritising improvements to Victoria's skills system to ensure the sector can continue to innovate and meet the changing needs of students and industry in creative and collaborative ways.[20]

The government's skills reform agenda, which includes the development of the plan, seeks to transform the delivery of senior secondary education and vocational education and training. This will ensure Victorians have access to high-quality education and training to assist in seeking out meaningful jobs and careers, and industry and employers have access to a skilled workforce. In combination, these lead to individual and community wellbeing and economic prosperity.

Statewide trends and the impact on the Goulburn region

This profile is being prepared in a complex and challenging period. The Australian and Victorian economies are being impacted by cost-of-living pressures, significant labour shortages, and the continued recovery from the pandemic that has exacerbated existing challenges, including the ongoing impacts of climate change and extreme weather events as seen through the recent flooding to the Goulburn region. Conditions being experienced locally result from the impact of trends such as supply chain disruptions. These provide the context for the skills and workforce challenges outlined in this profile.

Figure 5: Megatrends impacting the Victorian economy

Drivers

Intra-state movement	Supply chain disruptions	Child care access and affordability	Insecure working conditions	
Intra and inter-state movement and migration	Uplifting local manufacturing capability	Inflation and wage growth	Teacher and trainer shortages	Climate change resource management

Impacts

Labour shortages	Housing accessibility	Increased service demands	Extremes in visitor economy

This diagram illustrates how the impacts of megatrends can reinforce other impacts

- Local business pressure
- Housing inaccessibility
- Labour shortages

Strategic directions for the Goulburn region

The Goulburn region is unique in its strengths and opportunities. While this profile explores the current and emerging skills needs of the region, it is informed by the wider planning and strategic directions for the region.

Figure 6: Strategic directions of the Goulburn region[21,22,23,24,25]

Goulburn local government area strategies

	Greater Shepparton City Council	Mitchell Shire Council	Moira Shire Council	Murrindindi Shire Council	Strathbogie Shire Council
Local	'great careers and lifestyles happen here'	'together with the community, creating a sustainable future'	'connected, healthy, educated and inclusive'	'sustainable, vibrant and resilient'	'respectful, optimistic and inclusive'
State	Regional Development Victoria (RDV) Regional Partnership: Goulburn	DJSIR Regional Economic Development Strategy May 2022.			
Federal	**Local jobs plan** Increasing participation and training programs	**Regional strengths and weaknesses report** Identifying the infrastructural pipeline.			

The Goulburn Regional Economic Development Strategy identifies 4 strategic directions for the region, which have been used to support the identification of future skills needs. These 4 strategic directions are a starting point for creation of a broader set of focus areas currently underway and identified for the region in coming years.

The Goulburn Regional Economic Development Strategy (REDS)[26] released by Regional Development Victoria in March 2022, outlines the medium to longterm strategic directions for socioeconomic growth and development across the region.

These are founded in an evidence base that considers the region's unique attributes, existing and emerging industries, and socioeconomic context.

1. Enhance productivity and resilience in the agricultural and food product manufacturing sectors

Goulburn is a major producer of Victoria's meat, fruit, vegetables, and dairy.[27] There is also significant agriculture related manufacturing in the region, including but not limited to food product, packaging, equipment and metals manufacturing that allow much of the supply chain to remain in the region.

Growing demand for Australian grown produce in overseas markets, as well as food product innovations and changing tastes domestically such as food meat substitutes, represent the opportunity and appetite for quality products. Activities arising from increasing interest in native foods and botanicals intersects with leveraging economic opportunities for Traditional Owners and First Nations farmers, and also sustainable farming practices that emphasise the provenance of the produce. Technological advancements in the agriculture sector can help to facilitate these opportunities and drive productivity – specifically at the intersection of agriculture and the clean economy space where Goulburn is well positioned to become a global leader in regeneration.

2. Focus on continued growth and development of the visitor economy, leveraging natural assets and Aboriginal heritage

The Goulburn region is home to many nature-based attractions and activities, including Lake Eildon and Surrounds, the Murray River, Barmah and Lower Goulburn, Kinglake National Parks, and Steavenson Falls in Marysville. Many of these places are important cultural assets to the Yorta Yorta, Taungurung and Wurundjeri peoples and there is opportunity to increase the recognition, self-determination and experiences associated with their role as Traditional Custodians of the land. Developing unique 'hero' experiences that render the region a 'must visit' destination and leveraging the strength of other industries such as agritourism are likely to increase attraction to the area.

3. Strengthen renewable energy generation and the role of the circular economy

Renewable energies, as well as the activities in the circular economy, have grown more prominent over the last decade. The Goulburn region has one of the highest concentrations of community energy groups in Victoria which reflects the existing appetite and commitment to sustainability in the area.[28] Favourable natural conditions, coupled with this community drive, mean that Goulburn is in a strong position to realise the gains of these investments.

There are opportunities for the region to generate and store reliable energy outputs through distributed energy resources. Goulburn benefits from several renewable energy sources, including solar, pumped hydro, and bioenergy, and has already been identified as having the third highest potential output from bioenergy in the state.[29] Developing secure energy supplies can enable growth in other sectors of the economy, reduce input costs and increase global competitiveness.

4. Leverage the role of Shepparton as the regional capital and industry hub

Shepparton is well-connected via major arterial roads, and currently plays a critical role in linking training institutions with local industry and product markets. There is opportunity to maximise and diversify activity across many industries, including the agriculture sector, by leveraging the expertise and reputation of Shepparton as a hub for industry collaboration and innovation due to its concentration of learning institutions, food manufacturing businesses and transport capabilities. As the regional capital of Goulburn, Shepparton also has a part to play in functioning as a meeting and networking place for education, private organisation and governmental interaction. This includes research and development activity.

In addition to the key priorities set out in the REDS, there are a range of initiatives at a local, state and federal level informing and driving the strategic direction and skills development within the Goulburn region.

The Goulburn Murray Resilience Strategy outlines 8 'resilience principles' to enable growth during periods of uncertainty and change so that the region can 'adapt, transform and thrive'.[30] Developed through the Goulburn Regional Partnership and significant stakeholder consultation, the strategy provides an in-depth study of the path forward contrasted with the implications of continuing business as usual. These 8 principles include 'designing for flexibility, managing networks and connectivity, and fostering cohesion, self-organisation and local responsibility'.

The Goulburn Murray Regional Prosperity Plan[31] is another key tool in realising the full potential of the local economy through meaningful engagement and uplifting of the local First Nations economy. Local government growth strategies, including the Shepparton and Mooroopna 2050 Regional City Growth Plan,[32] also play a large role in orientating the vision, goals, and pathway for regional growth in a more localised context.

More broadly, there are several frameworks that underpin activity in the Goulburn region. Goulburn benefits from the Goulburn Valley Designated Area Migration Agreement (DAMA)[33] with the Australian Government. This agreement increases flexibility in employing workers from overseas to fulfil local, unique labour requirements. The Victorian Forestry Plan[34] will have a significant impact on the local economy with the state government committing to an end to native forest harvesting by 2030, requiring additional support for workers as the sector undergoes a transition period.

Emerging economies: sustainability and renewable energy

The Hume Regional Climate Change Adaptation Strategy[35] released in 2021 sets out key priorities for the region across a 5-year period with a strong focus on planning and emergency management, caring for the natural environment, embracing renewable energy, improving health and wellbeing, enhancing the built environment and strengthening the economy and workforce. Planning and delivering the right supply of diverse skills across the region is paramount to achieving these priorities.

The Goulburn Outcomes Roadmap presents several strategic areas of focus, including population wellbeing, reducing disadvantage and establishing a growth corridor.[36] Developing and maintaining the role of renewable energies makes up a large part of partnership activity in the region.[37] Some of the key opportunities identified include further investment into pumped hydro energy storage, bioenergy and large-scale solar energy. More detailed mapping, such as Driving Smart Specialisation for the Hume region, sets forth the projected demand, job and skills requirements, and infrastructural changes needed to take advantage of electric vehicle growth in the region and state more broadly.

Development of the Victorian Government's Clean Economy Workforce Development Strategy[38] is currently underway and will outline the roadmap to realising a sustainable and successful clean economy. Submissions as part of this process already emphasise the role of vocational and industry-based training facilities and have identified potential employee cohorts needed to reach this goal.[39]

Enabling infrastructure focus

The Shepparton Education Plan is an initiative of the Victorian School Building Authority. As the largest city in the Goulburn region, Shepparton forms an important hub for higher and vocational education across the region. The plan provides a detailed strategy to transform education in the region and has included large-scale works such as the merging of 4 secondary schools to establish Greater Shepparton Secondary College, alongside actionable responses that promote greater uptake of tertiary education in the region.

Victoria's 30-year Infrastructure Strategy[40] commits to the delivery of critical growth infrastructure, including co-designing an Aboriginal community-controlled infrastructure plan, improving the resilience of regional telecommunications infrastructure, and expanding rail access to outer suburbs. The strategy also outlines specific activities needed to plan for high growth areas such as Mitchell Shire, including funding libraries and aquatic centres, extending rail services, and targeting 30% of tree canopy coverage in growth areas.[41]

Infrastructure Australia's Regional Strengths and Infrastructure Gaps report[42] outlines the pipeline for future investment and current challenges, such as internet connectivity and limited affordable housing in the Hume region.7 Flooding across the region in late 2022 has further exacerbated existing homelessness in the region, with more than 7,000 properties expected to be flooded in Shepparton alone, displacing residents and business owners among an already significant level of homelessness across the region.[43]

The diversity of strategies already in place in the region highlights that Goulburn's communities and industries have a strong understanding of the need for a future-fit workforce and are well positioned to drive and champion skills development as a key strategy for achieving this.

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7 Infrastructure Australia includes the Goulburn region within the Hume region boundary.
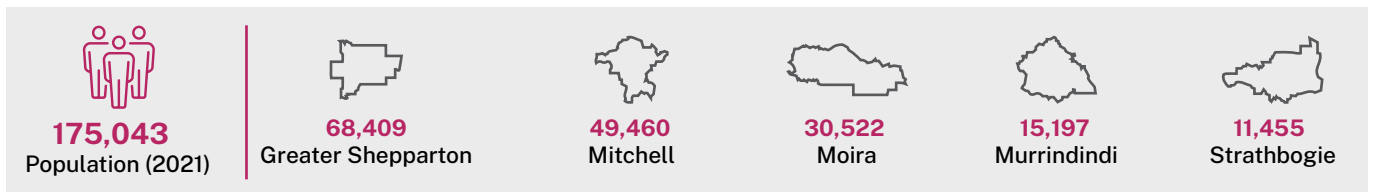
'The Goulburn region is home to many nature-based attractions and activities. Many of these places are important cultural assets to the Yorta Yorta, Taungurung and Wurundjeri peoples and there is opportunity to increase the recognition, self-determination and experiences associated with their role as Traditional Custodians of the land.'

Goulburn's current landscape

This section provides an overview of Goulburn's current landscape with respect to its population, economy, workforce, and demographic characteristics.

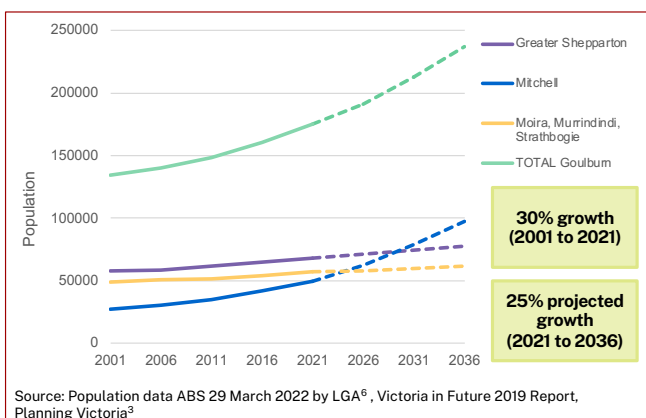## A region experiencing accelerated population growth

175,043 Population (2021)	**68,409** Greater Shepparton	**49,460** Mitchell	**30,522** Moira	**15,197** Murrindindi	**11,455** Strathbogie

As of 2021, over 175,000 people live in the Goulburn region.[44] The region has grown significantly since 2011, increasing by almost 27,000 people, or 18%.[45]

Mitchell Shire had a 40% population increase between 2011 and 2021, growing by more than 14,000 residents. Greater Shepparton is the largest local government area (LGA) by population in the region with approximately 68,400 residents in 2021.[46]

This growth is set to continue, with current projections indicating that Goulburn will reach an estimated population of almost 236,800 by 2036, an increase of 35%.[47] This is an average rate of 2.2% per annum, with Mitchell Shire growing at the fastest rate (4.7%) and is expected to outgrow Greater Shepparton by 2031.[48] Goulburn will outpace the growth of other parts of regional Victoria (average of 1% growth per annum), and Greater Melbourne (average of 1.6% growth per annum).[49]
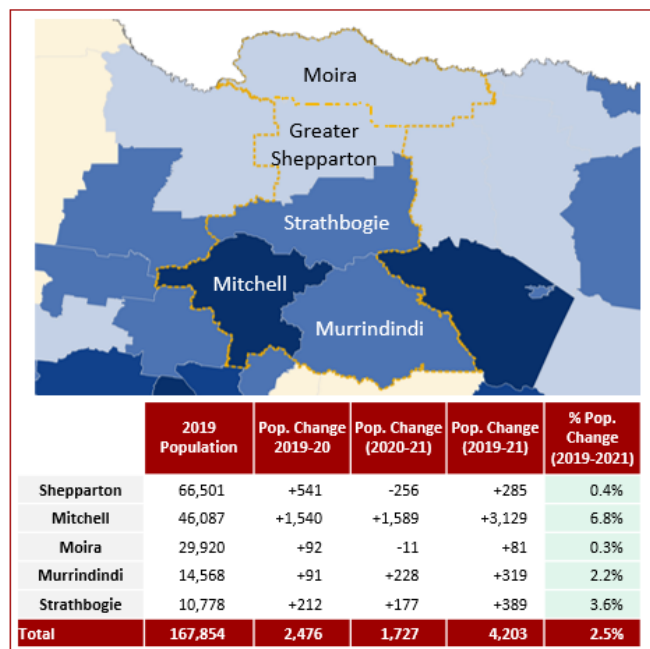
Figure 7: Population actual and projected growth by local government area 2001–2036 [50,51]

30% growth (2001 to 2021)

25% projected growth (2021 to 2036)

Source: Population data ABS 29 March 2022 by LGA[6], Victoria in Future 2019 Report, Planning Victoria[3]

Recent migration patterns have changed the trajectory of population growth in the region

More recently, between 2019 and 2021, the total population for Goulburn increased by 2.5%, resulting in a net increase of 4,203 residents across the 5 LGAs. Mitchell, Strathbogie, and Murrindindi had the highest increases at 6.8%, 3.6% and 2.2%, respectively. In the same period, 1% of Victoria's total population decreased[52] which may be an indicator of preferences for living in regional areas.

Figure 8: Goulburn population changes between 2019 and 2021[53]

|	2019 Population	Pop. Change 2019-20	Pop. Change (2020-21)	Pop. Change (2019-21)	% Pop. Change (2019-2021)
Shepparton	66,501	+541	-256	+285	0.4%
Mitchell	46,087	+1,540	+1,589	+3,129	6.8%
Moira	29,920	+92	-11	+81	0.3%
Murrindindi	14,568	+91	+228	+319	2.2%
Strathbogie	10,778	+212	+177	+389	3.6%
Total	**167,854**	**2,476**	**1,727**	**4,203**	**2.5%**

A regional economy with emerging growth potential

The economic strength of the Goulburn region continues to make it an attractive location for population and industry growth. In 2021, Goulburn's gross value added (GVA) was $6.5 billion and it was the fifth largest regional contributor to the total state GVA.[54] The industries of agriculture forestry and fishing, health care and social assistance, manufacturing and construction are the 4 key drivers of the region's overall economic output, contributing a combined $3.3 billion in GVA.[55]

Manufacturing and construction recorded growth in GVA over the past 5 years well above statewide levels (20.2 and 20.6 percentage points).[56] Although agriculture, forestry and fishing is the largest contributor to Goulburn's regional output, the industry has recorded a fall in GVA greater than the decline observed across the state (by 5.4 percentage points).[57] This indicates that Goulburn has experienced a relatively large change in agriculture-related activity compared with other regions across the state.

There is increasing industry investment and a desire for growth within Goulburn among current and emerging industries, most prominently a strong focus on the clean economy. Industry and taskforce members acknowledged that the current period represents opportunity for transition as changing sustainability pressures – including recovery efforts following the floods, and new technologies – may act as a springboard for innovative activity in the economy.

Figure 9: Contribution to Goulburn GVA (2020)[58]
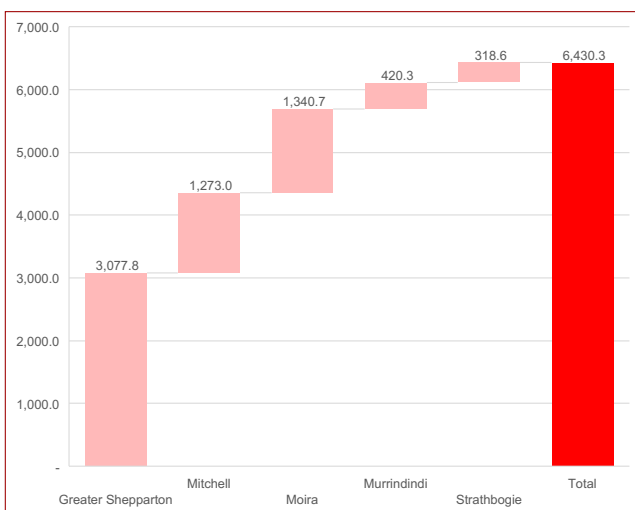
Economic output in the region does not include residents who commute or work remotely in jobs based outside of the Goulburn region. Many towns within the region are popular as holiday or investment properties, which can also obscure a seasonal population.

Figure 10: GVA by key industries in Goulburn (2021)[59]
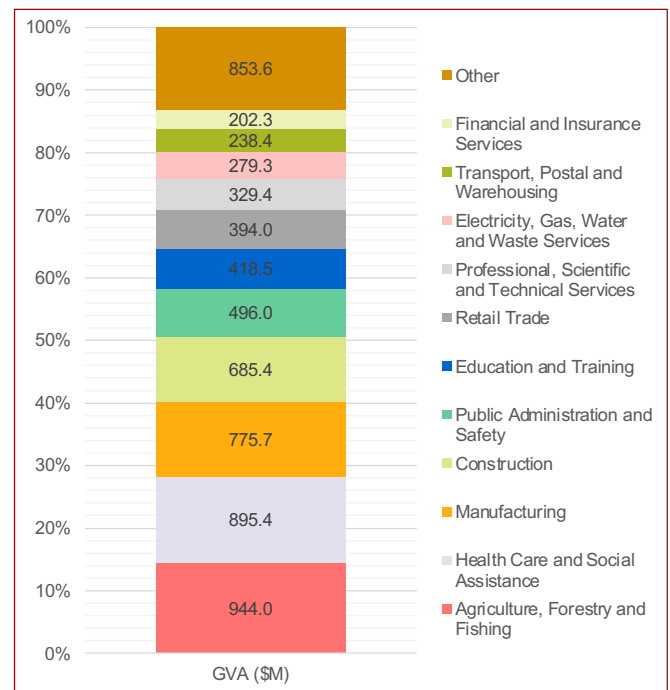
Greater Shepparton is the regional centre, accounting for approximately 48% of the region's total GVA in 2020, generating around $3 billion.[8] Health care and social assistance, electricity, gas, water and waste services and manufacturing were the highest value industries in Greater Shepparton.

Moira contributed approximately 21% of the region's GVA, predominantly through manufacturing and agriculture, forestry and fishing. Mitchell also contributed just under 20% to the region's GVA, primarily driven by high levels of construction and public administration and safety activity ($528 million collectively) in 2020.

Murrindindi and Strathbogie collectively accounted for 11% of the region's GVA which reflects, in part, their smaller populations. Agriculture, forestry and fishing were the highest contributor to GVA in both the Murrindindi and Strathbogie Shires at $92 million and $88 million, respectively.

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8 At the time of drafting this profile, the latest available data on GVA by local government area is 2020.

There are approximately 82,183[60] people employed in the Goulburn region, comprising about 77% of the working age population and 47% of the general population.9

The health care and social assistance industry is the largest employer in Goulburn, employing about 14% of the workforce. This is followed by manufacturing and construction, employing 11% of the workforce each. Over the last 20 years, employment in these industries has risen significantly, indicating growth in response to the increasing population across the region and rising demand for goods and services. These industries also have a higher proportion of employment relative to the average across Victoria, highlighting the significance of these industries to the Goulburn economy.[61]

Goulburn's industry employment specialisations include agriculture, forestry and fishing where there are 6 times as many agricultural workers employed as a share of total employment relative to the state average, and electricity, gas, water and waste services with one-and-a-half times as many workers compared to the state average.[62]

At a sub-industry level: agriculture; food product manufacturing; water supply, sewerage and drainage services; heavy and civil engineering construction; food retailing; defence; preschool and school education; and residential care services are among the highest employment specialisations in Goulburn.[63]

Figure 11: Goulburn employment by industry (2022)[64]

Source: VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
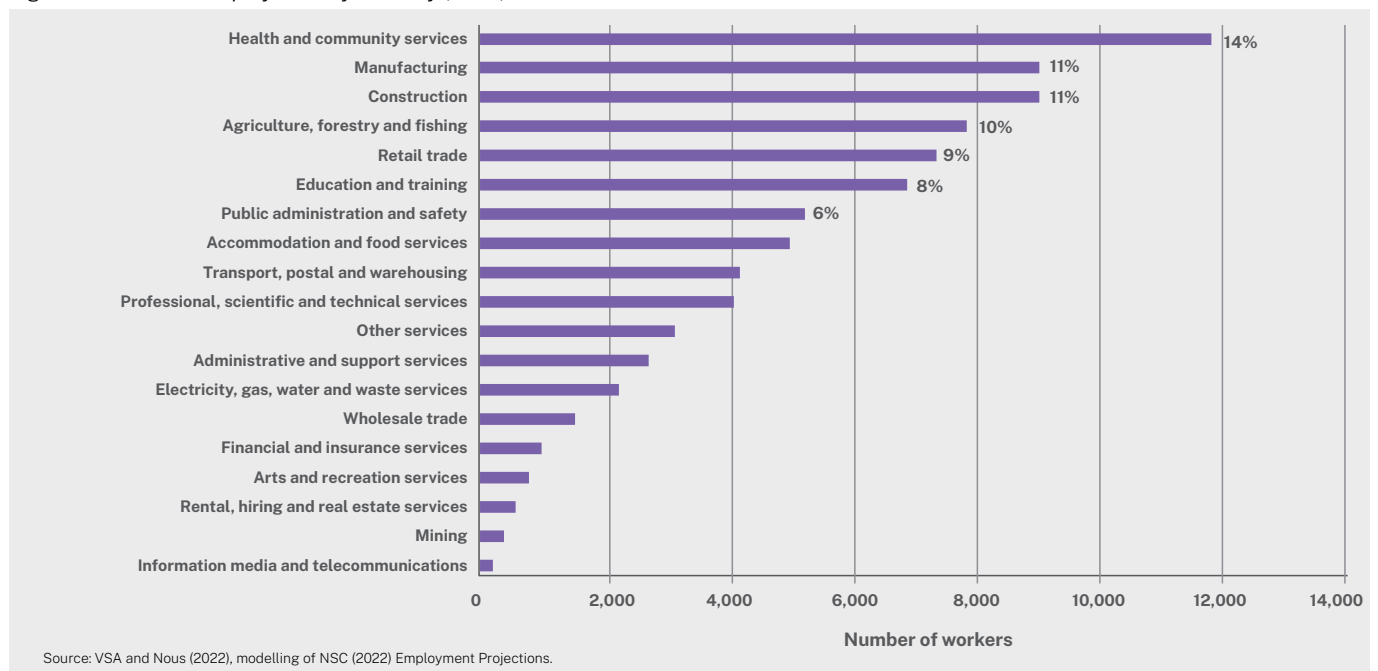
9 Note that this data may not account for individuals who travel to the Goulburn region for work.

A region with potential to uplift employment participation

Goulburn's workforce participation rate has experienced a slight decline between 2020 to 2022 and, in June 2022, it was at 62.1%.[65,9] In the same period, the unemployment rate in Goulburn decreased to 3.2%, which is the lowest unemployment rate the region has experienced since 2007. This unemployment rate was consistent with the Victorian average in the same period.[66] This has led to a tight labour market and is contributing to labour shortages across many sectors.

Figure 12: Shepparton's unemployment and participation rate (June 2007 to June 2022)[67,9]
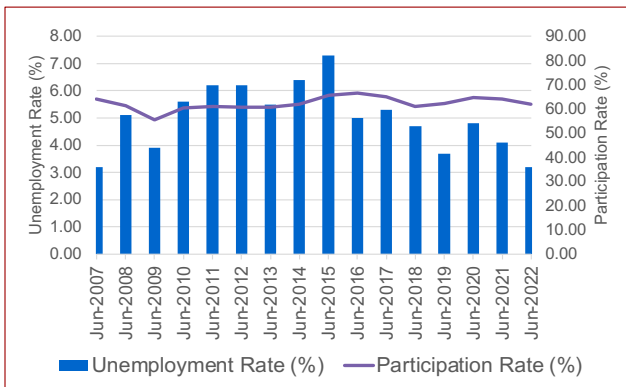
Significant labour shortages across the region's industries presents opportunities to engage under-represented cohorts and increase workforce participation

Goulburn's participation rate is substantially lower than the state average of 67.1% in June 2022, which highlights the need to uplift workforce participation and grow the supply of workers in the region.

Part-time employment and under-employment

Approximately 32% of Goulburn's workforce is employed on a part-time basis.[10] This is on par with the regional Victoria average of 32%.[40] Part-time employment is high in some of Goulburn's key industries, including retail services, accommodation and food services, that employ upwards of 50% of staff in part-time arrangements.[68]

Unemployment rates also hide the rates of underemployment, where barriers may be preventing people from working more hours than desired.[11] These barriers may include caring responsibilities, illness, or no jobs with suitable conditions.[69]

Youth unemployment

In August 2022, youth unemployment was 5.5% in the Greater Shepparton A4 region.[70] This is significantly lower than youth unemployment in nearby regions.[71] In bordering Bendigo and North West SA4 regions, youth unemployment is 10.8% and 6.6% respectively.

Workforce participation by gender

Around 47% of people in the Goulburn workforce are women.[72] There are also clear gender biases across many sectors. Health care and social assistance, education and training and accommodation and food services have significantly higher female representation in their workforces, while construction and manufacturing are male dominated fields.[73]

Addressing stereotypes of women's participation in work generally and across industries has potential to address labour shortages. Promotion of gender diversity and inclusive work practices and environments with employers is seen as the start to reducing these barriers, as is access to child care and flexible working arrangements.

Figure 13: Breakdown of workforce participation by gender across key Goulburn industries (May 2022)[74]

	Workers	Male	Female
Health care and social assistance	27,800	27%	73%
Construction	15,300	85%	15%
Agriculture, forestry and fishing	6,500	52%	48%
Retail trade	14,700	41%	59%
Accommodation and food services	13,700	38%	62%
Manufacturing	13,600	71%	29%
Education and training	11,600	34%	66%

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10 Using the Shepparton SA4 area.

11 The Australian Bureau of Statistics defines an employed person most generally as a person 15 years and older working for at least one hour a week for pay or other similar benefit. A person may also be underemployed if they are willing and able to work additional hours but are unable to do so due to finding extra employment or have worked fewer hours for economic reasons including insufficient work available.
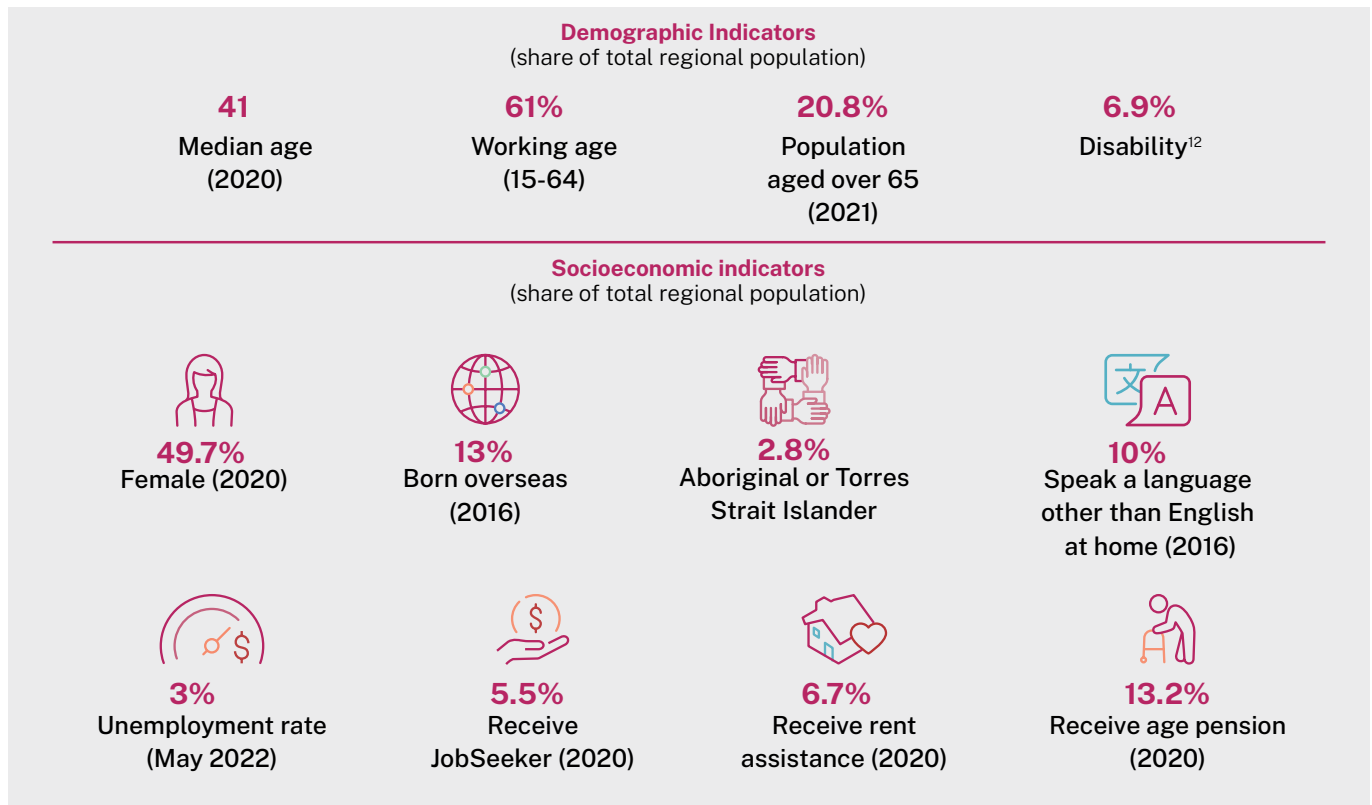
Demographic and socioeconomic context

Demographic considerations

Worker shortages in Goulburn highlights a need to engage and upskill the existing population, while looking to grow the future workforce.

