



Directions in Australia's Automotive Industry

An Industry Report 2021



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Preamble

This is the second edition of Directions in Australia's Automotive Industry – An Industry Report. The 2020/21 report provides updated information and builds on the themes developed in the first edition (2017) to provide a comprehensive and holistic picture of the current state of Australia's automotive industry, including key trends and their likely impacts on the industry over the next few years.

This report combines all automotive related sectors into one automotive industry entity, to inform both government and industry stakeholders of the size, scope, economic contribution and the challenges facing Australia's automotive industry. It is anticipated that this will help generate a greater understanding and awareness of the industry at both national and state/territory levels, that will help guide future industry policy and decision making over the short to medium term.

This report has been produced by the Motor Trades Association of Australia, and has been supported with contributions from:

- Victorian Automotive Chamber of Commerce
- Motor Trader's Association of New South Wales
- Motor Trade Association of Western Australia
- Tasmanian Automotive Chamber of Commerce
- Motor Trade Association of South Australia and Northern Territory



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Executive Summary

Australia's automotive industry has been in existence for more than 100 years. Over that period, it has faced many challenges, yet none larger than what is emerging now. For the first time in modern history, the industry is at a revolutionary turning point. This turning point not only encompasses the transition to zero emission vehicles over the next decade, but the integration of electric vehicles as assets within the electricity generation and transmission sector, that are capable of not only powering household energy needs, but can stabilise the electricity network in times of peak demand. These unprecedented developments will change the concept of the motor vehicle and potentially the scope of the automotive industry in the future.

As these developments evolve in the ensuing years, the automotive industry itself will undergo significant structural change. The evidence shows that such change is already emerging. Beyond the industry disruptions caused by COVID-19 during 2020, that still reverberate in the form of supply chain constraints in 2021, the transformation to electric, connected, and autonomous vehicles is also bringing visible changes to the automotive value chain, especially in terms of retail and after-market sales. With an increased industry focus to on-line sales, electric vehicles could also be the catalyst that significantly alters the traditional dealership network model, as witnessed by recent manufacturer agreements for the sale of electric vehicles on-line in Australia through local distributors.

The experience of Norway, a country well advanced in the path of electric mobility, also shows that the transition to electric vehicles requires significant investments by dealerships and automotive workshops in capital equipment and skills training. Not all automotive workshops will be able to compete in the automotive service and repair market for electric vehicles, with 20 per cent of automotive workshops expected to exit the repair market in Norway by 2030. These findings have significant implications for Australia as it transitions its vehicle fleet to electric.

All automotive businesses will need to obtain as much information as possible to make an informed decision on the future opportunities and risks of participating in the ensuing electric vehicle ecosystem.

Whilst Australia's electric vehicle uptake is low, ongoing technological advancements and economies of scale may bring about a quicker than expected price advantage for electric vehicles over internal combustion engine vehicles, and this may sway consumers to purchase electric vehicles sooner than expected. Such a scenario could place automotive businesses in an exposed position.

Australia's automotive industry is also experiencing compositional change and a redistribution of skilled labour. There is growing segmentation of the industry into large corporate businesses and sole traders. Evidence suggests skilled technicians are increasingly leaving their employers to set up their own businesses as sole traders. This has left a void for many small and medium size business owners who are struggling to replace these skilled tradespeople. Whilst the industry has made positive gains in regards to the Franchise Code of Conduct and access to technical repair information for independent repairers, addressing skill shortages and declining business profitability are key challenges that will test the resolve of the automotive industry over the next few years.

Governments have both a duty and obligation to understand these industry changes, including the impacts that electric vehicles will have on Australia's automotive industry and broader community. This would allow for long-term planning that oversees the transition of the industry and mitigates any employment and business losses within the community. For this to be successful, there must be an early and mutual interaction between government, automotive associations, and other industry stakeholders, where industry intelligence is shared, and appropriate policy measures are developed in consultation with affected parties.

For the first time
in modern history,
the industry is at
a revolutionary
turning point.



Section 1.

What represents

the automotive

industry?

Key Findings

- Australia's automotive industry is comprised of 13 different sectors. Automotive repair and maintenance is the largest sector, comprising more than half (56 per cent) of the industry.
- There were 72,521 registered businesses operating across the automotive industry as at 30 June 2020. Business growth is forecast to reach 74,981 businesses by 2022/23.
- Small and family owned businesses dominate the automotive industry, comprising 96.6 per cent of all businesses.
- Profit margins within automotive are amongst the lowest of all industries.
- There were 19.8 million registered vehicles on road as at 30 January 2020, an increase of 300,00 vehicles over the previous year.
- The vehicle fleet is getting older, with the average age now standing at 10.4 years as at 31 January 2020, up from 10.2 years in 2019.
- An estimated 762,777 vehicles were scrapped between 2019 and 2020. End-of-life vehicles are either recycled, exported, or go to landfill.
- There were 916,968 new vehicles sold in 2020, a decrease of 145,899 vehicles or 13.7 per cent over 2019. The used vehicle market stands at approximately 3.7 million sales in 2020, or 4 times the size of the new vehicle market.



BACKGROUND

The scope and economic footprint of Australia's automotive industry has often been subject to wide interpretation both within and outside of government, and particularly since the closure of domestic passenger car manufacturing in October 2017. This has largely arisen from a lack of an appropriate industry classification and poor statistical coverage relating to the automotive industry, thus leading to speculation and conjecture amongst industry commentators and government.

Whilst major reform to official industry and occupational classifications such as ANZSIC and ANZSCO as maintained by the Australian Bureau of Statistics (ABS) and Statistics New Zealand is desperately needed, it is also unlikely, thus leaving much of the granular detail concerning the automotive industry to be extensively modelled.

INDUSTRY SCOPE AND COMPOSITION

Unbeknown to many, the automotive industry embodies a wide variety of sectors and business activities, some of which are inherently recognisable and interconnected, whilst others remain less obvious. The overall boundary of the automotive industry incorporates 13 individual sectors, as displayed in Table 1. A key factor unifying most automotive sectors is their reliance upon a workforce invested with nationally accredited automotive qualifications and skills training, thus drawing seemingly diverse sectors such as marine, bicycles, agricultural machinery retailing and repairs and outdoor power equipment within the scope of the automotive industry.

Table 1: Australian automotive industry profile, December 2020

Automotive Sector	Main Activities	Percent of industry business population
Automotive repair and maintenance	Light and heavy vehicle mechanical service and repair; vehicle body, paint and interior repair; engine reconditioning; automotive electrical services; mining machinery service and repair; mobile plant and equipment service and repair.	56.0
Motor vehicle retailing	New and used car, motorcycle, truck, trailer and other motor vehicle retail sales.	7.0
Motor vehicle and parts wholesaling	Car, commercial vehicle, trailer and other motor vehicle wholesale sales; motor vehicle dismantling, recycling and parts wholesaling.	7.7
Motor vehicle parts and tyre retailing	Original equipment and aftermarket retail sales of motor vehicle parts and tyres.	6.1
Fuel retailing	Retailing of petrol, diesel, LPG, CNG, oils and service station operation.	5.5
Motor vehicle and parts manufacturing	Specialist vehicle manufacturing; bus and truck manufacturing; vehicle body and trailer manufacturing; automotive electrical components and other vehicle parts manufacturing.	4.4
Towing services	Accident, trade, heavy vehicle and other towing services.	3.4
Passenger car rental and hiring	Hiring, leasing or renting of passenger cars without drivers.	2.9
Agricultural machinery retailing and repair	Retail sales, service and repair of agricultural machinery and equipment.	2.0
Outdoor power equipment	Sales, service and repair of outdoor power equipment.	1.8
Bicycles	Retail sales, service and repair of bicycles.	1.4
Marine	Sales, service and repair of marine engines.	1.1
Other specialised machinery and equipment manufacturing	Manufacturing of bicycles, motorcycles, mining and construction equipment, lifting and materials handling equipment, agricultural machinery and equipment.	0.7

Source: ABS and VACC modelled industry data

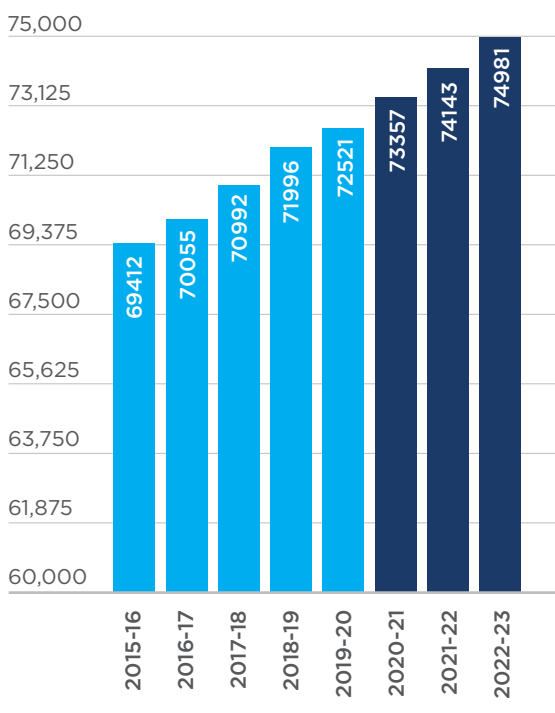
Table 1 shows that by far, the Automotive Repair and Maintenance sector accounts for the largest share of Australia's automotive industry, containing more than half (56 per cent) of all registered businesses within the industry. The industry dominance of the Automotive Repair and Maintenance sector has always prevailed, even during the era of passenger car manufacturing in Australia, yet this fact has often been unrecognised.

Following on from Automotive Repair and Maintenance are Motor Vehicle and Parts Wholesaling and Motor Vehicle Retailing (7.7 and 7.0 per cent of the industry business population respectively), followed by a host of other smaller sectors that make up the remaining fabric of the automotive industry.

BUSINESS POPULATION

The latest ABS estimates show that for the year ended June 2020, there were an estimated 72,521 registered businesses operating nationally within the automotive industry¹. This represents a modest increase of 525 businesses over June 2019. This estimate incorporates the first half year impact of COVID-19, which had the effect of reducing trend business growth from 1.2 per cent to 0.7 per cent per annum. Data which captures the full impact of COVID-19 on the business population will not be available until late 2021.

Chart 1: Number of Automotive Businesses by Financial Year, Actual and Projected



Source: ABS data and VACC modelled estimates.

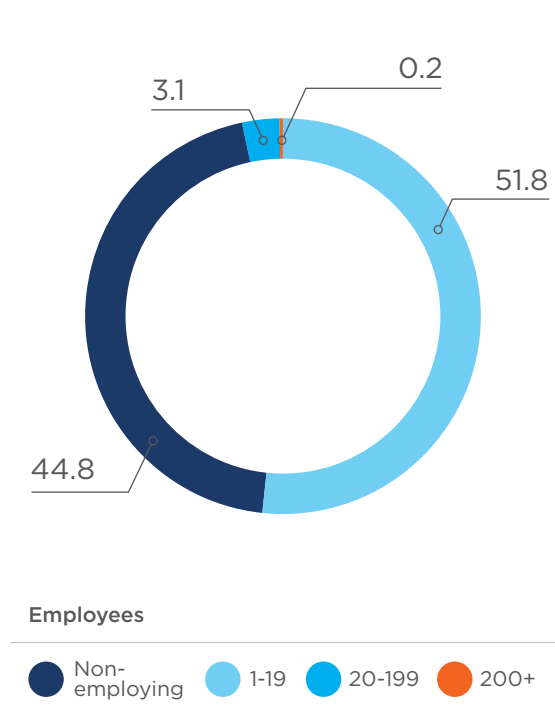
Chart 1 displays actual and trend projections of the number of automotive businesses in the Australian economy until 2022-23. The data relates to businesses that are actively trading, i.e. businesses that are registered both with an Australian Business Number (ABN) and for Goods and Services Tax (GST) purposes and are submitting a Business Activity Statement (BAS).

On average, the automotive industry has recorded annual business growth of around 1.1 per cent per year over the past five years, however, this growth has been below that of growth in national vehicle fleet (2 per cent) as well as population growth (1.6 per cent) over the same period. Therefore, in real terms, the automotive industry has been in decline for the past five years.

BUSINESS STRUCTURE

A key feature of the automotive industry is that it is dominated by small and family-owned businesses. Just over half the industry (51.8 per cent) is comprised of businesses containing between 1-19 employees, down from 54.6 per cent in 2016. A further 44.8 per cent are sole proprietor businesses with no employees, an increase from 41.9 per cent in 2016. Large businesses with 200 or more employees account for only 0.2 per cent of the automotive industry (Chart 2).

Chart 2: Business Share of Automotive Industry by Employment Size, June 2020 (% Share)



Source: ABS data

¹ Australian Bureau of Statistics, Counts of Australian Businesses, including Entries and Exits, June 2020

BUSINESS PROFITABILITY

Two useful metrics in assessing automotive sector profitability include the operating profit margin (OPM), and the percentage of businesses within the sector that made a profit or broke even.

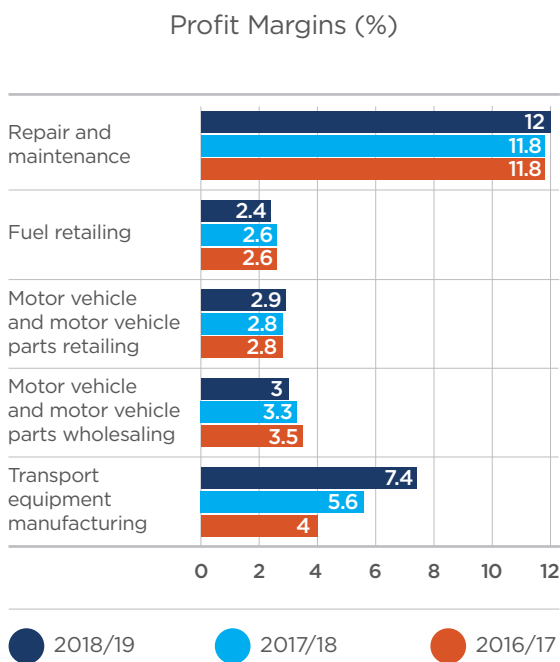
OPM measures how much profit a company makes per dollar of sales after paying for variable costs of production, such as wages and raw materials, but before paying interest expenses and tax. Companies with high operating profit margins are generally better equipped to pay for fixed costs and interest costs on obligations, have better chances to survive an economic slowdown and are more capable of offering lower prices than their competitors that have a lower profit margin.

