

Inherent Limitations

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KPMG have indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

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Wodonga TAFE socio-economic impact summary

Wodonga TAFE delivers over 190 courses, traineeships, apprenticeships and vocational education pathways to more than 9,000 learners allowing them to specialise, reskill and re-engage.



Economic contribution



Fee for service work is a strong differentiator, accounting for over 60% of total training fees in 2020.



Employed
638 Staff
in 2020 and delivered
training to
7,820 Students
(new and continuing) in 2021.



Ranked #1 for student recommendation at 85.7% and ranked #3 for

employer recommendation at 83.3% in Victoria.¹

1. Performance and Accountability Framework Report" (PAF) 2021



In 2020, Wodonga TAFE generated **\$60 million in revenues**, driving an estimated **\$81 million in GRP** in the Hume region.

This economic contribution is comprised of three impacts:

\$48m

due to the **operations** of Wodonga TAFE, spending by employees and purchases in the supply-chain to provide education services

\$22m

due to **upskilling the workforce** through education and training, leading to higher productivity and wages

\$11m

due to **improved employment outcomes**,
with higher qualification
attainment leading to more
people employed.

For every \$1

Wodonga TAFE spends, \$1.44 GRP in the region

KPMG's report identifies key social impact themes which are interrelated to the direct and indirect economic contribution, thereby demonstrating Wodonga TAFE's holistic impact on the regional economy and community.



Social contribution



Actively engages in community initiatives, leading, coordinating and participating in efforts to rebuild and reskill communities that have faced economic dislocation.



In 2021, over 80% of student survey respondents were satisfied with the training provided and 75% achieved their main reason for training.2

2. 2021 RTO Performance Detailed Report



Provides inclusive education and training to meet the needs of a diverse student cohort and improve social and economic prospects for regional communities.

Partnerships exist with a broad range of industries to ensure training is aligned with current and future workforce needs.



Wodonga TAFE **DECA** (Driver Education Centre of Australia) is Australia's leading post-licence driver training provider of Heavy Vehicle Licence upgrades.



Wodonga TAFE has a strong and expanding Defence partnership

It is the largest third-party training provider for the ADF, delivering critical training and support services to meet the current and future capabilities of Defence.

Over the period 2012-2021, Wodonga TAFE provided

worth of Defence training and support services.

In 2021, Wodonga TAFE has contracted \$31.9 million worth of Defence training contracts and has 3,568 Defence trainees enrolled to receive accredited training across 5 states and territories,

including the Northern Territory.

1 Introduction

The Wodonga Institute of TAFE (Wodonga TAFE) is a vocational education and training institute in the Hume region of north east Victoria, providing vocational education services to more than 9,000 learners. It offers over 190 courses ranging from non-accredited programs, through to accredited short courses, traineeships, apprenticeships, through to Certificate II to Advance Diploma programs. Wodonga TAFE offers qualifications across various sectors, including agriculture and horticulture, engineering, hospitality, commercial cookery, leadership and business, arts and design, health, and education.

Wodonga TAFE's mission is to strengthen their local communities and industries by providing accessible and innovative learning that leads to positive outcomes for the individual and industry. Wodonga TAFE is one of Australia's largest heavy vehicle training organisation, and the largest third-party training provider for the Australian Defence Force (ADF). Wodonga TAFE maintains partnerships with industries and other universities across Australia to design programs that create job-ready graduates and to ensure that curriculum and training opportunities are responsive and flexible to current and future industry demands. ²

1.1 Scope of work

KPMG has been commissioned by Wodonga TAFE to conduct a socio-economic analysis of its operations in Albury, Wodonga, Indigo and Towong within the Hume region of Victoria. This study is aimed at determining the social and economic contributions of Wodonga TAFE on the local economy and community through a comprehensive analysis of publicly available data (including data from the Australian Bureau of Statistics (ABS), Pennington Report, Macklin Review, National Centre for Vocational Education Research) and information and data provided by Wodonga TAFE on a range of course offerings, community initiatives and training programs.

As part of this analysis, the project focused on two components:

- An economic impact assessment This involved assessing the economic impacts of Wodonga TAFE's operations as follows:
 - Estimating the direct economic impacts by developing an understanding of Wodonga TAFE's operations in terms of revenue and expenditure streams, student numbers (enrolments, completions), student qualifications and employment before and after training.
 - Estimating the indirect economic impacts using KPMG-SD, a computable general equilibrium (CGE) model that captures the upstream and downstream linkages between businesses and the regional economies.
 - To assess the 'local' economic value and supply-chain impacts of Wodonga TAFE and its
 activities, the analysis focuses on the four local government areas of interest: Albury, Wodonga,
 Towong and Indigo. Overall, changes in employment, wage premiums and labour productivity
 drive the regional impacts and are presented in terms of Gross Regional Product (GRP) and
 industry activity.

¹ Wodonga Institute of TAFE Annual Report 2020

² Wodonga Institute of TAFE Course Guide 2021

- A social impact assessment This involved assessing the social impact made by Wodonga TAFE on the local community as follows:
 - Conducting comprehensive research (primary and secondary) and analysis to identify and discuss key social themes that capture Wodonga TAFE's value and contribution.
 - In conversation with key stakeholders, developing case studies that support the key themes.
 These case studies highlight tangible examples of Wodonga TAFE's programs and their impact on the regional community and industry, with a particular focus on Wodonga TAFE's contribution to Australia's defence industry.

The economic and social impacts in this report are interrelated and are discussed in conjunction with one another to demonstrate Wodonga TAFE's overall contribution to the local economy and community. Analysis is based on the most recent year where data is available, which is different across the different data sources used throughout this report. 2020 data was used for the economic modelling as 2021 data was not available at the time of production.

1.2 Report structure

The remainder of this report is structured as follows:

- **Section 2** provides an overview of Wodonga TAFE's operations in the Hume region. This includes background on Wodonga TAFE, its campuses, courses, enrolments, and staff. The section also provides a brief economic overview of the region in which Wodonga TAFE operates and the four Local Government Areas (LGAs) of interest.
- Section 3 provides a detailed analysis and discussion of the social and economic contribution of Wodonga TAFE. The economic impacts capture both the direct impacts of TAFE operations in the region and the potential flow-on, economy-wide impacts resulting from employment opportunities and productivity gains for skilled graduates. The key social impact themes identified demonstrate Wodonga TAFE's value 'beyond the numbers.' These themes are supported by case studies which bring to life tangible examples where Wodonga TAFE is delivering positive outcomes for the region's economy and community.
- **Section 4** provides an analysis of Wodonga TAFE's social and economic contribution to Australia's defence industry within the region and beyond. As the largest third-party provider for the ADF, Wodonga TAFE plays an important role in building the capability of Australia's ADF personnel.
- Appendix A provides technical details on the economic modelling undertaken as part of this report.



2 Wodonga Institute of TAFE

Wodonga TAFE was established in 1986 by the Victorian State Government as a Vocational Education and Training (VET) provider in north east Victoria. Its main campus is in West Wodonga, with additional campuses located at Logic Centre - Barnawartha North, Brockley Street Wodonga, and Shepparton (see Figure 3). In 2020, Wodonga TAFE also delivered VET programs within secondary schools throughout the north east region. This includes Wodonga Senior Secondary College, Tallangatta Secondary College, Victory Lutheran College, Mount Beauty Secondary College, Corryong Secondary College, and Mansfield Secondary College. Delivery of training and assessment also occurs within industry settings. By delivering courses and fee-for-service work tailored to the local economy and designed to bridge the current and future skills gap, Wodonga TAFE supports continued growth of the Hume region.

2.1 TAFE operations

This section provides an overview of Wodonga TAFE's operations in terms of student numbers, staff employment and financials. This provides an understanding of the size and scale of the Institute's current operations and services.

Table 1 shows the total headcount of new and continuing students over the period 2018 to 2021. This headcount covers a large range of accredited certificates, diplomas and apprenticeships offered by Wodonga TAFE, including short courses or single units lasting one to three days. This headcount also includes ADF students located at Latchford Barracks and ADF student enrolments for non-accredited training such as heavy vehicle training (Wodonga TAFE's ADF activities are discussed further in Section 4). The number of students continuing with their studies has consistently increased over the period. However, new student headcount has been on a downward trend, particularly exacerbated by the onset of the COVID-19 pandemic in 2020. This trend has been evident across the Victorian TAFE sector.

Table 1: Total headcount of new and continuing students at Wodonga TAFE, 2018-2021

	2018	2019	2020	2021
New students	7,902	7,039	5,498	5,734
Continuing students	1,753	1,809	2,009	2,086
Total headcount	9,655	8,848	7,507	7,820
ADF	707	836	792	887
Non-ADF	8,948	8,012	6,715	6,933

Source: Wodonga TAFE

³ Wodonga Institute of TAFE Annual Report 2020

In addition to total student headcount, Table 2 shows the total number of learners supported by Wodonga TAFE over the period 2018 to 2021. This includes non-accredited ADF training delivered to learners who are not formally Wodonga TAFE students, along with ADF accredited training delivered through Wodonga TAFE's Box Hill and Chisholm partnership. This brings the total number of learners supported by Wodonga TAFE to 9,416 in 2021.

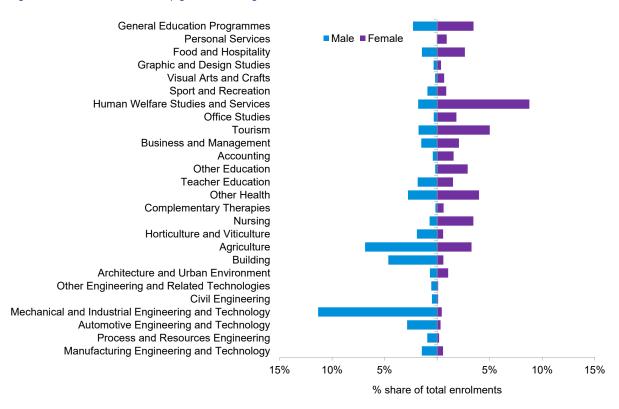
Table 2:Total headcount of new and continuing learners at Wodonga TAFE, 2018-2021

	2018	2019	2020	2021
New students	7,902	7,039	5,498	5,734
Continuing students	1,753	1,809	2,009	2,086
ADF non-accredited training	-	1,362	1,275	1,401
ADF accredited training (Box Hill/Chisholm partnership)	-	147	185	195
Total headcount	9,655	10,357	8,967	9,416

Source: Wodonga TAFE

Figure 1 shows the share of male and female student enrolments by fields of education. Over the period 2018 to 2020, the most chosen fields of education at Wodonga TAFE included *Mechanical and Industrial Engineering and Technology, Human Welfare Studies and Services, Agriculture, Other Health* and *Tourism*. The engineering and technology, building and agriculture fields have a higher proportion of male students, whereas female students are more concentrated in people-facing fields such as health, welfare, education and hospitality.