Figure 14: Overview of Goulburn's demographic and socioeconomic context[75,76,77]

Demographic Indicators
(share of total regional population)

41	**61%**	**20.8%**	**6.9%**
Median age (2020)	Working age (15-64)	Population aged over 65 (2021)	Disability[12]

Socioeconomic indicators
(share of total regional population)

49.7%	**13%**	**2.8%**	**10%**
Female (2020)	Born overseas (2016)	Aboriginal or Torres Strait Islander	Speak a language other than English at home (2016)

3%	**5.5%**	**6.7%**	**13.2%**
Unemployment rate (May 2022)	Receive JobSeeker (2020)	Receive rent assistance (2020)	Receive age pension (2020)

Goulburn's population is older, on average, than metropolitan Melbourne and Victoria at 20.8% compared to a state average of 16.8%. An ageing population in the region will impact workforce supply through increasing retirement and higher demands on essential service industries such as health care and social assistance. This highlights the need to keep older residents engaged in the workforce for as long as possible and for industry to support the building of knowledge and skills for younger workers.

Around 6.9% of the Goulburn population identifies as having a disability, demonstrating the importance of employment opportunities that enable individuals with disability to thrive and succeed.[78,12]

Approximately 13% of Goulburn's population was born overseas and over 10% speak a language other than English at home.[79] This is higher than the averages for regional Victoria which are 12.1% and 6.5% respectively,[80] recognising and supporting multiculturalism across the region, alongside diversity and inclusion for Goulburn's migrant workforce.

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12 Disability is defined as a person with either a disability, a profound or severe, or a mild and core activity limitation.

Socioeconomic considerations

Figure 15: Goulburn by index of relative disadvantage[13]
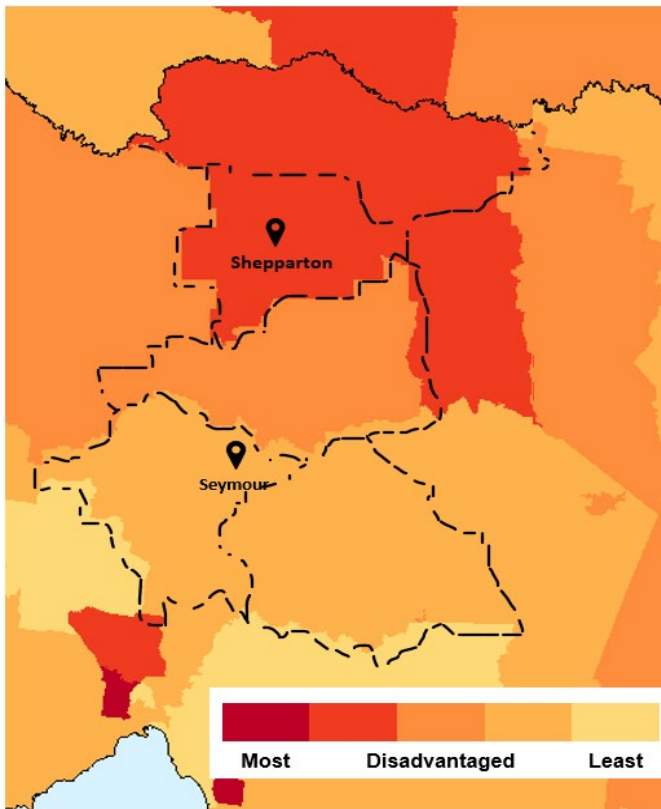
Despite strong industry-based success in pockets of the Goulburn economy, when considering local government areas (LGAs), Goulburn is one of the most disadvantaged areas in regional Victoria. In 2016, Greater Shepparton and Moira were ranked in the top 20 out of 79 most disadvantaged LGAs in the state. Moving closer to metropolitan Melbourne, this ranking improves.[81]

Areas with higher disadvantage have limited access to higher and vocational education opportunities relative to other parts of the region and limited access to public transport to access employment, education and services.

In 2016, approximately 54% of Goulburn's population had no post-school qualifications,[82] compared to the rate of 44% for Victoria. There are opportunities to improve individual and community outcomes through education and training.

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13 Note that this data reflects the 2016 Census and may have changed. Updated information will be available with the next census data released in mid-2023.

The continued demand for workers in Goulburn

The Victorian Skills Authority 3-year employment projections are a starting point for understanding the significant demand for workers in the region. Projections suggest that at least 7,900 new workers will be required across the region by 2025. With projected retirements between 2022 to 2025 of around 3,600 workers and at least 4,000 additional new workers required in the 3 years between 2022 and 2025 across the Goulburn region[83,84]

The employment forecasts project the underlying demand for workers in the region over 2022–2025, based on population growth trends, changes in industry, and historical employment trends. However, there are also additional factors that need to be considered in assessing the forecasts. This includes, but is not limited to, the impact of recent investment across the region that is likely to add to the forecast demand for workers in industries.

Importantly, these forecasts do not capture the supply-side challenges in meeting current demand for workers across most industries in the region. Current labour vacancies are not captured in the projected demand. Additionally, the forecasts do not account for current vacancies and workers leaving for other industries and instead reflect the net additional labour requirements.

Forecasts indicate that the accommodation and food services sector will experience the largest average annual growth between 2022 to 2025 at a rate of 4.6%, while the health care and social assistance industry is forecast to experience the highest total employment growth of over 1,500 workers. This is consistent with the region's projected population growth as key services also expand to keep up with demand.

There are projected decreases in the number of new workers required across the information, media and telecommunications industry, and a projected fall in agriculture, forestry and fishing reflecting the longer-term decrease in workers needed for the industry as it intensifies and automates production processes. Projected retirements for both industries indicate a slight increase in total new workers required in the 2022 to 2025 period.
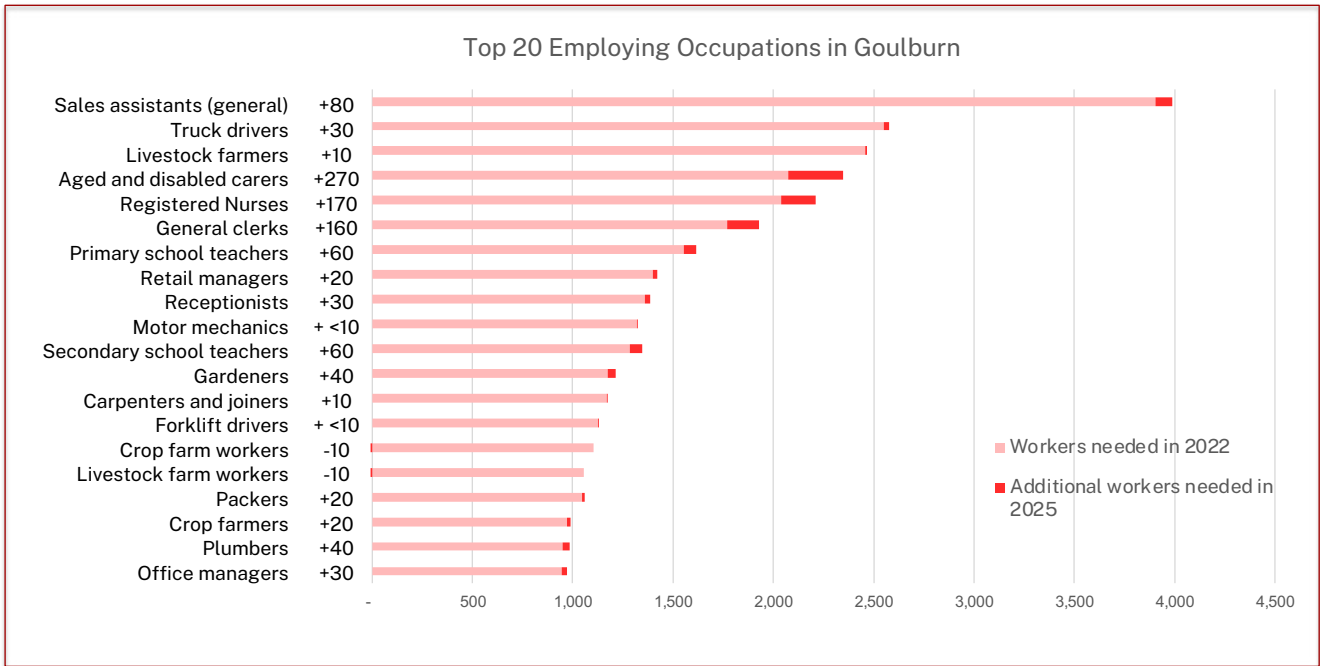
Table 3: Employment growth and new workers required by industry in Goulburn[14]

Industry	New workers required 2022–25**	Retirements between 2022–2025	Total new workers required by 2025	Employment growth 2022–25 average annual growth rate **
Accommodation and food services	+710	320	+950	4.6%
Health care and community services	+1,020	470	+1,500	2.8%
Rental, hiring and real estate services	+70	20	+90	2.4%
Arts and recreation services	+60	40	+100	2.3%
Education and training	+520	330	+850	2.3%
Electricity, gas, water and waste services	+100	70	+180	2.2%
Professional, scientific and technical services	+310	200	+530	2.2%
Transport, postal and warehousing	+240	220	+470	2.0%
Construction	+450	370	+830	1.9%
Administrative and support services	+80	100	+200	1.2%
Financial and insurance services	+70	80	+170	1.2%
Retail trade	+250	310	+570	1.1%
Public administration and safety	+140	280	+420	0.7%
Wholesale trade	+30	80	+130	0.7%
Manufacturing	+120	290	+430	0.6%
Other services	+40	100	+130	0.4%
Mining	+ <10	<10	<10	0.0%
Agriculture, forestry and fishing	-90	404	+330	-0.4%
Information media and telecommunications	-20	27	25	-0.7%
Total	**4,080**	**3,608**	**7,904**	**1.7%**

14 'New workers' and 'workers needed' refers to the number of new workers to be employed in the region during the period.

Figure 16: New workers required across the top 20 employing occupations in Goulburn[15]

Top 20 Employing Occupations in Goulburn

Occupation	
Sales assistants (general)	+80
Truck drivers	+30
Livestock farmers	+10
Aged and disabled carers	+270
Registered Nurses	+170
General clerks	+160
Primary school teachers	+60
Retail managers	+20
Receptionists	+30
Motor mechanics	+ <10
Secondary school teachers	+60
Gardeners	+40
Carpenters and joiners	+10
Forklift drivers	+ <10
Crop farm workers	-10
Livestock farm workers	-10
Packers	+20
Crop farmers	+20
Plumbers	+40
Office managers	+30

Legend: Workers needed in 2022; Additional workers needed in 2025

Industry roundtables highlighted additional factors that could contribute to higher demand across key industries. The types and profile of skills required by industry is also becoming more complex, meaning workers need to be equipped with the skills to meet the evolving needs of industries

Visitor economy

Local strategies to increase tourism activities and activate local spaces, such as the Lake Eildon Masterplan[85] and Mitchell Shire Council Tourism and Visitor Economy Plan 2020–2024 outline investment and engagement strategies for the region over the next 5 years. Goulburn has the largest Aboriginal population in Victoria outside of metropolitan Melbourne. Increased activities, strategic planning and public interest in sharing this heritage, culture and expertise are likely to further increase employment in the sector.[86]

Health care and community services

The health care and community services (HCCS) sector is experiencing worker shortages and staffing challenges in the face of a rapidly growing population, particularly in the south of the region. The major redevelopment of Goulburn Valley Health facilities, including at Shepparton Hospital, will double the capacity of the hospital and substantially increase demand for staff across a range of departments and services, including maternity, emergency and short-stay wards.[87,88]

Aged care and disability support workers, and registered nurses are among the 5 largest employing occupations in Goulburn and are likely to increase with further investment into mental health, disability, early learning, and reforms to aged care and in-home care such as safe patient care ratios. Development of the Goulburn Valley Health Strategy already points to the need for 500 additional staff by 2023 in addition to current projected shortages. Taskforce members also highlighted that the sector is heavily supported by part-time workers, meaning a larger number of workers are required to meet demand. For example, some full-time equivalent roles are shared across 3 part-time workers.

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15 Note that this graph represents the 20 largest employing occupations and is not a comprehensive list of all occupations across Goulburn.

Education and training

Recent policy reforms, such as the introduction of the Senior Secondary Vocational Major, additional funding to kindergarten reforms announced in the 2022–2023 Victorian Budget[89] and the Mental Health in Primary Schools Program, are likely to fuel demand for workers in the education and training industry beyond the current forecasts. The newly established Greater Shepparton Secondary College also represents opportunity for greater teaching opportunities, including in specific programs such as the Kaiela-Dhungala First People's Curriculum. The expansion of Free TAFE from 2023 is likely to drive greater demand for courses, and therefore trainers, in the region's vocational and education training space.

Construction and housing

In addition to significant expected demand for private housing, construction in the region will also be impacted by requirements associated with planned infrastructure investments, such as hospitals, hotels and government and justice buildings. Increasing activity in the clean energy space is also likely to require additional infrastructure support as the sector continues to develop and investment in related infrastructure is realised.

Manufacturing

Food product manufacturing is the primary driver of manufacturing activity in the region. With increasing demand for Australian products in domestic and international markets due to concern for food security and safety, forecasts are unlikely to reflect the employment demand generated by this increase. Technology advancements may impact the types of jobs and skills needed in this sector as increased use of automation can reduce the number of manual workers, but also necessitate employment of workers specialising in equipment and technology maintenance, design, and operations. Other manufacturing sub-sectors, such as fabricated metal products, have been trending upwards in gross value added (GVA) indicating that demand remains strong, and employment must also keep pace.[90]

Agriculture

The region's agriculture industry is likely to keep pace with the expected growth of food product manufacturing, including dairy production. Advances in the clean energy sector are also likely to improve access to key enablers, such as reliable water or energy supply, thereby increasing productivity in the agricultural sector to boost activity and employment in the sector. Future growth in animal-related experiences in the pandemic, including in equine tourism, are also likely to boost employment in related services, while the changes to native tree logging by 2030 may have fluctuating effects on employment in the intervening period.

Clean energy

The clean energy sector is a growing industry for Goulburn. There are opportunities related to generation and storage of reliable energy outputs through distributed energy recourse and the region has a comparative strength in several renewable energy sources, including solar, pumped hydro, and bioenergy. The growth of the clean energy sector is currently constrained by labour shortages in connected industries such as manufacturing and construction, highlighting the importance of transferrable skills in future workforces.

The demand-side employment forecasts do not reflect the current levels of labour shortages in the region. Current challenges associated with labour shortages across most key industries mean that there is likely to be greater worker demands than forecasted.

Discussions with industry roundtable participants and the taskforce highlighted acute staff shortages across most industries – most notably in education, construction and health care and community services. The number of online job advertisements within the Bendigo and High Country region which includes Goulburn local government areas have almost tripled since May 2020 to August 2022, from 1,670 to 4,312.[91]

While this experience is not unique to Goulburn, as a regional area, there are additional layers of challenge due to sparser populations, remote working enabling increased service demand but not supply, and housing supply challenges. With the decrease in migration in the past 2 years across Victoria,[92] the reduction in the number of graduates and skilled migrants in the past 2 years will likely have a follow-on effect in coming years.

Figure 17: Online job advertisements across the Bendigo and High Country[16] region (August 2019–August 2022)
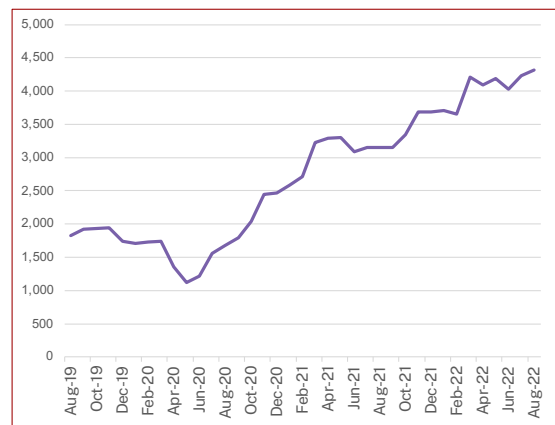
Source: LMIP IVI Vacancy Data (Bendigo and High Country)

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16 Note that Goulburn region LGAs fall within the labour market information portal Bendigo and High Country Internet Vacancy Index (IVI) region.

Key industries across the Goulburn region and common workforce and skills needs

This section provides a summary of the 7 key industries of focus identified by the Goulburn Regional Skills Taskforce and explores the common workforce and skills-related challenges facing these major industries. This section also details the skills needs that have been identified as critical to enable these major industries to grow and thrive in the future.
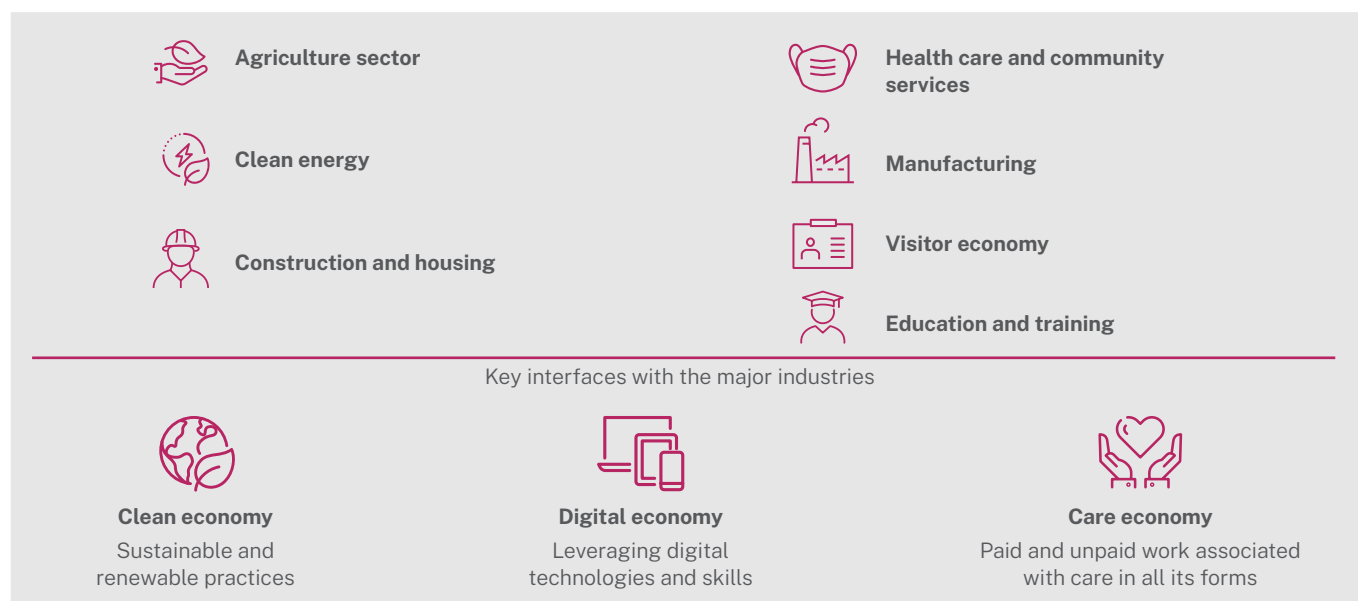
Goulburn's 7 key industries of focus

The Regional Skills Taskforce identified 7 industries of focus within Goulburn

The identification of 7 key industries has been informed by the current relative contribution in employment or income to the local economy, potential for future growth, and alignment with strategic growth opportunities for the region, including the Shepparton and Mooroopna 2050: Regional City Growth Plan. Further detail on each industry is provided in Appendix A as part of the detailed industry profile for each industry. Appendix C in the full draft will provide further detail on industry groupings.

These industries are highly interconnected and intersect with other parts of the economy

Key industries in the Goulburn region are diverse yet interconnected. There are many points of intersection and connectivity between industries that support supply chains and other outcomes for the regional community and economy. The 7 key industry groupings reflect existing local economic development strategies, supply chains and the economic and social significance of the particular industry to the broader region, its workers and their families as identified by taskforce representatives.

Agriculture sector

Health care and community services

Clean energy

Manufacturing

Construction and housing

Visitor economy

Education and training

Key interfaces with the major industries

Clean economy
Sustainable and renewable practices

Digital economy
Leveraging digital technologies and skills

Care economy
Paid and unpaid work associated with care in all its forms

Agriculture

The Goulburn agriculture industry covers agriculture, horticulture, horse breeding, forestry, and fishing activity.[17]

The agriculture industry is the fifth largest employing industry in Goulburn in 2022 with 7,900 or about 10% of the regional workforce.[93] The sector is the largest contributor to Goulburn's gross value added (GVA) generating $944 million or around 14.5% of total GVA in 2021.[94]

Goulburn is one of the largest food producing regions in Victoria. In 2021, Goulburn accounted for 29.4% of Victoria's total fruit production (excluding grapes), 12.6% of dairy, 11.5% of beef and 9.7% of sheep.[95] For this reason, the industry is a strategic area of focus for the region's local and state bodies, including Regional Development Victoria[96] and Greater Shepparton Council.[97]

Primary agricultural production in Goulburn is closely integrated with secondary food production facilities. There are a number of large food product manufacturing businesses located in the region, such as SPC based in Shepparton.[18] There is diversity of operations across local businesses, including Tatura Milk Industries, Flavourite, and Cobram Estate. Within each sub-sector, there is activity associated with servicing the sector including Harvest Trail Services, The Natural Compost Co and Sandmount Farms while businesses like Yulong Stud reveal the growing value of horse-related and equine activity in the region.

The agriculture industry is undergoing a period of transition and change. The increasing uptake of technology and automation in the industry, as well as the broader economic backdrop of Goulburn's economic transition towards service-based industries, is expected to shape the industry's future workforce and skills needs. Efforts to further integrate and connect agricultural businesses with the advanced manufacturing sector will lead to increased efficiency, higher technology uptake and support sustainability in farming. The existing reputation of facilities in the region, such as Tatura SmartFarm[98] and the University of Melbourne's agriculture and veterinary studies campus in Dookie, can be further leveraged to upskill workers in the region, particularly in the use of agriculture technology, and best practice industry processes.[99]

Current projections indicate 330 new workers will be required between 2022 to 2025 to meet expected retirements, but industry expects this to be a higher number.[100]

Industry roundtable participants suggested these employment projections are unlikely to consider changes to demand and growing opportunities across the industry. The industry is likely to experience some efficiency gains due to intensification of agricultural processes, and highly trained workers are required to operate new machinery and utilise AgTech.

Industry roundtable participants also reflected on the opportunities to continue to strengthen the pipeline of workers in the industry. This included targeted investment in engaging diverse or underrepresented cohorts to grow the workforce and share the gains of the industry across the community. Outback Academy Australia is one example of a self-determining, tailored business that supports and empowers First Nations' farmers to thrive in the region. [101]

Key intersections across industries			
Sustainability and climate change management Responsible resource management can reduce the risk of extreme weather events	**Hospitality and tourism** Food and wine tourism, 'farm to table' offerings and sustainable farming is a high growth tourism area	**Transport and logistics** Expanding businesses by diversifying into transport and logistics operations themselves	**Circular economy** Opportunity for the manufacturing and agriculture sector to collaboratively find innovative solutions to waste management

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17 Data on the agricultural sector is based on data relating to the ANZSIC industry classification agriculture, forestry and fishing. Horticulture and horse breeding activity are included within sub-sectors of this category.

18 Similar larger businesses are referenced in further detail in the Manufacturing Industry Summary in Appendix A.

Clean energy

Clean energy in Goulburn is a multidisciplinary sector that encompasses skills and jobs across several key industries in the region, including electricity, gas, water and waste services, manufacturing, construction, agriculture and professional and technical services.

The clean energy sector is rapidly growing and evolving, particularly in areas such as community energy, renewable energy, and low emissions vehicles. Data in this profile focuses on the industry classification electricity, gas, water and waste services, which is recognised as a narrow definition given the emerging nature of the sector and limited data availability.[19] Rapid sector evolvement highlights the evolving nature of skills requirements and scale of workers required across the region.

The clean energy industry contributed $279.3 million to regional gross value added (GVA) in 2021; however, given the interconnected nature of the industry with other sectors, this is likely to be understated.[102] There are currently 2,130 people employed in this sector representing approximately 3% of the Goulburn workforce.[103]

With increasing domestic and global investment into renewable energy, the circular economy and waste industries, as well as broader sustainability practices, the clean energy sector is expected to continue to grow rapidly and act as an enabler of wider industry growth in Goulburn's economy. Access to reliable and clean energy in Goulburn will also drive general population growth and support social and economic activity in the area.

The Goulburn region is well placed to capitalise on its existing capabilities in the sector and emerging potential to increase market share and prosperity. Goulburn is also well equipped to drive research, development, higher and vocational education activity from a local, national and global perspective. There is already a diverse range of product offerings, and community networks with businesses and collectives, including Yurringa, GVCE Mooroopna Solar Farm, Goulburn Murray Climate Alliance, Cherry Tree Wind Farm, Diamond Energy Shepparton Facility and at least 20 community energy groups. Goulburn also benefits from its inclusion in the Central North Renewable Energy Zone centred around Shepparton, as well as other state government funding initiatives such as the Hume Hydrogen Highway.[104]

Given the strong existing investment base and projected growth in future activity, employment in clean energy is forecasted to grow by at least 2.2% annually over the next 3 years into 2025.[105]

In this period, 177 workers are expected to be required, including 96 new workers, and 72 workers to fill retirements.[106] This is consistent with the industry's status as the third highest growing industry among the 7 industries identified in this profile.

Activity in the industry cuts across several occupations and continues to transform in fast and unexpected ways. This results in the need for a workforce not only with the requisite technical skills to develop, maintain and use related technologies, but also a mindset of continual learning, growth, and entrepreneurship to take advantage of opportunities as they arise. For example, there is a need for workers who can translate existing technologies and operational practices from international settings into the local landscape. Existing strategies such as the Hume Region Renewable Energy Roadmap have been leveraged to progress the conversation around skills needs and investment direction into the future.

Key intersections across industries		
Construction	**Manufacturing**	**Agriculture**
Establishing the sector involves investing in energy farms, storage facilities and heavy engineering infrastructure	Utilising the principles of the circular economy to reduce, reuse, recycle and repurpose, waste can become new products	Reliable supply of energy and key inputs such as secure water can unlock efficiencies in primary production activities

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19 Using only this ANZSIC Industry classification is likely to present a conservative view of current clean energy contributions. Insight from the taskforce and industry roundtable participants have been used to further inform this summary.

Construction and housing

The construction and housing industry in Goulburn includes building construction, heavy and civil engineering construction, and construction services.[20] This industry is a significant enabler of population growth and productivity as it supports the accommodation needs of the region and provides critical enabling infrastructure, such as community and health services infrastructure.

Construction and housing is the fourth largest contributor to local gross value added (GVA) valued at $685 million or around 10.5% (2021).[107] Employing around 8,930 workers in 2022, it is also the fourth largest industry, employing 11% of Goulburn's workforce.[108]

This industry is made up of small and larger-scale businesses operating in the residential and commercial sectors within direct delivery and ancillary services. These include Hansen and Yuncken, MS Constructions and Hedger Constructions. The construction industry also plays a critical role within the clean energy sector through the construction of clean energy infrastructure. For example, Gradian Projects' services include construction of renewable energy farms. Increasingly, local workers are more open to travelling outside of the region to work on large-scale jobs, particularly in metropolitan areas on jobs such as the North East Rail Link. This provides opportunities to upskill and transition capabilities of the local workforce.

Consistent with construction activity around the state, demand for services has exacerbated in recent years, with a strong pipeline of work planned into the coming years. Key local projects include the redevelopment of the Goulburn Valley Health Precinct, investment into the clean energy and visitor economy sectors, as well as the construction of new housing to reduce homelessness and increase availability of housing for current and new residents.

The construction and housing industry is expected to experience a rate of 1.9% annual employment growth from 2022 to 2025, with at least 830 new workers needed over this period.[109] This includes 450 new workers to meet current demand and an additional 370 workers to fill industry retirements.[110]

Outside of the direct contribution of construction in meeting the building demands of the region, industry roundtable participants reflected on the role of the sector in supporting attraction of workers to Goulburn. For example, the opportunity to increase amenity and liveability of public areas through green spaces and urban planning – and thereby combining technical knowledge with strategic and human-centred thinking. This is especially important in the wake and recovery of flooding impacts on the region. Similarly, the sector can enable the realisation of key initiatives that facilitate greater First Nations employment and engagement as outlined in the Goulburn Murray Regional Prosperity Plan and the Kaiela Institute with facilities such as the Munarra Centre for Regional Excellence creating space for both employment during construction, and ongoing training and development upon completion.[111]

Key intersections across industries			
Mental and physical health	**Renewable and clean energy**	**Public administration**	**Professional and technical services**
The quality of the built environment can determine mental and physical health	Increased desire for energy efficient design and retrofitting or transformation for clean energy purposes	Large public works to house key government and law services in the region. Private construction requires planning permits	Integrating public buildings frees up space for private businesses to operate in areas close to where their services are required

Construction is also recognised as an enabler across all sectors, underpinning physical form and infrastructure requirements across all industries.

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20 There are many professional and technical service jobs associated with this industry that are not captured in this data, although they are noted in discussion.

Education and training

Education and training in Goulburn includes early childhood services, primary and secondary schooling, vocational education, higher education, and adult and community education. The industry plays a unique role in the regional economy with its dual purpose as a significant employer and educator of the current and future workforces for other industries.

Education and training is the sixth largest contributor to local gross value added (GVA) at $418.5 million or around 6.4% (2021).[112] It is also the sixth largest employing industry with 6,810 workers in 2022 (8% of Goulburn's workforce).[113]

There are several post-school education training providers in Goulburn, clustered around the Shepparton area. The University of Melbourne and La Trobe University maintain campuses in the region and include specialisations across clinical and agricultural disciplines, as well as pathways from TAFE qualifications. La Trobe University offers bachelor and post-graduate degrees in a range of fields within Shepparton.