Chart 3 displays OPM data as reported by the ABS², for selected automotive sectors over the period 2016/17 to 2018/19. Unequivocally, the data shows that for most of the sectors listed, profit margins have been consistently low over the period. This suggests that respective businesses have not been efficiently converting revenue into profit. This scenario could result from either prices charged being too low, the high costs of goods sold, high operating expenses, as well as other factors.

The repair and maintenance sector showed the highest OPM - around 12 per cent over the period - whilst fuel retailing and motor vehicle and motor vehicle parts retailing displayed the lowest profit margins (2.4 per cent and 2.9 per cent respectively in 2018/19). Consequently, the repair and maintenance sector also contained the highest proportion of businesses that made a profit or at least broke even (86.7 per cent of businesses in 2018/19) (Chart 4).

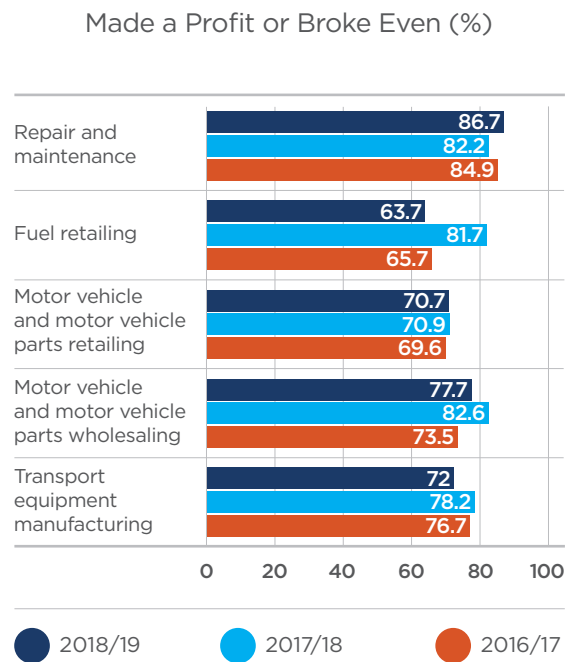
Qualitative evidence provided by business stakeholders also confirms that low profit margins are endemic across the automotive industry. Despite the increased technological complexity of modern motor vehicles, many business owners feel they are constrained in their ability to raise prices due to the sensitivity of consumers towards price rises, as well as the intense level of competition for customers amongst businesses. This results in business owners being undercompensated for the skills and services they provide, to the overall detriment of the business and the industry. Some small business owners have also reported to have never drawn a proper wage and are only in business as they are passionate about the trade and not necessarily for greater financial reward.

Chart 3: Operating Profit Margins by Automotive Sector and Year



Source: ABS data

Chart 4: Percentage of Businesses that Made a Profit or Broke Even, by Sector and Year



Source: ABS data

² Australian Bureau of Statistics, Australian Industry, 2018-19

Within dealerships especially, including car, motorcycle, truck and farm machinery dealerships, profit margins are very low, with many businesses currently reporting profit margins of around two per cent. This reflects the fact that dealerships are not only constrained in their ability to raise the price of their goods and services but have the added burden of the high cost of purchasing stock and the significant operating expenses associated with running a modern showroom. These operating expenses are compounded further for franchisee dealers that are constrained by the terms of their respective franchise agreement with their manufacturer or franchisor. This reinforces the fact that profit margins within the automotive industry are not high, and in fact are amongst the lowest of all industries.

NATIONAL VEHICLE FLEET – KEY FACTS

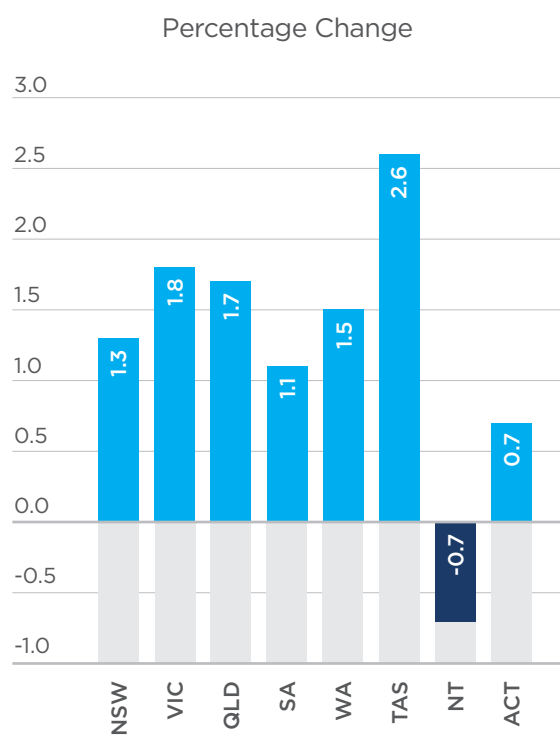
Composition

As at 31 January 2020, there were approximately 19.8 million registered motor vehicles on Australia's roads³. This represents a growth rate of 1.5 per cent or around 300,000 vehicles from January 2019 (Table 2). This growth rate has slowed over recent years, down from 2.1 per cent growth in 2016. Light rigid trucks continue to have the largest growth rate in registrations, increasing 5.8 per cent, followed by campervans with 3.5 per cent. Passenger vehicle registrations increased by 1.2 per cent, however, their share of the fleet fell 0.3 percentage points to 74.1 per cent.

All jurisdictions recorded a slowdown in growth of registered vehicles, except for Tasmania (steady at 2.6 per cent) and Western Australia

(1.5 per cent growth, up from 0.6 per cent in January 2019). The Northern Territory was the only state or territory to record an overall fall in the number of vehicles registered, with a decrease of 0.7 per cent (Chart 5).

Chart 5: Change in Motor Vehicle Registrations, 2019-2020, by State and Territory



Source: Australian Bureau of Statistics, undefined 31 Jan 2020.

Table 2: Registered Motor Vehicles, Australia, as at 31 January 2020

Vehicle category	No. of registrations	Per cent of fleet	Growth from 2019 (%)
Passenger vehicles	14,679,249	74.1	1.2
Light commercial vehicles	3,407,016	17.2	2.8
Motorcycles	880,881	4.4	1.2
Heavy rigid trucks	358,834	1.8	1.4
Light rigid trucks	176,680	0.9	5.8
Articulated trucks	105,137	0.5	2.0
Buses	100,473	0.5	1.1
Campervans	72,220	0.4	3.5
Non-freight carrying vehicles	24,841	0.1	0.7
TOTAL	19,805,331	100	1.5

³ Australian Bureau of Statistics, Motor Vehicle Census, Australia, 31 January 2020

Chart 6: Number of Registered Vehicles by Jurisdiction, January 2020

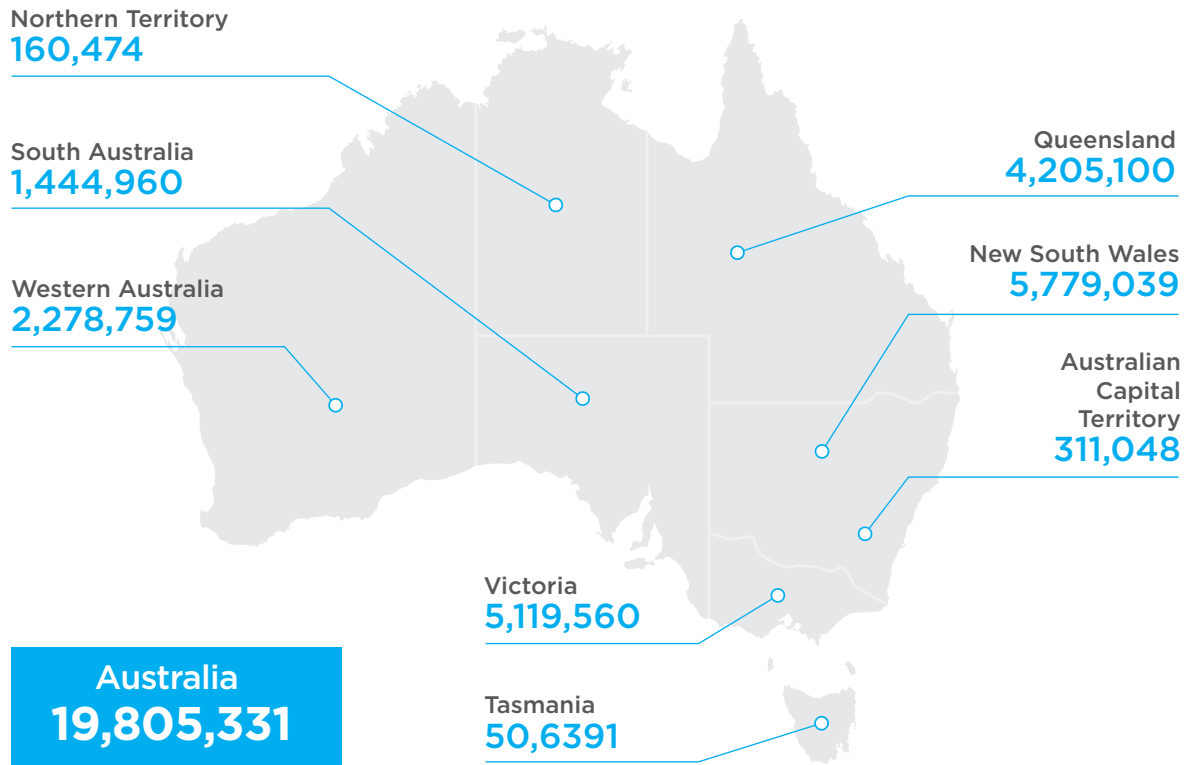
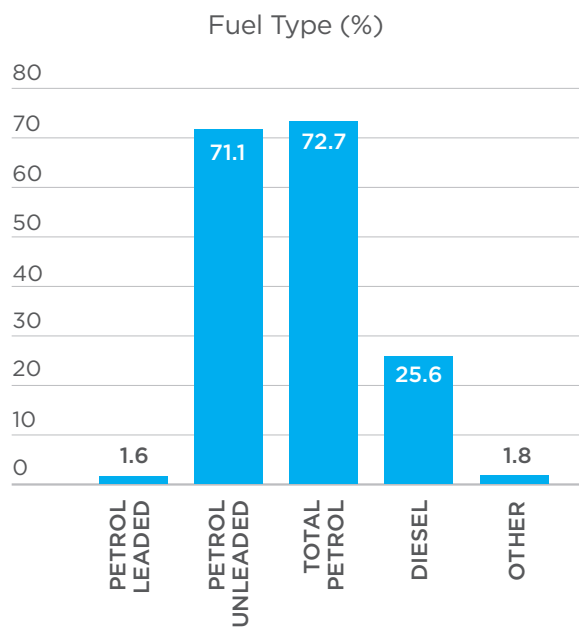


Chart 6 displays the number of registered vehicles by jurisdiction. Unregistered vehicles including tractors, farm machinery, mining and construction equipment, hobby/custom vehicles and recreational vehicles are not included in these estimates.

Fuel Type

Registrations of petrol powered vehicles decreased by 0.9 percentage points as at end January 2020, however, they still dominate the national fleet comprising 72.7 per cent of all registered vehicles (Chart 7). Diesel registrations grew by 1.0 percentage point, with diesel powered vehicles now comprising 25.6 per cent of the national fleet. While electric vehicles are still small in number, less than 0.1 per cent of the fleet, 14,253 electric vehicles were registered in 2020, almost double that of the previous year⁴.

Chart 7: Proportion of Vehicles by Fuel Type, Australia, 31 January 2020



Source: ABS data. 'Other' category includes LPG, dual fuel and electric.

⁴ Ibid

Age of Fleet

The average age of Australia's vehicle fleet increased to 10.4 years in 2020, up from 10.2 years in 2019⁵. The ACT has the youngest fleet with an average age of 9.5 years, whereas Tasmania has the oldest fleet at 13 years. More than half (55.7%) of Tasmania's vehicle fleet is comprised of vehicles manufactured up to the year 2009 (Table 3).

Nationally, campervans represent the oldest cohort of vehicles on-road (average age of 17 years), followed by heavy rigid trucks (15.7 years). Passenger vehicles are the youngest vehicles on road (10.1 years).

Scrappage Rate

An estimated 762,777⁶ vehicles (excluding motorcycles) were scrapped between 2019 and 2020, compared to 867,769 vehicles between 2018 to 2019. This decline in the number of vehicles scrapped annually reflects the increased age of vehicles on road. Most of these end-of-life vehicles (ELV's) are either recycled, exported, or go to landfill.

New Vehicle Market

New vehicle sales data as collected by the Federal Chamber of Automotive Industries (FCAI) indicates that there were 916,968 new vehicles sold in the 2020 calendar year, which represents a decrease of 13.7 per cent or 145,899 fewer vehicles sold than in 2019. Whilst this sales decline is not unexpected due to the financial impact of the COVID-19 pandemic, there was also a change in the reporting system introduced for new

vehicle sales in 2020, which factors in vehicle registrations along with sales figures supplied by car companies and dealers, which to some degree may affect comparability with previous year's figures.