Figure 1: Fields of education by gender, average of 2018-2020



Source: Wodonga TAFE

Wodonga TAFE has a strong commitment to delivering quality training and positive student outcomes, receiving Large Training Provider of the Year and Victorian Large Training Provider of the Year at the Australian Training Awards in 2018.⁴ The student and employer survey results from the *2021 RTO Performance Detailed Report* show that over 80 per cent of the student survey respondents were satisfied with the training provided by Wodonga TAFE, including through periods of remote learning due to COVID-19. Three-quarters of the respondents achieved their main reason for training (such as gaining extra skills for a current job or better job opportunities), with particularly positive outcomes for those studying *Society and Culture* and *Agriculture, Environmental and Related Studies*.

In addition to providing course training and apprenticeships, Wodonga TAFE engages with the industry and the broader education sector to deliver a range of fee-for-service work. Figure 2 shows training revenue shares by line of business over the period 2018 to 2020. Educational institutes generally receive a sizeable amount of government funding and grants for their operations and services. Wodonga TAFE differentiates itself through less reliance on public funding and a stronger focus on fee-for-service work, which generates the largest training revenue share for the TAFE. This share has increased over the years to account for 60 per cent of training revenues in 2020, speaking to Wodonga TAFE's strong industry partnerships and growth in the area.

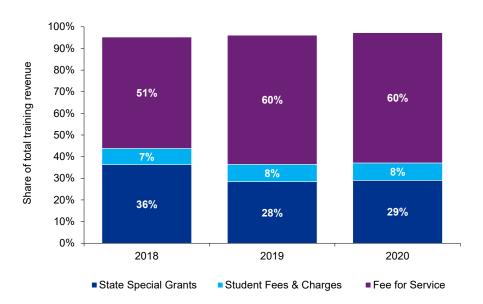


Figure 2: Wodonga TAFE's training revenue shares, 2018-2020

Source: Wodonga TAFE

Wodonga TAFE offers regional employment opportunities, with a total staff headcount of 663 employees in 2021. As seen in Table 3, overall employment headcount has remained broadly consistent over the three years to 2021. There has generally been a moderately larger proportion of female employees over these years, reaching near gender parity in 2021 (51 per cent female and 49 per cent male employees).

It is important to note that the standard measurement of employment used for economic analyses is the number of full-time equivalent (FTE) employees. This adjusts all employment headcount figures to FTEs and is therefore lower than the total number of staff employed by Wodonga TAFE.

⁴ Wodonga Institute of TAFE Annual Report 2020

Table 3: Baseline employment (headcount and FTE) numbers, 2019-2021

	2019	2020	2021
Staff headcount	628	638	663
Type of employment			
Full-time and part-time	416	457	521
Casual	212	181	142
Gender split			
Male	298	299	328
Female	330	339	335
FTE	445	461	526

Source: Wodonga TAFE



2.2 Regional economic context

To examine the economic impacts of Wodonga TAFE's activities at the local regional level, the analysis has focussed on the LGAs of Albury, Wodonga, Indigo and Towong, where the Institute's operations and services are concentrated. Isolating the impacts within these smaller regions provides a more targeted analysis of the 'local' flow-on or supply chain impacts of the institution. In providing overall impacts, this report refers to the impacts in the 'Hume region', which represents the Albury, Wodonga, Indigo and Towong LGAs and the rest of the Hume SA4 collectively.

This section presents a snapshot of these four LGA economies to provide context in terms of the regional economic size and structure within which Wodonga TAFE operates.

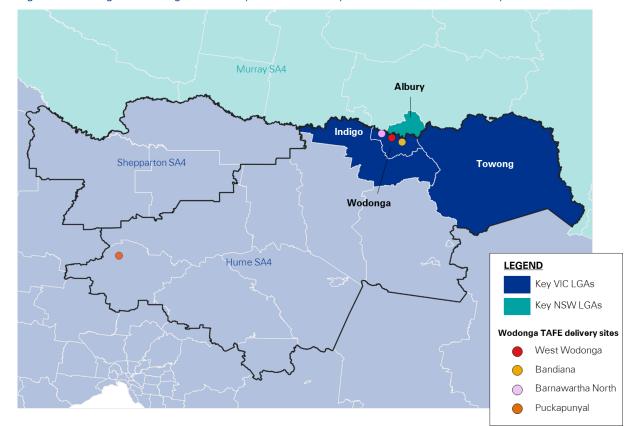


Figure 3: Wodonga TAFE's regional delivery sites and the key LGAs of interest for the analysis

Source: Wodonga TAFE

Albury and Wodonga are border towns in New South Wales and Victoria respectively, separated by the Murray River. The two LGAs, combined, form the main regional centre in north east Victoria, with a total estimated resident population of over 97,000 in 2020. Indigo and Towong are smaller regional LGAs with estimated resident population of around 16,000 and 6,000, respectively.⁵

In 2020, these LGAs generated a combined GRP of nearly \$8.8 billion. Of the total resident population across the four regions, over half (63,719 people) were employed. This employment was spread across industries as shown in Figure 4. These four LGAs account for 52 per cent of the Hume region's broader workforce.

⁵ ABS Region comparison (https://dbr.abs.gov.au/compare.html?lyr=lga&rgn0=27170)

4,500 Albury Wodonga ■ Indigo Towona 4,000 Employment (persons) 3,500 3,000 2,500 2,000 1.500 1,000 500 Profesional Scientific and Technical Services Agrounder Forestry and Fishing Accommodation and Food services Transport, Postal and Malestrosins Administrative and support services Public Administration and Safethy 0 Manufacturing wholesde Trade Construction

Figure 4: Regional employment across industries, 2020

Source: ABS - Data by region and KPMG calculations

Healthcare and Social Assistance is one of the highest employing industries in all four LGAs, accounting for about 15 per cent of jobs in each region. The Education and Training sector, which is where the Wodonga TAFE activity is located, also employs a sizeable proportion of the regional workforce. Retail Trade offers high employment opportunities in the larger LGAs of Albury and Wodonga, while the other regions have a slightly greater presence of primary and secondary industries such as Agriculture and Manufacturing. The popular fields of study at Wodonga TAFE, such as Other Health, Human Welfare Studies and Services and Agriculture, align with the employment demand in these regions.

The Hume region also hosts the largest ADF presence in Victoria. The total value of the sector in the region is estimated to include over 5,600 jobs and \$185 million per annum spend in 2019. Regional Development Australia Hume estimated an almost 44 per cent increase in spending by 2021. ⁶ As the largest third-party provider for the ADF, Wodonga TAFE plays an important role in supporting this sector within the region and across Australia. Wodonga TAFE's contribution to the defence sector is further expected to increase, with Wodonga TAFE winning the Defence Heavy Vehicle Driver training contract in October 2019 which is worth up to \$100 million over the next five years. ⁷

⁶ RDA Hume Projects - Regional Development Victoria (rdv.vic.gov.au)

⁷ Regional Development Australia 2019, Defence Industry in the Hume Region: An assessment of Value and Growth Opportunties, (www.rdv.vic.gov.au)

3 Socio-economic analysis

Wodonga TAFE has a well-established position in the Hume region as a vocational training provider and makes broad direct and indirect contributions to the local economy through its industry and university partnerships, community initiatives and student-focused programs. To understand and capture the value created by Wodonga TAFE in the region (including training delivery, partnering with industry, developing community and inclusive programs), the analysis has combined information and data provided by Wodonga TAFE with stakeholder consultations and other publicly available data inputs.

Supporting the local economy

Workforce capability development

Developing the community

Inclusive training

Partnering with industry

In Section 3.1, this report outlines the estimated economic value of the first two benefits discussed above (supporting the local economy and workforce capability development). These benefits can be quantified in terms of their impact on GRP and industry activity. The remaining three benefits (developing the community, inclusive training and partnering with industry) are discussed in qualitative terms in Section 3.2, including case studies to further illustrate these social contributions.

Wodonga TAFE's social and economic contribution to Australia's defence industry within the region and beyond is examined separately in Section 4. As the largest third-party provider to the ADF, Wodonga TAFE plays an important role in building the capability of Australia's ADF personnel.

It should be noted that the COVID-19 pandemic has generally had a negative impact on the Australian educational sector over the past two years. While student attrition rates have increased, Victorian TAFE enrolments have declined throughout this period and compulsory student placements were postponed which impacted student completions.



3.1 Measuring the economic impacts

Wodonga TAFE makes an important contribution to the local economy, providing a pathway for students to enter the labour force, up-skill, increase productivity and achieve higher wages. Creating a more productive workforce benefits the local economy through improved opportunities for both households and businesses. Through its training programs, Wodonga TAFE provides employment opportunities for local students, and its operational expenditure supports local businesses.

The economic contribution of Wodonga TAFE is analysed based on the components listed in Figure 5 and defined below. Data supplied by Wodonga TAFE provided the key inputs (or direct impacts) into the economy wide modelling. The wider economic impacts were modelled using the KPMG-SD model, regional CGE modelling representing the Hume region's economy and its interactions with the rest of Australia (further details are provided in Appendix A).

Figure 5: Graphical representation of the difference between sales/output and value-added



Source: KPMG

- **Sales/Output** is a measure of the value of the goods and services produced by an industry or sector, where the value reflects the cost of inputs: labour, capital, and intermediate inputs of goods and services, including imports.
- Value-added by industry is equivalent to output less goods and services sourced from other suppliers (including imports) and is the sector's contribution to gross state product. By excluding goods and service inputs from other domestic industries and from overseas, 'value added' avoids double counting as it does not include the value-added from other industries.
- Full-time equivalent (FTE) employment adjusts headcount employment figures (which capture
 all employees regardless of hours worked) to FTE figures by converting part-time workers to FTE
 workers. This metric allows for a standardised and more representative comparison of employment
 across industries.
- **Gross Regional Product (GRP)** is the total market value of goods and services produced in an economy. GRP is equivalent to gross national expenditure plus exports of goods and services, less imports of goods and services.

The separate operations, labour force and productivity impacts of Wodonga TAFE are described in more detail in the following sub-sections. Data provided by Wodonga TAFE formed the key inputs (or direct impacts) into the economy wide modelling. The wider economic impacts were modelled using the KPMG-SD model, regional CGE modelling representing the Hume region's economy and its interactions with the rest of Australia (further details are provided in Appendix A).

It is estimated that Wodonga TAFE contributed \$81.4 million to local GRP in the Hume region in 2020, with a significant proportion of this impact in the Wodonga LGA where Wodonga TAFE is situated. This overall impact in the region is driven by Wodonga TAFE's operations supporting local businesses, and by providing training that improves employment opportunities for graduates and supports a more productive workforce. Figure 6 shows these three main effects, with Wodonga TAFE operations having the strongest impact on the region's Gross Domestic Profit (GDP) impact (\$48 million), followed by the impact of increased labour productivity due to upskilling (\$22 million), and increased employment due to Wodonga TAFE training qualifications (\$11 million).