GOTAFE is the primary TAFE provider in the region with additional campuses in Mitchell Shire, and vehicle-related training further supported by Wodonga TAFE. Beyond Shepparton city limits, students in the region rely on registered training organisations (RTO), remote learning or relocation to Shepparton or metropolitan Melbourne to access courses. Increasing access to education and training providers throughout the region has been identified as a key response to attract learners into education and to upskill and retain workers in the region.

Adult Community Further Education (ACFE) offerings and other parallel training programs, such as Local Learning and Employment Networks (LLEN) provide alternative pathways into education, training and employment across the region. The rapidly growing population rate in Goulburn, alongside the relatively higher levels of socioeconomic and cultural and diversity, are likely to see demand for these offerings increase.

Employment in the education and training sector is projected to grow by 2.3% per year, with 850 new workers needed between 2022 and 2025. This includes 520 new workers and an additional 330 workers to replace forecasted retirees.[114]

There are opportunities for the industry to engage wider population groups in the region through tailored offerings to meet the training and delivery needs of local industry. Noting that most higher education providers are located in the Shepparton area, the Goulburn Regional Economic Development Strategy (REDS) has identified the potential for the regional city to strengthen its reputation as a hub of training, industry collaboration, and research. Achieving this is likely to help current and prospective learners and workers to upskill and flourish through increasingly dynamic operating environments.

Key intersections across industries		
Digital technologies Online learning and use of digital tools to enhance learning is more important than ever	**Health care** Early childhood education has a significant impact on health outcomes	**Community services** Intersections between schooling and community services for at risk populations

Education and training is an enabler across all sectors, underpinning the required knowledge, research requirements and skills across all industry.

Figure 18: Higher and vocational education institutions and facilities across the Goulburn region
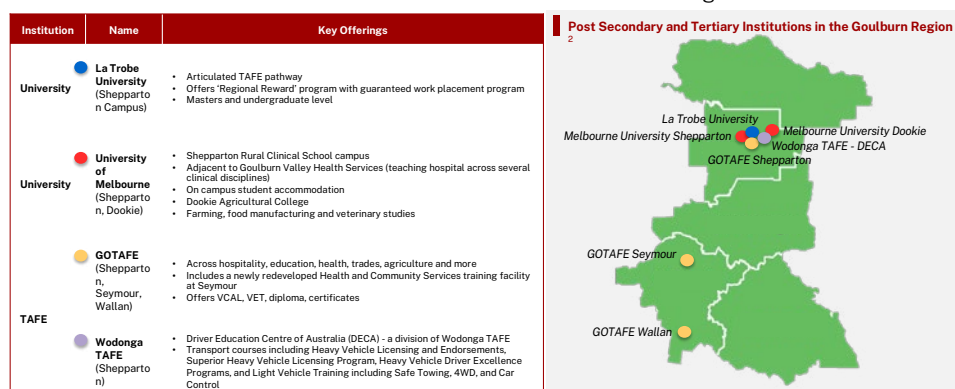
Health care and community services

The health care and community service (HCCS) industry is an interconnected network of providers and services across public, private, clinical, allied and community services across a range of demographic cohorts. A healthy workforce underpins wellbeing and inclusion which is essential for successful training and employment activity.

Approximately 11,670 people or 14% of Goulburn workers are employed in health care and community services (2022).[115] This industry contributes around $895.4 million or 13.8% of GVA (2021) the second largest contributor to the local economy.[116]

Goulburn is home to a number of health services, including Goulburn Valley (GV) Health, NCN Health, Yarrawonga Health, Seymour Health, Yea and District Memorial Hospital, and Kilmore District Health. Community service and disability organisations operate across the region, including Menzies Support, Primary Care Connect and ConnectGV.

Goulburn also benefits from the presence of The University of Melbourne Shepparton Rural Clinical School and health related courses delivered by the local TAFEs. A considerable amount of HCCS activity intersects with initiatives in the public administration and local government space with councils responsible for providing health, social and financial support programs. This emphasises the important role access to health care and community services plays in delivering social and economic outcomes for the region, as well as for the physical and mental wellbeing of residents.

It is estimated that over 1,500 new workers will be required in the HCCS industry between 2022 and 2025. This includes 470 to fill forecasted retirements, and an estimated 1,020 new workers to meet increased demand.[117]

Current staff shortages in critical occupations such as nurses, disability support workers and aged care workers are not included in the employment forecasts. Reforms to the aged care and mental health system across the state, and preferences for at home care and investment in telehealth treatments, are also expected to increase the number of new workers needed in the industry. This suggests that actual demand for HCCS workers in Goulburn region will be much higher than forecast.

The challenge in meeting this demand is compounded by relatively high levels of staff burnout in the industry, which industry roundtable participants suggest are contributing to attraction and retention difficulties. This could partly be due to a perceived lack of recognition and reward for demanding work. Improving training and recruitment practices would help address this. Participants also noted the need for increased capacity to utilise strategic and workforce planning in management and non-clinical roles.

Key intersections across industries	
Manufacturing	**Construction**
Securing supply chains of critical HCCS related goods (for example, masks, contrast dye) to ensure continuity of quality care	The quality of the built environment can determine mental and physical health. Constructing of housing is also required to accommodate workforce needs

Manufacturing

Goulburn's manufacturing industry includes traditional manufacturing activity, food product and beverage manufacturing, and primary metal and metal product manufacturing. Manufacturing intersects with several other industries, including agriculture, clean energy and health care and community services, and has a strong focus on technological and productive improvement.

Over 9,010 people are employed in the industry (2022), equating to 11% of the region's workforce.[118] Manufacturing is the third largest contributor to the region's local economy – generating $775.7 million in gross value added (GVA) in 2021.[119]

Manufacturing is the largest international export in Goulburn and was valued at $640 million in 2020.[120] Food product manufacturing is the main driver of this activity, accounting for 85.6% of all manufacturing export income.[121] The region is home to many large-scale food product manufacturing companies, including SPC and Campbells Australia. Other operations include product manufacturing for commercial, defence and domestic purposes including Unilever, Pental Soap, Furphy & Sons, Padman Stops for use in domestic, industrial, and agricultural sectors.

The manufacturing industry has changed dramatically in the last 30 years with advances in technology, changes to the market environment, and shifting workforce demographics impacting the skills and worker needs in the region.

At least 430 new workers are required across the manufacturing industry between 2022 to 2025. 290 workers are needed to fill retirements and a further 120 new workers are needed to meet increased demand.[122]

The ability to meet this expected demand for workers and fill current labour shortages will be enhanced by the industry's capacity to retrain, upskill, and support workers across all sub-sectors to fill roles as the industry evolves and grows. Key skills requirements raised by industry roundtables and taskforce members include digital literacy and regulatory and quality compliance.

The Goulburn region is well placed to further develop its reputation as a major transport corridor through Victoria and into New South Wales. Leveraging this advantage is likely to increase the capacity for strengthening supply chains to secure supply for the region and state more broadly. This can lead to increased activity in the warehousing and transport sub-sector of the manufacturing industry, thereby diversifying value and inflows to the region. With expected investment in the clean energy, health care and community services and agriculture industries, it is necessary that workers in manufacturing cultivate innovative practices, and strategic, creative and entrepreneurial thinking to take advantage of this growth.

Key intersections across industries			
Agriculture	**Health care**	**Freight and transport**	**Circular economy**
Food manufacturing has clear linkages with the primary production in the agriculture sector. Food-based tourism is a growing industry in Goulburn	Advanced manufacturing and Industry 4.0 can increase accessibility of care and ease workforce pressures	Reliable routes out of Goulburn are essential to ensuring that the value of production can be realised through exports and sales	The manufacturing and waste sectors have an important role in closing the gap to recycle and reuse waste through the circular economy

Visitor economy

The visitor economy is a diverse industry that interacts with many aspects of the Goulburn economy due to the growing interest from visitors in localised and unique experiences. Activity in the industry is primarily driven by the accommodation, retail, hospitality and arts sub-sectors.

Combining these 3 industries, the visitor economy is the largest employing industry in Goulburn making up 16% of the region's workforce with 12,760 workers (2022).[123] The industry contributed $587 million in gross value added (GVA) to the regional economy (2021).[124]

The Goulburn region covers a diverse range of landscapes from the peri-urban fringes of Melbourne through the orchards, greenhouses, and farmland of the region, reaching the border of New South Wales (NSW). There is an abundance of waterways and natural wonder in the region, including the Murray and Goulburn Rivers, Lake Nagambie and Lake Eildon, and the Cathedral Ranges. There are numerous places of particular cultural significance for the Traditional Owners of Country including the Barmah Forest Ramsar site, as well as the path of the historic Cummeragunja Walk-off beginning on the NSW side of the Murray River into Victoria. In the last 10 years, Shepparton has strengthened the reputation of local attractions as must-see destinations, including Shepparton Art Museum (SAM), the Museum of Vehicle Evolution (MOVE), and Bangerang Cultural Centre. Key events across the region include the annual Shepparton Festival, Land of Plenty and Taste of Goulburn music, cultural and food festivals.

Forecasts indicate that more than 1,620 additional workers will be required in the visitor economy between 2022 to 2025 – comprised of 570 workers to replace retirees and 1,020 new workers to meet increased demand.[125]

The visitor economy is expected to have the second largest annual employment growth rate during this period. Grounded in this positive outlook, industry roundtable participants reflected on the need to improve collaboration, scaling and resource sharing to achieve this growth in a sustainable manner.

With the largest regional Aboriginal population in Victoria outside of metropolitan Melbourne, there is also great opportunity for the increased self-determination, participation, and engagement of Aboriginal people within all sectors of the visitor economy. For example, expanding partnership models for the management of national parks, such as Barmah National Park which is jointly managed by the Victorian Government and the Yorta Yorta Traditional Owners, to other natural assets including water activities. Digital marketing and storytelling skills will be increasingly important to ensure that these cultural heritage sites and the region's broader attractions can be found and accessed by more visitors.

Although this industry forms a significant part of the local economy, the Goulburn region does not have a centralised tourism board, with most operators, events and activities organised independently. There is opportunity for more coordination at a strategic level to attract tourism in the region and support businesses.

Key intersections across industries			
Specialised manufacturing	**Construction**	**Food manufacturing**	**Digital technologies**
Locally made goods and unique retail offerings attract visitors	Access to quality accommodation can increase volume and duration of stays	Food and wine tourism, 'farm to table' and sustainable farming are high growth tourism areas	Innovative digital experiences and technologies enhance visitor engagement and experiences

'The visitor economy is expected to have the second largest annual employment growth rate during 2022-2025. Grounded in this positive outlook, industry roundtable participants reflected on the need to improve collaboration, scaling and resource sharing to achieve this growth in a sustainable manner.'

Workforce challenges

Goulburn is experiencing challenges that are resulting in barriers to higher and vocational, workforce participation, attraction and retention.

Child care access and affordability

Access to and affordability of child care act as barriers for those wanting to enter the workforce, particularly women, who are under-represented in the workforce. Access to child care is significantly lower in regional Victoria than in metropolitan Melbourne with the lowest levels of access in the region in Moira.[126]

Housing access and affordability

Housing affordability across the region has become more acute. For example, median house prices increased by 8.9% in Wallan, 20.6% in Shepparton and 16.1% in Seymour from August 2021 to 2022.[127] This is particularly significant for the Goulburn region where one in 5 low-income households experience financial stress from mortgage or rent.[128] Greater Shepparton has the highest level of homelessness in regional Victoria (5.56 per 1,000 persons in 2020) with the main reasons including financial difficulties, inadequate dwelling conditions and domestic violence.[129] Housing affordability and accessibility challenges have been exacerbated by the recent flooding. A lack of affordable housing makes it more difficult for skilled, prospective employees to move to the region to take up work.

Teacher and trainer shortages

Skills shortages have been exacerbated by trainer shortages, particularly in the regions. Factors such as job instability, retirement of older workers, lack of clear pathways, salary and mobility between industry and teaching roles – including due to trainer registration and compliance – are all reported contributors to this shortage.[130]

Access to transport

Access to transport limits the uptake of training or job opportunities. Access to public transport across Goulburn is low with mixed travel patterns across the region. For example, residents in southern shires such as Mitchell and Murrindindi are more likely to travel to metropolitan Melbourne for work than residents clustered around Shepparton or Moira. Nonetheless, only 6% of Murrindindi residents reported living in proximity to public transport.[131] Access to public transport across the Goulburn region is particularly important for smaller local government areas (LGAs) in the Goulburn region that do not have higher education and VET within close proximity. Without accessible transport, areas like Moira and Strathbogie that are further away from regional centres like Shepparton, highlight the need for alternative delivery models to service students.

Digital connectivity

Lack of reliable and fast broadband or digital connection in some regional and rural communities limit education responses and access to services and job opportunities. In 2021, LGAs across the Hume region[21] including Strathbogie scored an average Australian Digital Inclusion Index (ADII) score of 65, lower than the state average of 72.[132]

Labour shortages

Job vacancies have increased to record levels across many occupations (almost doubling from May 2020 to 2022).[133,22] This has placed upward wage pressure on some industries, reducing capacity to deliver services and impacting output from the region. Other contributing factors, such as workforce fatigue and a lower than expected rebound in international working holiday visa holders, is exacerbating current shortages, particularly in industries such as health and hospitality.

Employment security and working conditions

Employees are looking for more secure working conditions and flexible working arrangements, placing additional pressure on businesses that have relied on casual and shift work arrangements. Casual and shift work may reduce work security and affect long-term sustainability of employment.

Increased service demand

A 20.1% increase in population (2011 to 2021)134 in the region has increased demand and pressure on all essential services and industries in the local economy. This includes, but is not limited to, health, education, and retail and has increased pressure on infrastructure requirements such as internet access and network coverage.[135]

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21 Note, the Hume region includes areas within the Goulburn region as identified in this profile including, Seymour, Shepparton, Strathbogie and Yarrawonga.

22 This data captures online job advertisements within the region which may not account for the accurate level of vacancies noting different methods of recruitment.

Skills challenges

Consultation and engagement across Goulburn's major industries highlighted several common challenges affecting workforce participation and skills requirements in the region.

Barriers to accessing vocational and higher education and training

Goulburn is home to some of the most disadvantaged local government areas (LGAs) in Victoria with Greater Shepparton and Moira ranking 14 and 15 respectively out of Victoria's 80 LGAs and unincorporated areas in 2016.[136] The level of educational attainment is also lower in Goulburn than the rest of regional Victoria and metropolitan Melbourne with 54% of people in Goulburn with no post-school qualification compared to 50% and 43% respectively in 2016.[137] While discussions around workforce skills and training often view formal training programs for workers as an immediate solution to boost employment engagement, such approaches can sometimes be inappropriate if the prospective worker does not have the initial adequate skills to complete training. Reasons for this may include low confidence due to few role models, limited literacy, or access to technology, learning or health challenges, financial difficulties or other socioeconomic influences which may render training and subsequent employment untenable. Providing holistic support that enables students to complete training and study is more likely to empower lifelong learning and create a strong foundation for a life in the workforce.

Alignment between education and training and workforce needs

Industry roundtable participants reflected on the difficulties of changing needs and expectations of both employers and prospective employees. Perceived declines in interpersonal, customer service and technical skills, as well as economic conditions that are increasing costs for employers, are leading to difficulties in finding employees of best fit. At the same time, employee expectations of salary levels, flexibility of hours and working from home arrangements have also evolved following the significant disruptions throughout the pandemic.

The industry roundtable participants also highlighted that training in the region is not appropriately equipping students with industry-standard skills or knowledge. This is especially relevant in emerging industries where advancements and evolution occur at a rapid pace, and it is difficult for training providers and programs to keep up. One impact of this may be lower retention of newer workers. Industry and learning institutions must be aligned so training meets the needs of the local employers and prepares students for jobs.

Many industries are feeling the effects of declining enrolments in vocational education and training (VET) and higher education training courses in the region. This is a consistent challenge across Victoria and is driven by several factors, including reduced international students and a tight labour market with more unskilled workers securing jobs that would traditionally require qualifications. In Goulburn as in many other regional areas, underlying challenges include difficulty in accessing consistent transport to and from training, unaffordability of courses for certain cohorts and a lack of access to enabling services such as child care.

Scale and reach of existing programs and initiatives

Taskforce and industry roundtable participants in several sectors noted a lack of coordination of activities across the region. This included across local government initiatives, few opportunities for industry bodies to eventuate or meet, and isolation of businesses across Goulburn. Some of the impacts of this disconnect include difficulty in taking advantage of economies of scale, risk and cost sharing information, weakened value proposition of the region as a whole and risk of regional siloing as limited internet connectivity can hinder remote collaboration and employment. Limited communication, coupled with significant labour shortages, have led employers within and across industries to compete for the same, limited workforce, rather than focusing on opportunities to grow the skilled workforce. This is particularly relevant in the health care and community services, construction and education sectors where skills requirements and occupations are similar amongst employers in the region.

Risk of low skilled future workforce

Rapid population growth in Goulburn's southern LGAs such as Mitchell is a promising sign of future economic growth and success. School leavers and prospective workers seeking a career change must be supported in their transition into the workforce and continued learning throughout their career. Creating aspirations around the pathways and opportunities for work in the region is a key component of achieving this.

Priority skills for the Goulburn region

The Regional Skills Taskforce and industry roundtables identified a common set of priority skills requirements across all major industries in the Goulburn region. These priority skills relate to key overarching capabilities that industry representatives believe individuals should have an awareness of when they enter the workforce and should focus on developing as their career progresses.

The specific skills and training requirements identified through engagement are included in each industry profile at Appendix A which build on existing workforce development strategies and planning undertaken across the region to date.

Figure 19: Common priority skills needs across Goulburn's major industries

| Core competencies | Digital and technology Skills | Leadership skills | Strategic thinking and planning skills |

Core competencies

The need to complement technical skills with interpersonal skills was consistently raised in industry roundtable discussions. The importance of these skills is reflected through their framing as 'core competencies'. Common personal and social skill needs included interpersonal communication, emotional intelligence, conflict resolution, collaboration and teamwork. The pandemic also shone light on the need for skills such as resilience, flexibility, and adaptability. There is also a need for workers to demonstrate appropriate behaviour when operating within particularly sensitive contexts, for example, trauma experiences. With much diversity in the region, there is also a need for culturally appropriate engagement with Aboriginal and Torres Strait Island communities and across culturally and linguistically diverse cohorts.

Leadership skills

Industry roundtables identified a need to uplift capabilities of existing workers to meet current gaps in leadership and management positions, ranging from younger workers with limited experience, as well as qualified staff to step into more senior management positions. This is particularly relevant for family businesses growing from small-to-medium size enterprises. It is important to note that leadership extends beyond direct operation of the business, to also creating effective inclusive and sustainable working environments. Wellbeing and mentoring skills to foster and promote a culturally safe workplace was also expressed by industry representatives, alongside recognition of the importance of building awareness and commitment from local businesses to uphold 'employer of choice' qualities consistent with best practice processes across domestic and global markets.

Digital and technology skills

Digital skills are required across all industries to meet modern consumer expectations and increase business productivity. Increasingly, jobs will involve humans working with machines, which means that future work will require people with technical and digital skills. Individuals will also require interpersonal skills that empower them to work with new technological and communication processes. Needs range from basic digital literacy skills (for example, use of tablets, computers and common sales systems) to digital marketing capabilities and more technical skills (for example, software and hardware activities to support automation, cyber security, biosecurity and emerging electrical technologies).

Strategic thinking and planning skills

Strong demand across many sectors and increasing government and private investment in major industries across the region has led to a comfortable pipeline of work and potential for growth. To take advantage of these opportunities, individuals and businesses must have strong growth-focused mindsets, strategic business development skills, and competency in sales and marketing to tap into new markets. industry roundtable participants reflected on the importance of problem solving and critical thinking capabilities alongside the ability to stay abreast of changing trends and ways to thrive in evolving environments.

Opportunities to address workforce and education outcomes

This section presents potential responses and solutions to address the key regional challenges and skills requirements including case studies and examples where the region is already tackling the issues.

Key industry and workforce opportunities

Consultation and engagement across the region highlighted a number of overarching opportunity areas unique to the Goulburn region that can be prioritised to promote and enable greater workforce participation, in addition to developing skills required across the region both now and into the future.

Figure 20: Goulburn's overarching opportunity areas

| A passionate local community | First mover advantage of emerging and converging industries | Strong partnerships across the education sector | Maximise benefits from key transport and activity corridors | Support greater workforce participation |

A passionate local community

The development of this profile has shown first hand the growing energy and commitment across the Goulburn region to address current workforce needs and build a skilled workforce. The region is strongly positioned to continue to work together to address current and emerging industry and skills needs.

First mover advantage across emerging and converging industries

Goulburn has a clear competitive advantage in the agriculture and food production and clean energy sectors. With climate change and carbon emissions targets becoming increasingly front of mind across domestic and international stages, there is opportunity for Goulburn to establish itself as a global leader in this space and realise gains from innovation and investment as well as the practical benefit of a clean and reliable energy source to power other industries. Beyond renewable energy, taskforce members also reflected on the growing importance of the circular economy in the region to repurpose waste, strengthen the local supply chain and expand channels of economic inflows.

Strong partnerships across the education sector

Strong partnerships and alignment to the education sector (early childhood centres, schools, TAFEs and universities) supports improved educational outcomes for the region and ensures higher and vocational training is aligned to the current and future needs of local industry. There is an opportunity to further engage with the education sector.

Maximise benefits from key transport and activity corridors

The Goulburn region cuts through the centre of Victoria linking metropolitan Melbourne with the regions, and Melbourne to broader NSW. Arterial highways and transport infrastructure facilitate movement of various exports and commodities, such as agricultural produce, a key part of the regional economy. Consequently, there is an opportunity to further develop warehousing, transport and packing activities. From a population perspective, with some of the fastest growing local government areas (LGAs) in Victoria in the peri-urban fringe, economic activity in these areas is also likely to draw ongoing migration and continuous opportunities for industry and regional growth.

Support greater workforce participation

Goulburn is home to some of the most diverse local LGAs in Victoria. The more affordable nature of peri-urban growth areas results in great socioeconomic and cultural diversity across the region.[138] There is opportunity to engage more deliberately and strategically with all community groups including Aboriginal and Torres Strait Island peoples, new migrants and refugee communities, mature aged workers, neurodiverse workers and those with other disabilities. Innovative strategies to leverage experience-based cohorts such as visiting workers or holiday makers also exist.

'Strong partnerships and alignment to the education sector (early childhood centres, schools, TAFEs and universities) supports improved educational outcomes for the region and ensures higher and vocational training is aligned to the current and future needs of local industry. '

Overview of potential responses

Consultation across the Goulburn region identified a range of potential higher and vocational education and training responses to address the current and emerging challenges facing major industries.

This profile acknowledges broader issues, policy and funding solutions that could support the Goulburn region to address workforce and skills requirements. Proposed responses within this profile specifically focus on skills and education related responses within the remit of the Victorian Skills Authority (VSA) and the taskforce.

The VSA has engaged (and will continue to engage) across government to share feedback and input to broader megatrends impacting the region, and the taskforce acknowledge the need to continue engaging in advocacy activities to address some of these issues.

An overview of the common skills-related challenges and overarching opportunities are outlined below, with further detail on potential actions.

Figure 21: Overview of challenges and overarching responses across the major industries

Common workforce and skills challenges	Barriers to accessing vocational and higher education	Alignment between education and training and workforce needs	Scale and reach of existing programs and initiatives	Risk of low skilled workforce
Overarching solutions	Identify and address barriers to participation in post-school education and the transition to employment	Enhance inter and intra-sector collaboration and co-ordination to address Goulburn's workforce challenges	Leverage industry experience to develop innovative training approaches	Increase opportunities for continual learning and development

To support next steps and further discussions in relation to these proposed actions, including further implementation planning, each of the actions is examined in terms of complexity and impact.

Complexity relates to the effort required to implement the proposed responses. Implementation considerations include factors such as resourcing, funding and number of steps and additional consultation required to commence activities.

Impact horizon relates to how long it will take for the benefits of the proposed response to be realised. This is intended to identify responses that will have an immediate impact over the next 1–2 years, compared to those that will start to see results over the medium term (3–5 years) and long-term horizon (5+ years).
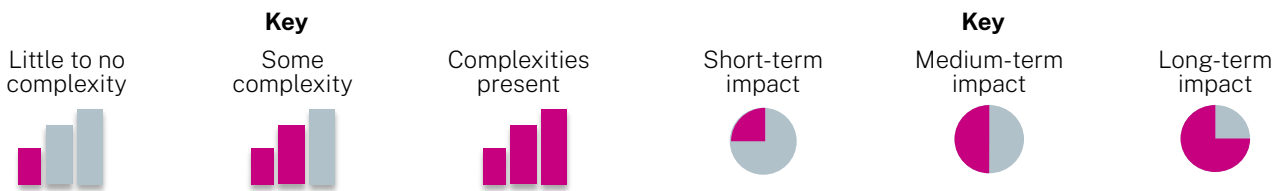
Key

Little to no complexity

Some complexity

Complexities present

Key

Short-term impact

Medium-term impact

Long-term impact

'Purposeful participation in higher and vocational education and successful transition and retention into the workforce requires a clear understanding of local community needs and barriers hindering participation. '
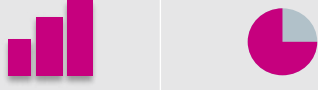
Key Response Area 1: Identify and address barriers to participation in post-school education and the transition to employment

Purposeful participation in higher and vocational education and successful transition and retention into the workforce requires a clear understanding of local community needs and barriers hindering participation.
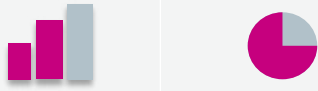
Goulburn is home to some of the most disadvantaged local government areas (LGAs) in Victoria[139] and, while there are a range of support services available within the region, the Goulburn Regional Skills Taskforce reflected on the need to better understand the varying needs of diverse community members to ensure prioritisation of solutions that address ongoing participation.

Proposed solutions to identify and address barriers to participation in post-school education and the transition to employment		
Potential actions within the remit of the Victorian Skills Authority	**Complexity**	**Impact horizon**
Undertake explorative research to better understand the data, trends and factors affecting participation in education and training High levels of educational attainment have broad social and economic impacts in a region. Deficiencies in these areas risk people being excluded from the opportunities arising from business and industry expansion. A better understanding of the data, trends and specific factors impacting participation for Goulburn's current and prospective learners can drive the development of more appropriate approaches to address and increase participation in education, training and transition to employment.		
Support the Senior Secondary Pathways reform agenda through facilitation of local opportunities to improve VET within the region The Department of Education is enhancing vocational focused education and training in senior secondary schools, including focusing vocational education and training (VET) delivery in schools to occupations in demand (to grow the supply of school graduates to industry) and, through the VCE Vocational Major, is offering broader preparation for careers and work-readiness. The Victorian Skills Authority (VSA) is supporting the reforms with guidance on occupations and industries in demand and advice, to be developed, on the nature of skills needed for the future. These skills vary on a regional basis across Victoria, depending on concentrations of industries, therefore context-relevant information can assist in targeting vocational learning. There are opportunities for local education and training institutions to work together to plan and expand skills development and work exposure experiences.		
Review and refine the Australian Qualifications Framework (AQF) to ensure that education and training offerings are accessible, aligned and tailored to Goulburn learner and local industry needs The AQF is the basis for recognition in the community of formal learning across schooling and vocational and higher education and sets out progression in knowledge and skills. The increasing sophistication in the application of skills and knowledge today and the rate of change in work will require the ability to learn and adapt on-the-job more readily for Goulburn, the broader state and country. Alignment of training with Goulburn's skill needs may mean bundling or expanding delivery of specific units of competency instead of increasing full qualifications. This would help to ensure that the local workforce is equipped with skills required by industry and compliance in a cost and time effective manner. The VSA can support continued discussions and initiatives to drive higher skills and progression through education and training (Action 11 of the Victorian Skills Plan).[140] The VSA's key priorities across the next 3 years are to: • pilot aspects of the revised AQF to design contemporary skills solutions and strengthen recognition and credit arrangements • use existing skills classification tools to identify new and emerging skills to supplement existing qualifications.		

Potential actions that can be achieved through collaboration across the region and with broader partners and stakeholders	Complexity	Impact horizon
Targeted engagement with current and prospective learners – including under represented and vulnerable communities, and their support networks to build awareness of higher and vocational education, skills development and employment opportunities Deliberate, tailored and targeted programs are required to engage current and prospective learners, particularly among vulnerable, mature age or culturally and linguistically diverse cohorts into higher and vocational, other training and employment. Noting that study and work decisions are often made in community, activities can extend to engagement with parents, families and community groups who influence decisions. This can be achieved through programs and initiatives such as: • incursions and excursions for primary and secondary students across major industries, organisations and education and training facilities within the region including Victorian Virtual Industry Career Experiences (VIC VICE) (refer to case study) • situational learning opportunities and work placements that enable students to learn while earning an income, thereby reducing a cost barrier to train • increasing flexibility of practical training, such as more time intensive placement opportunities (for example, 8-week placement rather than one day placement for 10 months) or staggered approaches if better suited to individual learners.		
Develop a clear pathway for learners to transition from non-traditional training opportunities into formal qualification programs. While vocational and higher education are key pathways to upskilling and developing skills needed for employment, there are also some for whom traditional modes of studying and training can represent additional barriers. These barriers may include low confidence and a lack of family support and role modelling, which can influence enrolment and completion. Further investment and support to expand non-traditional or 'taster' programs is one approach to bridging the gap from disengagement to study and work opportunities. A desire for non-traditional program pathways may also be motivated by a need or preference for 'earn and learn' opportunities. Programs such as Head Start[23] and initiatives through the local learning and employment networks (LLENs) can help to increase access to hands on, tailored, and supported placements as a central part of a broad, skills-focused learning program.		

23 Head Start is a Government Initiative which complements school-based education with an apprenticeship or traineeship. Planning and delivery of the Head Start program across the Goulburn region is currently underway.