Despite the sales contraction, it is also the case that new vehicle sales had been in decline for 30 consecutive months before the impact of the pandemic in 2020, and this can be attributed to many factors including:

- Economic conditions - declining house prices during 2018 and 2019; rising living costs; low wage growth; unfavourable exchange rates and consumer/business uncertainty
- Regulatory restrictions on lending practices and processes emanating from the Royal Commission into the Banking, Superannuation and Financial Services Industry, and
- The impact of natural disasters, such as bushfires and drought

In what is an encouraging sign, however, the new vehicle market in Australia is now showing positive signs of growth, with 12.4 and 13.5 per cent growth recorded during the months of November and December 2020 compared to the same months in 2019, and 11.1 per cent growth in January 2021 compared to January 2020.

Even with the exit of prominent brands such as Holden, the Australian new vehicle market still remains one of the most concentrated and competitive in the world, containing 66 vehicle marques and hundreds of vehicle models on offer in what is a relatively small market globally.

Table 3: Age of Vehicle Fleet by Jurisdiction and Year of Manufacture, as at 31 January 2020

State/Territory	Average vehicle age (years)	Vehicles manufactured up to 2009 (% of fleet)	Vehicles manufactured between 2010-14 (% of fleet)	Vehicles manufactured between 2015-20 (% of fleet)
NSW	9.7	40.1	27.1	32.5
VIC	10.2	43.1	26.8	30.2
QLD	10.2	44.2	26.6	29.2
SA	11.8	50.2	25.2	24.7
WA	11.5	48.3	28.3	23.4
TAS	13.0	55.7	21.9	22.4
NT	9.8	41.0	28.4	30.7
ACT	9.5	39.3	29.6	31.1
Australia	10.4	43.9	26.8	29.3

Source: ABS data

⁵ Ibid

⁶ Ibid

Table 4: Estimated Number of Vehicles scrapped, by Jurisdiction, 2019-20

State/Territory	Number of vehicles scrapped between 2019 -2020
NSW	262,979
VIC	215,728
QLD	144,070
SA	51,180
WA	58,113
TAS	7,063
NT	9,770
ACT	13,874
Australia	762,777

Source: ABS data. Estimates exclude motorcycles.

Table 5 below shows a breakdown of the new vehicle market by buyer type for the 2020 calendar year. Private customers were the largest buyer group (49 per cent) followed by business (40.1), and rentals and heavy vehicles (both 3.8 per cent). Government purchases accounted for the smallest share (3.4 per cent). Whilst all buyer segments shrank in 2020 due to the financial impact of COVID-19, the most pronounced decline occurred within sales to rental, which recorded a 53 per cent decrease over 2019.

Table 5: New Vehicle Sales by Type of Buyer, as at end 2020

Buyer type	Vehicle sales	Percentage of market	Per cent change from 2019
Private	449,376	49.0	-6.1
Business	367,932	40.1	-15.7
Government	30,417	3.3	-15.7
Rental	34,676	3.8	-53.0
Heavy vehicles	34,567	3.8	-9.0
TOTAL SALES	916,968		

Source: FCAI VFACTS data

Used Vehicle Market

Unlike new vehicle sales, which are collected by the FCAI, there is no central authority responsible for the national collection of used vehicle sales data.

Proxy estimates for used vehicle sales nationally can be obtained through transfer of vehicle registration data, which is available from state and territory vehicle registration authorities. Whilst there are some issues with the classification and quality of vehicle transfer data in each jurisdiction, the data in aggregate provides a reasonably good indication of the size of the used vehicle market.

Vehicle transfer data collected from each jurisdiction indicates that nationally there were approximately 3.7 million used vehicles sold in 2020. This places the used vehicle market at around four times the size of the new vehicle market in Australia. The total combined new and used vehicle market in Australia is therefore estimated to be approximately 4.6 million vehicles.

KEY INDUSTRY BODIES AND REPRESENTATION

Given that there are 13 sectors within the automotive industry (Table 1), there are a wide number of automotive bodies, associations, organisations and other stakeholders that represent the various sectoral interests of the automotive industry. Some of the key industry bodies are presented overleaf.

Motor Trades Association of Australia (MTAA)

MTAA is a federation of state and territory motor trades associations and automotive chambers of commerce. It is the largest automotive industry body, representing automotive businesses across all automotive sectors, and particularly the retail, service and repair sectors, which account for more than 80 per cent of Australia's automotive industry.

Each state and territory motor trade association and automotive chamber of commerce contains its own core membership of automotive businesses derived from its respective jurisdiction and advocates on their behalf at both state and federal government level. Federal issues are normally undertaken by MTAA.

Other Key Bodies

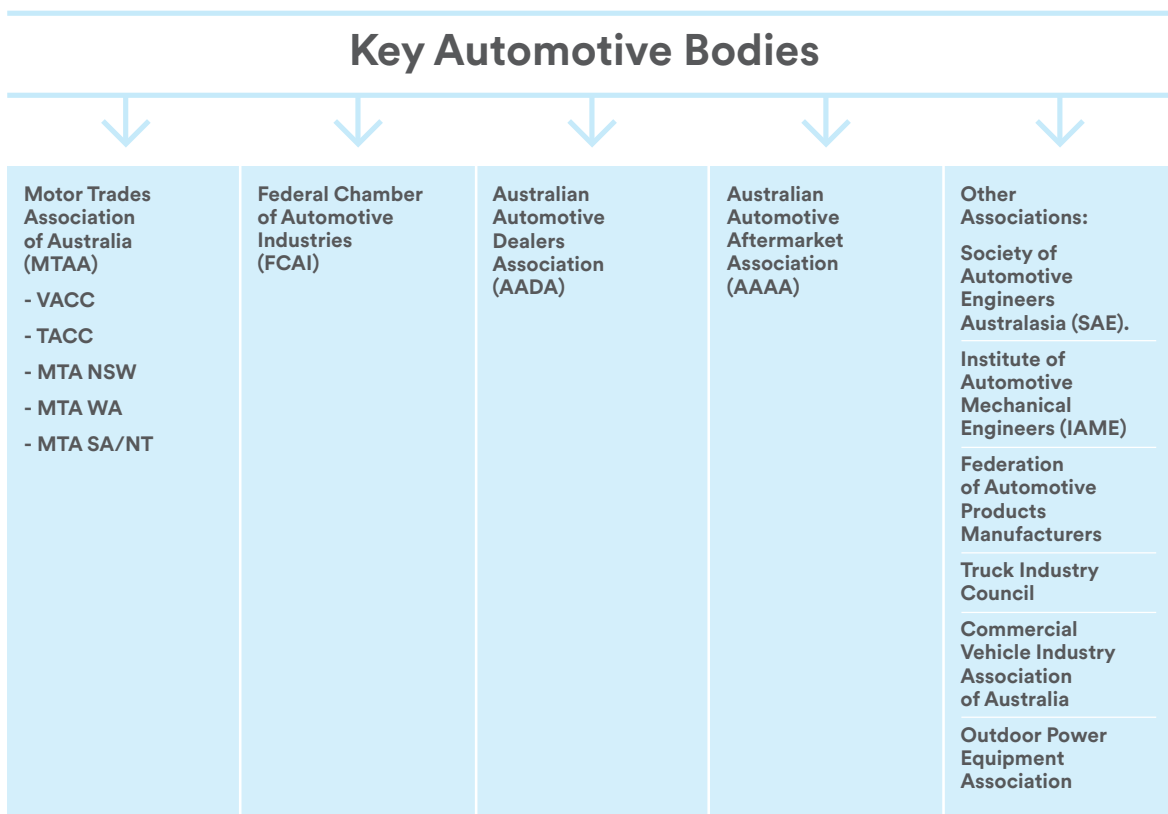
In addition to MTAA, there are other bodies and associations representing sectoral interests of the industry. These include, but are not limited to the following:

- **Federal Chamber of Automotive Industries (FCAI)** – the peak organisation representing manufacturers and importers of passenger vehicles, light commercial vehicles and motorcycles

- **Australian Automotive Dealers Association (AADA)** – represents franchised new car dealers in all states and territories
- **Australian Automotive Aftermarket Association (AAAA)** – national association representing car component manufacturers, wholesalers & distributors of parts and accessories and independent service and repair workshops
- **Other Associations** – Society of Automotive Engineers Australia; Institute of Automotive Mechanical Engineers; Truck Industry Association; Commercial Vehicle Industry Association of Australia; Outdoor Power Equipment Association.

Chart 8 presents a graphical display of the key representative bodies of Australia's Automotive industry. There are also many other smaller industry bodies that exist either as partner, splinter or independent organisations from these main bodies. Automotive businesses can also be members of more than one representative body. Organisations such as the Royal Automobile Club of Victoria (RACV) or the National Roads and Motorists Association (NRMA) are more consumer focussed in their membership and representation and therefore are not included in Chart 8.

Chart 8: Key Automotive Bodies



Section 2.

How important is the automotive industry?

Key Findings

- There were 384,810 people employed nationally within the automotive industry in 2019/20, an increase of 5,415 people and 525 businesses from 2018/19.
- Industry employment has remained at relatively the same level since the end of local car manufacturing in October 2017.
- The automotive industry contributes \$39.35 billion to Australia's GDP. This represents approximately 2.1 per cent of Australia's economy.
- The automotive industry has extensive interconnections to over 90 per cent of Australian industry, including strong linkages to road transport, construction and mining which have large dependencies on automotive goods and services to sustain their operations.
- In 2019/20, imports of automotive goods amounted to \$34.7 billion, a decrease of \$5.7 billion or 14.1 per cent over 2018/19.
- The value of Australian automotive exports in 2019/20 was \$1.94 billion, an increase of \$41.3 million or 2.2 per cent over 2018/19.
- Automotive manufacturing still plays a significant role within the automotive industry and the broader Australian economy, with the potential to expand over time.
- The automotive industry has a key role to play in the sustainability of our environment through reductions in greenhouse gas emissions.
- Automotive qualifications and courses are consistently amongst the most popular within the Vocational Education and Training (VET) system, and are essential in developing workforce skills to support the needs of local businesses.



BACKGROUND

The automotive industry is a major economic, technological, and social force in Australia. The industry not only represents a source of employment for around 385,000 people nationally, but is also a barometer of the health of Australia's economy, as automotive sales are closely tied to disposable income levels, interest rates, finance availability, consumer confidence and economic growth. The automotive industry is also a critical enabler of economic growth, as its goods and services are utilised by most industries as inputs towards their own goods and services in addition to final purchases made by consumers.

Furthermore, automotive is one of the largest employers of apprentices nationally, playing a pivotal role in skills development and the creation of career opportunities for young people across cities and regions. Motor vehicles have also been a liberating technology for Australians,

providing access to markets, doctors, jobs, and allowing people to live and work in ways that were unimaginable a century ago. Almost every car trip ends with either an economic transaction or some other benefit to people's quality of life.

ECONOMIC CONTRIBUTION

Employment

ABS labour force estimates show that there were approximately 384,810 people employed nationally within the automotive industry in 2019/20 within 72,521 businesses (Table 6). This represents an increase in employment of 5,415 people and 525 businesses over 2018/19. As an indication of where the industry currently stands, the 2019/20 employment figure is approximately the same level as that at the time of closure of local car manufacturing in October 2017, along with an increase of 1,529 businesses since that period.

Table 6: Automotive Industry, Economic Summary 2019/20

ANZSIC Code	Industry Sector	Employment (No.)	Businesses (No.)	GDP Contribution* (\$Billion)
941	Automotive repair and maintenance	140,850	40,220	11.0
391	Motor vehicle retailing	71,450	5,361	7.7
2311, 2312, 2313, 2319	Motor vehicle and parts manufacturing	37,050	3,148	3.72
400	Fuel retailing	34,450	3,972	3.38
392	Motor vehicle parts & tyre retailing	34,750	4,285	2.1
350	Motor vehicle and parts wholesaling	26,200	5,488	6.13
2399, 2462, 2491, 2461	Other specialised machinery & equipment manufacturing	10,000	837	1.6
6611	Passenger car rental & hiring	7,120	2,134	1.7
4231, 9429	Outdoor power equipment	4,650	1,285	0.3
4245, 9429	Marine equipment retailing	3,210	818	0.22
4241	Bicycle retailing	5,020	1,103	1.3
4610	Towing services	3,040	2,460	0.2
9429	Agricultural machinery retailing & repair	7,020	1,410	N/A
TOTAL		384,810	72,521	39.35 billion

Source: ABS data *Estimates are in terms of Industry Value Added for 2018/19.

These results indicate that industry employment levels have not declined and have even grown slightly since the end of car manufacturing along with the aggregate number of businesses within the industry. This is contrary to opinion of many commentators at the time, who believed the automotive industry would collapse with the end of car manufacturing. Furthermore, the employment data incorporates the first half year effects of the COVID-19 pandemic in 2020 and shows no decrease in industry employment. Employment data for the second half of 2020 also confirms that there has been no decrease in aggregate industry employment from the impact of the COVID-19 pandemic.