Wodonga TAFE Operations

Upskilling the workforce

Improved employment prospects

Hume region total GRP

0 20 40 60 80 100

Figure 6: Change in Hume region GRP due to Wodonga TAFE operations and training (\$ millions)

Source: KPMG-SD model

Note: Figures may not sum to total due to rounding.

Figure 7 shows the expenditure side components of the Hume region GRP impact from Wodonga TAFE's activities:

Change in local GRP (\$ million)

- Household consumption is \$38 million higher, reflecting spending on education and additional household incomes. The additional household income is largely the direct result of Wodonga TAFE employment and from students' employment and productivity outcomes.
- There is higher investment in the local economy as the higher-skilled workforce means that returns to capital also improve.
- A stronger workforce means that exports from the region are higher, along with higher demand for imports, both as inputs into production and for local consumption.

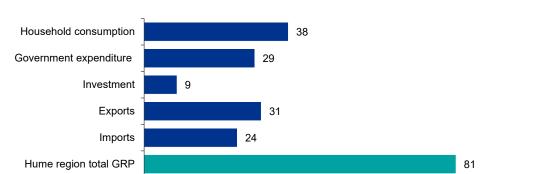


Figure 7: Change in expenditure components of Hume region GRP (\$ millions)

Source: KPMG-SD model

Note: GRP = Household + Government Expenditure + Investment + (Exports – Imports)

20

0

40

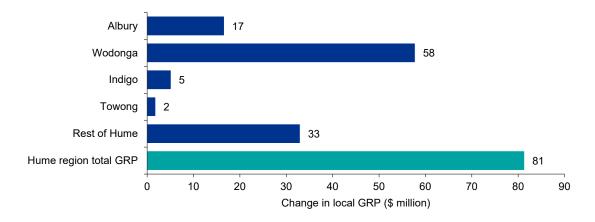
Change in local GRP (\$ million)

100

80

Figure 8 reports the breakdown of GRP impacts of Wodonga TAFE by LGA. As mentioned above, most activity is captured in the Wodonga LGA, as this is where Wodonga TAFE's operations are based. Albury has the second largest impact as it is estimated that a large share of the TAFE-trained local labour force is employed there. Wodonga TAFE's operations also benefit the wider regional economy, with the rest of the Hume region GRP increasing by \$33 million, largely from upskilling of workers in the *Agriculture, Construction* and *Healthcare* sectors.

Figure 8: Change in GRP by LGA (\$ millions)



Source: KPMG-SD model



⁸ Based on current industry and employment shares in each LGA.

3.1.1 Supporting the local economy

Wodonga TAFE's operations **directly** contribute to local economic activity (as measured by expenditure, employment and value added in the tertiary education sector). These activities also drive additional **indirect** benefits,

Supporting the local economy

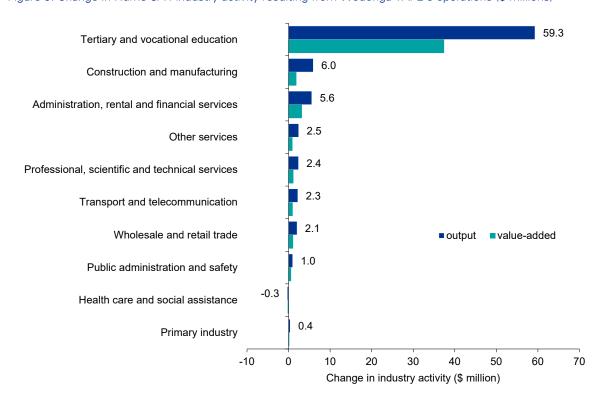
with businesses that supply Wodonga TAFE also spending in the local community to support their own operations (e.g., for supplies, maintenance, and capital purchases) and through the spending of their employees in local businesses.

In 2020, Wodonga TAFE:

- Earned aggregate income of just over \$59 million, of which almost \$42 million was spent on staff wages
- Employed 638 staff (or 461 in FTE terms).

Figure 9 shows the industry output (sales) and value-added impacts resulting from Wodonga TAFE's operations. The largest impact is seen in the *Tertiary and Vocational education* sector, as this is where Wodonga TAFE's operations are classified. Activities in the *Construction and manufacturing* and *Administration, rental and financial services* sectors are significantly stimulated as these provide inputs into Wodonga TAFE's operations. Sectors such as *Retail trade* are stimulated from spending by workers in the local economy.

Figure 9: Change in Hume SA4 industry activity resulting from Wodonga TAFE's operations (\$ millions)



Source: KPMG-SD model

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⁹ Sales less inputs from other industries.

3.1.2 Workforce capability development

Vocational education and training aims to deliver a productive and skilled workforce that meets current and future industry needs, enables greater participation in the labour market, and upskills working Australians.¹⁰

Workforce capability development

Consistent with these aims, Victorian TAFEs confer a range of significant and positive opportunities and impacts for the individuals engaged in learning and training, alongside broader benefits for the community, local industries, and skill sectors. As public providers, TAFEs champion and deliver equity and access to education and training and play an active role in contributing to social cohesion. Victorian TAFEs provide graduates with educational pathways and develop regional capacity to support local needs and current and emerging industry priorities. ¹¹

Labour force impact

Through quality training, in-demand courses and links to industry, Wodonga TAFE provides improved employment prospects for students, trainees and apprentices. Training and skills can lead to higher employment and higher participation in the workforce. Table 4 shows the outcomes for students before and after their training. The number of students who reported being employed increased by nine percentage points, from 65 per cent to 74 per cent, after completing their training. Overall, a high improved employment status was reported by respondents who completed their training in *Education, Society and Culture* and *Agriculture, Environmental and Related Studies*. ¹²

Table 4: Wodonga TAFE student outcomes, pre- and post-training, 2020

	2020 Labour force status			
	6 months before training		6 months after training	
Employed or undertaking/completing apprenticeships or VET	433	65%	517	74%
Not Employed, but looking for a job	104	16%	72	10%
Not Employed, not looking or unable to work	60	9%	45	6%
Own business	57	9%	62	9%
Helper not receiving wages	11	2%	7	1%
Total	665	100%	703	100%

Source: Victorian Skills Authority, 2021 RTO Performance Detailed Report

From 2018 to 2020, the average number of completed qualifications from Wodonga TAFE was 1,535 per annum. Based on the increased employment outcome reported above, this suggests around 133 additional people are employed after their training. The increase in employment in each sector (based on the courses studied) was applied to the KPMG-SD model to capture the local economic impact from this additional employment.

In addition to benefitting from improved employment prospects after training at Wodonga TAFE, this training is a pathway for some students to pursue further studies and receive higher qualifications. Over 17 per cent of the students surveyed reported going on to further study after their training. ¹³ While this

¹⁰ Productivity Commission, Report on Government Services 2017, https://www.pc.gov.au/research/ongoing/report-on-government-services/2017/child-care-education-and-training/vocational-education-and-training/rogs-2017-volumeb-chapter5.pdf

¹¹ KPMG, The importance of TAFE to Victoria's prosperity 2018, https://vta.vic.edu.au/document-manager/research-applied/848-the-importance-of-tafe-to-victoria-s-prosperity-final-29-06-18

¹² Victorian Skills Authority, 2021 RTO Performance Detailed Report

¹³ Ibid.

student outcome is not captured in data used to simulate current regional benefits, it is another important component that should be noted when understanding Wodonga TAFE's contribution to creating a more educated and skilled future workforce. It is important to note that a large proportion of Wodonga TAFE students are currently employed and pursing further studies.

Figure 10 shows the impact across local industries due to the additional employment of Wodonga TAFE graduates. Most sectors show an increase in output, with a particularly strong impact in the *Healthcare* sector because of a relatively high number of completions in health education fields, such as nursing. There is switching out of some sectors, such as *Accommodation and Food services*, as workers upskill into other industries.

A central part of Wodonga TAFE's services is its ADF partnership and training, which is provided to a range of current ADF personnel (and is discussed in more detail in Section 4). Defence personnel completing their qualification through TAFE are already employed within the ADF when they commence and continue to be employed after gaining their qualification. Therefore, as can be seen below, there is no impact in terms of overall ADF employment numbers. The benefits of this training are from a more highly skilled ADF contributing to Australia's strategic defence capabilities (which are outlined in Section 4).

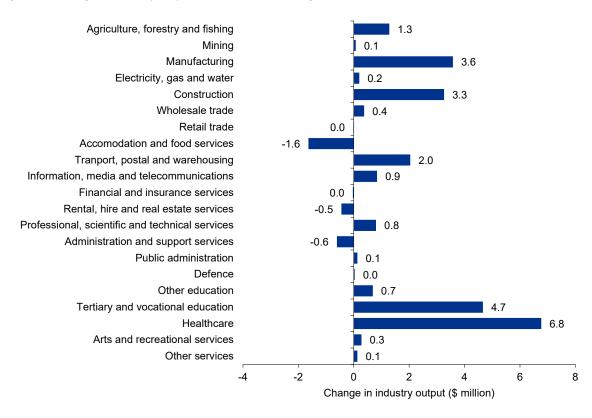


Figure 10: Change in industry output as a result of Wodonga TAFE student outcomes (\$ million)

Source: KPMG-SD model

While there are some modest impacts in terms of employment in different industries, the more significant economic impact of defence training and VET education more broadly is the productivity benefits generated through existing training and new labour force in the economy (as discussed in Section 4). This is due to the fact that, given the nature of TAFE training, a significant number of trainees are already employed in the industry in which they are training (e.g. apprenticeships). As these workers gain additional skills through training at Wodonga TAFE, they become more productive and improve labour efficiency in the regions and beyond.

Productivity gains

Students completing their courses at Wodonga TAFE learn valuable skills and knowledge that can then be applied to their workplace. For the local Hume economy, this means that workers with greater qualifications will receive a higher wage and businesses will benefit from more productive employees.

Table 5 summarises the average number of course completions from 2018 to 2020, and their estimated wage premium. Certificate III/IV attainment is estimated to attract a 10 per cent wage premium, relative to those with a Year 11 education, and those attaining a Diploma or Advanced Diploma are estimated to attract a 16 per cent wage premium. Appendix B provides further detail of the link between wage and productivity improvements from tertiary and vocational education and how this is derived.