Potential actions that can be achieved through collaboration across the region and with broader partners and stakeholders	Complexity	Impact horizon
Empower and equip businesses to employ and create positive working environments for under-represented and under-represented cohorts Strengthening recruitment, onboarding processes and wrap-around support is critical to assist employment of diverse groups within industry. This is particularly important for industries with a strong gender bias, workers with disability, and Aboriginal and Torres Strait Islander and culturally diverse communities. There is a need to increase engagement with Aboriginal people and migrant groups within the region to promote economic and social inclusion. There are already several existing initiatives which can be leveraged, including the Goulburn Murray Regional Prosperity Plan. Employers need to ensure that their business processes are fit for purpose and truly inclusive to facilitate recruitment and retention of all cohorts. For example, streamlining position selection criteria and alternative 'interview' methods (such as group or informal interactions), to minimise prospective candidates' self-screening or being excluded from the application process prematurely. Taskforce members noted that these existing processes are particularly disadvantageous for workers with disability. Other engagement activities include mentoring programs, specific training and skills development programs, and access to colleagues with similar lived experiences and backgrounds. Models such as the Skills and Jobs Centre also provide insights into how skills training, careers counselling, and employment opportunities can be delivered through one coordinated response to attract under-represented and non-traditional cohorts in industries with significant demand.[24]		
Advocate and support local initiatives to address housing, transport and childcare accessibility that impact participation in higher and vocational education, and the employment and upskilling of current and prospective learners and workers Consultation across industry and with the taskforce members highlighted the significant impact of transport, housing and childcare accessibility and affordability within the region on education, training, and workforce participation. These challenges are complex with each consideration largely impacted – and impacting – the burden on the other. For example, limited access to work is likely to render more accommodation inaccessible. Additionally, the recent floods have increased the number of already homeless or displaced persons in the region. While transport, housing, child care and other related policies are not within the remit of the Victorian Skills Authority (VSA) the Regional Skills Taskforce reflected on the importance of addressing these challenges to enable success across broader skills and workforce participation. Key strategic investment within the region is likely to accelerate accessibility to transport, housing and accommodation, particularly as Shepparton and the broader region focus on flood recovery. The VSA can help advocate for investment across government, including with Homes Victoria, and support identification and coordination of innovative solutions to address this challenge.		

Case study: VIC VICE

Victorian Virtual Industry Career Experiences (VIC VICE) is a virtual reality platform that will allow secondary school students to see, touch and experience different workplaces. Currently being developed by Goulburn Murray LLEN in partnership with VIC VICE, the platform is a modern solution to growing workforce shortages and a widening skills gap.

VIC VICE will bring to classrooms across Victoria:

- 360* virtual workplace environments with interactive touchpoints
- engaging video content featuring real people working in different industries
- immersive 'hands-on' experiences that simulate workplace activities.

Source: VIC VICE – GM LLEN

Key Response Area 2: Enhance inter and intra-sector collaboration and coordination to address Goulburn's workforce challenges

Galvanising existing connections and energy across the region, opportunities for greater collaboration and coordination of existing programs and initiatives can help to address Goulburn's workforce challenges at the required pace and scale.

While there are several programs on offer in the region, the Regional Skills Taskforce reflected on the number of participants who can benefit from such activities as a key limitation due to funding and scaling challenges, particularly in areas outside major cities or towns in the region. Facilitating more streamlined collaboration between government, industry and education and training providers presents an opportunity to accelerate solutions that address current labour shortages and future workforce needs that are unique and critical to Goulburn.

Proposed ways to enhance inter and intra-sector collaboration and coordination to address Goulburn's workforce challenges		
Potential actions within the remit of the Victorian Skills Authority	Complexity	Impact horizon
Provide data and insights to support the Goulburn region's workforce planning The Victorian Skills Authority (VSA) collects and reports on data and insights that can be shared to support workforce planning across the Goulburn region. Working in collaboration with industry representatives and employers, the VSA can support the Goulburn region with workforce planning through the sharing of data and insights between the VSA and the region. This could include workforce data at a holistic perspective and more closely focusing on gender, diversity, and inclusion measures with time.		
Implement the Clean Economy Workforce Development Strategy The Victorian Government's commitment to decarbonising the economy and achieving net zero emissions by 2050 will have implications for workforce skills needs. To meet the skills and training needs, the Victorian Government is funding the development of the Clean Economy Workforce Skills Initiative which will include the delivery of a Clean Economy Skills and Jobs Taskforce, Capacity Building Fund and Workforce Development Strategy.[141] Designed to include workforce skills needs in key traditional, transitioning, and emerging Victorian sectors as Victoria moves towards a clean economy, the strategy is currently underway. Once released, the VSA will build on existing work to engage across the state, and the Goulburn region specifically, to determine what this means for the region and ways to realise its potential.		
Actively support and bolster initiatives of the Shepparton Education Plan The VSA can collaborate with the working groups progressing the goals of the Shepparton Education Plan and connect the Regional Skills Taskforce with this work to bring fresh momentum, leveraging the insights gained through the development of this profile. The process of developing this profile has led to other collaborative groupings of local stakeholders and these can also be leveraged to bolster initiatives of the plan. The first phase of the Shepparton Education Plan has the 'vision of transforming student outcomes by empowering all students to learn and achieve, experience high quality teaching and the best conditions for lifelong learning'.[142] Ongoing collaboration to ensure young people have more opportunities to access pathways which better meet their interests, ambitions and needs are likely to improve outcomes for young people as they transition into senior secondary education.		

Potential actions that can be achieved through collaboration across the region and with broader partners and stakeholders	Complexity	Impact horizon
Partner with regional, community and other industry bodies to improve access to a holistic suite of support services for new and prospective learners and workers While further training and education is a pathway for many students into careers, there are others for whom continuing and completing training is particularly challenging in and of itself due to circumstantial factors. These may include generational disengagement from employment or training, health-related barriers, carer commitments, or competing financial demands. Given that many of these determinants cut across social, economic and health concerns, there is opportunity for local organisations, community and industry to collaborate to improve access to a holistic suite of support services. The Regional Skills Taskforce can use its unique position to aid coordination, quality and reach of organisations, such as Skills and Jobs Centres, the Local Learning and Employment Networks (LLENs) and Learn Locals in Goulburn, to increase provision and accessibility of services. Key support services may include language support, mentoring or buddy systems, financial advice and support and flexible working arrangements.		
Collaborate to increase reach of programs and initiatives that showcase the diverse range of career opportunities and employment trajectories in the Goulburn region Raising awareness and increasing exposure to career opportunities can help increase the supply of workers across Goulburn and its diverse industries. Prospective workers and school leavers do not always know the exact nature of the work they seek and thus exposure to different jobs and skills increases awareness of opportunities in the region. How Work Works and the Community Connector Program are examples of programs in the region designed to showcase the exciting opportunities presented by industry to attract a future workforce and provide new workers with support mechanisms to retain them in the region (detailed in the case studies).		
Incentivise trainers to gain accreditation and enter the education system Increasing attraction and retention of accredited trainers with relevant, up-to-date industry experience can help address skills gaps and development opportunities for current and future higher education and vocational education and training (VET) students. There are many opportunities for industry to partner with education and training institutions across the region to plan and deliver practical, engaging and relevant education that equips graduates with the right skills and supports a more seamless and successful transition into employment. Employers can support their employees to partake in such opportunities through financial and career development incentives, where appropriate. This proposed response to skills shortages can be applied across all industries and prioritised for major industries and employers within the region facing skills shortages.		

Potential actions that can be achieved through collaboration across the region and with broader partners and stakeholders	Complexity	Impact horizon
Expand engagement activities with students and their networks Conversations, forums and programs will enable industry to partner with schools and students to build a more tangible understanding of employment and career opportunities within the region. School leavers rarely make training decisions in isolation and are often influenced by peers, parents, and teachers. Similar to the How Work Works program, there are opportunities to leverage existing partnerships and connections to expand the reach of industry-employer engagement with students at schools, TAFEs and universities. Programs and experiences, including excursions, incursions, and events with multiple local employers, enable students to build an early understanding of their strengths and interests and how this can translate to skills, capabilities, and career opportunities within and across sectors in the region. Engagement can extend beyond formal recruitment opportunities and include broader visibility in the community, such as through supporting public events or sponsorship to build business interest and awareness.		
Advocate for simplifying participation pathways for workers in transition across industries or mature and retiring cohorts Current Recognition of Prior Learning and Recognition of Current Competency (RPL and RCC)[25], credit transfer and recognition of international qualification standards within Victoria can often be challenging given time, financial and process constraints. This often acts as a deterrent from enabling individuals with skills and capabilities to take up job opportunities and progress their careers. Initiatives that lead to greater recognition of non-traditional knowledge and skills acquirement, including through on-the-job learning and work experience, can support greater attraction across Goulburn's industries where occupations and skills are in demand. Similarly, initiatives to reconnect recently retired workers to flexible working arrangements without substantial impacts to pension or superannuation payments, for example, is another way that industry can retain expertise without added costs of upskilling or training employees.		
Support the Goulburn Tourism Partnership to accelerate planning and delivery of a more coordinated tourism plan for Goulburn Greater Shepparton boasts a diversity of cultural and tourism assets, attractions and activities that are yet to be realised to their full potential. The Regional Skills Taskforce reflected on the need for accelerated support to uplift the region's reputation as an ideal place to visit, live and work. A coordinated approach to planning and delivering a strategic regional marketing plan that identifies and captures unique, compelling, and engaging visitor content for the region is necessary to support the ongoing growth of businesses, local community and to attract and retain the workers needed now and into the future. The taskforce can continue to support local government area-orientated collaboration, such as the Goulburn Region Tourism Partnership – a project involving Shepparton, Mitchell and Strathbogie Shires. With funding secured for the first 12 months, the temporary partnership will be tasked with generating initiatives relevant to the tourism needs of each municipality.[143] Other activities, including bringing together the local councils and broader community to plan and execute the marketing plan, provide immense opportunity to attract more visitors and residents to the region.		

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25 RPL and RCC means that knowledge and skills acquired through work or life experiences may be recognised as equivalent to some specified course outcomes.

Victorian Skills Authority

Potential actions that can be achieved through collaboration across the region and with broader partners and stakeholders	Complexity	Impact horizon
Explore opportunities for shared recruitment pools across organisations where appropriate or feasible Minimising the flow of workers from the region to metropolitan areas remains a constant challenge in organising the local workforce. Goulburn representatives flagged the opportunities for greater coordination and collaboration between businesses' recruitment processes and practices within the region. One possible approach is development of an industry-led, centralised 'bank' of employee applications that streamlines the application and recruitment process. From an employer perspective, this allows assurance that even if a candidate is qualified but not of best fit, there are assisting frameworks that allow them to be matched to a company of better fit and to stay in the region. Coordinated in this way, there is also potential for models of shared employment where organisations can look to leverage individuals with niche and, or transferable skills across more than one business. While there are potential risks and tax limitations associated with individuals having multiple employers, identifying the success factors of previously implemented shared recruitment models would help to ensure the appropriate mechanisms are in place for any models considered.		
Increase access to mentoring opportunities for businesses and workers, including through peer-to-peer learning and cross-business programs Mismatch between worker and employer expectations can lead to challenges in attracting and retaining workers. For example, industries with seasonal demand, such as the visitor economy and agriculture, often experience under-employment due to inconsistency of working hours. Additionally, post-trade training such as through short courses is not always appropriate, tailored or feasible for workers to undertake. Mentoring can fill this gap with 2 distinct applications. Firstly, mentoring can provide on-the-job upskilling for staff in different aspects of operations (for example, front of house, online marketing, accounts) within an organisation or across other local businesses enabling workers to develop a portfolio of skills that are less seasonally dependent, thereby boosting potential hours worked and minimising the need to hire additional staff. Opportunities for larger businesses to support smaller businesses to offer on-the-job mentoring could also be explored by Goulburn Regional Skills Taskforce members, including through existing forums and networks such as the Startup Shakeup initiative and Creative City Networking sessions held by the Shepparton City Council (detailed in the case study). Mentoring businesses in their capacity as an employer is another way to help match and meet worker expectations as it provides employers themselves with the skills to support employees through their role. For example, developing leadership and relational skills which can improve staff retention, or awareness and capabilities to foster inclusion and diversity which can aid attraction.		

Case study: How Work Works

How Work Works came about as a collaboration between 4 adjacent local learning and employment networks (LLENs) and was supported by Regional Development Victoria. Murrindindi Shire's 2021–22 How Work Works Program provided 6 interns with the opportunity to learn about employers and pathways in the Goulburn region. This program also included the delivery of a report to assist young people in the region with the first practical steps in finding and securing work.

Source: How Work Works – LLENs pioneer youth-Led research into growing industries

Case study: Community Connectors Program

Community Connector Program is a collaboration between Greater Shepparton City Council and Committee for Greater Shepparton and was developed to assist new-to-area residents with a relocation concierge service supporting all aspects of their relocation and assisting those people considering relocating who need the extra reassurance and support at the decision-making end. Key services provided through the program include:

- support with securing accommodation and finding a home
- support with finding employment opportunities for partners
- determining the right school and, or childcare options for new residents with children
- formal and informal networking opportunities to connect in with the local community.

Source: Community Connector Program | Greater Shepparton: Great Things Happen Here

Case study: Startup Shakeup – Ripe Robotics

Startup Shakeup supports regional entrepreneurs who want to innovate. Partially funded by LaunchVic, the program includes masterclasses, business mentoring and networking opportunities for new businesses (start-ups) and businesses in transition (shake-ups). Industry roundtable participants reflected on this program as a possible example of empowering new business owners in the region, similar to the Ripe Robotics example.

Founded with the goal of changing an industry that has been left behind by technological innovation, Hunter Jay saw a gap that he was able to fill through Ripe Robotics. Operating from McNab & Sons orchards in Ardmona, Ripe Robotics are making fruit picking autonomous using data-driven technology possible thanks to a grant worth $571,567 under the government's Accelerating Commercialisation program through the Startup Shakeup initiative.

Source: Farming innovation receives funding bonus - The Shepparton Adviser (sheppadviser.com.au)

Case study: Creative City Networking Sessions

The Creative City Networking Sessions is a new series by the Greater Shepparton City Council, providing all creative individuals living in and around Shepparton with the opportunity to participate in friendly, informal and free monthly sessions. Part of Council's Creative City Strategy, the program has been designed to energise and nurture the local creative sector with opportunities for artists, business owners and community members to familiarise, connect, share knowledge and ideas, and network. The second session of the program held in September 2022 saw over 40 local creatives and community members coming together to share ideas on the role festivals and events can play in a community.

Source: Second Creative City Networking Session a success - Greater Shepparton City Council

'Raising awareness and increasing exposure to career opportunities can help increase the supply of workers across Goulburn and its diverse industries.'

Key Response Area 3: Leverage current and emerging industry experience to develop innovative training approaches

Investment in innovative education and training approaches and supports, including non-traditional pathways, can help address declining enrolments that are impacting the readiness of the future workforce and improve workforce participation and engagement among under-represented cohorts.

Employers and industry representatives can play a more active role in the design, planning and delivery of education and training to ensure the current and future workforce has the skill sets that meet the specific needs of local employers and address emerging and future industry requirements.

Proposed ways to leverage current and emerging industry experience to develop innovative training approaches		
Potential actions within the remit of the Victorian Skills Authority	Complexity	Impact horizon
Provide local insights to support the development of the Victorian Skills Plan The plan consists of a suite of products that can support the facilitation of targeted and purposeful collaboration across industry and training providers to address emerging and future skills needs across the Goulburn region. The Victorian Skills Authority (VSA) will release an annual Victorian Skills Plan that draws on local insights across Victoria's regions.		
Publish industry data and trends for current and prospective students, parents and career counsellors The VSA can work with local industry, education and training providers, and local government to develop and share data and insights in a student-friendly manner to support greater understanding of job and career opportunities within the region, enabling more informed education and employment decisions. This data should be shared among students, mid-career workers, teachers, career counsellors, parents and other networks who influence students' decision making. Reach and impact of this work can be accelerated through the Victorian Skills Gateway, Skills and Jobs Centres and leveraging existing forums and work underway as part of the Shepparton Education Plan. Linked to this is a role for the VSA to present this industry data alongside the relevant courses and qualifications that are locally available. Providing this information in a readily accessible way would support clearer understanding of educational pathways and encourage students to study in the region.		
Work with the VET Development Centre (VDC) and industry expertise to better support teacher training and development The new and deeper skills that taskforce members highlighted as a priority for the region will require new vocational education teaching capability. The plan highlights the need for a strategy to lift vocational education and training (VET) teacher capacity for future skills. The VDC is also able to develop programs to bring the latest in industry skills to teachers through professional programs and raise the professional standing of the VET workforce.		

Potential actions that can be achieved through collaboration across the region and with broader partners and stakeholders	Complexity	Impact horizon
Support industry and education providers to continue to take a place-based approach to course design and delivery Vocational education providers indicated that accreditation rules for some VET qualifications and associated funding limited their ability to organise vocational programs aligned to the needs of the region, or specific requirements that lead to high-cost structures given limited student numbers. The new organisational arrangements for VET in Victoria that focus on planning for future skills need to consider how these needs can be met effectively at a regional level. Travel to Shepparton (for those who live outside the city) or to Melbourne to complete components relating to courses such as these can be a barrier to completion, draw valuable workers away from the region, and compromise regional relevance of content. This issue is particularly acute in the context of limited educational provision in areas outside of Shepparton and is particularly problematic for residents without access to a car and limited public transport access in more disadvantaged areas outside of the major towns in the region.[144] It is recognised that education providers also face challenges in running courses at scale and in locations outside of larger regional cities or towns. Integrated initiatives need to play a greater role in addressing some of these gaps in more localised education provision, such as the Department of Jobs, Skills, Industry and Regions Digital Jobs Program[145] to support mid-career people to gain industry experience. Place-based learning can also refer to the broader needs and industry direction of the region both now and into the future. This can exist outside of individual business needs.		
Provide wider access to existing industry-specific training materials and facilities to prepare students and prospective employees for employment A concern of some current training methods is that some courses do not adequately prepare students for work in industry. Given that an increasing number of medium and large organisations have already developed their own internal training, there are opportunities for industry to increase awareness about their sector and develop fundamental competencies prior to starting a job by making courses available. Leveraging existing facilities across the region, including GOTAFE's Trades Training Centre (detailed in the case studies section), alongside ongoing advocacy for improved facilities, such as a technical school in the region, can help to improve access to hands-on, practical training relevant to current and emerging industry needs. Enabling public access and, or collaboration across companies has the potential to add considerable value to the training sector.		
Facilitate a smooth flow of teachers between industry and training Increasing attraction and retention of accredited trainers with relevant, up-to-date industry experience can help address skills gaps and development opportunities for current and future higher education or VET students. Several factors act as barriers for prospective trainers, including uncompetitive remuneration and the perceived cost of undertaking the Training and Education (TAE) package qualifications as the base requirement for teaching in VET. Financial and structure issues need to be addressed regarding supply of the teaching workforce for VET. For students, improved access to quality courses is likely to translate to higher uptake and graduates equipped with the right skills to transition into employment.		

Case study: Digital Jobs program

The Victorian Government's Digital Jobs program is building the state's digital workforce by training and upskilling mid-career Victorians looking for a career change so they can transition into digital careers. The program is supporting up to 5,000 mid-career Victorians over the age of 30 to complete 12 weeks of industry-backed training with top employers along with the opportunity to apply their new digital skills in a 12-week digital job placement with a Victorian business.

Case study: GOTAFE Trade Training Centre

The Seymour Trades Training Centre provides quality, practical hands-on training spanning across all trades whilst focusing on contemporary practices and technology. The $2.17 million purpose-built Trades Training Centre features multi-purpose trade teaching facilities and flexible learning spaces, with state-of-the-art equipment and technology to enable quality, hands-on training across all trade areas. The refurbished centre will enable GOTAFE to deliver industry standard training across all building and construction related courses, complementing existing facilities for training automotive and engineering students.

Source: New Trades Training Centre open in Seymour

'The VSA can work with local industry, education and training providers, and local government to develop and share data and insights in a student-friendly manner to support greater understanding of job and career opportunities within the region, enabling more informed education and employment decisions.'

Key Response Area 4: Increase opportunities for continual learning and development

Advocacy, promotion, and facilitation of opportunities for life-long learning through micro-credentials, short courses and personal and professional skills development has been identified as a critical solution to address skills gaps. This is particularly important in an environment where labour shortages are leading employers to recruit under-qualified employees and, or employees with no experience or relevant qualifications and where industry and higher and vocational education will need to design and deliver learning and development aligned to industry priorities and areas of growth that are fast approaching, most prominently aligned to the clean economy.

Proposed ways to increase opportunities for continual learning and development		
Potential actions within the remit of the Victorian Skills Authority	Complexity	Impact horizon
Increase access and provision of support for Aboriginal people to enter education, training and employment by working closely with Traditional Owners Building on existing initiatives and collaboration across the region, the Regional Skills Taskforce has identified the need to better understand ways to increase engagement and provision of support for Aboriginal people. These activities aim to ensure education and training is meeting current, emerging and future skills needs of Aboriginal people. Through this engagement, the Victorian Skills Authority (VSA) will focus on a range of areas, including (but not limited to): • understanding the barriers to engaging in education, training and employment • ensuring higher education and vocational training opportunities are developed, packaged and communicated with aboriginal people across Goulburn through existing effective channels, including organisations that already deliver these services and have a strong presence in the region, including Outback Academy Australia (further detail provided in the case study).		
Future skills requirement planning and mapping Advances in big data techniques which can identify work skills from job advertisements and other sources has given rise to a focus on skills needed to work to complement qualifications. The VSA is exploring ways to better map and showcase skills in relation to occupations, working with industry and education and training providers. Developments in this area can assist with skills-based recruitment for employers in the region.		
Promote micro-credential courses that can meet industry and employee skill development needs Reskilling and upskilling is an increasingly critical way to secure employment opportunities and progress meaningful careers. Employers and employees are expected to look to short, sharp and focused skill development opportunities that address emerging skills requirements with both time and financial consideration at play. The VSA is engaging across industry and the region to understand and plan for the development of the right skill sets that will meet the needs of industry and workers. This work can leverage existing localised activity in this space, such as the Goulburn Murray Regional Prosperity Plan which details training and employment initiatives including for First Nations communities in Goulburn.		

Potential actions that can be achieved through collaboration across the region and with broader partners and stakeholders	Complexity	Impact horizon
Support and promote an attitude of lifelong learning through organisational and industry-based initiatives There is opportunity to engage and support targeted initiatives-focusing on specific age groups, cultural groups and geographies which position training and skills development as an inherent part of the life-journey and as a passport to a range of employment opportunities and career development. The VSA can work with local education providers in Goulburn, as well as the Office of the TAFE Coordination and Delivery, to deliver this response and promote initiatives to reposition the narrative surrounding continued training. Within industry, there is opportunity to establish communities of practice for entry and mid-level workers which would provide an opportunity for workers to connect, learn and upskill. Because of the interactive and collaborative nature found in many communities of practices, participants are empowered to take ownership of their learning journey. Additionally, strengthening of personal relationships is also likely to increase employee retention within a company and region once those networks are created. Buddy or mentor programs also encourage continual learning–specifically in mid-level roles as management and interpersonal skills can be further developed. Matching a junior and a manager brings the added benefit of creating channels between 'on the ground' and strategic roles.		
Collaborate across industry and education and training institutions to design and deliver industry-recognised short courses, including micro-credentials The Goulburn region has several higher and vocational education institutions that have the skills, technologies and capabilities to work collaboratively with industry. Through collaboration, they can design and deliver short courses that address niche skills gaps and, or can focus on core interpersonal, digital and clean economy related skills. In the absence of formalised micro-credentials that focus on meeting these skills requirements, there are opportunities for industry, education and training providers to work together to trial and deliver courses that help meet the needs of industry and workers.		
Review and redesign recruitment processes to prioritise core skills, alongside technical competency Numerous industry roundtable discussions highlighted a preference for job candidates with the aptitude to learn and an interest in the subject of work over pure technical skills. As a result, recruitment and application processes could reflect this preference. This could include informal interview portions of the process, relaxing qualification requirements (where appropriate), and involving operational staff in the recruitment process alongside human resources or similar teams.		

Case study: Outback Academy Australia

Outback Academy Australia is a not-for-profit, majority Aboriginal-led organisation driving inclusive approaches to agricultural and horticultural business, education, employment, health and wellbeing.

Outback Academy Australia works on the ground with Aboriginal farmers to build capacity and capabilities for alliance-based and scaled-up agricultural and horticultural regenerative farming businesses. Farmers are also building farm-based tourism activities and other related business. Farmers are building opportunities for young people and others seeking a hand-up into employment or enterprise establishment. This includes people with disability, young people in out of home care, and others who may seek a reset on farm for improved educational, employment, health, social and emotional wellbeing outcomes. Outback Academy has recently received Workforce Training and Innovation Fund (WTIF) funding to deliver the Follow the Flowers project in regional Victoria.

- Source: About us–Outback Academy Australia and Following The Flowers to First Nations-Led agriculture
- Source: Following The Flowers To First Nations-Led Agriculture | Premier of Victoria
- Source: About Us–Outback Academy Australia

'There is opportunity to engage and support targeted initiatives - focusing on specific age groups, cultural groups and geographies which position training and skills development as an inherent part of the life-journey'

Appendix A: Industry profiles

This section includes detailed industry profiles for each of the 7 major industries across the Goulburn region.

The following information is provided within each of the industry profiles:

- an overview of the industry, its composition and presence in the region
- top occupations and forecast demand
- current education and training trends
- current, emerging and future skills requirements
- opportunities to improve education, training and workforce outcomes.

While this profile acknowledges and references the broader issues, policy and funding solutions that could support the Goulburn region to address the enabling and fundamental workforce and skills requirements, the proposed responses within this report specifically focus on skills and education-related solutions within the remit of the Victorian Skills Authority and the Goulburn Regional Skills Taskforce.

Agriculture industry profile

Goulburn's agriculture industry is comprised of agriculture, horticulture, horse breeding, forestry, and fishing. For the purpose of this profile, this industry captures established and emerging activity across the region.

Agriculture is the fifth largest employing industry in Goulburn, with upward of 7,900 workers (10% of the region's workforce).[146] The industry contributed $944 million to Goulburn's local economy in 2021 (14.5% of the region's total gross value added), making it the largest contributor to Goulburn's economy.[147]

The industry's total gross value added (GVA) has fallen since 2019 at a faster rate than the average decline experienced across the industry in Victoria as a whole.[148] Despite this, there has been a 17% increase in businesses established in this industry across both primary and support service activities between 2017 to 2022 – particularly in other agricultural and fishing support services, sheep and beef cattle farming and grain farming.[149] Over the next 3 years, employment growth is projected to fall by 0.4% each year which may be explained, in part, by an increase in uptake of technology and automation in the course of production.[150] Despite this forecasted decline, the agriculture sector is likely to remain a significant part of the local economy and way of life in Goulburn with the Goulburn Regional Economic Development Strategy (REDS) identifying 'enhancing productivity and resilience in the agricultural and food product manufacturing sectors' as a key strategic direction.[151]

Figure 22: Goulburn's agriculture sector snapshot

Key statistics
Across the Agriculture industry.

7,900
Current workforce (2022)

-0.4%
Projected annual employment growth (2022–25)

10%
Of Goulburn's workforce (2022)

+330
Workers including 400 to fill retirements despite a decline of 90 new workers (2022–25)
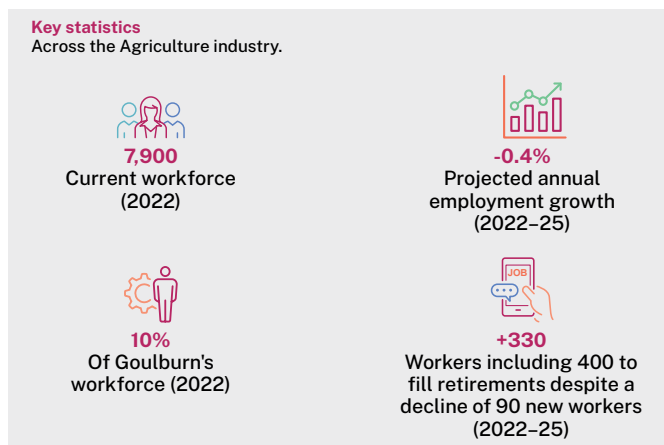
Key strengths

Goulburn benefits from favourable growing conditions and an amenable climate to support a variety of agricultural activities. A significant amount of Victorian produce is grown in the region, most prominently, 29.4% of all fruit (excluding grapes), 12.6% of dairy, 11.5% of beef and 9.7% of sheep in 2021.[152]

Primary producers in this industry vary in size with some of the larger businesses in the region jointly operating the secondary, food or beverage manufacturing component of their operations.[26] There are also numerous support service providers in the region which allow Goulburn businesses to benefit from economies of scale and access to enabling services. These include, but are not limited to, shearing, crop dusting, and harvesting services.

Collaboration and innovation

The size and economic significance of the agriculture sector in Goulburn highlights the capacity to develop and maintain partnerships between industry and research institutions. For example, the NorVicFoods facility established by The University of Melbourne with Victorian Government funding, looks to collaborate with local agri-food businesses to strengthen industry value add and develop employees.[153] Similarly, while not located in Goulburn itself, the network between the La Trobe University's AgriBio Centre for AgriBioscience and La Trobe University's Shepparton campus is likely to benefit students and researchers interested in solving key problems in this industry. There are also numerous industry events in the region, including Seymour Alternative Farming Expo which attracts around 20,000 visitors each year.[154] These opportunities for collaboration across public, private and commercial sectors of the industry, as well as across other industries including manufacturing, promote innovation, community and a vision for shared prosperity.

Developing new markets

Building upon the strong reputation and practical foundation of historically significant agricultural activity in the region, there are also emerging areas of growth that are likely to support success into the future. These include expanding activities in the medicinal cannabis space (such as Cannatrek's $160 million Shepparton production facility),[155] exploration of alternative proteins and animal-based activity including horse breeding and racing.

Key challenges and opportunity areas

Evolving operating environment and associated skills requirements

Environmental conditions influence the success of agricultural activity. While an increasing number of producers are investing in sustainable practices and leveraging technologies, the industry will remain sensitive to factors they cannot control such as extreme weather events like drought or flood, biodiversity threats or unforeseen international trade sanctions.

26 Food product manufacturing activity and data is discussed in the manufacturing industry section.

The agriculture industry comprises a broad range of occupations and skill requirements. There are shortages across most roles from management to on-the-ground workers. Industry roundtable participants reflected that attracting new workers and transitioning workers with transferrable skills into the industry may be aided by specific activities to promote the career pathways and development opportunities available in the industry. Re-thinking job design or implementing shared employment models of work to manage seasonality of demand may be another way to address labour shortages.

Skilled workers are required to flourish in the changing operating environment. Key skills and capabilities required include improved in-house capabilities using digital technologies, and online platforms to engage in marketing and recruitment activities. More broadly, this can extend to managing increasingly complex export markets that must navigate regulation, traceability, and trade policy among other considerations, as well as fulfil sustainable practice requirements.

Inter and intra-sector competition for a limited workforce pool

The agriculture industry is experiencing labour shortages across the workforce. Over the last 2 years, this has been driven, in part, by the impacts of the pandemic related border closures, restricting access to seasonal workers, including working holiday makers and gap year students.