Many argue however, that the federal JobKeeper Package, along with a host of other federal and state government business stimulus and assistance measures, have helped prop-up businesses and employment levels within automotive and most other industries during 2020. Some also fear that following the removal of these measures, there may be negative repercussions for automotive and other industries. Whilst these assistance measures were no doubt critical in helping sustain many businesses and the effects of the removal of these

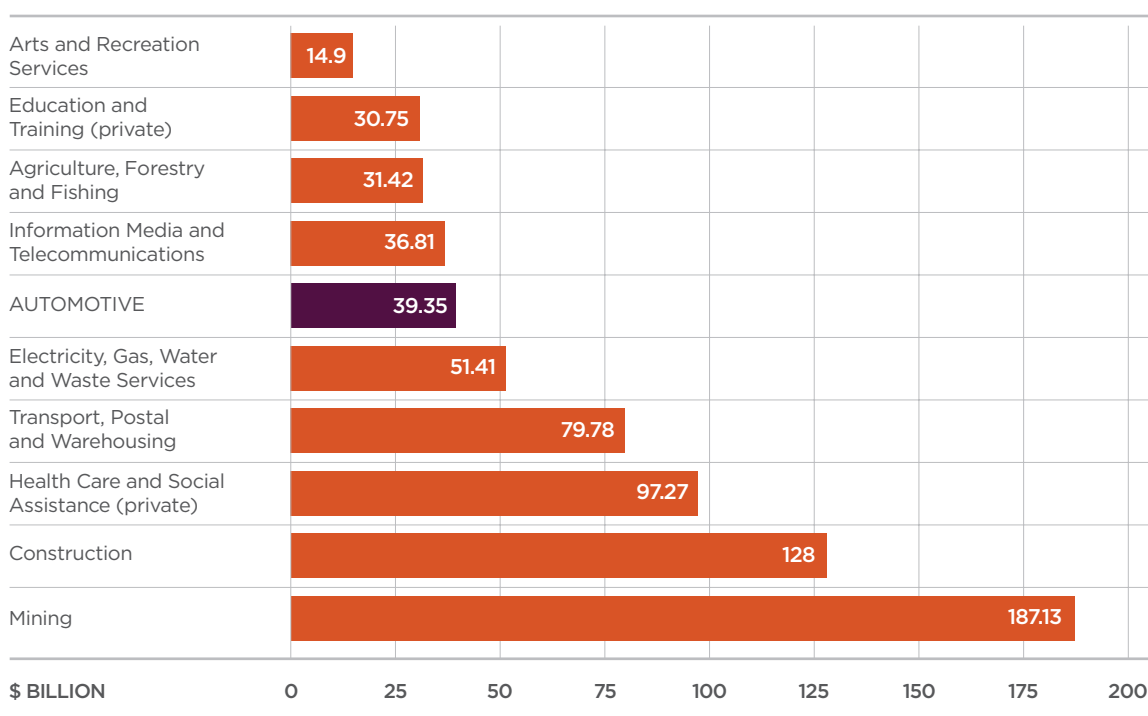
assistance measures is yet to be seen, it is unlikely that there will be a major collapse in businesses or employment within automotive, given recent positive retail sales trends and strong economic growth forecasts from Treasury and the Reserve Bank for 2021/22 and beyond.

GDP Contribution

Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders over a specific time. It is the main measure of the size and performance of the economy. Table 6 records both the individual contribution of each automotive sector to Australia's GDP, as well as the aggregate industry contribution. In aggregate, the automotive industry contributed \$39.35 billion towards Australia's GDP in 2018/19, which is approximately 2.1 per cent of Australia's economy.

Chart 7 shows the GDP contribution of the automotive industry relative to other industries. Significantly, the economic contribution of automotive is higher than that of many industries including Agriculture, Forestry and Fishing; Education and Training (private); and Information Media and Telecommunications.

Chart 7: Automotive and Selected Industries Contribution to Australian GDP, 2018/19



Source: ABS data

Whilst the automotive industry is not the largest contributor to Australia's GDP, ABS data shows that automotive has extensive interconnections to over 90 per cent of Australian industry, including strong linkages to sectors such as road transport, construction and mining which have large dependencies on automotive goods and services to sustain their operations.

For example, the road transport industry alone utilises over \$7 billion¹ worth of automotive goods and services per annum to ensure the efficient movement of freight by road across Australia and the operation of buses and other vehicles (i.e. taxis) for the transportation of passengers. This includes both the purchase of expensive heavy vehicles and equipment and the need for their on-going upkeep through the use of automotive support services such as engine reconditioning and maintenance to ensure their longevity and reliability. Without such support, the road transport industry would grind to a halt, with serious flow-on consequences for the economy.

Similarly, the construction, mining, agricultural and maritime industries are dependent on the automotive industry for the repair and refurbishment of earthmoving machinery and equipment, diesel engines, mobile plant and other capital equipment that are too costly to replace on a regular basis. This helps sustain the viability and profitability of their operations. Households are also heavily dependent on the automotive industry for the supply of new vehicles, parts and their maintenance, accident repairs and vehicle recovery (towing) services.

The economic importance of the automotive industry is even more significant if one considers the full range of services related to sales, marketing and maintenance throughout a vehicle's life. Before reaching the market, a vehicle is enriched by the addition of several services, which are not limited to warranty services, but include sophisticated loan schemes, assistance packages and many other advanced services. These after-sales activities have come to play a major role and have enabled car dealers and manufacturers to remain viable, particularly with profit margins on new vehicle sales declining significantly over recent years.

All these linkages demonstrate the critical importance of the automotive industry to Australia's economy and economic growth, and that the final impact of shocks or disruptions to the automotive industry reverberate across the broader economy, and potentially can be quite sizeable in nature.

Automotive Imports

Australia is a net importer of automotive products, and hence the value of automotive imports and exports has often fluctuated relative to the value of the Australian dollar. In 2019/20, imports of automotive goods amounted to \$34.7 billion, a decrease of \$5.7 billion or 14.1 per cent over 2018/19 (Table 7).

Table 7: Value of Automotive Imports, Australia

Category	2019/20 (\$000)	2018/19 (\$000)	Percentage change
Agricultural machinery (excl tractors) & parts	1,341,835	1,315,470	2.0
Tractors	689,510	808,795	-14.7
Passenger motor vehicles	19,093,022	21,573,858	-11.5
Goods vehicles	8,074,974	10,571,717	-23.6
Other road motor vehicles (incl bus, truck)	438,708	746,721	-41.2
Vehicle parts & accessories	2,956,019	3,244,092	-8.9
Motorcycles & cycles	1,220,785	1,186,084	2.9
Trailers & semi-trailers	931,834	1,017,777	-8.4
TOTAL	34,746,686	40,464,514	-14.1

Source: Department of Foreign Affairs and Trade

¹ Australian Bureau of Statistics, Australian National Accounts: Supply Use Tables 2018-19

The sharp decrease in the value of imports in 2019/20 is largely attributable to the impact of the coronavirus, where supply chain constraints, stock shortages, lower consumer demand and associated restrictions have reduced the import volume and value of motor vehicles and parts. The value of imports of passenger vehicles, other road vehicles and goods vehicles fell by 11.5 per cent, 41.2 per cent and 23.6 per cent respectively over the period.

The period from April to May 2020 witnessed the sharpest decline in imports of road vehicles (more than \$1 billion). Monthly trade data for July, August and September 2020 however indicates that imports of road vehicles have been recovering steadily, with the September 2020 import value being only \$1 million less than September 2019. This recovery had been led by imports from Australia's largest road vehicle source countries, Japan and Thailand.

Automotive Exports

The value of Australian automotive exports in 2019/20 was \$1.94 billion, a modest increase of \$41.3 million or 2.2 per cent over 2018/19 (Table 8). Vehicle parts and accessories are now the single biggest automotive export item, accounting for \$920.4 million or almost half of automotive exports.

Just prior to the closure of local car manufacturing operations in 2017, Australian automotive exports were around \$3 billion, with locally produced passenger vehicles being the largest export item at over \$1.8 billion annually. Therefore, from the time of closure of car manufacturing, Australia

has foregone additional export revenues of approximately \$1.5 billion per annum through the loss of car exports to major international markets.

Automotive Manufacturing

Whilst mass car production ceased more than three years ago, there is still considerable automotive manufacturing activity being undertaken in Australia, in the form of bus, truck, trailer, specialist vehicles and component manufacturing. In aggregate, these manufacturing operations employ 37,000 people and contribute \$3.7 billion to the national economy.

Trucks and buses make up 54 and 14 per cent of the automotive manufacturing base respectively, and Australia has three large truck factories owned by Volvo, PACCAR and CNH Industrial, which between them have close to 50 per cent market share. Volvo's factory in Brisbane currently produces around 3,000 trucks a year, with plans to increase that capacity to 4,000. PACCAR Australia makes Kenworth trucks in Melbourne, while CNH Industrial's Iveco truck and bus factory is also located in Melbourne.

Truck manufacturers utilise significant quantities of locally produced automotive components, for example, according to the Department of Industry, Volvo's Brisbane factory has about 90 local suppliers providing more than 2,500 different components, many of which are made in Australia. Some automotive component suppliers that made parts for the car manufacturers have survived and even thrived by shifting to producing components for the truck industry.

Table 8: Value of Automotive Exports, Australia

Category	2019/20 (\$000)	2018/19 (\$000)	Percentage change
Agricultural machinery (excl tractors) & parts	130,644	127,082	2.8
Tractors	13,597	10,096	34.7
Passenger motor vehicles	376,277	350,166	7.5
Goods vehicles	273,891	249,192	9.9
Other road motor vehicles (incl bus, truck)	52,446	91,290	-42.6
Vehicle parts & accessories	920,400	881,472	4.4
Motorcycles & cycles	74,145	93,676	-20.8
Trailers & semi-trailers	103,353	100,457	2.9
TOTAL	1,944,753	1,903,431	2.2

Source: Department of Foreign Affairs and Trade

However, it is not just those companies supplying parts to truck makers that are still in business. Many survived through a new or increased focus on exports, helped by \$1.3 billion in federal transitional support between the announcement of the car factory closures in 2013 and the final shutdown in 2017, with a portion of this money going to help establish new export markets.

Bosch diodes made in Australia are now being sent to Europe, USA, India, China, Japan, Korea and elsewhere, with the factory's annual output of 120 million units making up roughly a fifth of the global market share for those components. Nissan, which exited car manufacturing in Australia in the early 1990s, still retains a casting plant in Melbourne, which supplies critical aluminium components for the company's global operations, including the Leaf electric vehicle.

Component manufacturers such as wheelmaker Carbon Revolution is selling single-piece carbon fibre wheels to major carmakers for high-performance vehicles and is in the process of expanding production. Other Australian start-ups are developing LiDAR technology to help guide driverless vehicles. There are also niche and specialist vehicle manufacturers producing sports vehicles, purpose built defence vehicles for the Australian army and other customised vehicle applications and modifications.

Furthermore, in the 2020/21 Federal Budget, the Government announced that it would provide \$5 million to establish an Advanced Manufacturing Facility in South Australia to facilitate the manufacturing and assembly of electric vehicles, and for a bi-directional vehicle-to-grid trial to examine the concept and operation of systems which support solar home charging, grid services and virtual storage infrastructure.

These initiatives illustrate that automotive manufacturing still plays a significant role in the Australian economy, and given the right business environment, potentially this may grow larger over time as Australia has both the natural resources and human capital to innovate and prosper from manufacturing.

Social and environmental contribution

Aside from the economic contribution, there is also a social importance attached to the automotive industry. Motor vehicles continue to enable the development of suburbia today, influencing the expansion of roads and land use in both urban and rural areas to accommodate growing populations and commerce.

They have also been both a liberating technology and a lifestyle choice, enabling greater social interactions with friends and family and many other benefits to our quality of life.

However there is also an environmental responsibility attached to the automotive industry. The journey to work is a daily reality for many Australians, and of the 9.2 million people who commute to work, most prefer to use a private motor vehicle. More specifically, ABS 2016 Census Journey to Work data shows that nationally:

- 79 per cent of people drive to work by private vehicle
- 14 per cent use public transport
- 5.2 per cent cycle or walk
- 1.8 per cent use other means

This strong preference towards private vehicles for journey to work is unlikely to change any time soon and echoes similar patterns observed in other OECD nations, given that driving offers greater accessibility, flexibility, and convenience relative to other travel modes. People's preferences to drive to work has also led to the increased popularity and subsequent increased sales of heavier vehicles such as SUVs, four-wheel drives and diesel vehicles that has had an even greater impact on the environment.

The latest National Greenhouse Gas Inventory report² shows that in the 12 months to September 2020, Australia's Transport sector was responsible for 17.6 per cent of Australia's greenhouse gas inventory. The main fuels for transport are automotive gasoline (petrol), diesel oil, liquefied petroleum gas (LPG) and aviation turbine fuel. While this appears as an environmental negative, it also represents an opportunity where the automotive industry can make a significant contribution to reductions in national greenhouse gas emissions going forward.

The automotive industry has a key role to play in the sustainability of our environment. This imparts to some degree a social responsibility on industry and the public. Industry can play a part in producing zero emission vehicles, which are cost effective and more accessible to the everyday driver and consumer. Consumers, in response to the greater affordability, can increase their uptake of zero emission vehicles, or as a minimum, consider them as an option when purchasing a motor car.

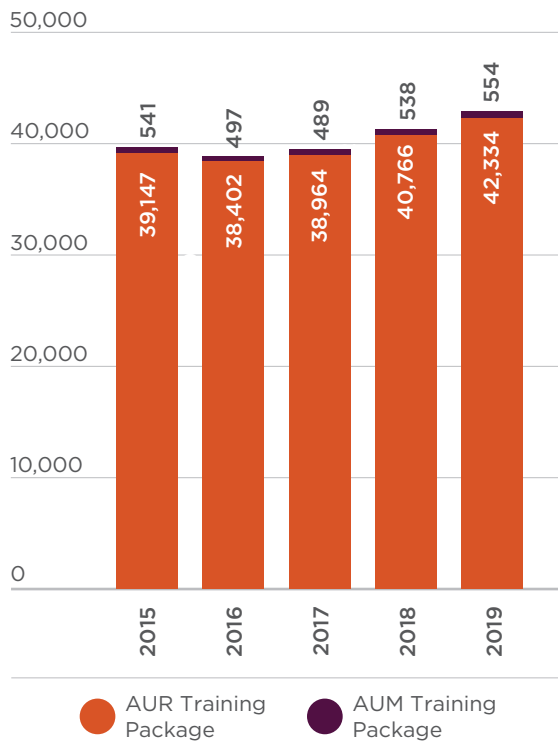
² Department of Industry, Science, Energy and Resources: Quarterly Update of Australia's National Greenhouse Gas Inventory: September 2020

Recent times has also seen Australia’s automotive industry adapt to help play a critical social role in the fight against the COVID-19 pandemic. Whilst cars are no longer mass produced in Australia, the automotive industry has retained a strong design and engineering presence. With medical equipment in short supply, this expertise has enabled many Australian vehicle designers, component manufacturers and suppliers to shift their focus to the design and production of face masks, face shields, ventilators, associated parts and other emergency medical equipment for health care workers during the pandemic. This highlights the fact that automotive engineering and manufacturing expertise is still very much alive and has proved to be an important social asset in a time of need.