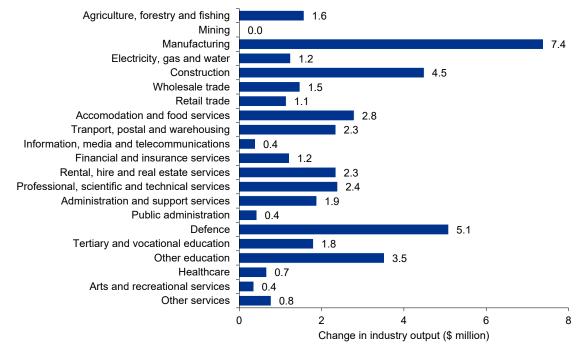
Table 5: Average annual Wodonga TAFE completions and earning premiums

	Average completions 2018-20		Gender-weighted
	Female	Male	earnings premium
Diploma or Advanced Diploma	172	110	16%
Certificate III/IV	444	444	10%

Source: Wodonga TAFE, KPMG analysis using Wilkins amended estimates (2015)

The skills and technical abilities provided to Wodonga TAFE students (including ADF personnel) makes them more productive employees, which in turn allows businesses to produce more and result in a larger local economy. The impacts to output (revenue) by industry are shown in Figure 11. More productive employees in one industry also results in flow-through benefits for other industries. **As demonstrated in the following industry-level results, a more highly skilled and productive labour force is beneficial to all industries**. Industries employing higher skilled workers can produce more with a given amount of capital and labour.

Figure 11: Change in industry output (\$ million) due to productivity improvements signalled by Wodonga TAFE related wage premiums



Source: KPMG-SD model

3.2 Social impacts

Wodonga TAFE plays a pivotal role in strengthening regional and remote communities by providing increased access to education and skills training across **multiple campus locations**. Regional TAFE Institutes like Wodonga TAFE play a prominent role in their community, and train proportionately more regional students compared to private providers or higher education. ¹⁴ The ways in which TAFE promotes stronger economic and labour market outcomes for regional areas includes:

- **Developing the community** by leading and coordinating efforts to rebuild and reskill communities that have faced economic dislocation. This benefits local governments, businesses, and individuals.
- Servicing diverse cohorts, with Victorian TAFEs educating and delivering training to three times
 as many students from low socio-economic backgrounds, and four times as many Indigenous
 students, compared to higher education providers. TAFE provides education pathways and
 outcomes for 'at risk' groups. Without TAFE, these students may have been excluded from tertiary
 education and training.¹⁵
- Partnering with industry to address regional skill shortages, including the appropriate workforce skills for current and emerging industry priorities. Victorian TAFEs work in collaboration with industry, providing 'hands on' practical training, delivering courses that address current and future industry requirements and supporting the diffusion of innovation through an applied research agenda.

Within the current economic climate, the TAFE sector is vital in supporting Victoria's post-COVID economic recovery by delivering education and training pathways and opportunities to diverse learners. Investment in the TAFE and vocational training sector by the Victorian Government recognises the important role the TAFE sector plays in rebuilding the community and the workforce connections that will support the State's economic recovery.

As a regional VET and skills provider in the Hume region, Wodonga TAFE plays a strong role in equipping students in the region with the appropriate skills to meet the current and changing workforce demands within this growing region. The delivery of training across multiple campuses means students are not required to leave the local area to study, supporting its growth as they move into employment.

The Hume region's population is expected to increase by more than 38 per cent by 2031, with the region currently accounting for 19.8 per cent of all jobs in regional Victoria. With two national transport corridors and direct access to four capital cities within 24 hours by road or rail, Wodonga TAFE plays an important role in training and developing the capacity to support the expansion of the region alongside these transport corridors. ¹⁶

Ensuring that graduates are ready for the workforce is critical to growing the local Hume economy and meeting industry needs. By collaborating with industry, Wodonga TAFE provides training opportunities to meet the current and future needs of the region's workforce. Wodonga TAFE has partnered with industries across a range of sectors that are currently facing skill shortages. These include industries within the agriculture, health, and engineering sectors. The Tallangatta Aged Care Program is one such example. These partnerships ensure that curriculum and training opportunities provided are responsive and flexible to the future demands of industry, and regional and rural industry needs in particular.

¹⁴ KPMG, The importance of TAFE to Victoria's prosperity 2018, https://vta.vic.edu.au/document-manager/research-applied/848-the-importance-of-tafe-to-victoria-s-prosperity-final-29-06-18

¹⁵ Ibid

¹⁶ Regional Development Australia, 2021, 'Victoria's Regional Development Australia committee,' Victoria's Regional Development Australia committees - Regional Development Victoria (rdv.vic.gov.au)

To support student success, Wodonga TAFE provides students with generalist and careers counselling and academic skills and study support. Student success can be understood as academic achievement, engagement in purposeful community activities, acquisition of relevant skills and knowledge, and/or persistence in training and post-study performance.

With guidance from Wodonga TAFE's Academic and Support Services team, students receive career guidance to help manage study loads and meet their identified needs and goals. Students graduate with not only the industry required skills to obtain work, but the soft skills needed to excel in the 21st Century workforce.

Case Study - Tallangatta Aged Care Program

Wodonga TAFE's aged care course at Tallangatta allowed former dairy farmer Shannon Heffernan to successfully transition to a new career after the closure of the Murray Goulburn Kiewa Plant in Tangambalanga. Wodonga TAFE gained funding through Jobs Victoria to deliver this collaborative, place-based aged care program in Tallangatta, a small rural town in north east Victoria. The program was delivered in partnership with Tallangatta Health Service, the largest employer in the town, and the Towong Shire Council.

Shannon and 11 other local students enrolled in the course, which had integrated delivery within the community through the Tallangatta Health Service. Digital literacy training was provided for all students, and Wodonga TAFE supplied laptops to support their learning. The program also offered the students a careers counsellor who travelled each week to work with the individual students on their employment aspirations and applications.

By the end of the year, Shannon had completed placements at both Tallangatta Health Service and Westmont Aged Care Services. She was interviewed at both agencies and accepted a job at Westmont. Eight out of the 12 participants in this course gained employment in the health sector, with six working for Tallangatta Health Service.

Shannon has since continued her studies, completing the Diploma of Nursing at Wodonga TAFE in 2021. She was awarded an Australian Nursing and Midwifery Federation Award for her professionalism and dedication to her studies. Shannon has now been accepted to study a Bachelor of Nursing at Charles Sturt University.



3.2.1 Developing the community

Wodonga TAFE plays a role in developing the community by leading, coordinating and participating in efforts to rebuild and reskill communities that have faced economic dislocation. Wodonga TAFE is committed to

Developing the community

providing critical support in the Hume region and altering trajectories of economically disadvantaged communities.

Wodonga TAFE has delivered extensive initiatives to support community outcomes, including homelessness and food insecurity, and provided economic and social stimulus to a region that has been impacted by bushfires, the COVID-19 pandemic, and extended lockdowns. These initiatives centre on addressing current and future local community inequalities and ensuring local people in the community are equipped with the skills to embrace lifelong learning and employment.

The COVID-19 pandemic has contributed to an increase in homelessness, with social housing waiting lists having increased significantly in regional Victoria. There are 22,230 people living in poverty ¹⁷ in the Hume region and there has been a 21.4 per cent rise in unemployment over the past 12 months to September 2020. ¹⁸ In Wodonga, there is evidence that housing stress, homelessness and risk of homelessness is increasing. ¹⁹ Australians living in regional and remote areas are 33 per cent more likely to have experienced food insecurity in the last 12 months than those living in cities. ²⁰

Since 2013, Wodonga TAFE has been a significant sponsor of the regional FoodShare organisation which provides support for individuals who have experienced food insecurity. FoodShare has rescued over one million kilograms of food from over 70 suppliers and redistributed it to 29,000 people living in poverty through 225 regional agencies, educational institutions, and community groups within 150 kilometres of Albury-Wodonga. ²¹ Wodonga TAFE staff have worked with the FoodShare team to package meals, goods and provide logistic coordination where appropriate. During the 2019-2020 Black Summer Bushfires, Wodonga TAFE partnered with FoodShare to create and supply free meals to individuals impacted by the bushfires. Wodonga TAFE also provides training opportunities for students and Food Share volunteers through the partnership.



¹⁷ Poverty is defined as living in a household with an income less than \$368 per week.

¹⁸ Albury Wodonga Regional FoodShare report 2019

¹⁹ 'A place to call home', Wodonga Housing Strategy Report 2018

²⁰ Foodbank Hunger Report 2018

²¹ Food Unity Hub, Building Connections through food flyer 2021

Wodonga TAFE has also partnered with seven key organisations to propose an Education First Youth Foyer (EFYF). The program utilises a 'hard to reach' model, aimed at breaking the cycle of youth homelessness, displacement, and disengagement from the community. ²² Young people who may be caught in the cycle of homelessness require tailored support that effectively meets their development, social and legal needs. The proposed program is targeted at young people aged 16-24 years who are at risk of homelessness, and will offer affordable housing and around-the-clock, onsite support through Junction Support Services, in conjunction with education and career counselling that will be provided by Wodonga TAFE during business hours.

Wodonga TAFE's proposed EYFY prioritises education compared to other foyer models and youth homelessness services. ²³ As part of their residency, the young people will all complete a Certificate I in Developing Independence with Wodonga TAFE. Using a strengths-based model to build and invest in the individual's capabilities, the Youth Foyer program will encourage education, employment, housing, and civic participation within mainstream opportunities. Young people who will access the initial safety and support services once the program is establish will receive post-foyer transition coaching and support for up to one year to ensure success in living independently in other forms of mainstream accommodation (such as student accommodation, private rentals or living with relatives).

Previous analysis of EFFY by KPMG indicates that there is likely to be significant improvement in outcomes for young people who access these services. The monetised benefits of the EFY services significantly outweigh the direct and indirect costs associated with establishing the model, with approximately \$10 million in additional net benefits over a 20-year timeframe. These social benefits include improvements to education outcomes, stronger health outcomes, housing stability and stronger civic engagement. However, due to the difficultly in measuring social impacts, the monetary value of these services is likely to be understated.²⁴





²² Wodonga Institute of TAFE, Wodonga Education First Youth Foyer Proposal

²³ KPMG, 2019, Education First Youth Foyers Economic Analysis, Brotherhood of St Laurence

²⁴ Ibid.

Case Study - Bushfire Support

During the 2019-2020 Black Summer bushfires that devasted Victoria and New South Wales, Wodonga TAFE supported the Upper Murray communities through their evacuation and recovery efforts. Wodonga TAFE transformed its commercial kitchen to prepare over 900 meals for local communities. In association with FoodShare, the free catering and meals were distributed by Wodonga TAFE to bushfire relief volunteers and local community evacuees.

Accommodation was also provided free of charge by Wodonga TAFE for international fire fighters and police who were supporting the bushfire relief program. This accommodation was extended to bushfire-affected community members, with four families living on the campus during the bushfire season. The Community Services and Health Department at Wodonga TAFE delivered activities for children in the Fire Evacuation Centre, providing much needed support and relief for parents. Staff volunteered their time to offer head and shoulder massages to adults who were in the evacuation centres. After the immediate bushfire, 2,000 seedlings were donated to the Upper Murray Community Recovery Hub, which were propagated and prepared by the Wodonga TAFE's Horticulture team.