These factors have contributed to a marked increase in vacancies with almost triple the number of advertised positions between March 2020 to March 2022.[156]

Figure 23: Agriculture sector related vacancy changes in Bendigo and the High Country[27]

Bendigo and High Country (includes Goulburn region)
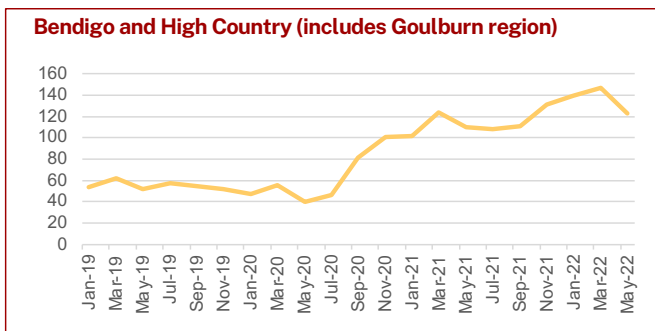
Source: LMIP IVI Vacancies Data

Includes: Farmers and Farm Managers; Skilled Animal and Horticultural Workers; Farm, Forestry and Garden Workers

Interface with other industries and emerging sectors

Agriculture in Goulburn interacts with several other industries via the production supply chain.

Table 4: Key intersections across Goulburn's agriculture sector

Food product manufacturing

There is a clear link between the primary production activities in the agriculture sector and secondary production in the food product sub-sector of manufacturing. These operations often occur as a single operation and enable produce in the Goulburn 'food bowl' to enter the market supply chain.

Hospitality and tourism

Agriculture has growing importance for the visitor economy as food-based and agri-tourism increases in popularity from a quality and sustainability point of view. there are several food-related events in the region including the tastes of Goulburn festival.

Transport and logistics

As some aspects of primary production in agriculture begin to slow, some farmers are themselves expanding their businesses by diversifying into transport and logistics operations.

Advanced manufacturing

The agriculture sector is undergoing a period of transition due to the increased use of digital and scientific technologies to aid contemporary farming practices, including sensors and augmented reality tools. Producing these aids locally would ensure they are suited for the regional growing and operational environment.

Clean energy and sustainability

Bushfire, flood, and extreme weather events are a threat to all areas of Victoria but are acutely felt in the Goulburn region. Responsible and appropriate resource management can reduce the risk of such events or minimise the impact of human activity on the land, such as through responsible water management, conservation and protection of land, controlled burns, and culling of pests. This also intersects with clean energy and the circular economy activities.

27 The Bendigo and High Country IVI region include local government areas of the Goulburn region

Recent and forecasted industry growth

Largest sub-industries by employment

The agriculture industry in Goulburn is comprised of several sub-sectors. The largest employment sub-sector is agriculture which is significantly larger than other sub-sectors.[157] Employment increased in 2019 with more than 9,000 workers employed across fruit, vegetable and fungus growing, livestock, grain and floriculture production. In 2020, this sub-sector experienced a large decrease in employment – likely due to the impacts of the pandemic on the international workforce. Despite this drop, agriculture still employed 17 times more workers than the second largest employing sub-sector of agriculture – forestry and fishing support services. This sub-sector experienced strong employment growth in each year of the period, increasing by approximately 60 workers each year.[158]

The forestry and logging workforce appears stable over this period but the Victorian Government's commitment to cease native logging by 2030 is likely to decrease employment as workers transition to new roles outside of the industry.[159] Employment in aquaculture has been facing a downward trend since 2018,[160] however, recent investment into hatcheries in the region since 2021, including the newly developed Arcadia hatchery near Shepparton, may soften the impact of this trend and positively impact fishing tourism along the Goulburn River.[161]

Figure 24: Top 4 agriculture sub-industries by employment
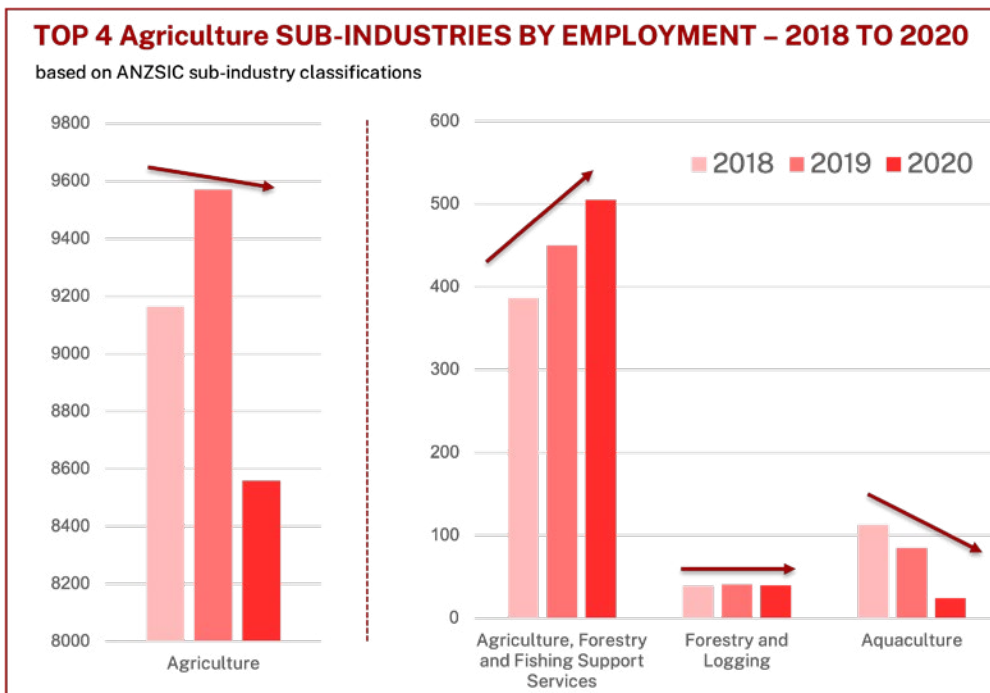
Forecasted growth by occupation

Current projections suggest the agriculture sector workforce will grow by over 330 new workers between 2022 to 2025,[162] including around 90 new workers to fill retirements. Although the projected annual employment growth rate is negative for this period (-0.4%), employment growth is likely to be understated due to its identification as a strategic focus for the region, further operational efficiencies due to growth in other enabling sectors, and continued demand for produce.

The Victorian Government announced an end to native logging by the year 2030.[163] This is likely to have a fluctuating impact on employment in the agriculture sector as the number and types of jobs needed change through each stage of the transition. Forecasted occupation growth across this sector for the top 20 occupations (as classified by the Australian Bureau of Statistics) is included below.[28]

Figure 25: Forecasted occupation growth in Goulburn's agriculture sector (2022–2025)

Forecasted occupation growth in Goulburn's agriculture industry from 2022 to 2025

Top 20 agriculture occupations	Change
Livestock Farmers	0
Crop Farmers	+10
Livestock Farm Workers	-20
Crop Farm Workers	-10
Mixed Crop and Livestock Farmers	-10
Packers	-10
Agricultural, Forestry and Horticultural Plant Operators	0
Aquaculture Farmers	0
Metal Fitters and Machinists	-10
Gardeners	0
Office Managers	0
Garden and Nursery Labourers	0
Meat, Poultry and Seafood Process Workers	0
Truck Drivers	-10
General Clerks	0
Fencers	0
Bookkeepers	-10
Inquiry Clerks	0
Metal Casting, Forging and Finishing Trades Workers	0
Shearers	0

Source: Victorian Skills Authority Employment Forecasts, April 2022

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28 This graph is not exhaustive (top 20 occupations only) and may not include other major roles and responsibilities as identified by industry.

Skills and occupation requirement

Beyond forecasted occupations based on Australian Bureau of Statistics (ABS) classifications, industry roundtable participants raised a number of skills needs and capabilities required in the next 1–2 years (immediate needs) and 3–5 years (emerging needs).

Immediate needs (1–2 years)		Emerging needs (3–5 years)
Agriculture sector		

Immediate needs (1–2 years)

Specific roles or occupations:
- entry level farmhands in dairy
- management roles in dairy
- climate-change aligned workers
- biosecurity experts
- forest management workers

Technical and digital skills:
- data management
- competency around administrative programs
- proficiency using biosecurity management programs or software
- using and maintaining various technology including robotics
- drone operators in horticulture
- AI and testing skills for the dairy industry
- general maintenance and safe use across the sector, including quad bikes or forklift
- general maintenance
- driving licence and demonstrating requisite skills, following road and other safety rules for domestic and international workers

- animal veterinarians
- natural resource management
- OH&S specialists
- truck drivers as a critical enabler of the sector
- animal husbandry

Core competencies including:
- leadership skills
- resilience building for people coming from unemployment
- ability to retain and apply transferrable skill sets that can support the broader industry
- business management skills

Other training courses required:
- first-aid training
- locally available training to improve sustainable or environmentally friendly practices (for example, irrigation, shearing, shed handing, carbon farming)
- telehandler training
- chemical-handling safety
- mental health management (from safety perspective)

Emerging needs (3–5 years)

Industry knowledge:
- awareness of climate and sustainability practices
- technical or data climate management skills
- native plant and horticulture specialisation
- quality or compliance skills
- carbon neutral processes
- access and ability to stay abreast of best of practice processes and operations

Core competencies:
- leadership skills for mid-career workers
- cross-collaboration skills to engage and network across the sector and with supermarkets

Technology:
- ability to develop, use and maintain new processes and technologies involved in new farming systems
- use of drones for planting instead of manual or individual hand planting
- mapping skills Geographic Information Systems (GIS) and Global Positioning System (GPS) in the forestry and environment sectors

Opportunities to address workforce and education outcomes

Consultation across the region identified a range of potential responses to address the current and emerging challenges facing the agriculture industry across the Goulburn region. Opportunities to address workforce challenges across the region are further detailed in the profile across 4 key response areas, including impact and complexity considerations.

Table 5: Agriculture industry proposed responses and solutions

Agriculture industry proposed responses and solutions
Proposed responses within the remit of the Victorian Skills Authority
• Implement the Clean Economy Workforce Development Strategy and support businesses in the agricultural industry to improve sustainability of operations and targets • Promotion of micro-credential courses that can meet industry and employee skill development needs • Increase awareness of agricultural career pathways in schools • Promote and advocate for increased investment in the DAMA (Designated Area Migration Agreement) visa and migration pathway into the region.
Proposed responses to be achieved through broader collaboration across the region and with broader partners and stakeholders
• Targeted engagement with students and vulnerable communities to build awareness of education and training and career pathway opportunities • Prepare prospective students to enter formal learning through non-traditional program pathways • Coordinate shared employment for seasonal workers to allow for full-time equivalent (FTE) and retention • Develop and disseminate frequent and fit-for-purpose resources for small-to-medium businesses to continue to build knowledge and keep pace with best practice processes and operations • Advocate and support the coordination of local initiatives to address transport, housing and childcare accessibility challenges that are impacting participation in education and training, employment and upskilling of current and prospective learners and workers • Shared recruitment pools across organisations where appropriate or feasible • Develop and offer cognitive learning courses • Offer localised skill sets and training • Improve timely access to education and training opportunities by reducing administrative burdens • Elevate the voices and experiences of Aboriginal and Torres Strait Island farmers with strong knowledge of native flowers, agriculture or horticulture spaces to lead and collaborate • Undertake an evaluation and refresh of individual and sector wide employment strategies, to actively become an employer of choice.

Clean energy industry profile

The clean energy industry in Goulburn comprises activity in a diverse range of sub-sectors, including community energy, renewable energy, and low emissions vehicles, and shares strong connectivity with the circular economy. The Goulburn Regional Economic Development Strategy (REDS) identifies 'strengthening renewable energy generation and the role of the circular economy' as a critical strategic direction for the region.[164]

To understand possible employment and economic value of the clean energy industry, data in this profile focuses on the electricity, gas, water and waste industry. Due to the wide reaching and evolving nature of the clean economy sector – particularly its significant intersections between manufacturing and construction industries – the data presented here is likely to paint a conservative picture about the true value and level of activity in the industry today.

There are at least 2,130 people employed across Goulburn's clean energy industry, making up around 3% of the total workforce (2021).[165] In 2021, this industry contributed at least $279.3 million to regional gross value added (GVA) in 2021.[166]

The clean energy industry is an important and growing industry for Goulburn, with a forecast annual employment growth rate of 2.2% expected over 2022 to 2025. Clean energy in Goulburn is an industry of its own market significance and specialisation but is also an enabler of growth in other industries. With population growth of around 35% expected by 2036,[167] the industry will also play an important role in providing sustainable and more affordable energy and critical infrastructure for its growing population.

Figure 26: Goulburn's clean energy snapshot

Key statistics
Across the Clean energy sector.

~2,130
Current workforce
(2022)

~2.2%
Projected annual
employment growth
(2022–25)

3%
Of Goulburn's
workforce (2022)

+180
New workers including
100 new jobs and 70 to fill
retirements (2022–25)
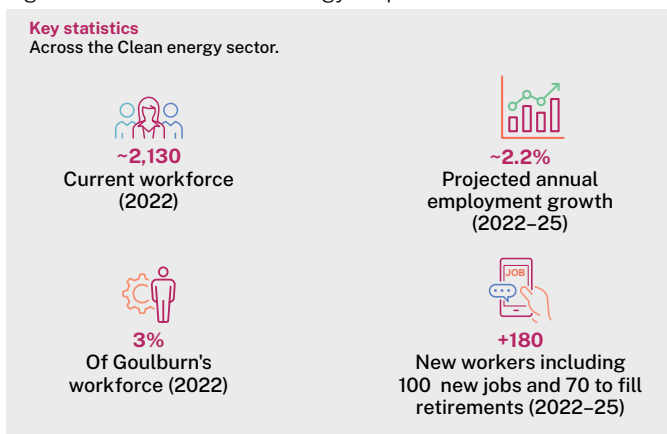
Key strengths

The Goulburn region runs through the centre of Victoria, crossing a variety of terrains and weather conditions from the peri-urban areas of the southern local government areas (LGAs) to the biodiverse Goulburn and Murray River bordered lands in the north. This variation allows the region to tap into many kinds of renewable energy sources, including solar, wind, hydro, bioenergy, and gas. This market diversification supports a robust mix of energy sources in the market and potential financial inflow streams.

Enabling mutual economic growth

The clean energy industry interacts with other industries in the local economy such as manufacturing, construction and agriculture. This combination of workers, occupations and skills provides a strong foundation for future growth in this industry as workers have a base upon which they can upskill and adapt both themselves and production, with the appropriate training supports. Additionally, growth across interconnected industries is likely to have a positive flow-on effect for other industries. This may be especially apparent in agriculture as a significant driver of the Goulburn economy. Access to cheaper, reliable and quality renewable energy is likely to increase efficiency of production and, in turn, generate further activities in related industries such as transportation, food manufacturing and hospitality activities.

Leveraging community momentum

In addition to these material advantages, clean energy in Goulburn also benefits from a largely engaged, motivated and passionate community, business, and local government base. The region is one of the largest community energy group areas reflecting the appetite for sustainability, innovation, and collaboration. Taskforce members noted that much of the current activity in this sector has been driven by local businesses and individuals motivated by the commercial imperative to develop the environmental, social and governance (ESG) proposition and increase efficiency of operations. Further investment and government contribution can aid collaboration, coordination and scaling of projects.

Goulburn benefits from its inclusion in the Central North Renewable Energy Zone centred around Shepparton, as well other Victorian Government funding initiatives such as the Hume Hydrogen Highway.[168] A receptive social base is likely to make it easier to progress investment, policy and regulatory changes, and risk management which can help industry growth.

Key challenges and opportunity areas

As an emerging industry, a key challenge of developing the workforce and industry more broadly is the rapid rate of industrial evolution within the region and internationally. Utilising, developing, and maintaining new technologies specific to clean energy alongside existing industry 4.0 capabilities requires a continuous learning mindset to be able to stay abreast of changing skills and capability requirements. Industry roundtable participants reflected that the rate of industry advancement occurs so quickly that there is difficulty in ensuring training courses remain relevant for industry needs. The use of micro-credential courses and specialised workshops, such as how to adapt existing technologies to the local context, were identified as potential strategies to minimise this challenge. Furthermore, leveraging the 'environmentally friendly' purpose of this industry is another way of attracting prospective or transitioning workers.

While there is already considerable ESG activity in the region, greater support is needed to uplift the capabilities of smaller businesses in this space. Taskforce members reflected that smaller businesses are likely to already engage in such activities but currently lack the expertise to apply and promote these capabilities according to the reportable framework. Additionally, businesses whose operations are more gas intensive or that may take longer to transition to electricity will require greater training support.

Reducing uncertainty

Industry roundtable participants noted that clean energy exists in a particularly uncertain operating environment due to lagging regulation or policy that would provide financial and industry guidance and confidence, particularly due to the typically larger scale of investments required in the industry. Each of these factors can be a barrier to increased activity in this industry. Developing models and frameworks for risk, information and worker sharing across the local and international market may be one way to mitigate this concern. Given that greater sustainability and a reduction in carbon emissions leads to positive public externalities, there may also be a role for government to aid in this coordination. Coordination is also likely to increase visibility of opportunities across the sector including gaps where training can intervene to support upskilling or retraining of workers.

Developing the workforce

While online job vacancies cannot provide the full picture of what is occurring in the region, they do highlight a trend of increasing vacancies in the industry. Online job advertisements were almost 4 times the number in May 2022 than in May 2020.[169] The graph at Figure 27 captures a small subsection of related vacancies in the clean energy industry.

Figure 27: Clean Energy vacancy changes in Goulburn
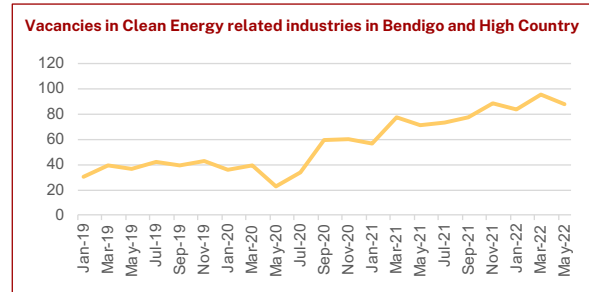
Source: LMIP IVI Vacancies Data

Includes: Machine and Stationary Plant Operators, and Electrotechnology and telecommunications Trades Workers

Supporting workforce transition in other industries

While the employment, output and economic value of clean energy is expected to grow over the next 3 years, this will also have an impact on employment in other industries such as nonelectric car manufacturers or non-renewable energy generators. There is an opportunity for workforce planning within clean energy itself to consider how to support a transition from other fields. This may include upskilling, mentoring or graduated retirement plans to ensure that the relevant industry experience and knowledge Is retained and passed through to new workers. Activities such as this are also likely to enable the Goulburn region to become a net exporter of research and development, to develop, maintain and tailor international technology to local contexts.

Interface with other industries and emerging sectors

The clean energy sector is a key component of activity in other industries. Recognising the full value of clean energy in the Goulburn economy from a public, domestic, and commercial perspective provides a more accurate picture of the skills and workforce needs of the region. Changes, challenges, and opportunities have flow on effects across the region.

Table 6: Key intersections across Goulburn's clean energy sector

Construction

Buildings can be designed or retrofitted with eco-friendly and energy saving design to reduce the carbon footprint of both public and private buildings. It is likely that there will be increased use of renewable energies, such as wind and solar, as demand for construction continues to rise. Clean energy activities also often require infrastructure on a large scale to commence, such as construction of solar farms.

Specialty retail

Utilising the principles of the circular economy to reduce, reuse, recycle and repurpose, there is opportunity for waste to become new specialty products across all sectors in the economy.

Manufacturing

There is opportunity to produce key components of clean energy activities, such as parts for wind turbines, within the region. The transition to new energy sources using existing and new technologies is likely to benefit from collaboration across industries, for example, petrol car companies in collaboration with electric vehicle workers.

Agriculture

Access to reliable and renewable energy through clean energy sources can improve efficiency of production during agricultural activities as the supply chain is secure and variable costs are directly controlled by businesses.

Public administration

Local councils, other levels of government and utility providers have a responsibility to provide access to quality and timely essential services, including energy, gas, water, and waste services. Operators in this space include Goulburn Valley and Goulburn-Murray Water.

Recent and forecasted industry growth

Largest sub-industries by employment

Due to the emerging and interconnected nature of the clean energy industry and the lack of a comprehensive industry classification for this industry, employment data is based on the electricity, gas, water and waste (EGWW) industry classification only.

Key sub-industries within EGWW include water supply, sewerage and drainage services; waste collection, treatment and disposal services, electricity supply and gas supply.[170] Water and waste related services were the largest employing sub-sectors in Goulburn over the 3-year period (2018–2020) which is consistent with the growing population and large agricultural focus of productive land in the region.

While there was a decline in the employment share of electricity supply in 2020, waste and gas supply services have been trending upward. Employment in the clean energy space is likely to be larger than these figures show due to relevant workers potentially being captured in other industry data, such as manufacturing and construction.

Figure 28: Top clean energy sub-industries by employment
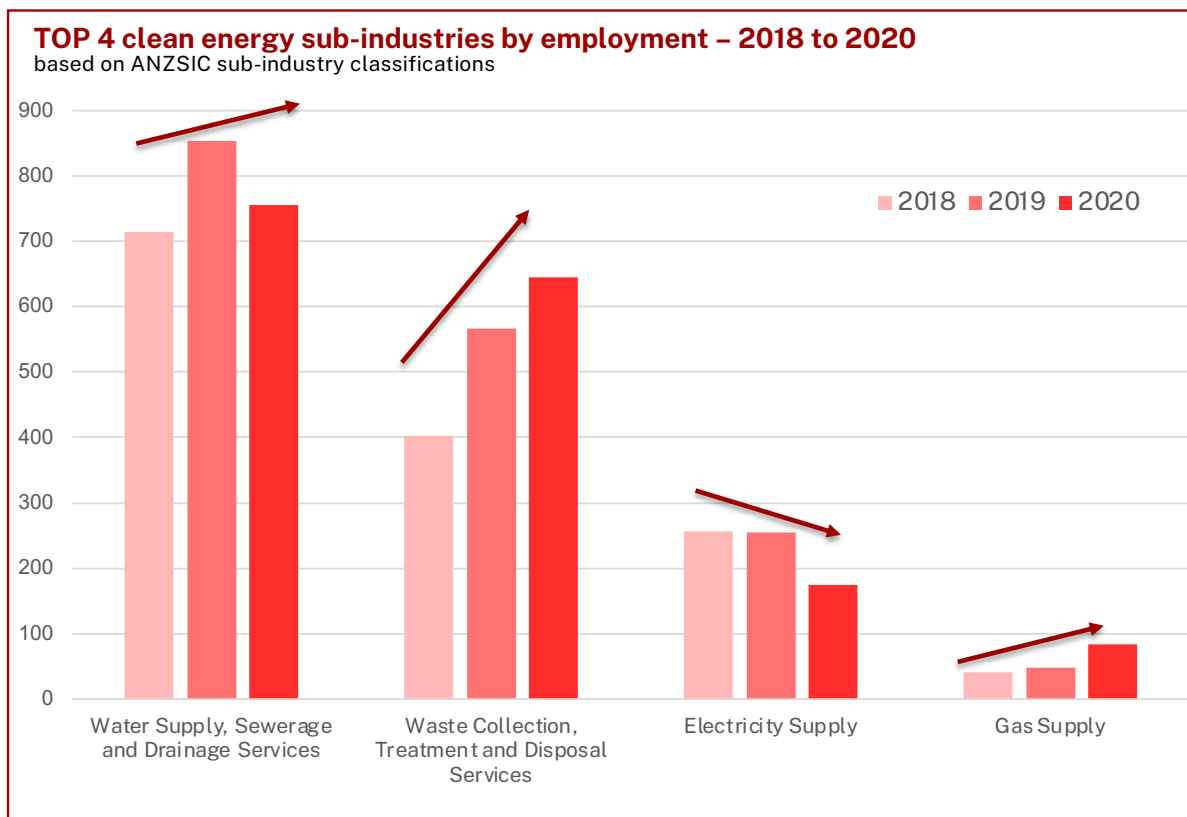
TOP 4 clean energy sub-industries by employment – 2018 to 2020
based on ANZSIC sub-industry classifications

Source: NIEIR Goulburn Regional Data, 2021

Forecasted growth by occupation

Forecasts suggest that at least 180 new workers[29] will be required over the next 3 years to meet demand[171] with around 70 of these needed to fill retirements. Noting the key manufacturing and construction related workforces are also expected to experience average annual employment growth rates of 0.6% and 1.9% per year respectively,[172] it is likely that in the clean energy industry, this number will be higher than projected in coming years due to continued demand.

Industry roundtable and taskforce members raised the need for adaptability, transferability and agility in skilling and retaining workers given the emerging and rapidly evolving nature of the sector. Demand for workers may be further impacted by technological advancement and uptake of technology in boosting efficiency.

Forecasted occupation growth across this sector for the top 20 occupations (as classified by the Australian Bureau of Statistics) is included below.[30] The evolving nature of occupations, skills and workers required across the industry is likely to shift the top growth occupations in the next 3 to 5 years.

Figure 29: Forecasted occupation growth in Goulburn's clean energy sector (2022–2025)

Forecasted occupation growth in Goulburn's clean energy industry from 2022 to 2025

Top 20 Clean energy occupations	Change
Other Stationary Plant Operators	-10
Database and Systems Administrators, and ICT Security Specialists	+20
Truck Drivers	<10
Building and Plumbing Labourers	<10
Electrical Distribution Trades Workers	<10
Management and Organisation Analysts	+10
Other Specialist Managers	+10
Contract, Program and Project Administrators	<10
Construction Managers	<10
General Managers	<10
Finance Managers	<10
Civil Engineering Professionals	<10
Payroll Clerks	<10
Science Technicians	<10
ICT Support Technicians	<10
Advertising and Sales Managers	<10
Storepersons	<10
Other Miscellaneous Labourers	<10
Other Building and Engineering Technicians	<10
Advertising and Marketing Professionals	<10

Source: Victorian Skills Authority Employment Forecasts, April 2022

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29 Note that this does not account for the current worker shortages experienced across the sector.

30 This graph is not exhaustive (top 20 occupations only) and may not include other major roles and responsibilities as identified by industry.

Note that this does not account for the current worker shortages experienced across the sector.

Skills and occupation requirements

Beyond forecasted occupations based on Australian Bureau of Statistics (ABS) classifications, industry roundtable participants raised a number of skills needs and capabilities required in the next 1–2 years (immediate needs) and 3–5 years (emerging needs).

	Immediate needs (1–2 years)		Emerging needs (3–5 years)
Clean energy	**Specific roles or occupations:** • change managers • community engagement • solar and clean hydrogen experts • auditing and account professionals • supply chain optimisation • carbon accountants • engineers • secondary school teachers with technical expertise • workers adept at using, translating and maintaining bespoke equipment for local context • building design specialists to capture ecologically sustainable development	• workforce planners • servicing and maintaining equipment, for example, electric vehicles (EVs) • asset managers • capability planning • architects • contractors **Technical and digital skills:** • data analysts • industry 4.0 literacy **Core competencies including:** • communication • customer service skills • attitude for learning • leadership • collaborative mindset • entrepreneurial capacity	• Workers experienced in zero emission vehicles (ZEVs) maintenance, including chargers and battery recycling • Circular economy activity • Solar panel recyclers • Workers with expertise in agriculture • Innovative designers, engineers and manufacturers to repurpose or dispose of superseded fossil fuel appliances – internal combustion engines, gas heaters etcetera • Mentors • Business development skills and big picture thinkers, for example, capacity to evaluate performance, report back on project learnings

Opportunities to address workforce and education outcomes

Consultation across the region identified a range of potential responses to address the current and emerging challenges facing the clean energy industry across the Goulburn region. Opportunities to address workforce challenges across the region are further detailed in the profile across 4 key response areas, including impact and complexity considerations.

Table 7: Clean energy proposed responses and solutions

Clean energy proposed responses and solutions
Proposed responses within the remit of the Victorian Skills Authority
• Implement the Clean Economy Workforce Development Strategy • Support the Senior Secondary Pathways reform agenda through facilitation of local opportunities to improve vocational education and training (VET) within the region • Support systemic change that enhances accessibility to education and training offerings aligned to Goulburn learner and industry needs • Provision of data and insights to support the Goulburn region's workforce planning • Publication of industry data and trends for current and prospective students, parents, and career counsellors • Engage in future skill requirement planning and mapping • Advocate for the development of regulatory frameworks and social buy in that sees carbon emitting industries investing in relevant higher education and community led projects • Support strategic planning partnerships of varying sizes.
Proposed responses to be achieved through broader collaboration across the region and with broader partners and stakeholders
• Prepare prospective students to enter formal learning through non-traditional program pathways • Facilitate peer learning and cross-business mentoring • Highlight the opportunities and benefits of lifelong learning • Promote a culture of learning through establishing communities of practice around different industries, technological innovations or skill level cohorts • Support and encourage the trades to adapt and retrofit international technology to local conditions or requirements • Partner together as an industry and government to create the frameworks, funding and space to implement trials around new initiatives to better understand and uncover skill needs • Offer opportunities to earn and learn simultaneously • Identify and articulate growing circular economy opportunities in region through regional strategic planning and assessment of investment pathways • Promote the economic value-add of clean energy sector • Proactively identify, plan and transition the workforce who are likely to be impacted by renewable energy • Support and prioritise retraining and upskilling of locals to meet the emerging and future sector needs • Seek out and centre Indigenous expertise in environment and management • Understand and address the social barriers to training such as role modelling, confidence, awareness and cost • Provide more opportunities for women in STEM fields to develop and flourish.

'The clean energy industry is an important and growing industry for Goulburn, with a forecast annual employment growth rate of 2.2% expected over 2022 to 2025. Clean energy in Goulburn is an industry of its own market significance and specialisation but is also an enabler of growth in other industries. '

Construction and housing industry profile

Construction and housing in Goulburn refers to residential construction, civil construction and infrastructure, and planning and surveying activities.[31] The inclusion of housing draws attention to the role of the industry in meeting increasing demand for appropriate and affordable housing and achieving socioeconomic outcomes within the region.

The construction and housing workforce is comprised of around 8,930 workers, making it the fourth largest industry in Goulburn (2022).[173] Similarly, it is the fourth largest contributor to local gross value added (GVA) generating $685 million or around 10.5% in 2021.[174] Forecasts project an annual employment growth rate of 1.9% over 2022 to 2025 which is the fifth fastest level of growth across Goulburn's 7 key industries.[175]

Regional Skills Taskforce members reflected that demand necessitated by the recent weather extremes and flooding in 2022, alongside high levels of homelessness and existing housing accessibility and affordability challenges, may understate this figure.

Figure 30: Goulburn's construction and housing Industry snapshot

Key statistics
Across the Construction and housing sector.