SKILLS FORMATION AND VOCATIONAL EDUCATION AND TRAINING

Automotive trade training is founded on the system of apprenticeship induction and on-the-job training, which remains the preferred model of skills formation and development within the industry. Automotive qualifications and courses are consistently amongst the most popular within the Vocational Education and Training

CHART 8: Automotive Student Enrolments, 2015-2019

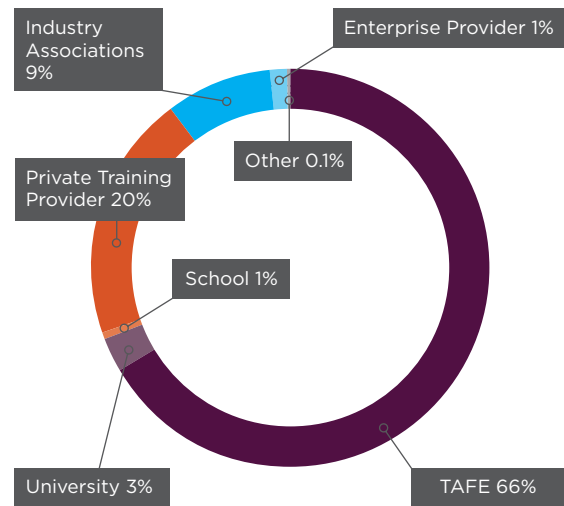


Source: NCVER. Estimates include student recommencements.

(VET) system, with 42,888 students enrolled in automotive training package qualifications in 2019, and 14,150 student commencements during the year (including recommencements)³. Automotive training is conducted across two nationally accredited Training Packages- Automotive Retail, Service and Repair (AUR) and the Automotive Manufacturing (AUM) Training Package. The AUR Training Package accounts for the overwhelming bulk of automotive student enrolments (42,334 enrolments - Chart 8).

In terms of the delivery of automotive training by type of registered training organisation (RTO), Chart 9 shows that in 2019, the largest cohort of automotive training (approximately two-thirds) was conducted by TAFE institutes, followed by private training providers at 29 per cent.

CHART 9: Automotive Training Delivery, by Type of Registered Training Organisation, 2019



Source: NCVER

In terms of the 29 per cent of training or 8,097 training positions delivered by private training providers, this can be further sub-divided by training conducted through privately operated organisations (20 per cent) followed by industry associations (9 per cent). Over the past few years, the proportion of automotive training delivered annually by automotive industry associations has been growing at a much faster rate to that of privately operated organisations.

³ National Centre for Vocational Education Research, VOCSTATS data

Automotive apprentices who complete their training are amongst the most successful and sought after graduates within the VET system, with a high match between training and expected skills and employment outcomes. Data from the National Centre for Vocational Education Research (NCVER) shows that 94.3 per cent of automotive apprentices and trainees that graduated with training qualifications were employed at the end of their training in 2019. This represents the highest employment outcome of all trade and non-trade occupations within the VET sector.

The Federal Government has devoted considerable resources in recent years towards apprenticeship development, and this support has continued in the 2020/21 Federal Budget, with policy announcements that businesses who take on a new apprentice or trainee in a Certificate II or higher qualification during the period 5 October 2020 to 30 September 2021, will be eligible for a 50 per cent wage subsidy, until a cap of 100,000 enrolments is reached.

Furthermore, as part of the JobMaker Plan-Skills Reform Package, \$263 million will be provided over four years from 2020-21 to continue to improve the quality of the VET system and to respond to the 2019 Expert Review of Australia's VET System.

This package includes:

- \$52.3 million over three years to expand the Skills for Education and Employment program to support additional places for basic foundational language, literacy and numeracy skills training
- \$29.6 million over four years to support the ongoing role of the National Careers Institute to simplify and strengthen career information, promote VET pathways, and enhance partnerships between industry, employers, schools and tertiary providers

- \$1.7 million over four years for the development of a National Skills Priority List for Apprenticeships to replace the current three lists with a single list based on a skills shortage methodology, and
- \$27.3 million over five years from 2020-21 to enhance the science, technology, engineering and mathematics (STEM) skills of young Australians.

These support measures are particularly important in that they reinforce critical issues such as underpinning knowledge, technical trade-level skills and structured employment pathways, all of which are key features of automotive apprenticeships.

The VET system also plays a key role in the educational, economic and social infrastructure of regional Australia. TAFE institutes and colleges are often the only provider of post compulsory and vocational education and training in a region, which enables young people to undertake training locally rather than relocating to metropolitan areas and undertaking further education without the benefits of a family support network. This is essential in developing workforce skills to support the needs of local businesses and ensuring a source of skilled automotive employees is available for employers in regional areas.

Section 3.

The current state

of Australia's

automotive industry

Key Findings

- Prior to the arrival of COVID-19, business conditions were positive to strong for most of the automotive industry in all jurisdictions.
- The arrival of the COVID-19 pandemic in 2020 had an immediate and varying impact on the automotive industry in each state and territory, with Victorian automotive businesses being the most seriously affected, and Queensland and Western Australian businesses being the least affected.
- The main impacts of COVID-19 on automotive businesses included a reduction in customers, a reduction in business turnover or cashflow of up to 30 per cent, and difficulties in sourcing stock or raw materials.
- Vehicle retailing, vehicle body repair, vehicle trimming, vehicle restorations, marine and vehicle hire were the most seriously affected automotive sectors during the pandemic in 2020, whilst the motorcycle and bicycle sectors were the best performing sectors.
- 66.2 per cent of automotive businesses nationally utilised the Federal JobKeeper Payment, which is the second highest uptake in the economy behind Accommodation and Food Services Industry (67%).
- The JobKeeper Program enabled many automotive businesses to maintain their operations and stay afloat in 2020.
- The primary response of most automotive businesses to the economic threats posed by the pandemic was to change their quantity of orders i.e. purchase less stock. This compounded the effects of emerging disruptions to automotive supply chains and left many businesses with insufficient stock holdings.
- Automotive business expectations beyond COVID-19 remain generally optimistic provided the pandemic is brought under control.

BACKGROUND

Until relatively recently, Australia was a major automotive manufacturer in the Asia-Pacific region, but for reasons that have been well documented, it no longer has mass passenger vehicle production. Despite this loss, however, the evidence clearly shows that most remaining automotive sectors and businesses have prospered in the ensuing years since the end of local car manufacturing in October 2017.

The advent of COVID-19 during 2020 however, brought a serious shock across Australia's automotive industry. The heavy reliance on other countries for vehicles and parts production and the interconnected nature of global automotive supply chains exposed how vulnerable the Australian automotive industry can be. Car plant closures and broken supply chains around the globe had reduced to a trickle the supply of vehicles and parts to Australia. Many automotive businesses could not obtain sufficient vehicle stock or parts to satisfy local demand during 2020, and this still remains the case in early 2021, to the detriment of the industry and consumers.

To evaluate the overall condition of Australia's automotive industry, the Motor Trades Associations of Australia (MTAA), in conjunction with its constituent state and territory bodies, conducted a national survey of 1,000 automotive businesses during August and September 2020. This survey, the 2020 Automotive Industry National Survey, is the largest and most comprehensive industry survey undertaken in recent years. The survey has a margin of error of 3.1 per cent.

The survey sampled all sectors of the automotive industry and collected detailed data on many critical industry issues, including:

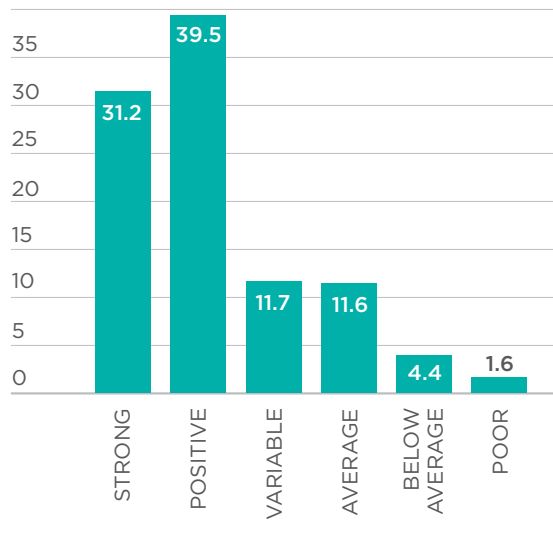
- The pre-COVID-19 business environment and the impact of COVID-19
- Business expectations and intentions moving forward
- The labour market and skill shortages
- Demand for apprentices
- The national training system
- Other key industry issues and challenges

PRE-COVID-19 BUSINESS ENVIRONMENT

The results of the 2020 Automotive Industry National Survey confirm that prior to the arrival of COVID-19, the automotive industry was in a relatively healthy position, with 70.7 per cent of survey respondents nationally reporting business conditions as being positive to strong. This response was consistent across most automotive sectors and within all jurisdictions, including both metropolitan and regional areas. These were amongst the most favourable business conditions reported in recent years (Charts 10 & 11).

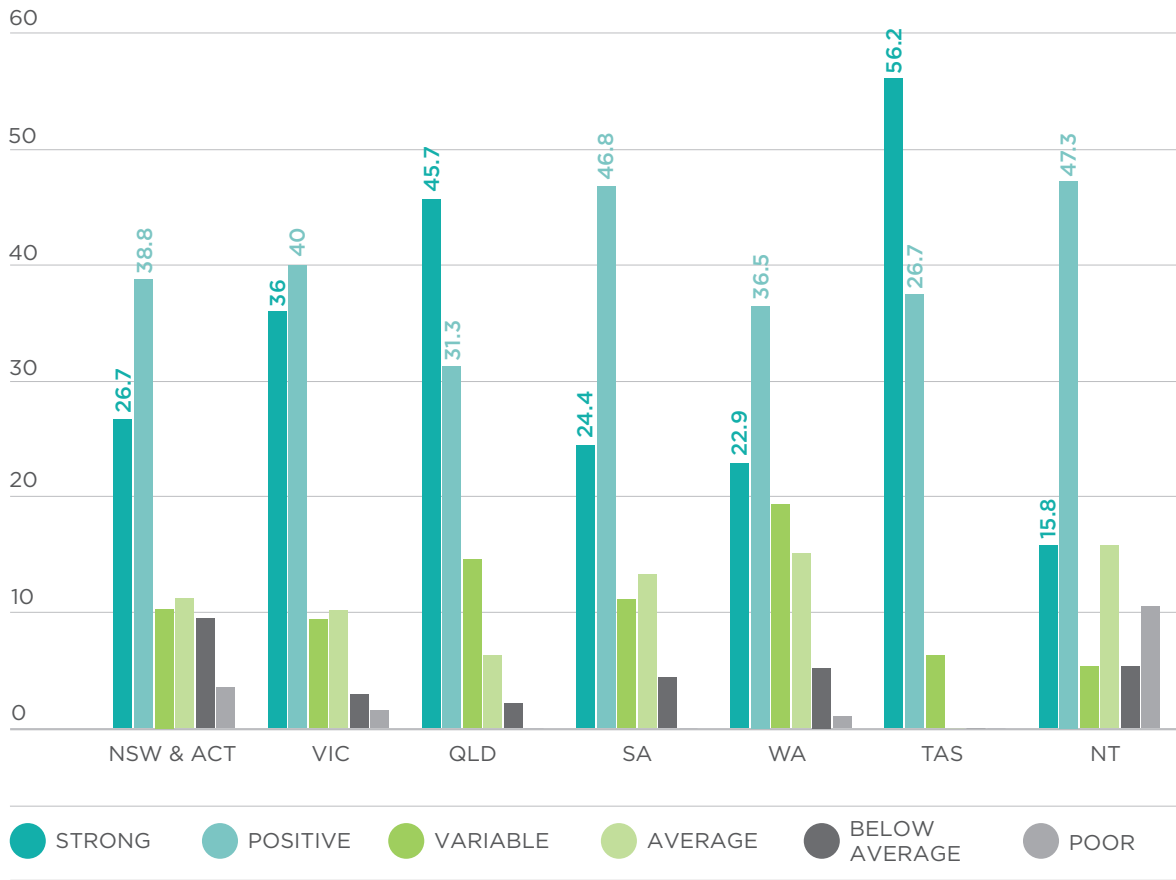
The only exception to this favourable business environment was observed in the automotive retail sectors (predominantly new and used light vehicles and heavy vehicle sales), where approximately 55 per cent of survey respondents reported experiencing variable to poor business conditions during 2019, before the arrival of COVID-19. The trend decline in new vehicle sales over the previous two years from sales peaks reached in 2017 was a key factor in this response, and arguably this placed many vehicle dealers in a more vulnerable position relative to other automotive sectors during 2020 with the arrival of COVID-19.