To support the broader economic recovery, Wodonga TAFE used its funding to provide subsidised courses and training to support regional communities impacted by the bushfires. A total of 75 Towong Shire residents benefited from the skills-based training, which included the following Bushfire Recovery Program courses in Tallangatta:

- Responsible Service of Alcohol (delivered twice)
- Food Handling
- WHS Construction Induction Card (White Card)
- Chemical Users Course
- Chainsaw Course (delivered twice)
- First Aid.

Through their support during the bushfire season, Wodonga TAFE demonstrated its commitment to supporting the immediate and future social and economic recovery of the local community.



3.2.2 Inclusive training

According to the Productivity Commission, the role of VET providers can be categorised by three broad aims:

Inclusive training

- To deliver an inclusive, productive and highly skilled workforce
- To enable everyone to participate in the labour market, regardless of their background
- To contribute to Australia's economic future; and to contribute to the increasing skill levels of working Australians.²⁵

Higher levels of education are correlated with increased opportunities of employment and higher earnings. ²⁶ Increasing levels of education has also been shown to have a positive effect on an individual's physical and mental health with individuals with diplomas and advanced diplomas reporting better health compared to those with education of Year 11 and below. ²⁷ Wodonga TAFE supports students attain higher levels of education by providing flexible learning opportunities for students to reskill, specialise in studies or change career pathways.

With the automation of low-skilled occupations potentially forcing up to one in five workers out of a job, employees will need to reskill to meet workforce demands. Looking to the future, an estimated two-thirds of the 1.1 million jobs to be created by 2024 will require a Certificate III qualification or above. 28 According to the Macklin Review, to mitigate the risk of extended periods of precarious employment, students need to graduate with current and future skills required by industry. These core skills include literacy, numeracy and digital literacy, alongside 21st Century skills such as interpersonal skills, the ability to problem solve and critical thinking.

While Wodonga TAFE supports a broad range of students from a diverse range of backgrounds, including through its fee-for-service training partnerships, Wodonga TAFE provides students the opportunity to develop the skills and capabilities needed for improved economic participation and participation in society. As a VET provider, Wodonga TAFE also has a particular aim to provide inclusive education and support students experiencing disadvantage or disengagement. ²⁹ Across Victoria, 40 per cent of students enrolled in TAFEs come from a low socio-economic background, compared to 33 per cent in private registered training organisations (RTOs) and 14 per cent in universities. ³⁰ TAFE has a role in supporting the social cohesion of local communities, primarily through the delivery of inclusive education and training opportunities that improve social equity. ³¹

TAFE students are more likely than private RTOs and universities to have experienced disrupted learning for a variety of reasons and may be vulnerable to social exclusion. TAFE students are more likely to be from designated equity groups. This includes students from low socio-economic status families, Aboriginal and Torres Strait Islander students, students from non-English speaking backgrounds and students with disabilities.³²

Wodonga TAFE delivers training to support a diverse student population access education and training. Of students at Wodonga TAFE, 6.52 per cent have a non-English-speaking background, 3.39 per cent

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²⁵ Productivity Commission, Report on Government Services 2017, https://www.pc.gov.au/research/ongoing/report-on-government-services/2017/child-care-education-and-training/vocational-education-and-training/rogs-2017-volumeb-chapter5.pdf

²⁶ OECD 2018. Education at a Glance 2018: OECD Indicators. Paris: OECD Publishing

²⁷ Stanwick, J, Ong, K, Karmel, T, 'Vocational education and training, health and wellbeing" Is there a relationship?, 2010, National Centre for Vocational Education Research

²⁸ Macklin, J. 'Future skills for Victoria: driving collaboration and innovation in post-secondary education and training', 2021

²⁹ Productivity Commission, Report on Government Services 2017, https://www.pc.gov.au/research/ongoing/report-on-government-services/2017/child-care-education-and-training/vocational-education-and-training/rogs-2017-volumeb-chapter5.pdf

³⁰ KPMG, The importance of TAFE to Victoria's prosperity 2018, https://vta.vic.edu.au/document-manager/research-applied/848-the-importance-of-tafe-to-victoria-s-prosperity-final-29-06-18

³¹ Buddelmeyer, H, Leung, F and Scutella, R, 'Education oneself out of social exclusion, Promoting social inclusion for disadvantaged groups through education and training' 2012, National Centre for Vocational Educational Research

³² KPMG, The importance of TAFE to Victoria's prosperity 2018, https://vta.vic.edu.au/document-manager/research-applied/848-the-importance-of-tafe-to-victoria-s-prosperity-final-29-06-18

of students identify as Aboriginal and/or Torres Strait Islander, and 6.78 per cent of students have a disability.³³

Students from diverse groups or those who have experienced disrupted learning may experience additional barriers to learning. Wodonga TAFE plays a distinct role in helping students overcome additional barriers in obtaining meaningful vocation and progressing to further education. These barriers may include personal, social, and financial barriers to successfully accessing education and employment.

In response to these barriers, Wodonga TAFE provides a range of supports to meet the various needs of its diverse students.³⁴ The current supports for students include distributing food for people in the community who are experiencing poverty, providing careers counselling supports, fee assistance, equity and disability support, youth support, and access to childcare centres. These supports provide support and an opportunity for the community to re-engage with formal education systems. Wodonga TAFE's co-location with La Trobe University also supports pathways to further education.

Examples of Wodonga TAFE's leadership in supporting diverse learners across the Hume region include:

- Disability courses designed to support post-school aged learners with permanent cognitive impairment or intellectual disability. Learners are supported to work with a mentor to explore appropriate work options in the community or in further education, and focus on developing their independence and self-confidence, and learning skills for independent living.
- Work Ready workshops for culturally and linguistically diverse (CALD) communities. For example, the Skills and Job Centre at Wodonga TAFE conducted a Zoom Q&A session in partnership with North East Local Learning Employment Network on career development. These sessions encourage CALD clients to consider vocational classes or English language classes at Wodonga TAFE.
- Supporting North East Local Learning and Employment Network to deliver the 'Keys to our Future' project employment program that targets the specific needs of the CALD, migrant and refugee communities in Wodonga.
- The Skills First Reconnect program which provides eligible residents in Wodonga, Towong, Indigo
 and Alpine Shires a mentor to help access relevant supports that will assist them in meeting their
 identified personal goals and ensure they are on track to re-engage with education or obtain
 employment.



³³ Wodonga Institute of TAFE's Belong Framework 2021 report

³⁴ Wodonga Institute of TAFE Community Service funding – Report, 2020

Case Study - Skill First Reconnect

Through the Skills First (SF) Reconnect program, Wodonga TAFE has been successful in re-engaging people experiencing social exclusion to access education and find training and employment.

The COVID-19 pandemic has disproportionally impacted marginalised workers and accelerated existing inequalities.³⁵ The Alpine, Indigo, Towong, Wangaratta, Wodonga and Greater Hume Shires have a higher percentage of residents drawing unemployment benefits compared to capital cities, and a higher percentage of those aged 15-19 years not engaged in school or employment.³⁶ The SF Reconnect program is designed to help people who are experiencing social exclusion in obtaining training and employment. This support is free for eligible residents in Wodonga, Towong, Indigo and Alpine Shires. Groups eligible for the program include:

- Young people aged between 17 to 19 years who have not been engaged in education or training for six months or more
- Mature participants aged between 20 to 64 years who have been unemployed for six months or more (less than eight hours per week) and have not been engaged in education or training for six months or more (less than eight hours per week)
- Young people impacted by the justice system aged between 17 to 24 years who have been, or are currently on, Youth Justice Orders
- Asylum seekers aged between 17 to 64 years without citizenship but who hold a valid Bridging Visa Class E, Safe Haven Enterprise Visa, or Temporary Protection Visa.

In the SF Reconnect program participants work with a mentor who provides tailored support in identifying the potential barriers to success, including mental health, accommodation, issues with transport or licences, social integration, substance abuse, other health issues, relationship, financial, or legal issues.³⁷ Through the support of their mentor, participants are referred to the appropriate organisations for assistance.

Participants highlighted the importance of their case managers in helping them access services to assist them in reaching their personal goals, stay motivated and on track to re-engage and succeed in further education and training or obtaining employment. To support their goals, students have access to free counselling services, including careers counselling, financial assistance to pay training fees and study support.

Since 2020, the Reconnect program has assisted 70 participants across four LGAs. Prior to the COVID-19 pandemic, the spread of participants was relatively even across the four LGAs. In 2021, 52 per cent of participants identified as a Person with a Disability, as Aboriginal or Torres Strait Islander, or a member of a Culturally and Linguistically Diverse community.

"For the first time in years, I know that my finances are being managed properly, my home is no longer at risk, there is food in the cupboard, and I don't feel sick when my phone rings. I now know who to contact when I run into roadblocks, and I can finally sleep at night knowing that my kids are warm, fed, and safe.

Placing myself as a priority has never been an option, but having help from Reconnect, along with the services that they have connected me with, I have made a start. I now have my goals, big and small and am engaged in training. I have a part time job for the first time in my life, with a clear direction for the future."

Sarah, Skills First Reconnect participant





 $^{^{\}rm 35}$ Pennington, A, 'An Investment in Productivity and Inclusion,' 2020

³⁶ Food Unity Hub, Building Connections through food flyer 202

³⁷ Reconnect Program 2021 Contract

3.2.2.1 Support for Indigenous Students

Wodonga TAFE works closely with local community organisations, such as Mungabareena Aboriginal Corporation, to drive positive outcomes for Indigenous students and the wider community. These include:

- Albury Wodonga Aboriginal Health Services (AWAHS): Wodonga TAFE is assisting to build programs, across carpentry, logistics and horticulture, that are culturally safe and respectful of Aboriginal protocols.
- **Burraja:** Working together to offer local Aboriginal heritage programs for schools in the Albury-Wodonga area, as well as cultural knowledge programs for Landcare, local government agencies and private businesses. Wodonga TAFE supported the centre to create the Burraja Garden project, which formed a part of the Victorian State Justice and Community Safety rehabilitation program.
- Mungabareena Aboriginal Corporation: Facilitating participation in community events and workshops for Aboriginal staff and students and partnering with Gateway Health to offer services and programs to the Aboriginal community.