~8,930
Current workforce (2022)

1.9%
Projected annual employment growth (2022–25)

11%
Of Goulburn's workforce (2022)

+830
New workers including 450 new jobs and 370 to fill retirements (2022–25)
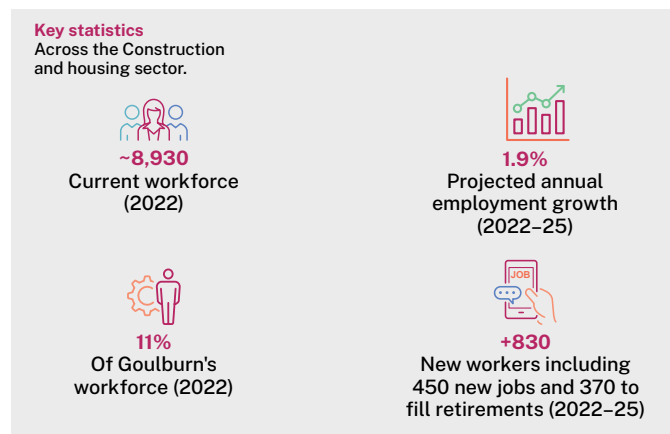
Key strengths

Goulburn continues to establish itself as a key growth corridor of the state with several arterial roads, freight tracks and airports within the region which suggests it is well positioned to take advantage of ongoing demand for construction across the region. Recent investment and works across the state, including the North East Link, provide increased opportunities for further training and employment.[176]

The Goulburn region has an employment specialisation in heavy and civil engineering construction, employing almost twice as many workers in the region than the state average and employment growing 40 percentage points faster than the Victorian average.[177] This is partially due to the presence of major road, rail, industry and irrigation infrastructure upgrades throughout the region, and demonstrates an underlying employment strength in specialised construction.[178]

Construction interconnects with several other key industries, including clean energy, with critical infrastructure needed to set up operations, health care and community services (HCCS) through the construction of hospitals and other community buildings such as the Goulburn Valley Health redevelopment project, and the visitor economy. Strong demand is not limited to public works with some southern Goulburn local government areas (LGAs) expected to experience exceptionally high population growth over the next 15 years. The Mitchell Shire population is expected to increase by more than 90% by 2036, with highlighting the need for significant residential construction and enabling community infrastructure to be built.[179]

Education and training in construction and housing is delivered by GOTAFE, with campuses in Shepparton, Seymour and Wallan delivering training pathways into the industry. Additionally, Wodonga TAFE administers the Driver Education Centre of Australia in Shepparton to provide a variety of vehicle training, essential to construction work. As training is largely limited to the Mitchell and Greater Shepparton LGAs, accessibility to education for those in acceptable proximity is likely to encourage greater uptake of training in relevant construction related courses.

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31 Note that while services such as planning, architecutre and design, and engineering and technical services are included within the infrastructure industry for the purpose of this profile, from an employment data perspective, employment in these services is captured in the professional, scientific and technical services industry classification. the business, professional and public administration services industry was not identified as one of Goulburn's 7 key industries.

Key challenges and opportunity areas

The benefits of strong demand for large public works across the state can increase competition for labour, with local construction businesses in Goulburn finding it difficult to match salary or lifestyle factors that may be available in metropolitan areas due to economies of scale. While movement to urban areas may benefit individual workers due to higher salaries, it may risk the long-term retention of skilled workers in the region. Industry roundtable participants noted that severe labour shortages can risk critical skills and capability areas being entirely lost in a regional area due to the inability to find apprentices and, or qualified supervisors. Strengthening the benefits of living and working in Goulburn was identified as one way to improve attraction and retention of workers in the industry and the region more broadly.

Inter and intra-sector competition for a limited workforce pool

Online job advertisements within the region have more than doubled in the past 2 years (May 2020 to May 2022).[180] Coupled with a strong pipeline of public, residential and commercial construction, the construction industry will remain a significant part of the Goulburn economy. Noting 85% of construction workers are male,[181] particular focus on how to engage women in the diverse range of jobs across the sector is paramount to the sustainability of the industry.

Figure 31: Construction vacancy changes in Goulburn

Vacancies in construction related industries in Bendigo and High Country (including Goulburn region)
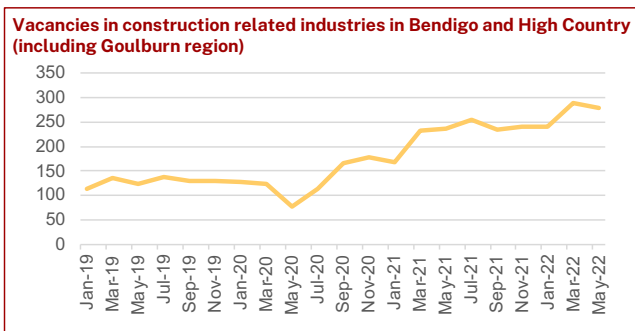
Source: LMIP IVI Vacancies Data

Includes: Construction, Production and Distribution Managers; Engineers; Engineering, ICT and Science Technicians; Construction Trades Workers construction and Mining Labourers

Connecting beyond the existing workforce

Industry roundtable participants reflected on the growing importance of workers in other industries to be able to develop competencies in 'speaking' the language of construction and infrastructure to streamline the building process. For example, fostering workers within health care and community services who understand project management for construction. This may also strengthen business relationships and increase visibility of the industry across the broader economy.

There is also opportunity to better engage Aboriginal workers and learners in the region through frameworks such as the Goulburn Murray Shared Prosperity Plan from the Kaiela Institute which centres on First Nations peoples' self-determination, design and opportunity as a way to achieve social and economic equity.[182] Current projects in this program include building the Munarra Centre for Regional Excellence.[183] In partnership with Rumbalara Football Netball club – an Aboriginal community run sporting club – the project both engages First Nations workers in the course of construction, and provides a welcoming hub for community engagement, cultural events and continued learning which can feed into employment pathways.[184]

Interface with other industries and emerging sectors

As the construction and housing sector focuses on the built environment, the sector interfaces with several other major industries. Beyond the act of physical construction alone, this industry can enable greater social opportunity or cohesion, economic activity and attraction to the region.

Table 8: Key intersections across Goulburn's construction and housing industry

| **Sustainable design** |
| --- |
| Energy efficient design and retrofitting are transformed for clean energy purposes. New buildings can be designed with energy use and renewable energies in mind to reduce their carbon impact. Similarly, retrofitting older structures or transforming manufacturing facilities can assist advancements in the renewable and clean energy sector. |
| **Safe physical environment through construction** |
| The quality of the built environment can determine mental and physical health. Access to secure and affordable housing, high quality health care infrastructure and services are a key determinant of mental health given the significance of environmental safety for individual and community wellbeing. Shepparton has one of the highest rates of homelessness in regional Victoria and this has a flow on effect on people to engage with work, training and the broader community.[185] It is likely that significant construction works will also need to take place as part of the recovery plan for the region's flooding experiences in late 2022. |
| **Professional and technical services** |
| The Australian Bureau of Statistics classifies architectural, engineering and technical services as part of the professional and technical services sector. These services are essential to the safe delivery of construction work in the region. |
| **Tourism** |
| Investment into infrastructure and housing, as well as existing projects, will likely increase construction activity, and promote the region as an ideal place to work, visit and live. |

Recent and forecasted industry growth

Largest sub-industries by employment

Key sub-industries within Goulburn's construction and housing industry include construction services, building construction and heavy and civil engineering construction. These sectors experienced continuing employment growth between 2018 and 2020 due to the significant demand for construction across the region and the state more broadly.[186]

This sub-sector includes development and site preparation, building structure, building installation, building completion and other construction services.[32] The building construction sub-sector refers to both residential and non-residential construction.

Figure 32: Top 3 construction sub-industries by employment

Top 3 construction sub-industries by employment – 2018 to 2020
based on ANZSIC sub-industry classifications
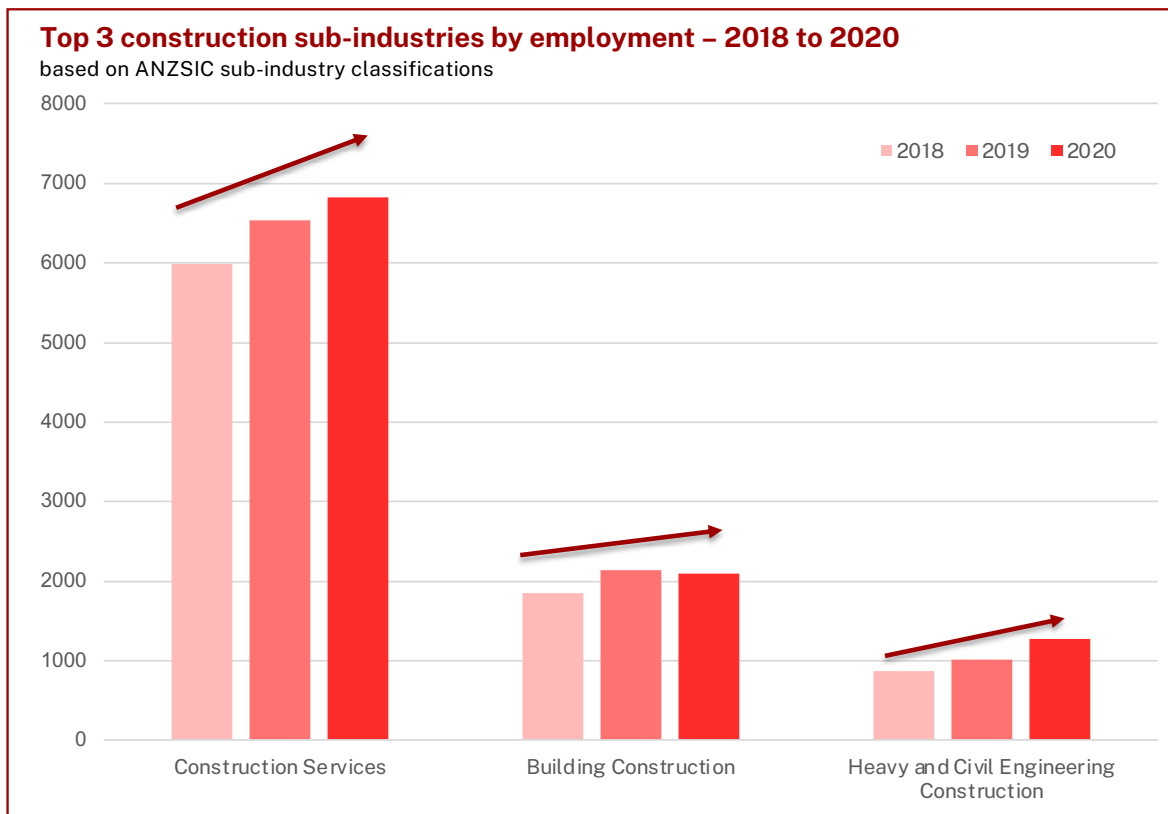
Source: NIEIR Goulburn Regional Data, 2020

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32 Other construction services include landscape and hire of construction machinery.

Forecasted growth by occupation

With major population and infrastructure growth projected, it is likely that construction and housing related jobs will also increase to meet this demand.

Over the next 3 years, at least 830 workers will be required with 450 new workers needed to fulfil demand, and around 370 workers to fill expected retirements.[187] Forecasted occupation growth for the top 20 occupations as classified by the Australian Bureau of Statistics (ABS) is included below.[33]

Figure 33: Forecasted occupation growth in Goulburn's construction and housing industry (2022–2025)

Forecasted occupation growth in Goulburn's construction industry from 2022 to 2025

Top 20 construction occupations	Change
Electricians	+60
Construction Managers	+50
Plumbers	+30
Carpenters and Joiners	+10
Earthmoving Plant Operators	+10
Concreters	+10
Building and Plumbing Labourers	+20
Painting Trades Workers	0
Structural Steel and Welding Trades Workers	+20
Truck Drivers	+10
Architectural, Building and Surveying Technicians	+20
Office Managers	+10
Commercial Cleaners	+10
Gardeners	+10
General Clerks	+20
Metal Fitters and Machinists	+10
Plasterers	0
Fencers	+10
Airconditioning and Refrigeration Mechanics	+10
Handypersons	0

Source: Victorian Skills Authority Employment Forecasts, April 2022

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33 This graph is not exhaustive (top 20 occupations only) and may not include other major roles and responsibilities as identified by industry.

Skills and occupation requirements

Beyond forecasted occupations based on ABS classifications, industry roundtable participants raised a number of skills needs and capabilities required in the next 1–2 years (immediate needs) and 3–5 years (emerging needs).

	Immediate needs (1–2 years)		Emerging needs (3–5 years)
Construction and housing	**Specific role or occupations:** · metal workers · bricklayers · tilers · plumbers · roofers · refrigeration mechanics · supervisors · project administrators · hr managers · accredited skill sets · electricians · planners	Core competencies including attitude and aptitude to learn such as: · resilience · personality matching · communication or relationship building with different groups for example, youth **Technical and digital skills:** · digital literacy · basic literacy and numeracy · cyber security professionals	· Job ready core competencies including accountability, time management, contingency, communication, resilience, teamwork · Middle to senior level staff in roles such as: · Building surveyors · Inspectors · Planners · Civil engineers · Project managers · Staff with capacity and experience to mentor cadets · Engineers · Drone controllers · Stone masons · Workers with expertise in modular or prefabricated construction and materials · Materials specialists

Opportunities to address workforce and education outcomes

Consultation across the region identified a range of potential responses to address the current and emerging challenges facing the construction and housing industry across the Goulburn region. Opportunities to address workforce challenges across the region are further detailed in the profile across 4 key response areas, including impact and complexity considerations.

Table 9: Construction and housing industry proposed responses and solutions

Construction and housing industry proposed responses and solutions
Proposed responses within the remit of the Victorian Skills Authority
• Increase access and provision of support for Aboriginal people to enter education, training and employment through working closely with Traditional Owners • Promotion of micro-credential courses that can meet industry and employee skill development needs • Work with the VET Development Centre (VDC) and industry experts to better support teacher development • Provide local insights to support the development of the plan • Actively support the Shepparton Education Plan • Undertake explorative research to better understand the data, trends and factors affecting training participation • Engage students in the area by investing in a local technical school • Ensure that any new formal and parallel training is certified and accepted by industry • Advocate for the streamlining and ease of migration processes.
Proposed responses to be achieved through broader collaboration across the region and with broader partners and stakeholders
• Review and redesign recruitment processes to prioritise core skills, alongside technical competency • Facilitate a smooth flow of teachers between industry and training • Provide wider access to existing industry-specific training materials and facilities to prepare students and prospective employees for employment • Support the Goulburn Tourism Partnership to accelerate planning and delivery of a more coordinated tourism plan for Goulburn which may include investment into accommodation, transport infrastructure and attractions • Advocate for simplifying participation pathways for mature and retiring workers in transition across industries • Engage in activity mapping across the sector to understand the scale, scope and opportunities in Goulburn • Develop a transferable framework for employment that businesses can use to establish cadetships • Actively prepare for future demand and diversity needs through engagement with public and council • Deliberately design activities to retain, not just recruit, workers • Create training programs that allow concurrent work opportunities ('earn and learn' models) • Explore models of flexible working in the sector to better support non-traditional cohort participation and retention • Establish a cross-industry regional mentoring program to support entry level workers.

Education and training industry profile

Education and training in Goulburn includes early childhood services, primary and secondary schooling, vocational training, higher education, and adult and community education. The industry plays a unique role in the region as the sixth largest employing industry, and as the direct link to upskilling and preparing the workforce for employment across the broader economy.

In 2022, there are 6,810 workers in the education and training industry.[188] This 8% of the total Goulburn workforce contributed $418.5 million or around 6.4% of the region's gross value added (GVA) in 2021.[189] Forecasts suggest that employment in the industry will continue to grow 2.3%, on average, annually over the next 3 years.[190] This is consistent with expected high levels of population growth in the region, as education and training is an essential component of enabling social and economic engagement.

The Shepparton area plays a key role in enabling the education and training sector, now and into the future. The Goulburn Regional Economic Development Strategy (REDS) highlights the opportunity to 'leverage the role of Shepparton as the regional capital and industry hub' due to its meeting place for training institutions, industry activity and local and state government.[191]

Figure 34: Goulburn's education and training industry snapshot

Key statistics
Across the Education and training sector.

~6,810
Current workforce
(2022)

2.3%
Projected annual
employment growth
(2022–25)

8%
Of Goulburn's
workforce (2022)

+850
New workers including
520 new jobs and 330 to
fill retirements (2022–25)
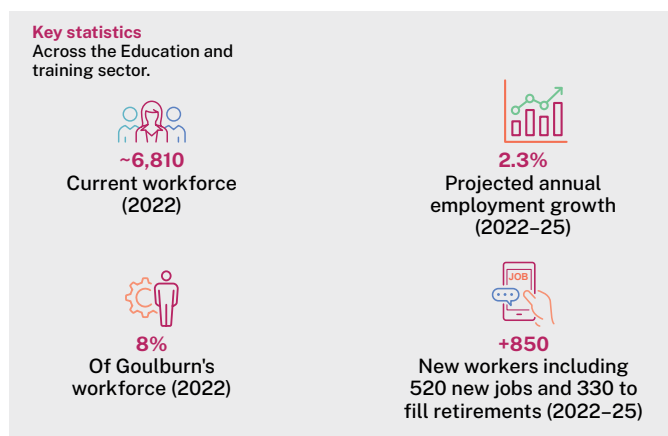
Key strengths

There are almost 17,000 students across approximately 83 primary and secondary schools in the region,[192] alongside La Trobe University, several University of Melbourne campuses, GOTAFE and Wodonga TAFE Campus. Many of these institutions have specialisations across medical, agriculture and veterinary studies and heavy vehicle safety which reflect the importance of the related key industries across Goulburn.

Outside of traditional post-school learning opportunities, there are numerous adult and community education facilities that offer life skills, digital and technology skills and special interest courses. This includes through local neighbourhood houses and programs such as the local learning and employment network (LLEN). Registered training organisations (RTOs) are found across the region and support students into pathways into trades. The value of adult and community further education (ACFE) extends beyond the direct ability of a prospective worker to develop technical skills for employment. The often less formal setting can help develop the confidence needed to engage in further study among discoursed cohorts, and regular social interaction and community engagement that promotes good mental health, social and economic prosperity.

The education and training industry benefits from high levels of industry activity in areas of comparative advantage such as primary and secondary production in the agriculture industry. Proximity to industry provides opportunities for the development of engaging onsite learning programs, as well as 'earn and learn' initiatives that can help strengthen the future pipeline of workers. There is potential for the uptake of programs centred around other industries such as Head Start in apprenticed trades around the region.

Figure 35: Higher education and training institutions and facilities across the Goulburn region

Post Secondary and Tertiary Institutions in the Goulburn Region [2]

La Trobe University
Melbourne University Shepparton
Melbourne University Dookie
Wodonga TAFE - DECA
GOTAFE Shepparton
GOTAFE Seymour
GOTAFE Wallan
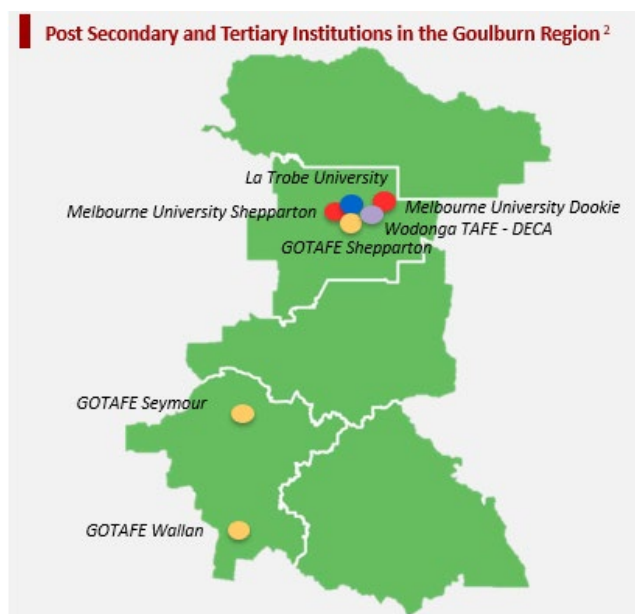
Key challenges and opportunity areas

While there are several established training options within the Greater Shepparton area, there are limited facilities across the rest of the region. Learners outside of the Shepparton area experience barriers to continued training and education given location and transport limitations. Fewer people in Goulburn have post-school qualifications than in the rest of regional Victoria with 13.5% obtaining a bachelor degree and above compared to 17.2%, while 54% of people have no post-school qualifications compared to 51% and 43% in Greater Melbourne.[193] A lower skilled or unengaged population has implications on the productivity and social engagement of the entire community.

From a supply perspective, there is a significant shortage of teachers and trainers across most areas of education and training. Contributing factors include difficulties in transitioning from industry to training roles and rapid population growth increasing demand for services.

Managing a limited workforce pool

The pandemic has created opportunities to rethink the design and delivery of education and training, including virtual and hybrid delivery. This creates greater access to courses for current and prospective learners outside the Shepparton region.

A shift in teaching and training methods is likely to help teachers and trainers to support and understand complex student needs, effectively manage a hybrid online and face-to-face teaching environment, as well as remain up to date with industry advancements to connect students to relevant opportunities. Vacancies therefore represent a need for skilled and experienced workers across several key dimensions.

Vacancy trends across the education and training sector have continued to increase. There are clear trends related to recruitment freezes during the beginning of the pandemic in mid-2020 and ongoing increases since that time.[194] It may also be useful to consider other ways that vacancies are communicated to staff that may not be online and are therefore obscured.

Figure 36: Education and training vacancy changes in Goulburn

Vacancies in Bendigo and High Country (including Goulburn regions)
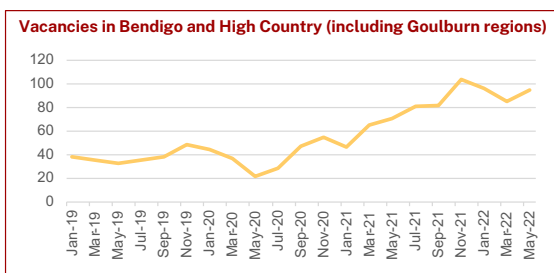
Source: LMIP IVI Vacancies Data. Includes: Education Professionals; Health, Education, ICT and Other Managers

From the pipeline perspective, the recent changes to the Year 12 certificates of completion – VCE and VCAL into a singular award – are likely to improve uptake of vocational studies during and after secondary school as some of the stigma around VCAL as a 'secondary' option is minimised, requiring more skilled workers to support increased demand.

Serving the needs of the region

The Goulburn economy is diverse with pockets of activity spread across the region. There is opportunity for the education and training industry to better engage potential learners through development of programs and ways of training that are tailored to the needs of prospective workers. For example, ensuring that courses at the Puckapunyal base are congruent with external programs or are timely and stackable to encourage uptake during a limited period of time as residents are often transient through the area. Ensuring that training facilities are industry standard and meet user needs are key components of facilitating continual learning. Similarly, supporting disengaged students back into study as a skill is another way to encourage continuation of learning and training. The Gaining the Edge program through GOTAFE is one example of this, with modules including learning to learn and digital literacy.[195]

Interface with other industries and emerging sectors

The education and training industry is a key factor of broader social and economic prosperity of the Goulburn region.

Table 10: Key intersections across Goulburn's education and training industry

Digital technologies
As the future of work moves toward a more digital economy, it is necessary for teachers, trainers and information services to also have digital capabilities to support their own and student development.
Preschool and school education
Early childhood education is a crucial time in a child's life where development occurs at a rapid rate cognitively, emotionally and physically.
Experiences from childhood in each of these spheres can also have an impact on a person's health as an adult, for example, a traumatic experience or undiagnosed learning difficulty can affect a person's mental health.
Community services
Disruptions to formal schooling may be due to a change in social or economic circumstance, interaction with the justice system or other challenges as noted in the health care and community services section. Disability may also impact access to the necessary education supports.

Recent and forecasted industry growth

Largest sub-industries by employment

Key sub-industries within Goulburn's education and training sector are preschool and school education, tertiary education, adult, community and other education and library and other information services.[34] only the tertiary education sub-sector has seen a decline in employment over the 2018 to 2020 period which may be a result of changes in the broader higher education operating environment in both Goulburn and the state more broadly, including industrial conditions and factors affecting trainer shortages.[196]

The adult and community further education (ACFE) and library sub-sectors had the largest relative increase in employment (34% and more than double respectively) in 2020 likely showing the importance of education in providing digital and social connectivity in the community.[197]

Figure 37: Top 4 education and training sub-industries by employment

Top 4 education & training sub-industries by employment – 2018 to 2020

based on ANZSIC sub-industry classifications
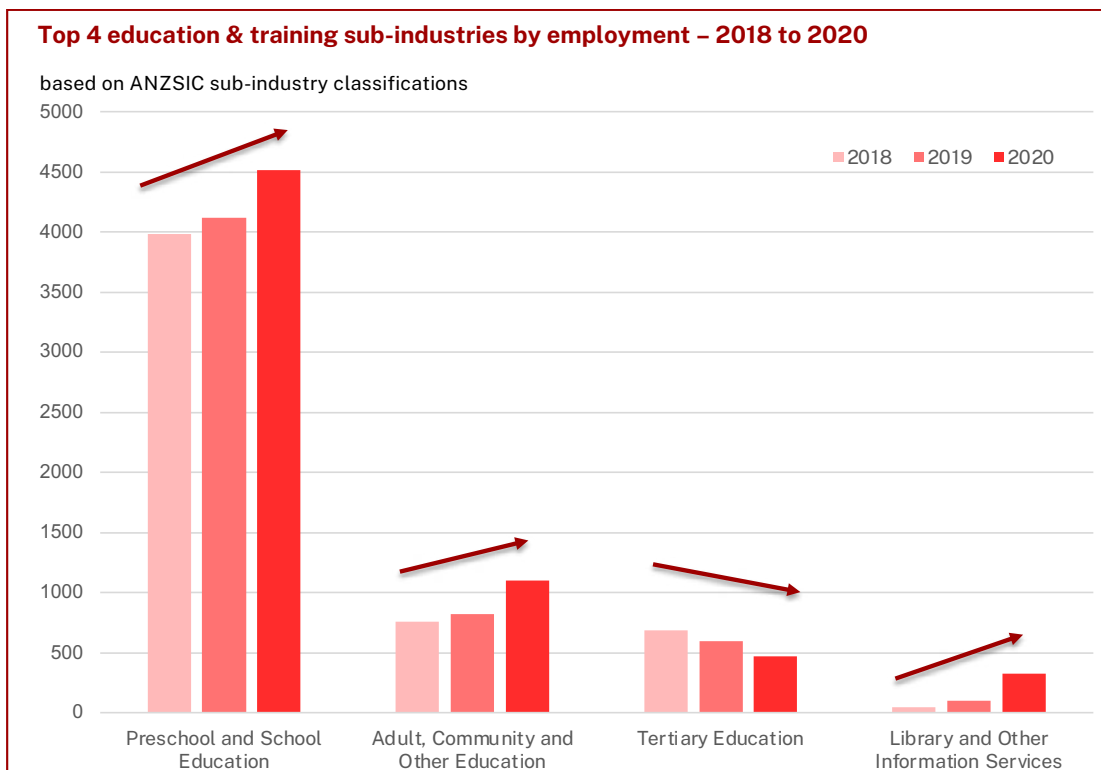
Source: NIEIR Goulburn Regional Data, 2021

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34 The tertiary education sub-sector includes technical and vocational education and training, and higher education.

Forecasted growth by occupation

Estimates suggest that over 850 new workers are required over the period 2022 to 2025.[198] While it is projected that 330 workers will be required to fill retirements over the period 2022 to 2025,[199] these figures are unlikely to account for existing shortages and the impacts of secondary school educational reforms and workplace agreements that will increase demands on teacher numbers, particularly vocational education and training (VET) teachers as part of the new Senior Secondary Vocational Major. Similarly, the recent kindergarten reforms will also increase pressure on early childhood (pre-primary school) teachers.

Yet, even without these changes considered, growth due to new demand is expected to be high with around 520 additional workers forecasted over this period.

Forecasted occupation growth across this sector for the top 20 occupations as classified by the Australian Bureau of Statistics is included below.[35]

Figure 38: Forecasted occupation growth in Goulburn's education and training sector (2022–2025)
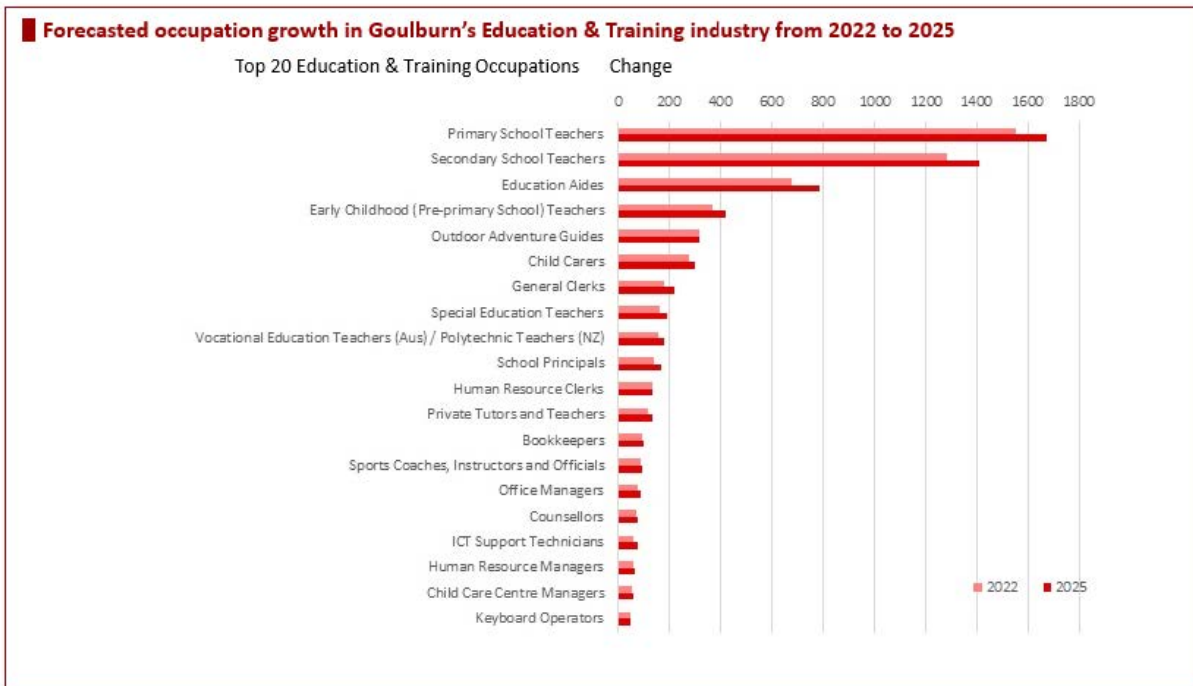
Source: Victorian Skills Authority Employment Forecasts, April 2022

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35 This graph is not exhaustive (top 20 occupations only) and may not include other major roles and responsibilities as identified by industry.