Chart 10. Automotive Business Conditions, Prior to COVID-19 (% response)



Source: 2020 Automotive Industry National Survey

Chart 11: Automotive Business Conditions, By Jurisdiction, Prior to COVID-19 (% response)



Source: 2020 Automotive Industry National Survey

INDUSTRY IMPACT OF COVID-19

The arrival of the COVID-19 pandemic in late February/early March 2020, had an immediate and varying impact on the automotive industry in each state and territory. During the first trimester of the pandemic (March -May 2020), most automotive sectors experienced a shock to their operations nationally. Beyond this period, the survey results show that the industry impacts during the second and third trimesters of COVID-19 were most serious in Victoria, but less serious within other jurisdictions. This coincides with the greater longevity and severity of the pandemic over this

period in Victoria, where government imposed restrictions to trade, travel, supply constraints, Stage 4 lockdowns and border closures all extracted a comparatively higher economic and social cost for the state.

For some regions, COVID-19’s impact comes after a disastrous summer of bushfire, floods, drought and other natural disasters, which further compounds the effects of COVID-19 on local economies and employment. Strong local economies and employment are important factors contributing to the prosperity of regional Australia, and Australia as a whole.

Chart 12 displays the main impacts of COVID-19 on the automotive industry nationally during 2020. The key impacts consisted of:

- A reduction in customers
- A reduction in business turnover or cashflow by up to 30 per cent
- Difficulties in sourcing stock or raw materials, and
- A reduction in demand for products or services

The survey data also shows that these four main impacts were consistent for 80 per cent of all automotive businesses over the first and second trimesters of the pandemic (late February to end July 2020).

IMPACTS OF COVID-19 BY SECTOR

Whilst most of the automotive industry was negatively affected by COVID-19 during the first half of 2020, the survey data indicates that some sectors fared comparatively worse over the period. These sectors included:

- Vehicle retailing - new and used
- Vehicle body repair

- Vehicle trimming
- Custom vehicle builds and restorations
- Marine
- Vehicle hire/rentals

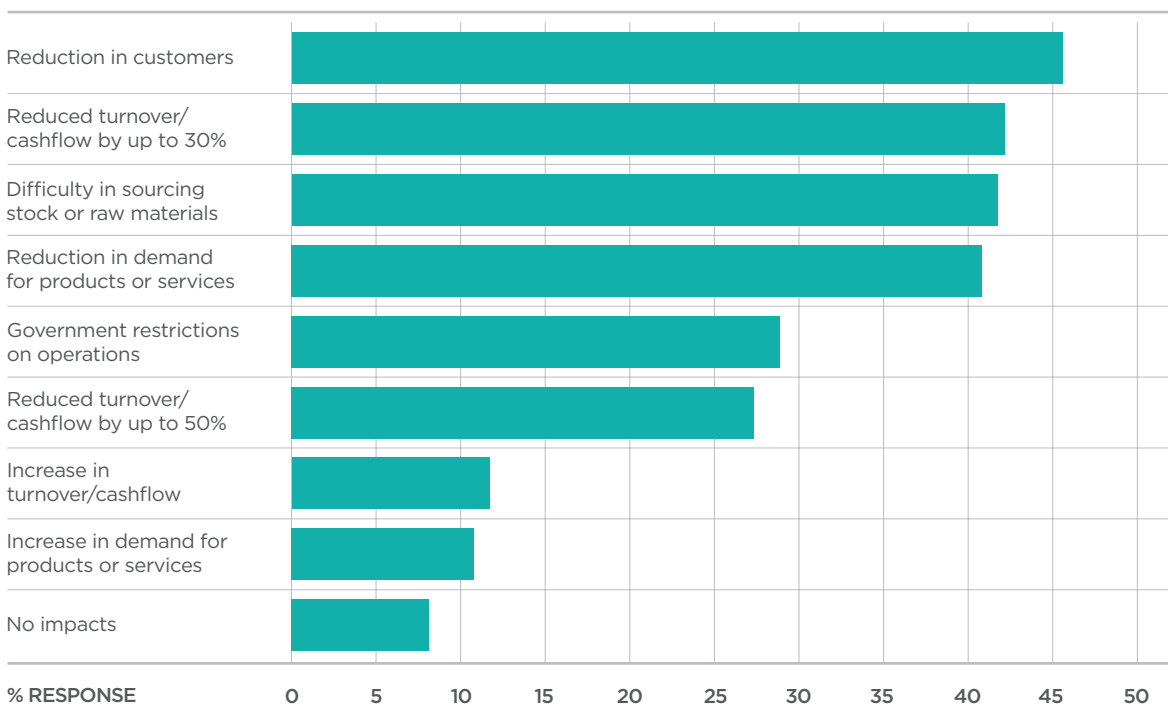
In addition to a reduction in customers, difficulties in sourcing stock and a reduction in demand for products and services, more than half of all respondents in the above sectors recorded a reduced turnover/cashflow of up to 50 per cent, instead of up to 30 per cent as recorded across most other sectors of the industry. This suggests that the financial impacts of COVID-19 on the above sectors were more severe relative to other automotive sectors over the period.

POSITIVELY PERFORMING SECTORS

Whilst most of the industry was negatively impacted by COVID-19, the survey data reveals that some sectors of the automotive industry benefitted greatly during the pandemic. Two stand-out sectors were:

- Motorcycles
- Bicycles

Chart 12: Main impacts of COVID-19 on Automotive Businesses, Australia, 2020



Source: 2020 Automotive Industry National Survey

Against the overall industry trend, more than 70 per cent of respondents within the motorcycle sector recorded an increase in demand for products and services, and an increase in turnover/cashflow during 2020. These results are supported by official motorcycle sales statistics, which show that new motorcycle sales had increased by 19.4 per cent by mid-2020, and by the end of 2020, were 22.1 per cent higher than the previous year. This represents the largest annual increase in motorcycle sales since 2016.

Intelligence received from industry stakeholders suggests several key reasons for this activity. After some initial uncertainty, motorcycle sales rose sharply between March and July 2020 for most dealers, after which a combination of winter and supply constraints, a lockdown and travel restrictions saw sales volumes level-off. With the easing of the first lockdown and the realisation of no international travel, many consumers adopted motorcycles as a new recreational activity and transport method. This was further facilitated by the Federal Government's instant asset write-off scheme and the added luxury of some people being able to access up to \$20,000 of their superannuation.

Similarly, the bicycle sector saw a huge boom in demand with bicycle retailers, factories, and supply chains unable to keep up with demand in Australia, as well as globally. Essentially, this was the result of many thousands of people turning to cycling as a form of recreation and transport in a COVID-19-induced environment, along with existing cyclists upgrading their bicycles and equipment. Consequently, the bicycle sector was subject to severe supply constraints and stock shortages during 2020, and these constraints are expected to continue to affect the sector well into 2021.

INDUSTRY RESPONSE TO COVID-19

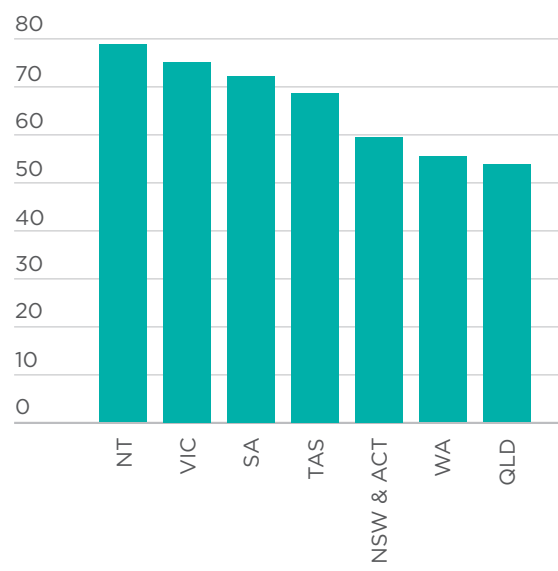
The rapidly changing business environment during 2020 saw automotive businesses respond in a variety of ways to the challenges created by the pandemic, as well as the policy interventions of state and federal governments. Whilst the economic impacts of the pandemic varied across jurisdictions, the evidence clearly shows that the JobKeeper Payments scheme, along with other commonwealth and state and territory Government stimulus packages and measures, went a long way towards offsetting financial and employment losses within the automotive industry

over the short to medium term. Most automotive businesses availed themselves of the Federal Government's JobKeeper Payment scheme to maintain their operations, support their staff and stay afloat.

The results from the 2020 Automotive Industry National Survey show that 66.2 per cent of automotive businesses utilised the JobKeeper scheme. Significantly, this uptake was higher than most industries and was almost on par with the Accommodation and food services industry, which recorded the highest uptake of the JobKeeper Payment scheme nationally (67%) according to ABS. This high uptake could also reflect the relatively low cash reserves of automotive businesses, many of whom operate with low profit margins.

The uptake of the JobKeeper Payment scheme by the automotive industry varied across jurisdictions. The highest uptake was recorded by the Northern Territory, Victoria and South Australia (78.0, 74.7 and 72.4 per cent of automotive businesses respectively), whilst the lowest uptake was recorded by Queensland and Western Australia (53.2 and 55.5 per cent of businesses) (Chart 13).

Chart 13: Automotive Industry Uptake of JobKeeper Scheme, by Jurisdiction (%)



Source: 2020 Automotive Industry National Survey

In addition to the use of JobKeeper, automotive businesses undertook a variety of measures to protect their businesses, or even take advantage of any opportunities offered by the pandemic. The most prominent response was to change the quantity of orders of inputs (i.e. buying less stock or raw materials). Essentially, this represents a conservative response to the economic threat posed by the pandemic, where in anticipation of a reduction in demand, businesses reduced their capital outlays on stock to avoid the possibility of carrying excess stock along with the associated holding costs. Whilst this strategy benefited many businesses in the short-term, as supply chains became increasingly disrupted globally and the flow of motor vehicles and parts to Australia tightened, many automotive businesses faced severe shortages of stock and were unable to capitalise on an increase in demand locally over the period. In a sense, this was an overreaction by many businesses to the perceived economic threat posed by COVID.

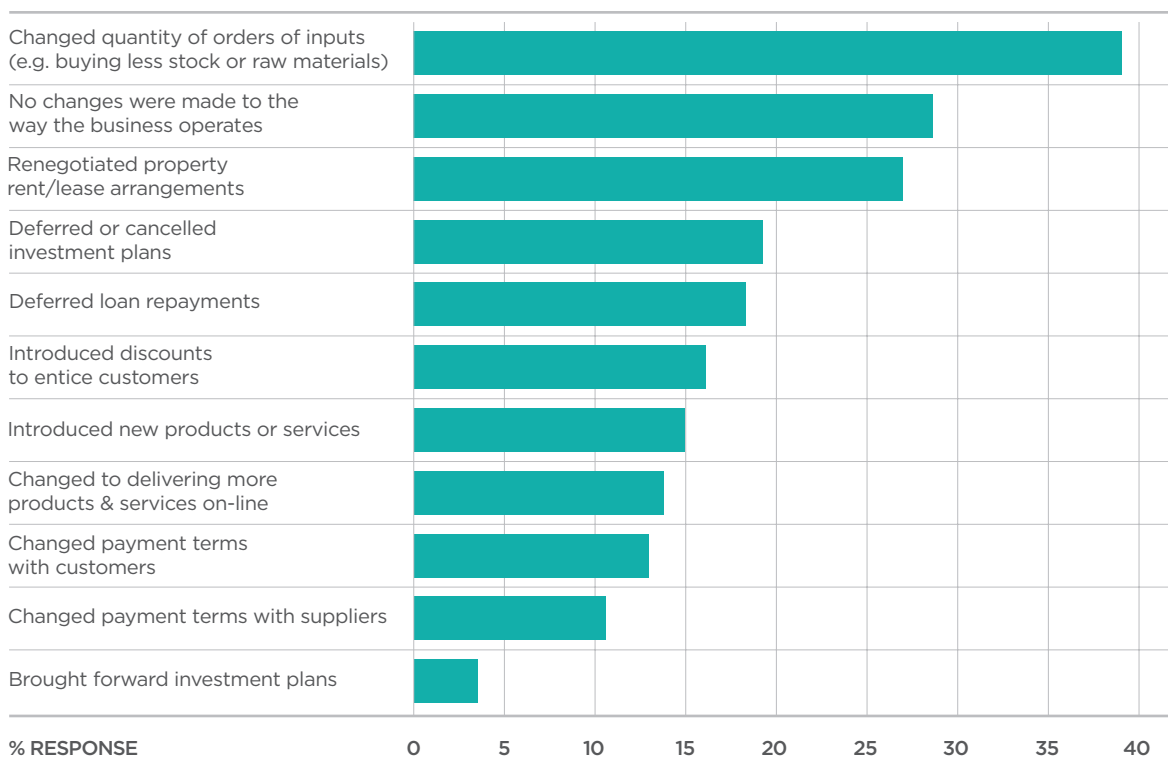
Some business operators, however, were less risk averse and were prepared to gamble early in the pandemic on the possibility of shortages or the unavailability of stock, and thus purchased as much excess stock as possible on the premise

that they may be the only company with available stock that could stay in business during the pandemic. This bullish strategy allowed such businesses to capitalise on rising prices and increase their profits due to the shortage of supply and rising consumer demand.

Furthermore, the survey responses show that many employers that hired apprentices through industry aligned Group Apprenticeship schemes, were able to effectively hand back these apprentices to their respective group training organisations. This highlights the importance of industry aligned schemes to employers in being able to quickly mitigate wage pressures to the business at a time of crisis.