3.2.2.2 Education pathways

Despite increasing demands for Australian domestic tertiary courses, students from designated equity groups continue to be under-represented in the higher education sector. ³⁸ VET plays an important role as an alternative pathway into higher education in Australia ³⁹ with some VET students using their diplomas as a steppingstone into degrees. ⁴⁰

Wodonga TAFE plays an important role in supporting education pathways into further training and employment. Wodonga TAFE's education pathways allow students to specialise, reskill and re-engage with education and change occupations. 1,168 participants accessed education pathway services at Wodonga TAFE. ⁴¹ These education pathways align with contemporary understandings of, and the need for, workforce professional development to respond to with the rapid industry transformation. Education pathways provide opportunities to further contribute to the socio-economic prosperity of learners as upskilling and training may result in higher levels of per capita income and living standards. ⁴²

Wodonga TAFE is co-located with La Trobe University's Albury-Wodonga campus, providing opportunities for students to access the university's facilities and enabling a seamless transition from studying at TAFE to University. ⁴³ The physical co-location of Wodonga TAFE and La Trobe University is coupled with the education pathways provided by Wodonga TAFE, with the CareerDirect program providing opportunities for Wodonga TAFE students to use their TAFE qualification credited at the University partner. Wodonga TAFE's CareerDirect program also provides students with pathways to access further education through partnerships with Charles Stuart University and Federation University. In response to student concerns about the difficulty in applying for higher education, Wodonga TAFE has resourced and employed an Education Pathways Officer (EPO). The EPO works with students who aspire to higher education studies at other universities and individually assists students to find and apply for further studies.

³⁸ Chesters, J., Rutter, K., Nelson, K., & Watson, L, 'Alternative pathways into university: Are tertiary preparation programs a viable option', 2018, Australian Universities' Review

³⁹ Griffin, T, 'Disadvantaged learners and VET to higher education transitions', National Centre for Vocational Education Research, 2014

 $^{^{40}}$ Atkinson, G & Stanwick, J 2016, Trends in VET: policy and participation, NCVER, Adelaide

⁴¹ Wodonga Institute of TAFE Community Service Funding Report 2021

⁴² Deloitte Access Economics, 'The importance of universities to Australia's prosperity', 2015

⁴³ Partnerships and community engagement, Albury-Wodonga Campus, La Trobe University

Wodonga TAFE has also partnered with the community and schools to engage with and support young people in considering education and employment pathways within industries with strong employment growth:

- The ABC A Boost to Careers program provides career education workshops, that will be delivered in 2022, to approximately 750 Grade 8 students studying across 12 different rural secondary schools in north east Victoria and NSW Southern Riverina. The workshops have a strong focus on illuminating the different pathways and careers within local industries that have strong employment growth.
- Wodonga TAFE has partnered with the Lighthouse Pit Stop project to demonstrate the different
 education pathways and careers within the transport and logistics industry. Young people who are
 at risk of disengaging from school are provided an opportunity to develop practical skills in the
 transport and logistics sector.

Research by the Organisation for Economic Cooperation and Development (OECD) highlights the important role that VET providers such as Wodonga TAFE play in providing career and education guidance. The OECD found that the ever-expanding career opportunities and education and training choices available to students increase the complexity of the system. The challenges students face in navigating the system results in student disengagement. Guidance is therefore required to support students to make the right decisions and choices that reflect their aspirations, needs, expectations and abilities. 44

By promoting a range of educational pathways, Wodonga TAFE supports the growth of the local labour force with higher skill levels and stronger employment opportunities. The increased supply of current and future job-ready graduates benefits the local industries experiencing skills gaps.



⁴⁴ OECD, (2013) Skills Beyond School: Synthesis Report, OECD Reviews of Vocational Education and Training, OECD Publishing.

Case Study - Lighthouse project, Shepparton campus

The Shepparton campus of Wodonga TAFE shares its site with the Lighthouse Pit Stop program and the Verney Road Special School. The Pit Stop program is a strengths-based, early intervention program which provides practical skills-based education for young people who are at risk of disengaging from school, are attending alternative education or have completely disengaged from mainstream education. For example, 20 per cent of students enrolled reported having a disability or learning disability, 32 per cent have been involved in youth justice, and only 35 per cent consistently attend school.

The Pit Stop program aims to inspire and motivate young people by building successful learning experiences and a sense of accomplishment and pride in their achievements. Students work on small engines and cars under the guidance of industry mentors and positive community role models. They rebuild and repurpose bicycles and distribute these to families without transport options so that they can commute to school, jobs and community activities. Local primary school students also benefit as the recycled bicycles are used to teach road safety, encourage active lifestyles, and promote sustainable transport options. The refurbished bicycles are also donated to the Mooroopna Family Haven.

Students who refurbish the bicycles gain a sense of accomplishment in giving back to their local community. In 2021, the Pit Stop program participants gifted 67 bicycles to people in need.

The Pit Stop program also has a significant focus on promoting respectful relationships and positive mental health. Of participants enrolled, 26 per cent reported a mental health diagnosis, such as depression or anxiety. Students learn strategies to develop social competence and build resilience. They establish supportive networks and connections with local industry to discover employment opportunities and to learn about job expectations.

The partnership between Wodonga TAFE and the Lighthouse project continues to grow and, in 2022, will be focussed on creating new training opportunities for local young people. The Lighthouse program actively encourages students to consider a career or pursue further accredited training within the sector and provides an opportunity for students to build their practical skills and experience within the logistics sector.



100 participants engaged during the pilot program in 2021

12 active business partners and supporters

19 different referring schools, alternative education settings and agencies





3.2.3 Partnering with industry

Wodonga TAFE plays a key role in supporting the local region's growth through its industry partnerships aimed at responding to the region's skill shortages. Wodonga TAFE has long-standing relationships with local industry

Partnering with industry

to meet demands for new industry skills. Wodonga TAFE also has corporate partnerships with Australia Post, USG Boral, Linfox, Elders, Visy, Bega and the ADF. 46

Through its partnerships with the defence, health, manufacturing, transport and logistic sectors, Wodonga TAFE ensures that its training is meeting industry requirements and that graduates are equipped with the skills needed to enter the job market.

Wodonga TAFE's partnership with the transport and logistics sector is explored in more detail in this chapter, with the impact of Wodonga TAFE's partnership with the ADF examined in greater detail in Chapter 4.

"Albury Wodonga Health values Wodonga TAFE as an industry partner and provides clinical placement to Wodonga TAFE's nursing students each year. We recognise the importance of simulation-based education in the TAFE program as simulation assists the development of essential nursing skills and knowledge such as critical thinking, teamwork, and psychomotor skills. As a result of the TAFE simulation-based education the students demonstrate increased confidence and competence when faced with similar situations in the clinical placement experience."

Emma Horsfield

Albury Wodonga Health

"As a regionally based business owner in the fashion industry it is of the utmost importance that we continue to educate the students at Wodonga TAFE being the only regional based campus outside the capital cities. Employing locals is of high importance to me as a business owner and having staff with the right skillset is a hard to find regionally."

Rebecca O'Brien

BRIE Corporate

"Having skilled trades in our local area is absolute key to keeping the integrity in the Building and Construction Industry and the future plan within our company is to identify local talent to be able to employ our own trades rather than to continually hire sub-contractors. We are passionate about growing industry standards and identifying local talent through pre-apprenticeship courses is key for us employing in the future."

Blaise Fisher

Business Manager, Southern Vale Homes

⁴⁶ Wodonga TAFE employers and partners

Transport and Logistics

To align its training offering with the region's transport and logistics sector skills needs, Wodonga TAFE is partnering with industry to deliver courses at Wodonga TAFE Driver Education Centre of Australia (Wodonga TAFE DECA). Since 2013, Wodonga TAFE has overseen and managed the operations of Wodonga TAFE DECA located in the Wodonga TAFE logic Campus and the Shepparton campus. Wodonga TAFE DECA is one of Australia's largest public heavy vehicle training organisations dedicated to teaching students, including Australian soldiers, how to drive heavy vehicles.⁴⁷

Victoria is Australia's major freight transport and logistics hub, servicing the Melbourne metropolitan area, regional Victoria, southern New South Wales, Tasmania, and other parts of Australia. Around 70 per cent of Australia's total population and the bulk of its manufacturing capacity are captured in this economic zone.

The COVID-19 pandemic has demonstrated the importance of the transport and logistics industry to the Australian economy. ⁴⁸ The pandemic has caused disruptions to Australia's logistics sectors with products and services delayed by interstate lockdowns and border closures. Workers in the industry reported working longer hours to meet the demand.

During 2020, the transport and logistics industry employed more than 530,000 Australians across major sub-sectors of road transport, logistics, warehousing, and stevedoring. This projected workforce size in 2026 is 600,648 with a 4.6 per cent employment growth from 2021. Industry requires strong training programs and vocational education to provide the skills needed for employment.

The transport industry has been plagued with its negative public reception. CEO of Volvo Group Australia, Peter Voorhoeve, argues that "There is still a poor public perception of truck drivers and the transport industry. A lack of structured education or nationally recognised qualification within the industry has also been a problem." ⁴⁹ This poor reception has contributed to the driver shortage in Australia where 46 per cent of transport companies are already experiencing a shortage of professional truck drivers, and road freight demand is expected to double by 2030.

As a reputable provider of training and services, Wodonga TAFE DECA delivers industry aligned driving and transport logistics services to meet the ever-changing needs and standards of the industry. These services include driver licensing, education programs, specialist safety and workplace efficiency programs. Wodonga TAFE DECA meets the demands of the rapidly changing transport and logistics industry by providing students access to state-of-the-art facilities and equipment and a national network of trainers and accessors. Training and accreditation at Wodonga TAFE are provided and tailored to both state and national levels.

Wodonga TAFE has developed courses, such as the Women Driving Transport Careers program at Wodonga TAFE DECA, to encourage women to enter the driving workforces. To promote non-traditional trade career paths and choices for employment and career pathways, Wodonga TAFE has also developed a VET ambassador program. Through this VET ambassador program, students are encouraged to pursue a career in transport, building and construction, warehousing, landscaping, civil construction, and engineering.

In February 2022, it was announced that Wodonga TAFE had been awarded \$450,000 in new funding through the Victorian Government's Infrastructure Fast Track Fund to expand its driver and forklift driver training facility. ⁵⁰ This funding will support industries, such as defence and health, to bring specialist vehicles and related technology to Wodonga TAFE's Logic Park to train and test drivers.

⁵⁰ Unlocking Potential At The Wodonga Logistics Precinct, 2022

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⁴⁷ Wodonga Institute of TAFE looks to the future of heavy vehicle training - Australian Defence Magazine

 $^{^{\}rm 48}$ Australian Industry Standards, Industry Outlook Transport and Logistics, 2021

⁴⁹ Tackling driver shortages head-on (volvotrucks.com.au)

Case study - Women in Transport

Wodonga TAFE has developed a practical solution that provides industry high calibre drivers to help meet industry skill shortage and cultural needs. Australia is standing on the precipice of a serious truck driver shortage, driven by an ageing workforce. According to industry estimates, driver recruitment may need to increase by 150 per cent to offset retirement and meet demand. ⁵¹

According to the Transport and Logistics Industry Skills Council, women account for only 21 per cent of the current and projected workforce in the transport and logistics industry. The industry perception and the poor stereotypes represent a barrier to more women entering this male-dominant industry. Once working in the transport and logistics industry, women reported intimidation and bullying by male counterparts. Research conducted by Wodonga TAFE identified the negative cultural perceptions and barriers that women in Transport and Logistics faced and a desire from the diverse participants for more supports.