Skills and occupation requirements

Beyond forecasted occupations based on Australian Bureau of Statistics (ABS) classifications, industry roundtable participants raised a number of skills needs and capabilities required in the next 1–2 years (immediate needs) and 3–5 years (emerging needs).

	Immediate needs (1–2 years)		Emerging needs (3–5 years)
Education and training	**Specific roles, occupations or industry focus:** • VET teachers for school aged students • VET trainers • trauma-informed training delivery • skills to codesign delivery of education and training with industry experts and representatives • administrative staff to share burden of work on teaching staff • mental health services • counsellors and counselling or mentoring capabilities.	**Core competencies including:** • innovative thinking and willingness to try new teaching methods • mentoring students • creating excitement and aspirations among students regarding the various industries and advancements • linking the variety of service offerings and careers within the region, for example, AgTech, proximity to energy, renewable energy or circular economy • managing difficult conversations, occupational violence, self-defence courses. **Technical and digital skills:** • ability to effectively deliver education online • virtual and hybrid teaching abilities	• Support frameworks that allow workers Learn to Lead, for example, in the course of business development to VET delivery • Understanding and comfort using teaching online for example, gamification • Strength-capabilities for virtual work placements, for example, through use of virtual reality (VR) technology.

Opportunities to address workforce and education outcomes

Consultation across the region identified a range of potential responses to address the current and emerging challenges facing the education and training industry across the Goulburn region. Opportunities to address workforce challenges across the region are further detailed in the profile across 4 key response areas, including impact and complexity considerations.

Table 11: Education and training industry proposed responses and solutions

Education and training industry proposed responses and solutions
Proposed responses within the remit of the Victorian Skills Authority
• Undertake explorative research to better understand the data, trends and factors affecting participation in education and training • Support the Senior Secondary Pathways reform agenda through facilitation of local opportunities to improve vocational education and training (VET) within the region • Actively support the Shepparton Education Plan • Publication of industry data and trends for current and prospective students, parents and career counsellors • Work with the VET Development Centre (VDC) and industry expertise to better support teacher training and development • Future skill requirement planning and mapping • Review of teacher workforce attrition trends including consideration of teacher wellbeing and support mechanisms • Evaluate and support redesign of the current training and education (TAE) model: for example, considering cost, standardisation, Recognition of Prior Learning (RPL) • Advocate for changes to the regulatory frameworks
Proposed responses to be achieved through broader collaboration across the region and with broader partners and stakeholders
• Targeted engagement with students and vulnerable communities to build awareness of education and training and career pathway opportunities • Prepare prospective students to enter formal learning through non-traditional program pathways • Facilitate employment of under-represented and non-traditional cohorts • Partner with regional, community and other industry bodies to improve access to a holistic suite of support services for new and prospective learners and workers • Incentivise trainers to gain accreditation and enter the education system • Expand engagement activities with students and their networks • Advocate for simplifying participation pathways for mature and retiring workers in transition across industries • Support industry and education providers to continue to take a place-based approach to course design or delivery • Facilitate a smooth flow of teachers between industry and training • Highlight the opportunities and benefits of lifelong learning • Improve accessibility and coordinate uptake of short courses within the region (onsite and central locations) • Streamline processes to support industry to take on apprentices, trainees, cadets and students • Provide additional, targeted support for NEET (Not in Education, Employment, or Training) individuals re-entering higher and vocational education

Health care and community services industry profile

The health care and community services (HCCS) industry is a network of providers and services across public, private, clinical, allied and community services across a range of demographic cohorts. Maintaining and cultivating a healthy workforce is essential for a sustainable economy as good health and social support underpins wellbeing and inclusion which is essential for successful training and employment activity.

This industry (HCCS) is the second largest employer in Goulburn with approximately 14% of the total local workforce in 2022.[200] These 11,670 people contribute around $895.4 million or 13.8% of gross value added (GVA) in 2021 – which renders HCCS the second largest industry in the local economy.[201] The top 4 sub-industries of the HCCS industry include:

1. Hospitals

2. Medical and other health care services (including allied health, diagnostic and pathology services, general and specialist care, and ambulance services)

3. Community services (comprising childcare services and other social assistance such as adoption, aged care assistance services and welfare counselling services)

4. Residential care services.

Employment in HCCS is expected to grow at the fastest annual rate in Goulburn, outpacing growth in the visitor economy, education and training, and clean energy industries.[202] The rate of growth is almost on par with expected employment growth in metropolitan Melbourne (2.8% compared to 2.9% respectively).[203] Local governments' strategies, such as the Moira,[204] Mitchell[205] and Murrindindi[206] Shires, have identified improving social and economic factors in the economy such as addressing disadvantage and supporting diverse communities as key priorities. The HCCS industry is an integral part of achieving this, to create the pathways that allow meaningful engagement within the community.

Figure 39: Goulburn's health care and community services industry snapshot

Key statistics
Across the Healthcare and community services sector.

~11,670
Current workforce (2022)

2.8%
Projected annual employment growth (2022–25)

14%
Of Goulburn's workforce (2022)

+1,500
New workers including 1,020 new jobs and 470 to fill retirements (2022–25)
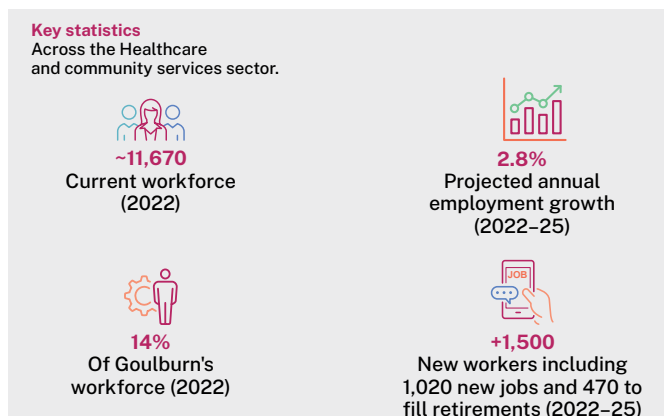
Key strengths

Goulburn has a broad HCCS offering with a variety of providers across the region, including major employers and hospital networks, local service providers who operate across both regional centres and in smaller communities. The geographic layout of Goulburn across the backbone of Central Victoria has helped foster collaboration across the region with businesses and government partnering with individual communities. Cooperation between individuals can then translate to an interconnectedness of services and providers in HCCS.

The region also benefits from the presence of several training and education institutions, including the University of Melbourne Rural Health School as well as La Trobe University and GOTAFE which offer health and community services related courses more broadly. This helps provide a local flow of workers and opportunities for students to experience the region before relocating for longer term. La Trobe University and GOTAFE are currently exploring a guaranteed pathways program into higher education from vocational education and training which will support upskilling to meet industry needs.

Key challenges and opportunity areas

Labour shortages across clinical and community care roles impact the quality of care. This shortage is further exacerbated by the additional challenge of caring for patients with increasingly complex needs, such as multiple diagnoses, mental health concerns, and other socioeconomic considerations. Industry roundtable participants reflected on the impact to develop innovative strategies of care or workforce planning beyond immediate needs.

Strengthening the pipeline of workers is essential for ensuring sustainability of the industry itself and its workers. Consequently, there is opportunity to streamline existing processes to improve this extended demand for labour. This may include simplifying recognition of qualifications or prior learning, as well as proactive early intervention activities, or broadening channels of access to care such as through pharmacies or non-emergency paramedics in more remote areas.[207] Other initiatives identified by industry roundtable participants include using triaging services to filter patients to the appropriate service, greater uptake of labour-saving technology to provide virtual care and communication, and further centralisation of patient records to improve continuity of care.

It is important to note the impact of key enabling infrastructure on attracting and retaining a workforce that can adapt to new ways of working and skills requirements. Workers need to be supported in developing each dimension of skills needed for a successful and sustainable career in HCCS – both at an entry level and through career progression. Reviewing and addressing barriers and limiting factors of attracting and retaining a diverse workforce in the region is necessary to continue to build a pipeline of skilled workers that can meet the region's growing needs. This can extend to ensuring an adequate number of mature workers to support junior staff in technical and mentoring capacities.

Growing demand through constraints

High demand for HCCS services is a significant contributor to the shortage of labour experienced across the industry. Industry roundtable participants reflected on the immediate need to secure workers to support a range of construction activity in the region, including the Goulburn Valley Health project, and infrastructure improvement and development as part policy reforms to the aged care and disability sector. Industry roundtable participants noted that worker shortages can also increase the risk of over-reliance on less experienced or misaligned workers, for example in aged care or nursing roles, which can decrease confidence of both patients and providers.

Health care and community services (HCCS) has the largest number of online job vacancies in the region in 2022. Advertisements more than doubled between 2020 to 2022 (March 2020 to March 2022)[208] highlighting the clear increase in demand for workers. Considering this was not matched by a similar growth in skilled workers in the same period, there has been increased competition for a limited pool of workers in the region.

Figure 40: Health care and community services vacancy changes in Goulburn

Vacancies in HCCS related industries in Bendigo and High Country (including Goulburn region)
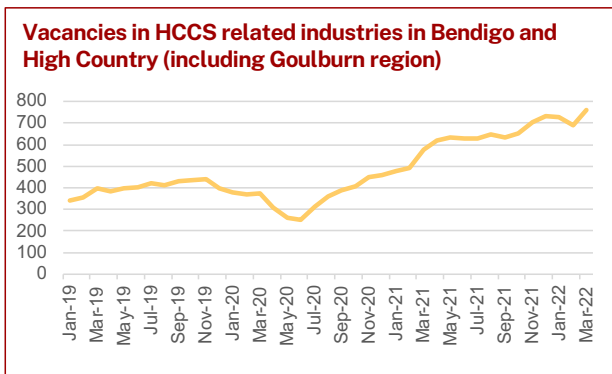
Source: LMIP IVI Vacancies Data

Includes: Health, Education, ICT and Other Managers; Health Diagnostic and Therapy Professionals; Medical Practitioners and Nurses; Health and Welfare Support Workers; Carers and Aides

Rethinking models of care

Goulburn is one of the most culturally diverse regions in regional Victoria.[209] There is opportunity to develop tailored programs and initiatives that engage workers from culturally diverse and under-represented cohorts. This is likely to boost the HCCS workforce and promote broader engagement with training and employment opportunities. Diversity within the workforce is also important for maintaining quality and accessibility of care for all residents in the region. For example, sharing lived experience can help identify service gaps while a common language facilitates meaningful communication for care. Taskforce members reflected on the opportunity to take a coordinated yet innovative approach to developing strategies that help improve the industry, beyond the parameters of existing programs and initiatives. Continued collaboration across community, industry and government is likely to be needed to achieve this.

Interface with other industries and emerging sectors

Almost every resident in Goulburn – employee or otherwise – interacts with the HCCS industry at some point. Similarly, the sector intersects and interfaces with other industries and fosters collaboration within its own network of providers and services. This means that changes, challenges and opportunities across various industries and sectors have flow on effects in other industries around the region.

Table 12: Key intersections across Goulburn's health care and community services sector

Health equipment manufacturing
Secure supply chains of critical health care and community services (HCCS) related goods (for example, personal protective equipment (PPE) and ventilators) ensure continuity of quality care. The pandemic highlighted the need for secure, reliable, and quality supply chains to produce critical equipment for the health sector, such as PPE and vaccines.
Safe physical environment through construction
The quality of the built environment can determine mental and physical health. Access to secure and affordable housing, high quality health care infrastructure and services are a key determinant of mental health given the significance of environmental safety for individual and community wellbeing.
Digital technology to improve health care
Advancing research to develop innovative ways to understand and care for mental ill health is vital to ensure a leading industry that can continue to evolve within the region. This includes the use of telehealth, at home integrated services and proposed triaging processes.
Community services and support to enable education and training
Education and training have a significant part to play in providing people with renewed purpose and opportunities and is also often a way to participate in general society and programs, such as the Skills Reconnect program at GOTAFE which includes a mentoring component to support students into training. Access to high-quality, affordable, and close-to-home child care is essential for greater workforce participation, particularly for women.

Recent and forecasted industry growth

Largest sub-industries by employment

Hospitals are the largest employing sub-sector in the region with more than 3,200 workers in 2020.[210] There have been mixed employment trends across each of the sub-sectors with the strongest growth occurring in the residential care services sub-sector experiencing an increase of almost 25% from 2019 to 2020.[211]

Medical and other health care services which include allied, diagnostic and pathology services, reported a similar level of employment to social assistance services for the same period. It is likely that the employment share of health care and community services (HCCS) sub-sectors will be further impacted by the changing policy and reform environment of recent Royal Commission reports.

Figure 41: Top 4 health care and community services (HCCS) sub-industries by employment

Top 4 HCCS sub-industries by employment – 2018 to 2020

based on ANZSIC sub-industry classifications
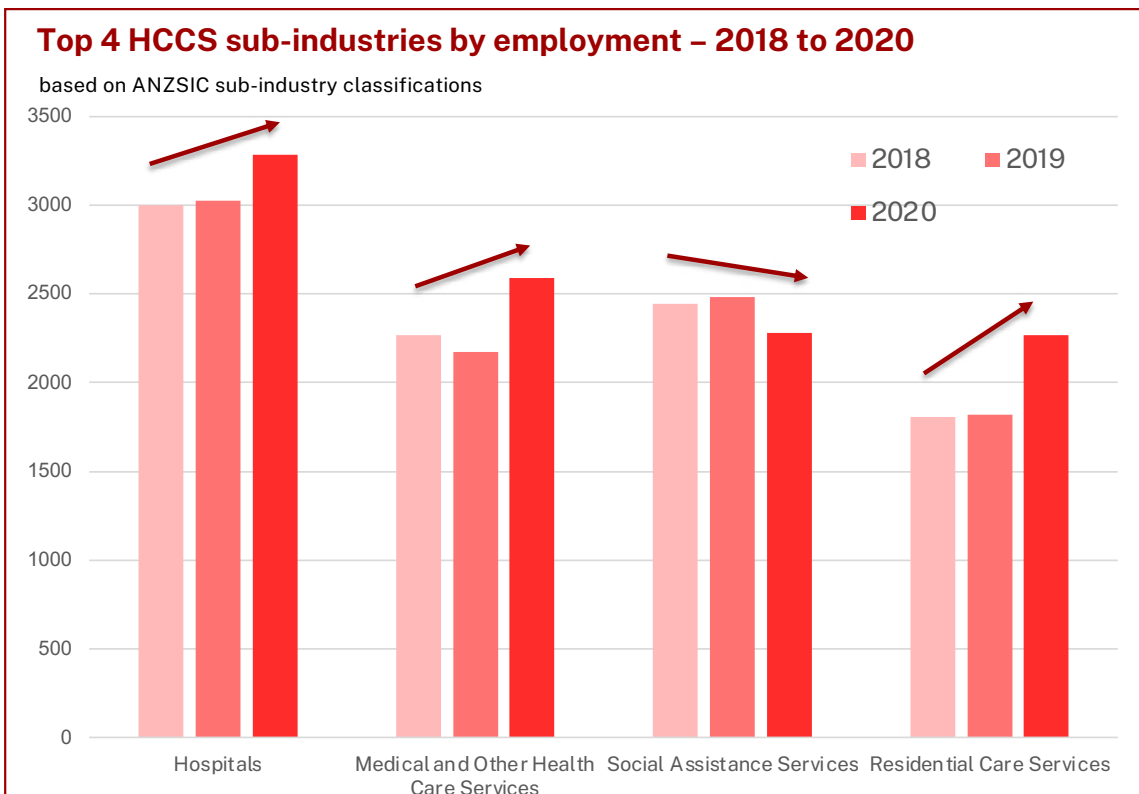
Source: NIEIR Goulburn Regional Data, 2021

Forecasted growth by occupation

With an expected increase in population of around 2.2% annually into the next 15 years,[212] jobs in the HCCS sector are also likely to grow to meet this demand. Over the next 3 years, at least 1,020 workers will be required.[213] A further 470 workers are projected to be needed to replace retiring workers.[214] These forecasts do not consider current shortages, attrition or recent policy changes such as reform to the aged care and mental health sectors, increase in NDIS non-registered providers or NDIS reform, thus the scale of workers needed is likely to be larger than predicted.

Forecasted occupation growth across this sector for the top 20 occupations (as classified by the Australian Bureau of Statistics) is included below.[36] The top occupations required in the HCCS industry are aged care and disability support workers, consistent with the current largest employing occupation in Goulburn's HCCS industry. Receptionists are the second largest occupation in the region with more than 1,000 additional workers in 2022 – consistent with current and forecasted trends.[215] Aged and disability support workers are also projected to experience the most growth over the 3-year period – reflecting the needs of the ageing population where 20.8% of people are aged over 65 years[216] and the increase in support needed for people with disabilities.

Figure 42: Forecasted occupation growth in Goulburn's health care and community services (HCCS) sector (2022–2025)

Forecasted occupation growth in Goulburn's HCCS industry from 2022 to 2025

Top 20 HCCS occupations	Change
Aged and Disabled Carers	+250
Receptionists	+10
Nursing Support and Personal Care Workers	+30
Child Carers	+20
Welfare Support Workers	+70
Generalist Medical Practitioners	+20
Commercial Cleaners	+10
General Clerks	+30
Kitchenhands	-10
Dental Assistants	+10
Ambulance Officers and Paramedics	+10
Health and Welfare Services Managers	+30
Welfare, Recreation and Community Arts Workers	+30
Enrolled and Mothercraft Nurses	0
Physiotherapists	+30
Medical Technicians	+20
Nurse Managers	+20
Social Workers	+20
Midwives	+20

Source: Victorian Skills Authority Employment Forecasts, April 2022

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36 This graph is not exhaustive (top 20 occupations only) and may not include other major roles and responsibilities as identified by industry.

Skills and occupation requirements

Beyond forecasted occupations based on Australian Bureau of Statistics (ABS) classifications, industry roundtable participants raised a number of skills needs and capabilities required in the next 1–2 years (immediate needs) and 3–5 years (emerging needs).

	Immediate needs (1–2 years)		Emerging needs (3–5 years)
Health care and community services	**Specific roles or occupations:** • early childhood staff • social workers • occupational therapists • speech pathologists • psychologists • child protection workers • community service workers • personal care assistants • human resources • administration • health literacy support • accountants and financial officers • ward clerks • medical consultants or specialists • GPs **Core competencies including:** • management and leadership skills • resilient mindset • collaborative and networking skills to partner with training • interpersonal sensitivity to support staff mental health and wellbeing • support for entry level workers • capability building of senior staff	• physiotherapists • allied health workers • midwifery and obstetrics • mental health clinicians including. adolescent and children • nurses including critical, aged, theatre care, maternal and child health • teachers • managers • accreditation support • systems support staff • administrators • call centre operators • junior medical officers (Hospital Medical Officer (HMO) registrars) • disability support workers • environmental health officers **Technical and digital skills:** • interpersonal sensitivity to support staff mental health and wellbeing • support for entry level workers • capability building of senior staff • telehealth skills, medical service • information and communications technology (ICT) specialists	• More strategic, collaborative and innovative thinkers • Greater understanding of how to manage complex patient cases such as with families in justice and social sectors • Critical and emergency staff • Human resources – can navigate industrial issues • Continued demand for suitably qualified health professionals • Community support and disability support workers • Family violence practitioners • Greater practice of self-management or health promotion among staff • Allied health, preventative, and early intervention workers

Opportunities to address workforce and education outcomes

Consultation across the region identified a range of potential responses to address the current and emerging challenges facing the health care and community services (HCCS) industry across the Goulburn region. Opportunities to address workforce challenges across the region are further detailed in the profile across 4 key response areas, including impact and complexity considerations.

Table 13: HCCS proposed responses and solutions

Health care and community services proposed responses and solutions
Proposed responses within the remit of the Victorian Skills Authority
• Future skill requirement planning and mapping • Publication of industry data and trends for current and prospective students, parents and career counsellors • Support systematic change that enhances accessibility to education and training offerings aligned to Goulburn learner and industry needs • Provision of data and insights to support the Goulburn region's workforce planning • Support systematic change that enhances accessibility to education and training offerings aligned to Goulburn learner and industry needs.
Proposed responses to be achieved through broader collaboration across the region and with broader partners and stakeholders
• Review and redesign recruitment processes to prioritise core skills, alongside technical competency • Promote a culture of learning through establishing communities of practice around different industries, technological innovations or skill level cohorts • Collaboration across industry and education and training institutions to design and deliver industry-recognised short courses, including micro-credentials • Support industry and education providers to continue to take a place-based approach to course design and delivery • Shared recruitment pools across organisations where appropriate or feasible • Expand engagement activities with students and their networks • Employ more students, providing more 'earn and learn' opportunities • Collaborate to attend career expos internationally to attract and recruit skilled migrants, increase flexibility of visa attainment • Scale programs that aim to showcase career opportunities and pathways to support greater attraction and retention of workers across Goulburn • Upskilling and capability training of recruiters and talent acquisition • Leverage case management lessons from the pandemic for example, triaging patients or assigning care to pharmacists to ensure service demand is sustainably and appropriately met • Promote benefits of local study opportunities for allied health professionals – building the 'university and TAFE culture' in Shepparton.

'Goulburn is one of the most culturally diverse regions in regional Victoria. There is opportunity to develop tailored programs and initiatives that engage workers from culturally diverse and under-represented cohorts.'

Manufacturing industry profile

The manufacturing industry in the Goulburn region is experiencing a resurgence in activity driven primarily by food product manufacturing. The region is highly specialised in food product and beverage manufacturing, employing over 3 times more workers in the Goulburn region than the state average and employment growing 15 percentage points faster than the Victorian average.[217] The region's manufacturing industry also has strengths in areas of traditional manufacturing and primary metal and metal production manufacturing.[218]

11% of the total regional workforce is employed across the manufacturing industry (9,010 people in 2022).[219] The manufacturing industry was responsible for generating $775.7 million in gross value added (GVA) or the third largest contributor in the region (2021).[220]

The industry is projected to experience 0.6% annual employment growth over the next 3 years.[221] This growth is overwhelmingly driven by food product manufacturing. For example, employment of food and drink factory workers and meat related processers in this sub-sector expected to grow by 2% per annum.[222]

Figure 43: Goulburn's manufacturing industry snapshot

Key statistics
Across the Manufacturing sector.

~9,010
Current workforce (2022)

~0.6%
Projected annual employment growth (2022–25)

11%
Of Goulburn's workforce (2022)

+430
New workers including 120 new jobs and 290 to fill retirements (2022–25)
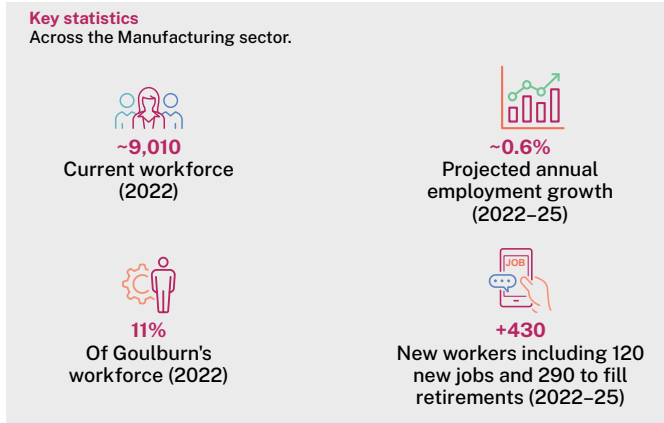
Key strengths

Goulburn has a strong reputation in the food product manufacturing sub-sector, which complements the region's strength in agriculture due to the benefits of integrating supply chains across primary and secondary production. Food product manufacturing makes up 62% of the total industry's GVA,[223] and was the top export commodity for Goulburn in 2020, accounting for 85.6% of industry value.[224] It is an important employment growth sub-sector for Goulburn and critical to the broader agri-food supply chain. In particular, Shepparton is a central hub of food manufacturing activity where industry, training and government can collaborate and form a strong base for continued partnership across the region.

The manufacturing industry plays a critical role in enabling the development and growth of other areas of the economy, such as the clean economy, agriculture and health care and community services (HCCS) by providing key inputs of production or care. Manufacturing intersects with 2 strategic directions identified in the Goulburn Regional Economic Development Strategy (REDS). These are the 'strengthening of renewable energy generation and the role of the circular economy' and 'enhancing productivity and resilience in the agricultural and food product manufacturing sectors.' As demand for these industries grows, so too does demand for local manufacturing, thereby promoting a dynamic operating environment where there is shared investment in economic prosperity and supply and demand is locally engaged. The significance of these activities is reflected in the share of fabricated metal production contribution to GVA, second only to food product manufacturing and continuing to trend upwards.[225]

The region is also well connected by arterial roads and freight routes which make Goulburn an attractive place in which to operate. There is opportunity to capitalise on existing infrastructure and further develop facilities, such as the Mangalore Airport, to establish an integrated, intermodal network of transport and warehousing.

Key challenges and opportunity areas

Like many other industries in Goulburn, there is a shortage of skilled labour in manufacturing. Due to its intersections with clean energy and agriculture, challenges in each industry have commonalities with the manufacturing workforce.

Labour supply

Industry roundtable members reflected that the ageing workforce, coupled with fewer entry level workers, have made it difficult for businesses to fill jobs. Additionally, they noted that delayed apprenticeship or placement programs during the pandemic have delayed the pipeline of workers. Early exposure to opportunities and pathways in the industry is an integral part of attraction to the industry.

Opportunities in transition

The manufacturing environment has changed significantly with increased use of Industry 4.0 and advanced manufacturing in the production process. This requires workers to upskill in technological literacy and maintain an attitude of continual learning to flourish in an ever-changing industry. To capitalise on the opportunities presented by a changing working environment, it is important for workers across all levels to develop leadership capabilities, prioritise transferable skills for different sub-industries and sectors across the region, and cultivate interpersonal skills. Engaging more workers from under-represented cohorts, including women or those from diverse communities, is likely to help alleviate job shortages as well as provide opportunities for innovation and problem solving due to new perspectives offered.

Safeguarding workforce continuity

Specific care may need to be given to maturing cohorts of workers within the industry to facilitate their transition to more technology intensive production. Inadequate support may lead to premature retirement from the industry, creating risk of losing critical experience and knowledge if not transitioned appropriately. Ensuring overlap between 'generations' of workers, as well as the migrant workforce, is a way to ensure that the sector can continue to operate efficiently and effectively.

Over the last 2 years, there has been an increase in vacancies in the region's online job advertisements for jobs in the manufacturing industry with almost more than 3 times the number in March 2022 than in March 2020.[226] This highlights the demand for workers across all levels including the food product manufacturing sector where the majority of manufacturing workers are employed and where there is greatest expected increase in future employment.[227]

Figure 44: Manufacturing vacancy changes in Bendigo and High Country region

Vacancies in Manufacturing related industries in Bendigo and High Country (including Glouburn region)
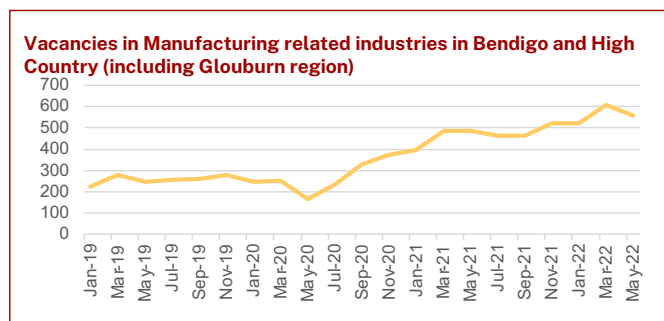
Source: LMIP IVI Vacancies Data

Includes: Engineers; Engineering, ICT and Science Technicians; Automotive and Engineering Trades Workers; Electrotechnology and Telecommunications Trades Workers; Machine and Stationary Plant Operators; Mobile Plant Operators; Drivers and Storepersons

Interface with other industries and emerging sectors

The manufacturing industry is comprised of varied sub-sectors and operations. The sector is a key enabler of other sectors and activities, including clean energy, agriculture and health care and community services. There are emerging offerings within food product manufacturing including cannabis, nutritional supplements, and alternative proteins. The industry itself is undergoing a period of transition where there is a growing use of complex technologies, and the principles of sustainable design are more important than ever.

Table 14: Key intersections across Goulburn's manufacturing industry

Health equipment manufacturing
The pandemic highlighted the need for secure, reliable and quality supply chains to produce critical equipment for the health sector. The shifted focus on local manufacturing capability for a number of areas, including hospital care, has highlighted a gap in local skills and capabilities to address such shortages.

Digital technology for advanced manufacturing
The shift to the Industry 4.0 focus, including AI, machine learning and nanotechnologies, is enabling innovation across industries. Research and innovation will continue to be critical to support advanced manufacturing growth in the region.

Agriculture sector
AgTech describes the range of advanced technologies used in contemporary farming. These include sensors, the Internet of Things, autonomous vehicles and technologies which increase the speed of data collection to facilitate more accurate and timely decision making.[228]

Freight and transport
Clear pathways out of the region of production are essential to ensuring that the value of production can be realised through exports and sales. Thus, transport and logistics operations become an important part of manufacturing.

Renewable practices and circular economy
Manufacturing has an important role to play in the circular economy, which is a growing area of focus for Victoria as seen through the establishment of Recycling Victoria. There is also opportunity to develop sustainable, best practice through the operations themselves. Care must also be taken to manage potential impacts on surrounding land and water sources.

Recent and forecasted industry growth

Largest sub-industries by employment

Goulburn's manufacturing industry is diverse, including a number of sub-sectors and areas of focus. Food product manufacturing is the largest employing sub-sector in the region, employing more than 4,100 people in 2020 and likely to grow further according to the 3-year trend.[229] Employment in this sub-sector was approximately 7 times larger than the second largest employing sub-sector for the same period.

Other sub-sectors, including fabricated metal product, transport and primary metal product manufacturing, experienced limited growth over 2018 to 2020, while furniture and machinery equipment manufacturing decreased over this time.[230] It is possible that low to no growth is occurring in these sectors due to the overwhelming economic significance of and specialisation in food product manufacturing in the region.