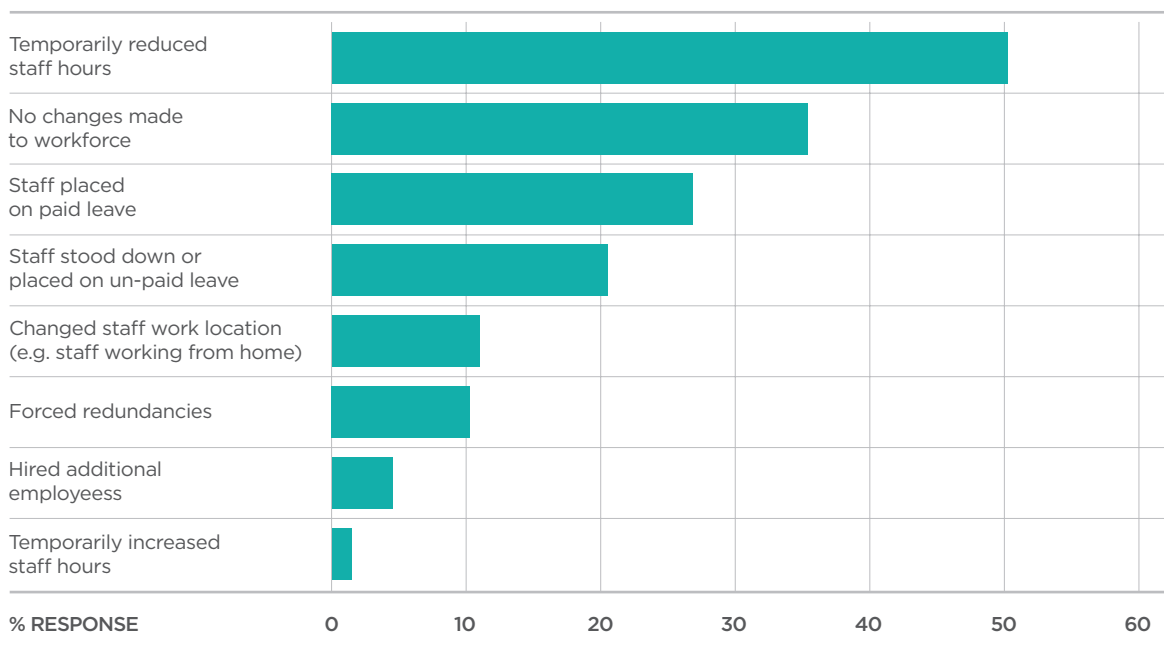
The survey data also reveals that those business operators that were less affected financially during the pandemic, generally made no changes to their business operations, whilst those businesses that were more severely affected implemented a combination of initiatives such as renegotiating their property rent/lease arrangements to obtain more favourable terms with their landlords, and temporarily reducing staff hours. Chart 13a and 13b illustrate the range of industry response measures to the pandemic.

Chart 13a: Main Business Responses to COVID-19, Automotive Industry, 2020



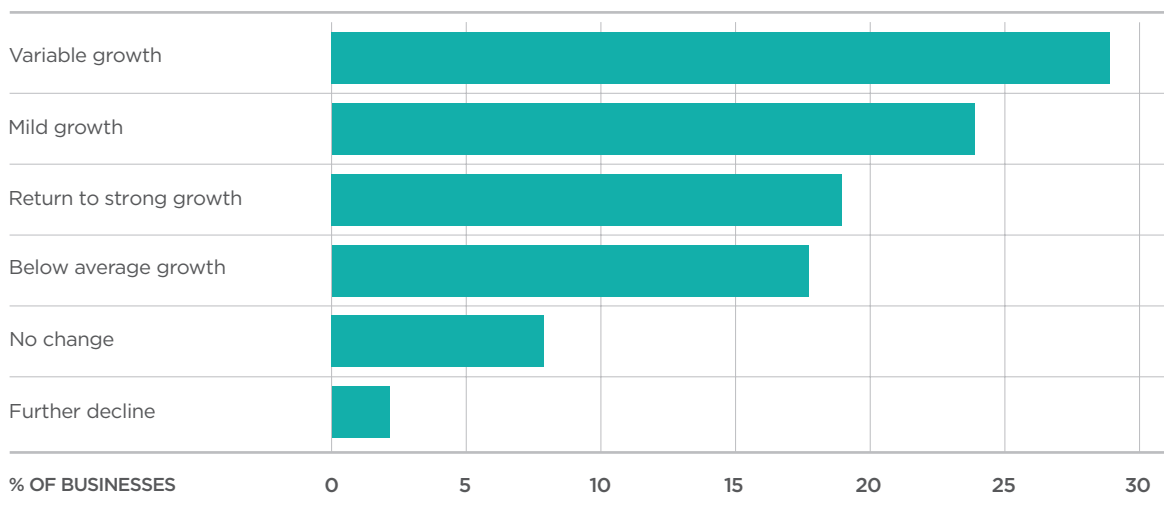
Source: 2020 Automotive Industry National Survey

Chart 13b: Business Changes to Workforce due to COVID-19



Source: 2020 Automotive Industry National Survey

Chart 13c: Automotive Industry Business expectations, next 12-24 months



Source: 2020 Automotive Industry National Survey

**BUSINESS EXPECTATIONS
LOOKING FORWARD**

Despite the challenges posed by the pandemic during 2020, business expectations within the automotive industry beyond COVID-19 remain generally optimistic. Data from the 2020 Automotive Industry National Survey indicates that for most of the industry, the expectation is that once the pandemic is brought under control,

the ensuing 12 to 24 months will see a return to some form of growth for businesses. Around 28.8 per cent of automotive businesses anticipate variable growth beyond the COVID-19 period, whilst 24.2 per cent anticipate mild growth, whilst a further 19.2 per cent expect a return to strong growth, as shown in Chart 13c. Furthermore, these business expectations remain broadly consistent across all jurisdictions.

These growth expectations are essentially predicated on the pre-COVID business environment, where as illustrated previously in Chart 10, most businesses had experienced positive to strong growth between 2017 and 2019, with many operators either intending to expand their business premises, or were in the process of doing so but were unfortunately curtailed by the pandemic.

There was also the view amongst respondents that despite the various government induced restrictions that were in force across jurisdictions, many businesses had built up a strong customer base and were confident that the business environment would return to its former levels once restrictions had eased. Similarly, other respondents believed that even if border restrictions and the decline in international travel were to continue, this would result in an increase in domestic travel and an uplift in automotive sales and servicing over the next 24 months, thus further fostering these expectations of growth.

Despite this positive industry sentiment, however, expectations of future growth were not shared by all sectors of the automotive industry. Respondents within the new and used vehicle retail sectors expressed more sombre expectations for the future, with most forecasting below average growth for the next two years. This was based on a consistent decline in new vehicle sales nationally over the previous 30 months, as well as other structural and operational issues afflicting the sector. These issues include:

- An overcrowded new car market
- Declining gross sales margins on new vehicles
- Unreasonable sales targets set by car manufacturers
- Uncertainty from changing business models imposed by manufacturers
- Finance restrictions on car dealers emanating from the Hayne Royal Commission
- Operational issues emanating from Australian Consumer Law

These and other issues afflicting the vehicle retail sector will be explored in more detail in Section 5. The remainder of this Section provides an overview of the impacts of COVID-19 in each jurisdiction.

INDUSTRY IMPACT OF COVID-19 BY JURISDICTION

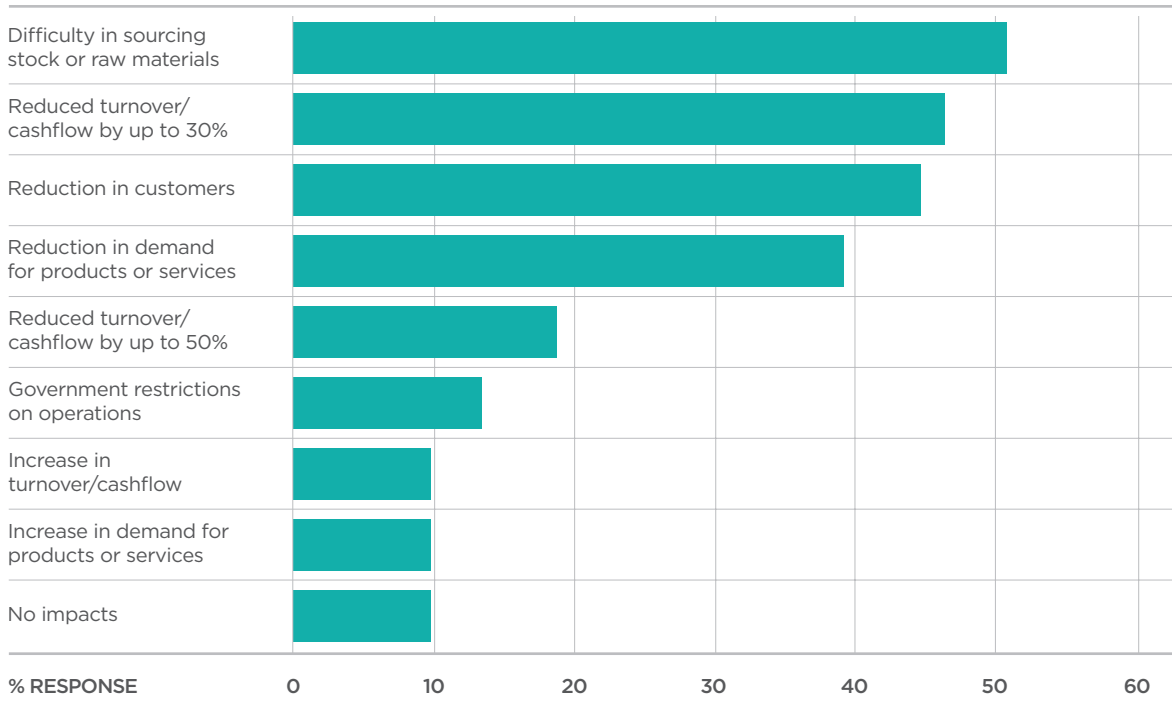
New South Wales and ACT

The results of the 2020 Automotive Industry National Survey show that 59.7 per cent of automotive businesses utilised the JobKeeper Payment scheme across NSW and ACT, with most reporting moderate to high levels of disruption, particularly between March and July 2020. Key impacts on businesses included difficulties in sourcing stock and parts; a reduction in turnover or cashflow of up to 30 per cent and a reduction in customers, as shown in Chart 14. Approximately 10 per cent of respondents reported experiencing no adverse impacts to their businesses from COVID-19 and witnessed an actual rise in demand for their products and services, including an increase in cashflow over the period.

Whilst some businesses were able to carry on as normal, most automotive businesses across NSW and ACT were compelled to respond to the challenges posed by the pandemic. Chart 15 shows the single biggest response measure undertaken by businesses was changing the quantity of orders, such as buying less stock. Significantly, just over one quarter of automotive businesses did not make any changes to their operations. This could be attributed to the fact that this was a one in a hundred year occurrence and was unforeseen, and this type of business environment had not been encountered before. Therefore, this cohort took a more cautious 'wait and see' approach in case this was just a passing phase, as no one could have foreseen the impact and severity of the virus on the economy.

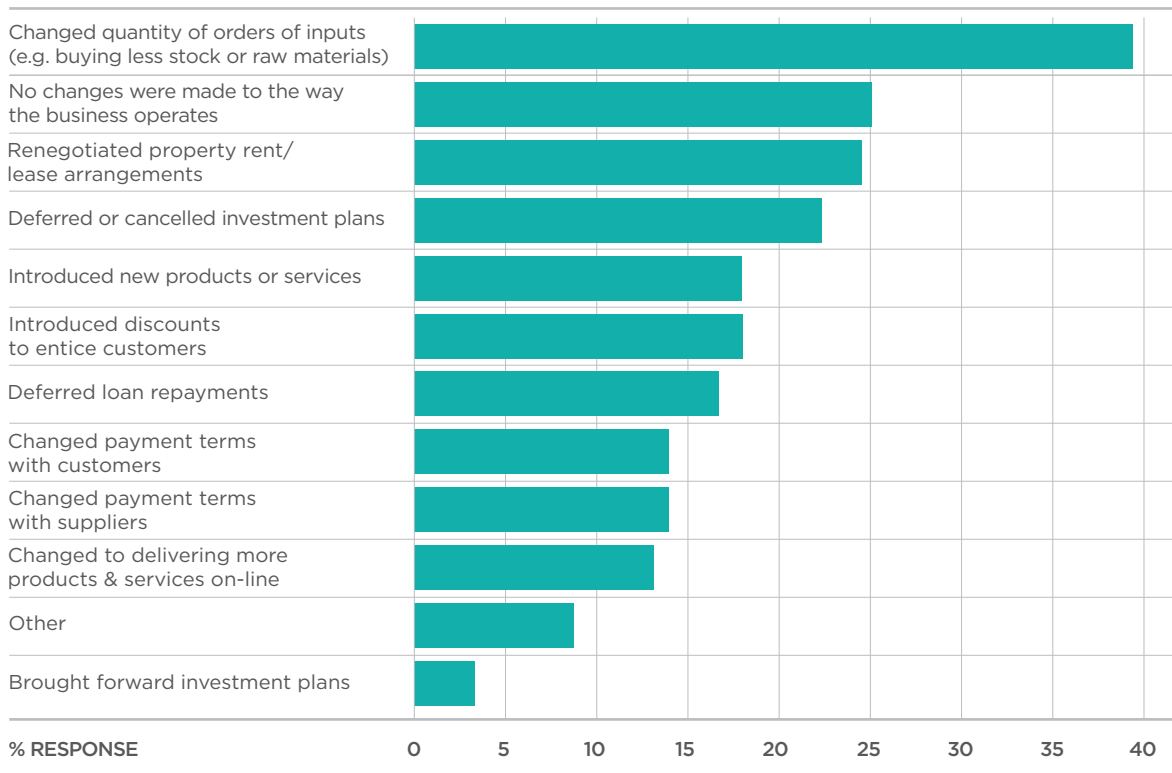
In terms of changes made to the workforce, the survey results reveal that almost half (47.8 per cent) of respondents across NSW and ACT made no changes to their workforce over the COVID-19 period during 2020 (Chart 16). Of the businesses that did make changes to their workforce, most temporarily reduced their staff hours and/or placed staff on paid leave (39.8 and 23 per cent response respectively).