Wodonga TAFE supports women pursue a career in transport through the Women Driving Transport Careers (WDTC) program which has been designed to help reduce the 'driver shortfall' within the transport industry. Description of the WDTC program, including Australia Post and Linfox. Participants undertake the four-week training course, at Shepparton Campus, while being paid by the employer, before completing ongoing mentoring from co-workers and shadowing experienced drivers to increase their confidence.

This course has had over a 95 per cent retention rate of students on completion. Almost all women who have undertaken the driving program are still working within their role or have progressed into management positions.

To further support and encourage women drivers explore a career in the transport industry, Wodonga TAFE developed The OzTruck app in collaboration with Launchpad App Development, Australia Post, Linfox, Volvo Group Australia, the Australian Trucking Association and Transport Women Australia.

The OzTruck app aims to remove the barriers for women entering the transport sector and increase participation and earnings for women. The app provides 24/7 support for users during breakdowns and crashes and an online forum for users to access peer support, health and wellbeing information, and information about petrol station, weighbridge, and female friendly facilities on transport routes.



"The WDTC program has been a fantastic program for Hanson's to be a part of. We've had a big push to get more diversity into our fleet and the WDTC has been a terrific program to get people, who thought that they'd never get an opportunity, to be behind the wheel of a heavy vehicle."

Andrew Proud

Transport Manager, Hanson

'I'm wrapped that we have seven new drivers, they're very capable, they're all women working in an industry that needs to do more to increase our diversity."

Peter Murphy

Managing Director, Alex Fraser

"I've gone from being a general car driver to a heavy rigid truck driver in just four weeks. Coming from hospitality to this completely different, new career; I was like wow, I can accomplish anything I want to."

Carla, WDTC graduate

⁵¹ 'Female driver program hits the spotlight in Victorian Training Awards,' 2021, https://www.linfox.com/women-driving-transport-careers-program-hits-the-spotlight-in-victorian-training-awards/

⁵² Volvo Group Australia Clemenger BBDO (Firm). (2016). Professional truck driver shortage: how driver availability impacts the transport industry and Australian society.

4 Supporting the defence sector

The Hume region has the largest ADF presence in Victoria, with the Defence sector currently generating an annual spend of \$185 million and 5,643 jobs. As the largest vocational educational training provider for the ADF, Wodonga TAFE plays an important role in supporting the defence sector within the region and across Australia – something of which Wodonga TAFE and its staff are proud. Wodonga TAFE has trained thousands of ADF personnel across Australia, providing training services to the Army Logistics Training Centre (ALTC), which encompasses Army School of Health, Army School of Logistics, Army School of Electrical and Mechanical Engineering and the Army School of Transport.

Wodonga TAFE delivers critical training and support services to meet current and future capabilities of the ADF and support the security and defence of Australia. Training is delivered across 11 locations nationally (see Figure 12), including some delivery through partnerships with other TAFEs, universities, and training providers. The ADF's partnership with Wodonga TAFE ensures that trainees can be supported to train in the region where they live. Where possible, ADF trainees experience blended learning experiences with remote and online opportunities, reducing travel and accommodation costs. Wodonga TAFE utilises technology to track trainees' competencies throughout the courses and provides students with interactive and modern learning tools. 53



Figure 12: Wodonga TAFE's national defence training footprint

⁵³ Regional Development Australia 2019, Defence Industry in the Hume Region: An assessment of Value and Growth Opportunties, (www.rdv.vic.gov.au)

Wodonga TAFE's 10-year partnership with ALTC has seen Wodonga TAFE strengthen the ADF's technical trade training capability, ⁵⁴ including the training of ADF medic personnel. Graduate medics from Wodonga TAFE were recently deployed to assist in the response to the COVID-19 pandemic at testing stations, aged care facilities, and in support of paramedics.

In light of Wodonga TAFE's training successes, it was awarded the DefenceConnect Academic Institution of the Year Award at the Australian Defence Industry Awards in 2019 for its contribution to strengthening Australia's defence and national security capabilities.⁵⁵

As detailed in Section 3.1, Wodonga TAFE's training delivery creates economic benefits across the entire economy, as revenues are reinvested into the region through significant levels of local employment and through purchases from local suppliers. Another significant economic impact of ADF training is seen through a boost in labour productivity (Figure 11). The training provided by Wodonga TAFE generates a higher-skilled and more productive workforce for the ADF. Each year, it is estimated that ADF training contributes an additional \$5.1 million to regional output

Furthermore, a large proportion of ADF trainees with relatively shorter ADF service periods, such as technicians and soldiers, exit the ADF with a set of skills that are of high value in the civilian labour market. With up to 5,000 Veterans exiting the ADF annually ⁵⁶, ADF training delivered by Wodonga TAFE also plays a role in providing a skilled workforce to meet the current and future workforce needs of the broader economy.

The earnings for the Wodonga TAFE ADF contracts are reinvested into the community and campus and further enhance the Institute's capability to provide new opportunities for local industry. The contributions of Wodonga TAFE are expected to increase into the future, with Wodonga TAFE winning the ADF driver training contract in 2019, which is worth up to \$100 million over the next five years. ⁵⁷



⁵⁴ Wodonga TAFE local leader in army personnel training

⁵⁵ Wodonga TAFE wins Australian Defence Industry Award

⁵⁶ Department of Defence Annual Report 2019 - 2020, (transparency.gov.au)

⁵⁷ Hume Defence Sector Report, (rdv.vic.gov.au)

4.1 Supporting a breadth of defence sovereign capabilities

Over the period 2012-2021, Wodonga TAFE provided \$126 million worth of defence training and support services. Wodonga TAFE had a total of 2,483 ADF trainees in 2021 including tech trade, medic, driver machinery and plant trainees. Wodonga TAFE employs more than 200 staff to support the provision of training. ⁵⁸ Wodonga TAFE continually partners with a range of industry experts to modernise training methods, ensuring training is innovative and meets the changing nature of the ADF.

Many of Wodonga TAFE's approximately 200 defence trainers are Veterans, with lived experience and insight into the life and regime of a new ADF trainee. This enables a more holistic and empathetic training experience for ADF trainees. It further instils pride within Wodonga TAFE's defence workforce, particularly for Veterans, but also for the entire organisation, to be contributing to the country's sovereign capabilities.

"After 20 years of service in The Army as a Vehicle Mechanic, I decided I wanted to train the next generation of Defence trainees. Wodonga TAFE gave me the opportunity to do this, and I feel very privileged to be able to continue my involvement with the Department of Defence and continue to grow their capability in supporting the defence of our great nation."

David Roberts

Veteran – Australian Army, Wodonga TAFE Academic Manager Vehicle Technology Program

Wodonga TAFE delivers capability uplift across five sectors of defence: licensing capabilities, defence driver training capability, training transformation solutions, medic training and technical and trade training. ⁵⁹ Wodonga TAFE provides bespoke training programs that meet the current and future needs of the ADF.

Licensing

Since 2011, Wodonga TAFE has supplied licensing and training services to the Army and Navy. These have been tailored to meet the needs of the ADF. Wodonga TAFE also provides a range of plant machinery services and training solutions. ⁶⁰

Defence driver training

The defence driver training program provides critical training for the ADF focused on heavy vehicle driver training and road safety. Recent statistics demonstrate the necessity of driver safety courses in avoiding fatal accidents. ⁶¹

Wodonga TAFE driving instructors train ADF personnel in a range of heavy and high mobility advanced vehicles, including the Mercedes G Wagon, MAN 40 M, MAN HX77, Hawkei, and MAN HX81. Wodonga TAFE's defence driver training is provided across six locations, with over 130 heavy vehicle driving instructors providing accredited training. Wodonga TAFE has also developed relationships and subcontracts with 12 smaller private RTOs to deliver heavy vehicle licensing and skills training Australia-wide.

⁵⁸ RDA Hume Defence Prospectus 2021, (rdv.vic.gov.au)

⁵⁹ Wodonga TAFE, Defence Training Transformation (document provided by Wodonga TAFE)

⁶⁰ Wodonga TAFE, Defence Training Transformation (document provided by Wodonga TAFE)

⁶¹ Regional Development Australia 2019, Defence Industry in the Hume Region: An assessment of Value and Growth Opportunities, (www.rdv.vic.gov.au)

Medic training

Wodonga TAFE has been delivering medic training to the ADF since 2012, having trained more than 1,000 Army, Air Force and Navy medics over that time. In 2021, Wodonga TAFE had 254 medic trainees. Medic training capabilities include experience and capability delivering, alongside accredited training in nursing, paramedical science, vaccinations, trauma nursing, first aid, and life support. 62

Technical training

Wodonga TAFE provides ADF personnel with technical and trade training capabilities. With over 100 technical instructors and over 700 technical trainees in 2021, Wodonga TAFE supports apprentices and trainees with industry aligned training and support to graduate with a technical training capability required by the ADF. In partnership with TAFE contracting partners, these cover refrigeration and air-conditioning, carpentry, plumbing, engineering, mechanics, and electricity. ⁶³ To deliver the technical training, Wodonga TAFE has contracted partners such as Box Hill Institute, Chisholm Institute, Charles Darwin University, TAFE Queensland.

Training transformation solutions

The Wodonga TAFE Training Transformation Solutions business unit supports the ADF to provide research, innovation, and simulation capability, as well as training transformation program and project capability. It also provides professional services to the ADF, including design and development services through instructional designer and multimedia technicians, learning management package development, digital platforms, and the development and conversion of courses to flexible and blended learning. ⁶⁴



⁶² Regional Development Australia 2019, Defence Industry in the Hume Region: An assessment of Value and Growth Opportunities, (www.rdv.vic.gov.au)

⁶³ Wodonga TAFE, Defence Training Transformation (document provided by Wodonga TAFE)

⁶⁴ Wodonga TAFE, Defence Training Transformation (document provided by Wodonga TAFE)

4.2 Supporting ADF personnel into the future

Looking to the future, Wodonga TAFE will continue supporting the defence industry and continues to advocate for Veterans and families within the region.

Heavy Vehicle Technology Program

Wodonga TAFE is looking to leverage its partnership with the ADF to expand its Logic campus through the Heavy Vehicle Technology Program into a 100-hectare mega-facility where the ADF can train drivers and evolve technologies to face the challenges of the future.

Wodonga TAFE's Heavy Vehicle Technology Program plans to develop a state-of-the-art innovative heavy vehicle training and experimentation facility, the technical training courses of the future, and a high school to industry pathway scheme. The Schools to Industry STEM Pathways aims to attract high school students into TAFE education and onwards into placements in the defence industry.

The program has been designed to align with the nation's Sovereign Industrial Capability Priorities including robotics and cyber. Delivering a state-of-the-art proving, experimentation and training ground for heavy robotics and autonomous system, it will meet support the needs of the defence sector, the heavy vehicle industry, emergency services, the transport sector and education in one facility.