Figure 45: Top 7 manufacturing sub-industries by employment
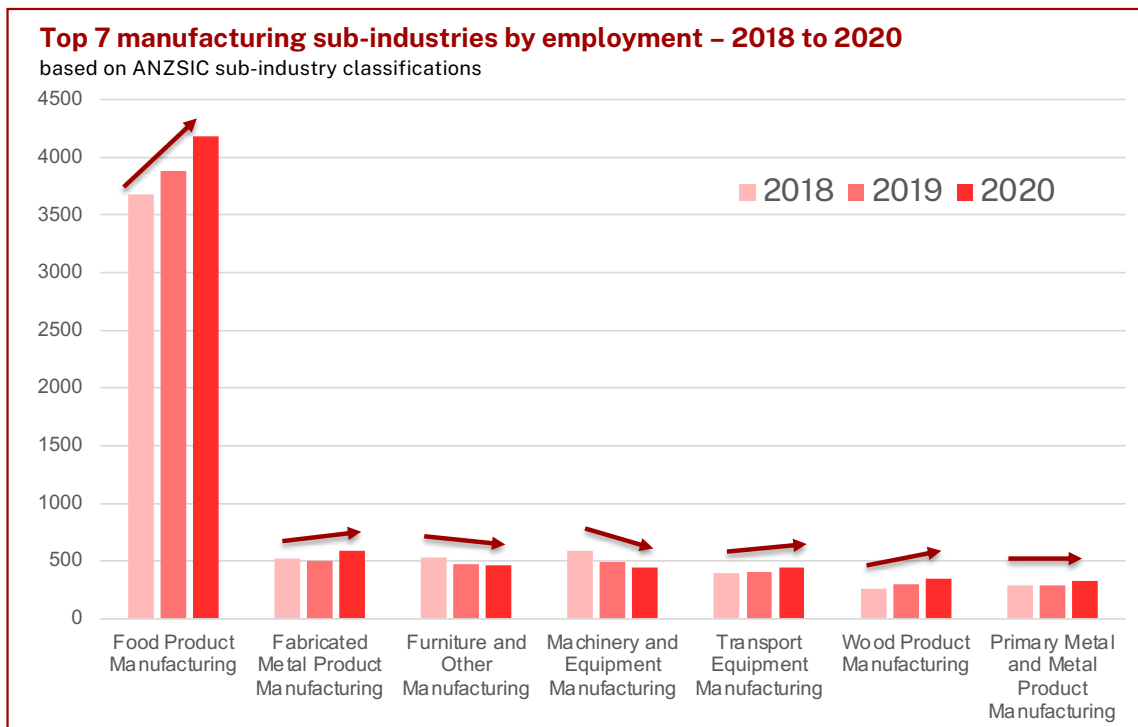
Top 7 manufacturing sub-industries by employment – 2018 to 2020
based on ANZSIC sub-industry classifications

Source: NIEIR Goulburn Regional Data, 2021

Forecasted growth by occupation

Forecasts suggest that at least 120 new workers[37] will be required over the next 3 years to meet demand in the industry. An additional 290 workers are projected to be needed to fill retirements over this period.[231]

This is likely to reflect transition considerations of an ageing population in Goulburn and represents the need to prioritise an appropriate phased transition of workers and handover of knowledge and experience.

Forecasted occupation growth across this sector for the top 20 occupations (as classified by the Australian Bureau of Statistics) is included below.[38]

Figure 46: Forecasted occupation growth in Goulburn's manufacturing industry (2022–2025)

Forecasted occupation growth in Goulburn's manufacturing industry from 2022 to 2025

Top 20 manufacturing occupations	Change
Food and Drink Factory Workers	+40
Structural Steel and Welding Trades Workers	0
Production Managers	+20
Manufacturers	+10
Forklift Drivers	0
Metal Fitters and Machinists	0
Cabinetmakers	0
Sales Assistants (General)	-10
Packers	0
Meat Boners and Slicers, and Slaughterers	+10
Bakers and Pastrycooks	0
Meat, Poultry and Seafood Process Workers	+10
Chemists, and Food and Wine Scientists	0
Storepersons	0
Other Specialist Managers	+10
Other Hospitality, Retail and Service Managers	0
Management and Organisation Analysts	+10
Electricians	0
Other Information and Organisation Professionals	+10
General Managers	0

Source: Victorian Skills Authority Employment Forecasts, April 2022

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37 Note that this does not account for the current worker shortages experienced across the sector.

38 This graph is not exhaustive (top 20 occupations only) and may not include other major roles and responsibilities as identified by industry. Note that this does not account for the current worker shortages experienced across the sector.

Skills and occupation requirements

Beyond forecasted occupations based on Australian Bureau of Statistics (ABS) classifications, industry roundtable participants raised a number of skills needs and capabilities required in the next 1–2 years (immediate needs) and 3–5 years (emerging needs).

	Immediate needs (1–2 years)		Emerging needs (3–5 years)
Manufacturing	**Specific roles or occupations:** • logistics, engineering, production and operation roles • support roles • account roles • creating vacation and graduate roles **Core competencies including:** • problem solving • critical thinking • safety skills • project management skills • lean and sigma skills to improve processes and maximise the bottom line • creative thinking • leadership skills	• customer service roles • food scientists and food technicians • food processing **Enabling competencies:** • public relations or media skills to promote and raise awareness of the sector and where it is heading • managing diverse workforces through understanding of workplace health and safety requirements, sustainability, and inclusion	• Problem solving and operational optimisation • Higher education skills for manufacturing roles • Having the right mentality • Higher education skills for advanced manufacturing roles

Opportunities to address workforce and education outcomes

Consultation across the region identified a range of potential responses to address the current and emerging challenges facing the manufacturing industry across the Goulburn region. Opportunities to address workforce challenges across the region are further detailed in the profile across 4 key response areas, including impact and complexity considerations.

Table 15: Manufacturing industry proposed responses and solutions

Manufacturing proposed responses and solutions
Proposed responses within the remit of the Victorian Skills Authority
• Advocate for increased support from government (capacity building and networking not just funding) to imagine, develop and deliver new models of training so that risk burdens are distributed amongst stakeholders • Support the Senior Secondary Pathways reform agenda through facilitation of local opportunities to improve vocational education and training (VET) within the region • Implement the Clean Economy Workforce Development Strategy • Provide local insights to support the development of the plan • Future skill requirement planning and mapping.
Proposed responses to be achieved through broader collaboration across the region and with broader partners and stakeholders
• Promote pathways and opportunities for career development within the region including promoting an updated view of work in the industry • Develop targeted strategies to attract university graduates from urban areas back or into the region • Develop more tailored higher education courses offered leading to career outcomes in manufacturing for all groups • Increase reach and scale of secondary school cadetship programs and scholarships to support people within the region to enter and progress through the sector • Foster partnership between education providers and industry to identify and delivery creative solutions • Learn from other countries to identify best-practice examples and promotion of the sector • Collaborate with local universities to raise the profile of the sector and promote innovative activities • Scale programs that aim to showcase career opportunities and pathways to support greater attraction and retention of workers across Goulburn • Advocate for simplifying participation pathways for workers in transition across industries or mature and retiring cohorts • Collaboration across industry and education and training institutions to design and deliver industry-recognised short courses, including micro-credentials.

Visitor economy profile

In this profile, the visitor economy is defined as being the industries that support tourism in the region, including accommodation, hospitality, retail, and arts and recreation. Although the data does not explicitly distinguish the contribution of cultural activities, they are also considered to be a key part of this industry. Activity in Goulburn's visitor economy Industry is primarily driven by the accommodation, retail, and arts sub-sectors including nature based and agri-tourism.

Combined, the visitor economy is the largest employing industry in the region with about 12,760 workers across each of these sub-sectors in 2022 (16% of workers).[232] The visitor economy is also a key contributor to Goulburn's economy, contributing 9% of regional gross value added (GVA) to the value of $587 million in 2021.[233]

Figure 47: Goulburn's visitor economy industry snapshot

Key statistics
Across the Visitor economy sector.

~12,760
Current workforce
(2022)

2.g%
Projected annual
employment growth
(2022–25)

16%
Of Goulburn's
workforce (2022)

+1,620
New workers including
1,020 new jobs and 570 to
fill retirements (2022–25)
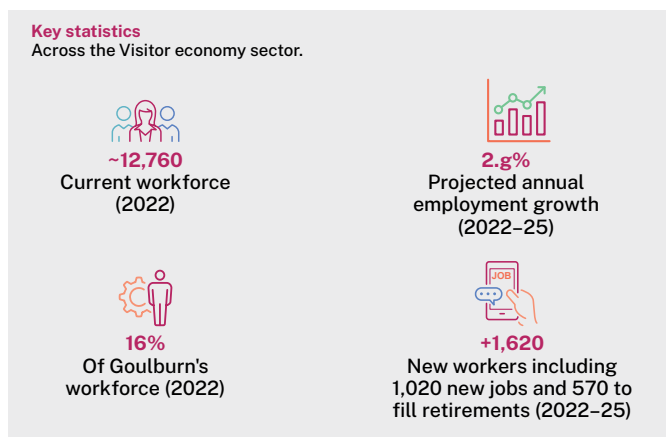
Key strengths

Goulburn's visitor economy sector is enabled by a growing breadth of attractions and experiences across diverse natural assets, the arts, agri-tourism and areas of cultural significance. Taskforce and industry roundtable participants reflected on the immense opportunities for the region to grow its visitor economy base, given growing attraction and visitation to the region.

Focus on continued growth and development of the industry is explored in the Goulburn Regional Economic Development Strategy (REDS) particularly the opportunity to leverage natural assets and Aboriginal heritage. Increased activities, strategic planning and public interest in sharing this heritage, culture and expertise are likely to attract new visitors, including international, interstate and domestically from urban Melbourne and New South Wales.[234]

Emerging industry activity will also continue to attract new workers and residents to the region which will inevitably increase visitation.

The industry also has an opportunity to encourage more frequent and longer overnight stays.

Key challenges and opportunity areas

Factors enabling industry growth

Regional Skills Taskforce and industry roundtable members reflected on the need for greater centralisation and coordination of visitor economy activity and strategic planning. Most prominently, the region would benefit from a region-wide tourism board which could help to streamline activity and planning to enable the region to benefit more rapidly through greater efficiencies. Additionally, connectivity challenges across pockets of the region can deter visitors, noting, local government areas (LGAs) across the Hume region[39] including Strathbogie scored an average Australian Digital Inclusion Index (ADII) score of 65, lower than the state average of 72 in 2021. [235] Like all other regions, Goulburn's visitor economy is faced with seasonal variability, including peak periods during school holidays and long weekends, with a need to consider how to sustainably enable the sector to thrive across the calendar year.

Promoting the value of the visitor economy to the Goulburn region amidst growing demand for current and new workers

Industry roundtable and taskforce members frequently noted perceptions about employment within the sector as temporary and transient, and relatively unskilled, instead of a rewarding career pathway. Labour shortages amidst increasing service demand challenge the sustainable operation of the sector in the current environment. Labour shortages raised by taskforce and industry roundtable participants range from more generalised positions, such as wait staff or retail assistants, to more specialised skills, such as strategic planning, innovative marketing and sustainability awareness, to help realise the potential of the industry and interconnected sectors.

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39 Note, the Hume region includes areas within the Goulburn region as identified in this profile including Seymour, Shepparton, Strathbogie and Yarrawonga.

Increasing awareness of career pathways to improve attraction and retention of workers

Increasing awareness of career pathway opportunities within the sector is paramount to addressing current shortages and supporting continued growth and development of the visitor economy – a central pillar in the strategic direction within the Goulburn REDS.

There are a number of initiatives that can better support the attraction and retention of workers in the region, including the Victorian Government arrangement for trainees completing a Certificate III in Hospitality or Tourism to receive 12-month secure employment while undertaking placement across regional businesses and receive a paid wage supplement up to $10,000 above the relevant industry award alongside one-on-one mentoring.[236]

Greater engagement with First Nations people across the sector is vital given the strong Aboriginal heritage and cultural significance of the region and noting Goulburn has the largest regional Indigenous population in Victoria.[237]

Inter and intra-sector competition for a limited workforce pool

Employment disruptions and uncertainty during the pandemic led to worker exits and business closures which has resulted in increased competition among a smaller pool of workers. Vacancies in the sector have almost quadrupled from January 2019 to May 2022.[238] While this poses clear challenges for the sustainability of many businesses in the sector, it highlights the need for innovative skills and employment solutions. For example, upskilling workers across multiple areas of operations to boost working hours and engaging in profit or premises sharing to minimise costs, particularly noting the region's reliance on younger workers and backpackers for seasonal occupations.

Figure 48: Visitor economy vacancies in the Bendigo and High Country area (January 2019 to May 2022)

Vacancies in Visitor Economy and related industries in Bendigo and High Country (including Goulburn region)
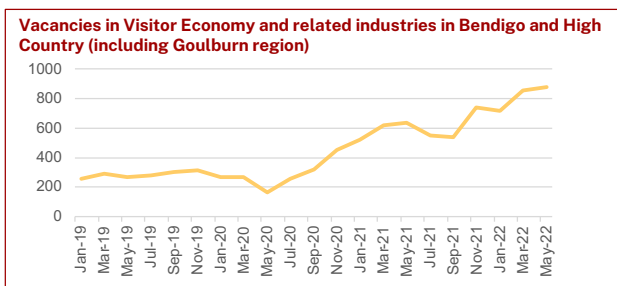
Source: LMIP IVI Vacancies Data

Includes: Hospitality, Retail and Service Managers; Arts and Media Professionals; Jewellers, arts and Other Trades Workers; Hospitality Workers; Sales Assistants and Salespersons; Cleaners and Laundry Workers; Food Preparation Assistants

Promote continual skills and training development opportunities to enable sustainable industry growth

Visitors are increasingly knowledgeable and aware of their preferences and expectations when engaging in activities, experiences and attractions. To increase desirability of the region as a visitation and holiday destination, operators in the Goulburn region must develop and promote an attractive value proposition. This can include digital and marketing capabilities, specialised knowledge of the region, product or attraction, and cultural awareness and sensitivity to the needs of diverse visitor groups. Consequently, workers in this sector require excellent core competencies, multidisciplinary and transferable skills.

Education and training is critical to developing well-rounded workers who are suitable for contributing and supporting businesses to maintain a future-fit workforce. This can occur in both formal and informal settings. For example, GOTAFE offers courses in hospitality and commercial cookery, while La Trobe University delivers business qualifications with a specific tourism and hospitality focus. Outside of training institutions, mentoring and cross sector partnerships, such as those between professional service firms and small businesses, can provide targeted upskilling opportunities.

Interface with other industries and emerging sectors

The visitor economy itself encompasses a range of activities and operations including accommodation, hospitality, retail and the arts. Outside of these sub-sectors, there are other intersecting industries that contribute to the attraction of tourists to the region.

Table 16: Key intersections across Goulburn's visitor economy

Specialised manufacturing
Unique retail offerings and shopping areas attract visitors looking for specialised or cultural purchasing experiences. This includes homewares, clothing, upcycled or circular economy-based production and Aboriginal crafts.
Construction
Out of town visitors, seasonal residents, day trippers, and international tourists seek quality, experience-enhancing accommodation in the region.
Agriculture and food manufacturing
Goulburn is one of the significant food bowls in Victoria. As a result of this abundance of produce, there are many opportunities for 'farm to table', farmgate and 'foodie' experiences such as the Numurkah Foodbowl Festival and Vineyards Running Festival.
Digital technologies
Visitors expect high quality, engaging and unique tourism experiences which can often be enhanced by new digital technologies. For example, interactive signage at a museum exhibit or sensor triggered sound design to activate outdoor areas.

Recent and forecasted industry growth

Largest sub-industries by employment

A breakdown of employment by key subindustries within Goulburn's visitor economy based on Australian Bureau of Statistics (ABS) industry classifications reveals declining employment from 2018 to 2020 across all major sub-industries.[239] In 2020, other store-based retailing[40] was the largest employing sub-industry, employing more than 3,700 workers, followed by food and beverage services at about 3,400 workers.[240]

Employment in this industry is subject to seasonality and the labour shortages over the last 2 years have further underscored the challenges associated with providing high quality and timely visitor offerings. The visitor economy is wide reaching and, as such, does not capture the full diversity of activities related to this sector, including nature-based activities. Furthermore, it is likely that employment will rebound in an upward pattern. This is demonstrated through the increase in job vacancies, current labour shortage challenges.

Figure 49: Top 6 visitor economy sub-industries by employment

Top 6 Visitor economy sub-industries by employment – 2018 to 2020

based on ANZSIC sub-industry classifications
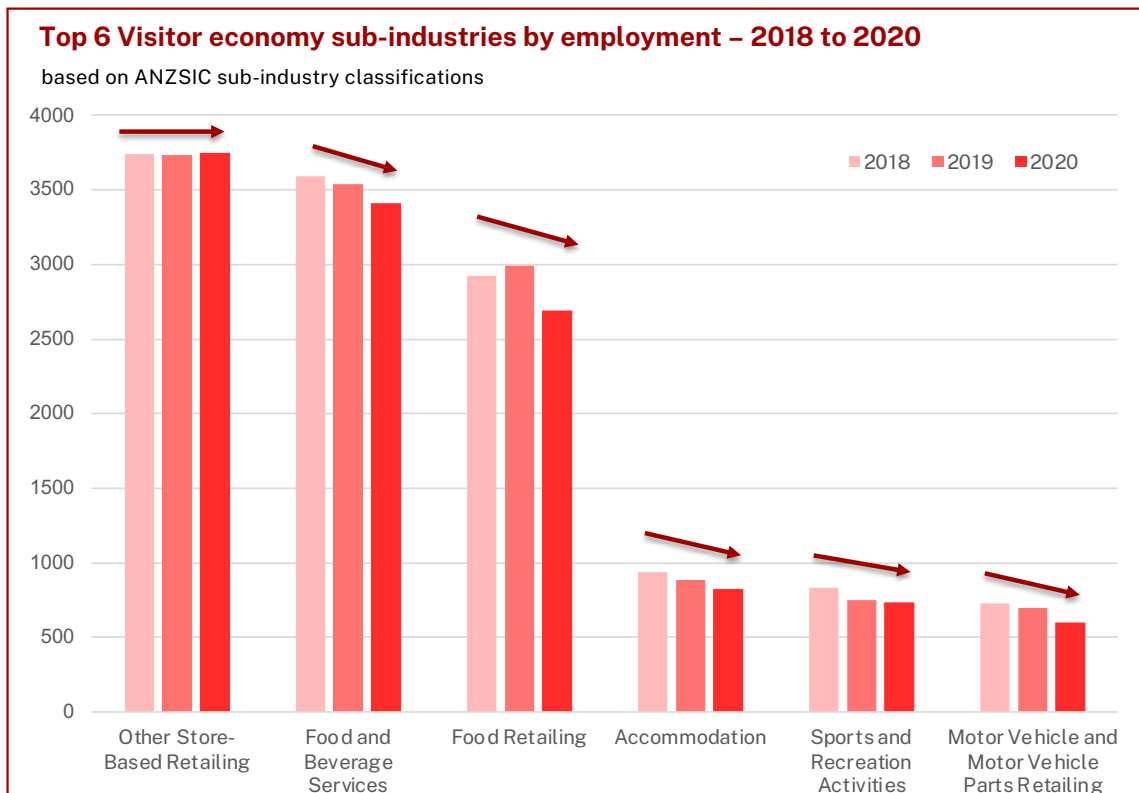
Source: NIEIR Goulburn Regional Data, 2020

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40 Other store-based retailing includes retail goods such as furniture, floor coverings, houseware and textile goods; electrical and electronic goods; hardware, building and garden supplies; recreational goods; clothing, footwear and personal accessories; department stores and pharmaceutical and other store-based retailing. Key exclusions from this classification are food, motor vehicles and parts, and fuel, which have unique classifications.

Forecasted growth by occupation

The visitor economy has significant potential for growth with an expected annual employment growth rate of 2.5% between 2022 to 2025 – the second largest employment growth rate for the region.[241] Current forecasts suggest that more than 1,620 workers are required in the industry over these 3 years. Of these, around 570 are expected to fill retirements.[242]

Forecasted occupation growth across this sector for the top 20 occupations (as classified by the ABS) is included below.[41] While this list is not exhaustive, it provides an overview of the key occupations in demand and highlights that a majority of existing jobs across the sector will continue to be required.

Figure 50: Forecasted occupation growth in Goulburn's visitor economy sector (2022–2025)

Forecasted occupation growth in Goulburn's visitor economy from 2022 to 2025

Top 20 visitor economy occupations	Change
Sales Assistants (General)	+100
Retail Managers	+30
Checkout Operators and Office Cashiers	+50
Waiters	+70
Shelf Fillers	+30
Kitchenhands	+50
Bar Attendants and Baristas	+50
Fast Food Cooks	+60
Commercial Cleaners	+50
Chefs	+40
Cafe and Restaurant Managers	+40
Cooks	+20
Retail Supervisors	0
Cafe Workers	+20
Receptionists	+20
Hotel and Motel Managers	+10
Motor Mechanics	+10
Pharmacy Sales Assistants	+10
Motor Vehicle and Vehicle Parts Salespersons	+10
Pharmacists	+10

Source: Victorian Skills Authority Employment Forecasts, April 2022

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41 This graph is not exhaustive (top 20 occupations only) and may not include other major roles and responsibilities as identified by industry.

Skills and occupation requirements

Beyond forecasted occupations based on Australian Bureau of Statistics (ABS) classifications, industry roundtable participants raised a number of skills needs and capabilities required in the next 1-2 years (immediate needs) and 3-5 years (emerging needs).

	Immediate needs (1–2 years)		Emerging needs (3–5 years)
Visitor economy	**Specific roles or occupations:** • hotel managers • chefs • linen services • bartenders • waiters • niche and specialised skills for example in agriculture that affect agritourism • planners **Niche or specific skills:** • workers from multicultural and diverse backgrounds	**Core competencies including:** • communication and storytelling skills • business management skills • marketing skills • teachable, positive attitude **Technical and digital skills:** • general digital literacy • ability to fulfil industry regulation and requisite certifications	• **Cross sector collaborations** ability to secure and sell local product with knowledge of the point of difference • **Project management skills** support and execute higher quality large scale events in the region • **Administrative skills** such as bookkeeping, inventory management, costing and pricing

Opportunities to address workforce and education outcomes

Consultation across the region identified a range of potential responses to address the current and emerging challenges facing the visitor economy across the Goulburn region. Opportunities to address workforce challenges across the region are further detailed in the profile across 4 key response areas, including impact and complexity considerations.

Table 17: Visitor economy proposed responses and solutions

Visitor economy proposed responses and solutions
Proposed responses within the remit of the Victorian Skills Authority
- Investigate strategies that promote the diversity of career pathways available and challenge limiting perceptions of the sector   - Expand programs like the pre-accelerator Startup Shakeup program to drive new business opportunities   - Advocate for increasing the skilled migration cap into the region   - Provide local insights to support the development of the Victorian Skills Plan.
Proposed responses to be achieved through broader collaboration across the region and with broader partners and stakeholders
- Host 'professional' working holiday makers in the region to encourage opportunities for local staff to upskill   - Create programs that specifically support and reskill older workers   - Enable increased worker flexibility across the sector through coordination of roles to create full-time equivalent (FTE) positions   - Provide relevant and specialised skill set training and programs including through scalable transferable skills, for example customer service   - Understand the value and contribution of a lower-skilled workforce to match them into roles and opportunities   - Invest in a campaign to rebrand the Goulburn region   - Facilitate inter-sector networking opportunities to enable innovative solutions to industry problems. For example: - Packaging visitor experiences to encourage greater dollar and time spend in the region   - Creating tours that cross shire boundaries   - Establish a transferable framework to better facilitate risk and cost sharing of events among providers   - Utilise micro-credentialling to upskill current and new workers   - Leverage the already engaged volunteer workforce and provide transition or attraction pathways into longer term paid opportunities   - Facilitate peer learning and cross-business mentoring   - Support the Goulburn Tourism Partnership to accelerate planning and delivery of a more coordinated tourism plan for Goulburn   - Facilitate employment of under-represented and non-traditional cohorts.

Appendix B: Data sources

Quality of data is central to the quality of insights shown through any economic profile. Significant effort has been made to reflect the Goulburn region robustly and accurately as defined by the Department of Jobs, Skills, Industry and Regions (DJSIR). Nonetheless, it is important to note there are varying definitions of the Goulburn region and some data is significantly outdated (at the time of developing this profile). Where the reported data does not fit the defined region exactly, inclusion of the data has considered the data type, available insights as well as the jurisdiction represented. Sources and their associated boundaries are denoted by footnote in the profile.

The Goulburn region

Note that the complete Goulburn region, as defined by DJSIR includes the local government areas (LGAs) of Greater Shepparton, Mitchell, Murrindindi, Moira and Strathbogie. For this reason, data disaggregated by LGA contained within this profile is most complete. Data from the Regional Development Victoria REDS and Victorian Skills Authority (VSA) Data Dashboard cover the Goulburn region completely.

ABS and labour market information data coverage

The Labour Market Information Portal (LMIP) and data from other federal level agencies utilise Australian Bureau of Statistics (ABS) data. While LGA data is occasionally available, the majority of ABS data is provided at an SA4 level.

Note that the referenced Goulburn region is comprised of multiple SA4 areas which are Shepparton and Hume. Because only around one fifth of Hume is part of Goulburn, SA4 Shepparton is occasionally used as a proxy for the entire 'Goulburn' region and has not been combined with other regional data. Regarding IVI data, the Goulburn region LGAs fall under the Bendigo and High Country data region. The Goulburn Murray employment area is larger than the Department of Education definition of the region.

Figure 51: LMIP and ABS SA4 regions
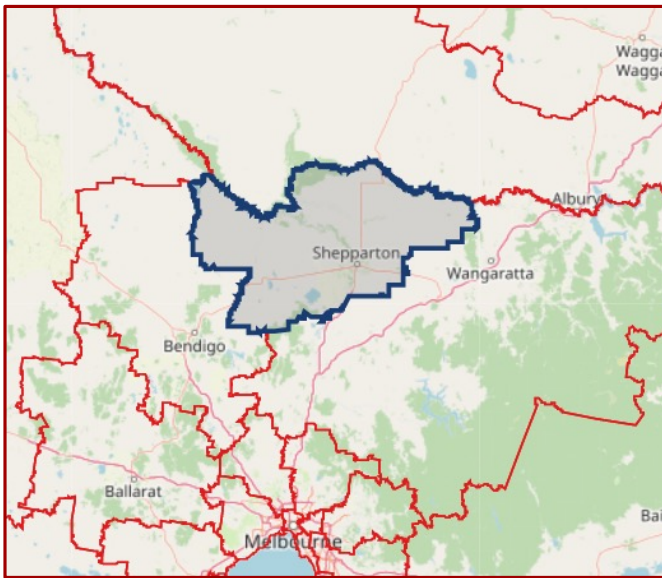
Shepparton SA4 – ABS
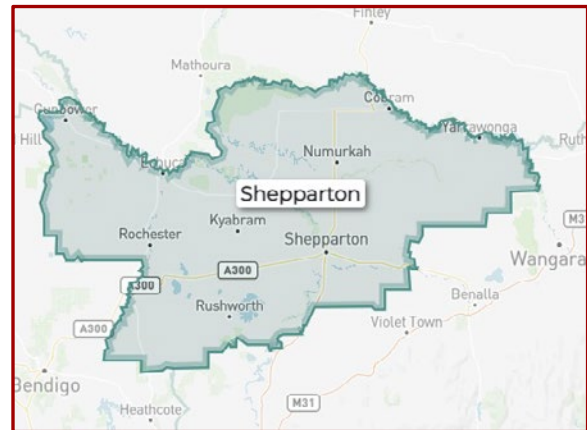
Shepparton Region, Goulburn Murray employment region – labour market information portal

Employment data

This profile contains both historic and projected employment figures.

- Data on **past employment**, for example subindustry data is sourced from National Institute of Economic and Industry Research (NIEIR) datasets collated for the VSA

- **Contemporary employment** (2021–2022) figures are collected from LMIP database –jurisdiction as explained in the paragraph above.

Assumptions for employment forecasts

Industry employment forecasts are consistent with the forecasts used for the purpose of the Victorian Skills Plan, which is based on Nous and VSA modelling using data from ANZSIC3, ANZSCO6, BGTOCC (Burning Glass Technologies Occupation Classification). The forecasts consider historical industry growth, population growth and projected industry growth.

As a result of the modelling method and practical limitations of an inability to predict all future conditions, these figures do not account for policy changes or incoming investment that may augment the potential for growth in a sector.

While the industry roundtable discussions provided a qualitative context and lived experience to these numbers, it is important to note that these forecasts are for new workers required due to an increase in production or operations. It does not include workers needed to fill current labour shortages existing at the same level of output.

Additionally, non-participation (due to discouraged workers for example) or underemployment is unlikely to be represented.

Appendix C: Definition of industry groupings

A breakdown of the 7 major industry groupings agreed by the Regional Skills Taskforce and the related sub-sectors for the purpose of this work is included below.

Grouping	Sub-sectors	
Agriculture	• Horticulture • Agriculture	• Horse breeding • Forestry • Fishing
Manufacturing	• Food processing • Engineering (equipment for agriculture and manufacturing)	• Manufactured construction products (for example concrete panels
Visitor economy	• Hospitality and accommodation (including wineries) • Retail • Events (including Horse races, art)	• Outdoor education
Healthcare and community services	• Hospitals • Medical services (General, specialist, dental, allied)	• Community services (aged care, residential, disability, youth and early childhood services)
Construction and housing	• Residential construction • Civil construction/infrastructure	• Planning and surveying
Clean energy	• Renewable energy • Community energy	• Low emission vehicles
Education and training	• Vocational training • Higher education	• Adult and community education • Primary and secondary schools
Key concepts sitting across all sectors	**Clean economy -** sustainable and renewable practices including activity in the circular economy	
	Digital economy - leveraging digital technologies and skills	
	Care economy - paid and unpaid work associated with care in all its forms	

Mapping of ANZIC Industry Classifications to key industries defined in this profile

To estimate the employment and gross value added of the key industries using the ANZSIC Industry Classifications, the following assumptions were applied.

Key industry	ANZSIC Industry Classifications
Agriculture sector	• Agriculture, forestry and fishing
Clean energy	• Electricity, gas, water and waste services
Construction and housing	• Construction
Education and training	• Education and training
Health care and community services	• Health care and social assistance
Manufacturing	• Manufacturing
Visitor economy	• Retail trade • Arts and recreation services • Accommodation and food services

'Consultation and engagement across the region highlighted a number of overarching opportunity areas unique to the Goulburn region that can be prioritised to promote and enable greater workforce participation, in addition to developing skills required across the region both now and into the future.'

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