Veteran Support Strategy

Wodonga TAFE also supports the defence industry by providing employment opportunities to Veterans and other support services to Veterans and their families. Many of the 200 staff that support the provision of training to ADF trainees are former ADF personnel.

In 2020, Wodonga TAFE repledged its support of the Soldier On program. ⁶⁵ This program offers ADF personnel, Veterans, and their families employment solutions through tailored careers programs. Defence spouses and their families can access reimbursed childcare. The Soldier On program is a part of Wodonga TAFE's Veteran Support Strategy which includes providing Veterans and their family access to self-awareness, career, resilience and emotional intelligence and skills workshops. Wodonga TAFE also partners with RSL to build programs in support of Veterans' communities.

Similarly, the VETFam shed will support bringing Veterans' families together in a welcoming, skills building environment at Wodonga TAFE.

"Wodonga TAFE is not only a large employer of veterans but recognises the valuable role vocational education plays in both post-service employment and mental health of veterans. I am proud of the role Wodonga TAFE plays in advocating on behalf of the veterans' community, and the significant contribution Wodonga TAFE makes to a national Defence capability."

Aaron Coutts

Veteran; Wodonga TAFE Executive Officer - Strategic Programs and Infrastructure

⁶⁵ Wodonga TAFE signs soldier on pledge

Appendix A: KPMG-SD model

KPMG-SD is a computable general equilibrium (CGE) model of Australian regional economies. This appendix provides detail on the data and theory used to construct the model.

The main features of the KPMG-SD database and theoretical structure are as follows:

- The key data input used by KPMG–SD is an input–output table that quantifies the flows of goods and services between producers and various users (e.g., intermediate inputs to other producers, inputs to capital creators, households, governments and foreigners) and the flows associated with primary factor inputs (i.e., labour, capital, land and natural resources). In standard form, KPMG-SD distinguishes 117 sectors and commodities, based on an extended version of the 2017-18 input-output tables produced by the ABS. 66 The data is then updated to reflect the latest 2019-20 national accounts. This process provides base data that represents the Australian economy in 2019-20.
- Primary factors are distinguished by 117 types of capital (one type per industry), nine occupations, two types of land (primary and non-primary production land), natural resource endowments (one per industry), and owner-operator labour. There is a representative firm in each sector that produces only one commodity. Commodities are distinguished between those destined for export markets and those destined for domestic sales, so that the ratio of export prices and domestic prices is variable.
- Production technology is represented by nested CRESH functions⁶⁷ allowing a high degree of flexibility in the parameterisation of substitution and technology parameters. Energy goods are treated separately to other intermediate goods and services in production and are complementary to primary factors.
- There is an infinitely-lived representative household agent that owns the major share of factors of production with non-Australian residents owning the remainder; the representative household can either spend or save its income. Total household consumption is assumed to be a function of household disposable income and the average propensity to consume. In the long-run, the average propensity to consume is endogenous and adjusts so that the ratio of net foreign liabilities to GDP stabilises. This mimics time-consistent behaviour by households and imposes a budget constraint on household behaviour in the long-run. Household consumption decisions by commodity are determined by a Stone-Geary utility function that distinguishes between subsistence (necessity) and discretionary (luxury) consumption. 68
- The supply of labour is determined by a labour-leisure trade-off that allows workers in each occupation to respond to changes in after-tax wage rates thereby determining the hours of work they offer to the labour market. The overall supply of labour is normalised on working-age population.

⁶⁶ The ABS released input-output tables for 2018-19 in May, 2021. We have not yet applied these in KPMG-SD as the ABS sometimes revises the tables soon after release. In our experience, it is more appropriate to use tables that have been in the public domain for at least one year as by then they can be considered as final.

⁶⁷ Hanoch, G. (1971), 'CRESH production functions', Econometrica, vol. 39, September, pp. 695–712

⁶⁸ Stone, R. (1954), 'Linear Expenditure Systems and demand analysis: an application to the pattern of British demand', The Economic Journal, vol. LXIV, pp. 511–27

- KPMG-SD includes detailed Commonwealth and State Government fiscal accounts, including the accumulation of public assets and liabilities; these are based on the ABS's Government Finance Statistics. ⁶⁹ Detailed government revenue flows are modelled, including over 20 direct and indirect taxes and income from government enterprises, and government expenditure includes government consumption, investment and the payment of various types of transfers (such as pensions and unemployment benefits).
- Investment behaviour is industry specific and is positively related to the expected rate of return on capital. This rate takes into account company taxation and a variety of capital allowances, including the structure of the imputation system.
- Foreign asset and liability accumulation is explicitly modelled, as are the cross-border income flows
 they generate and that contribute to the evolution of the current account. Along with other foreign
 income flows, such as labour payments and unrequited transfers, KPMG-SD takes into account
 primary and secondary income flows in Australia's current account; these are particularly important
 for Australia as they typically comprise the significant share of the balance on the current account.

Figure 13 presents an overview of the agents and transactions in the KPMG-SD model described above. These details are captured at the SA4 level, making the KPMG-SD model ideal for modelling regional policies and projects.

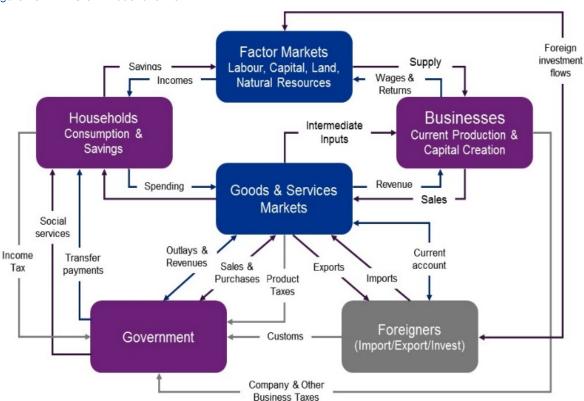


Figure 13: KPMG-SD model overview

⁶⁹ Australian Bureau of Statistics (2019). Government Finance Statistics, Australia, 2017-18, Cat. no. 5512.0, Canberra, April

Appendix B: Productivity calculations

The analysis below estimates the productivity improvements arising from a Wodonga TAFE education through analysis of completing students' employment outcomes and wage premiums. Wilkins analysed HILDA⁷⁰ data to derive wage premiums associated with educational outcomes, controlling for demographic factors and cognitive ability.⁷¹ Wilkins estimates wage premiums relative to a reference of Year 11 or below. Wilkins found a high wage return to Certificate III/IV attainment for males (20 per cent), whilst results for females were not significant. Weekly wage premiums were also estimated for diplomas and advanced diplomas, with 28 per cent and 8 per cent higher wages than those who had only completed Year 11 for males and females, respectively.

Wilkins' gender breakdown of education earning premiums are presented in Table 6.

Table 6: Returns to educational attainment relative to Year 11 or below, 2012

Weekly wage premium relative to educational attainment of Year 11 or below			
Education Level	Males	Females	
Certificate III/IV	20%	0%*	
Diploma or Advanced Diploma	28%	8%	

Source: Wilkins amended estimates (2015). 72 *Not significant at 10% confidence level.

Wilkins' estimated education wage premiums provide an indication of productivity improvements arising from education – that is, assuming workers are paid their marginal product or close to it, wage premiums attributable to educational attainment will reflect higher productivity by more educated workers. For example, this productivity is likely to be demonstrated through a better understanding of how to address technical issues within a sector and is also likely to reflect improvements in transferable skills, such as better problem solving and teamwork.

To model the impacts of higher productivity, the KPMG-REG model uses the enhanced earnings capacity associated with educational attainment as a reflection of the improvement in the productivity of the individual completing study. Before applying a productivity shock to the Hume region labour force in the CGE model, the wage premium must first be scaled such that it represents only those productivity improvements related to the TAFE students who are employed after study (either re-trained, up-skilled or are entering the workforce for the first time).

Firstly, Wilkins' findings are applied across gender by taking a weighted average of the earnings premium associated with education attainment according the proportions of the local workforce in each industry who have attained such education and who are male or female. Data is derived from the 2016 Census and 2020 Labour Force Survey.⁷³.

⁷⁰ The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a household-based panel study that collects valuable information about economic and personal well-being, labour market dynamics and family life.

⁷¹ Wilkens (amended), 2015, http://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0006/2155506/hilda-statreport-2015.pdf.

⁷² The earnings model is estimated by ordinary least squares regression and the estimates are the regression coefficients. The sample for the earnings model is full-time employees aged 25–59. All models contain controls for age, place of birth and Indigenous status, state of residence, population density of region of residence, disability and English proficiency – Wilkins (2015).

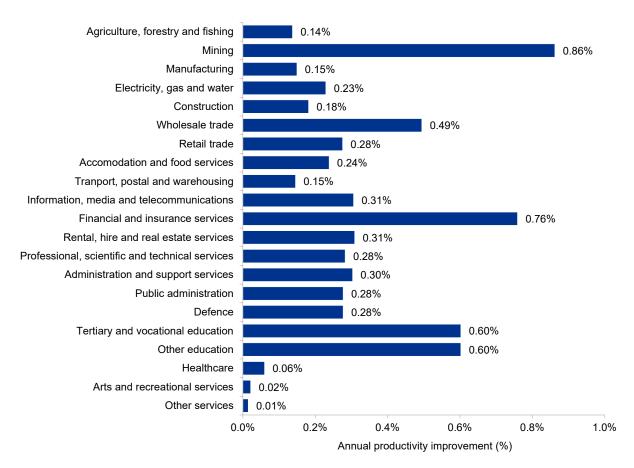
^{73 2016} Census – Counting Employed Persons, Place of Work (POW) (custom export from Table Builder Pro)

The final productivity shock to the KPMG-SD model is based on the productivity improvement associated with education attainment, appropriately weighted for the portion of students graduating with certificates versus those with diplomas.

Since labour productivity is industry-specific in KPMG-SD, we further weight the productivity improvement for the relative impact of those students entering the workforce on the existing stock of labour by industry. This allows the productivity shock to represent an annual improvement related to Wodonga TAFE student outcomes that recognises two important effects – firstly, that each local industry benefits from productivity improvements to varying magnitudes; and secondly, that the wider-economic flow-on benefits of improved labour force productivity will differ according to industry labour force structures.

By considering productivity improvements across local industries, the KPMG-SD model will better reflect the economic contribution of Wodonga TAFE to the local labour force. Figure 14 depicts the final annual productivity improvement by industry, after considering the relative impact of students entering each industry with either diplomas or certificates.

Figure 14: Annual productivity improvement related to Wodonga TAFE students entering the local labour force, by industry



Source: NCVER Student Outcomes 2020, ABS, KPMG

These productivity improvements are applied to the KPMG-SD model to estimate how local industry output and GRP changes in the Hume region. Results by industry are reported in Section 3.1.2.



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