Chart 14: Main Business Impacts of COVID-19, NSW & ACT



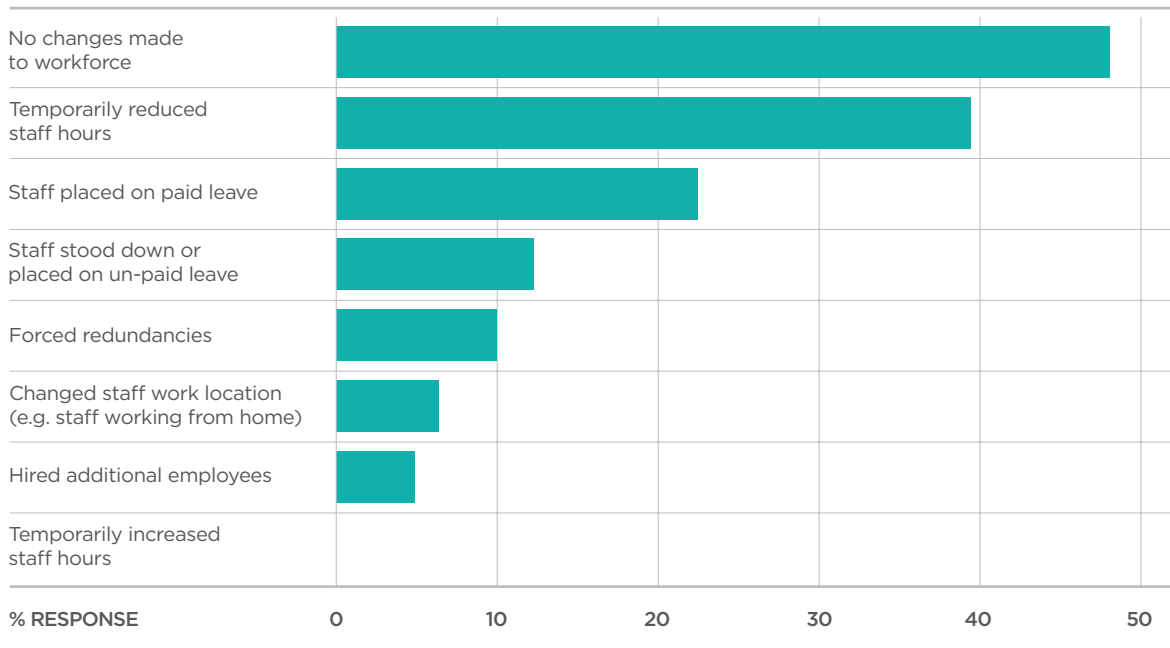
Source: 2020 Automotive Industry National Survey

Chart 15: Main Business Responses to COVID-19, NSW & ACT



Source: 2020 Automotive Industry National Survey

Chart 16: Business Changes to Workforce from COVID-19, NSW & ACT, 2020



Source: 2020 Automotive Industry National Survey

Victoria

Victoria experienced the highest economic and social cost from COVID-19 of all jurisdictions in 2020. This was due to the prolonged nature and greater severity of the pandemic in Victoria, which drew strong interventions from government in the form of major restrictions to trade, work and travel, that shutdown or financially crippled many automotive businesses. Chart 17 displays the key impacts of COVID-19 on automotive businesses in Victoria during 2020.

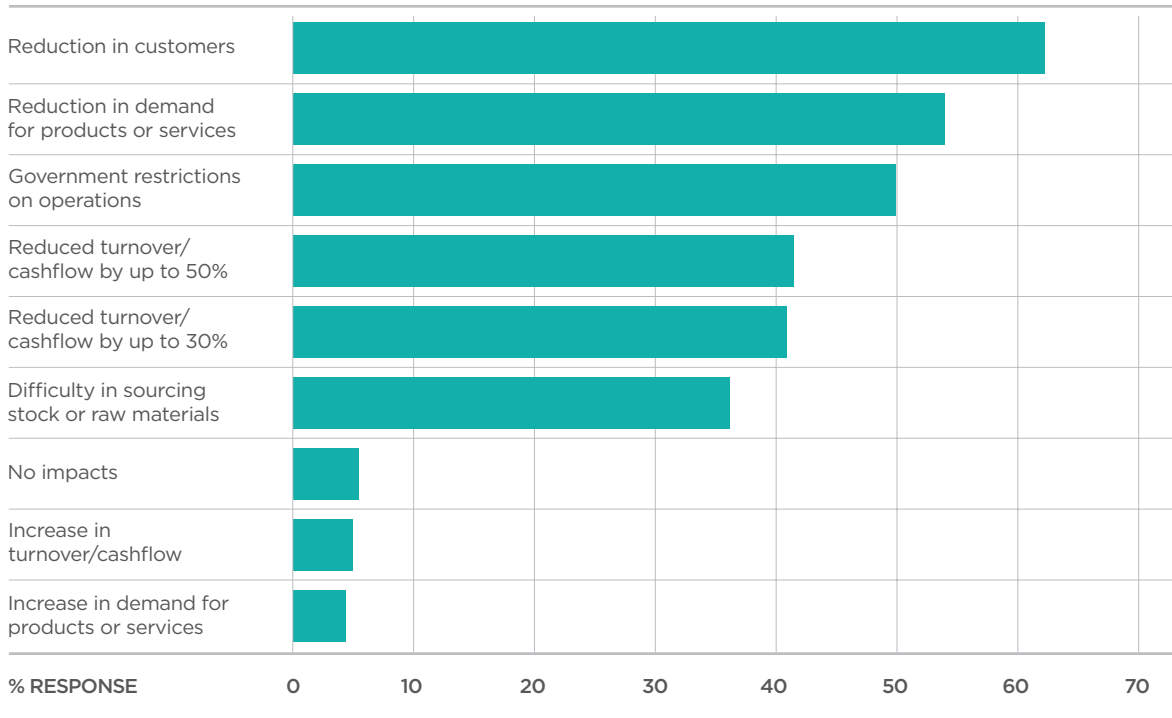
The survey data reveals that almost 95 per cent of Victorian automotive businesses were adversely affected as a result of COVID-19 between March and early October 2020. The largest impacts reported were a reduction in customers (62 per cent response), a reduction in demand for products and services (54 per cent response) and the effect of government restrictions on business operations (50 per cent response). These impacts were reported across most automotive sectors, with new vehicle sales, vehicle body repairs, fuel retailing and the marine sector recording impacts higher than the industry state average.

Whilst government restrictions on business operations adversely affected many automotive businesses, especially during the Stage 4 lockdown period in Victoria, this was much less of a factor in regional areas, where only around one quarter of regionally based businesses were affected by government restrictions.

Victorian automotive businesses also reported a higher reduction in turnover or cashflow of all jurisdictions in 2020. During Stage 4 restrictions implemented in August 2020, the survey data reveals a reduction in business turnover/cashflow of up to 50 per cent across many automotive sectors and businesses. Earlier Stage 3 government restrictions (March to July 2020), saw a reduction in reported business turnover/cashflow of up to 30 per cent. Only a minority (5.2 per cent) of respondents reported experiencing no adverse impacts to their business and an actual increase in business turnover or cashflow over the COVID-19 period and these were limited to selected motorcycle, bicycle, tyre retailing, agricultural machinery sales, vehicle parts sales and vehicle mechanical servicing and repair businesses.

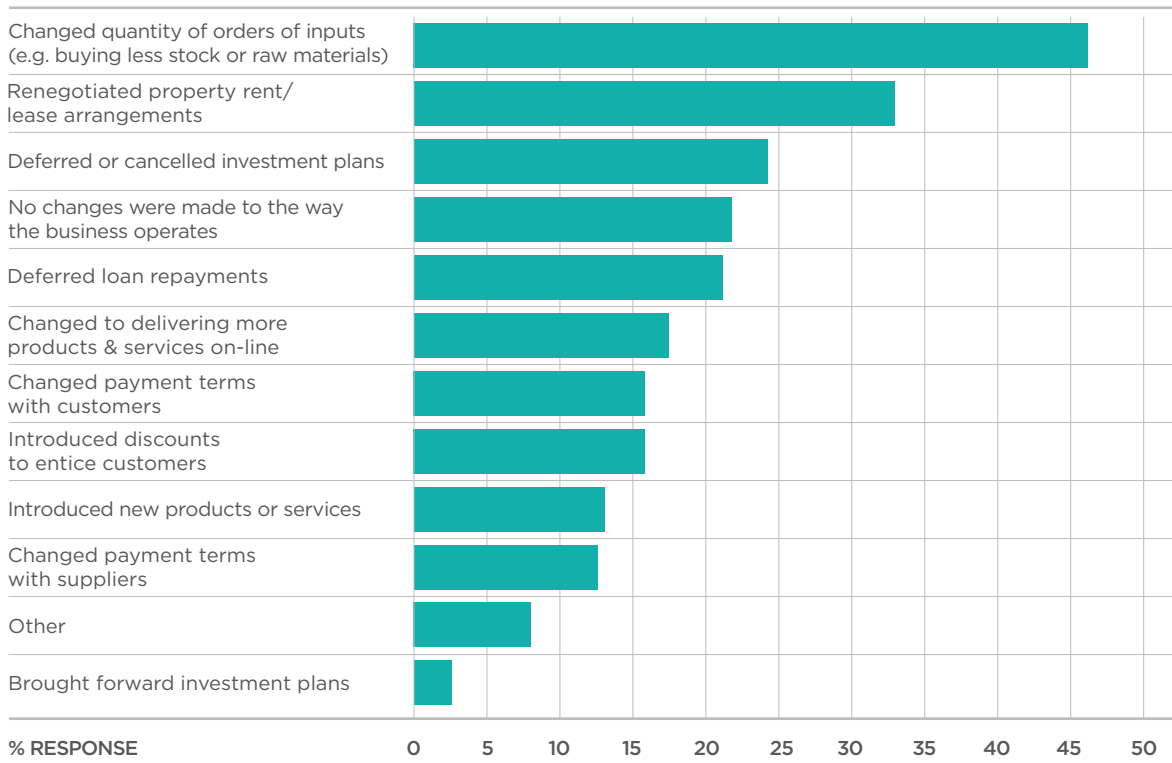
Like NSW, the predominant response of Victorian automotive businesses to the challenges of the pandemic was to purchase less stock, parts or inputs (Chart 18). This essentially represents a dilemma between a 'fight or flight' response to the rapidly changing business conditions of the pandemic. These rapidly changing conditions saw astute business owners take the fight response rather than the flight response. Chart 18 reveals that such businesses undertook a series of methodical actions that also included renegotiating property rent/lease arrangements, deferring or cancelling investment plans and a host of other measures to cushion the impact on their businesses and ensure their sustainability over the period.

Chart 17: Main Business Impacts of COVID-19, VIC, 2020

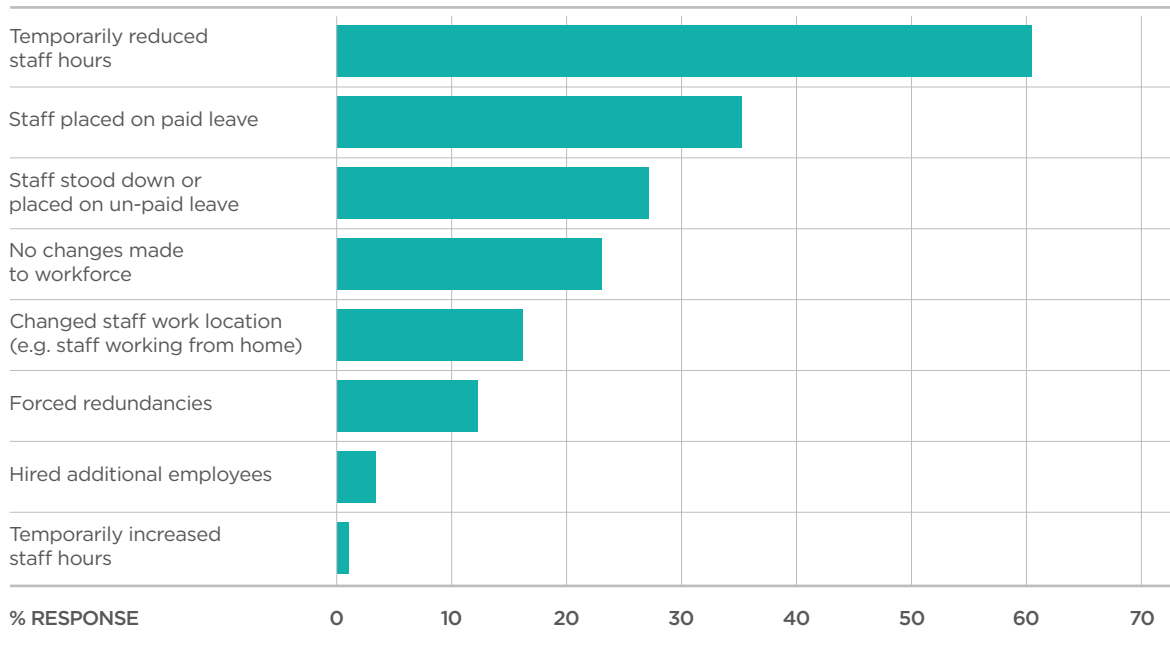


Source: 2020 Automotive Industry National Survey

Chart 18: Main Business Responses to COVID-19, VIC



Source: 2020 Automotive Industry National Survey

Chart 19: Business Changes to Workforce from COVID-19, VIC 2020

Source: 2020 Automotive Industry National Survey

In terms of staffing changes, most business owners reported temporarily reducing their staff hours (60.3 per cent response), placing staff on paid leave (34.3 per cent response) and standing down staff or placing staff on unpaid leave (27.8 per cent response) as their main workforce response measures to the pandemic (Chart 19).

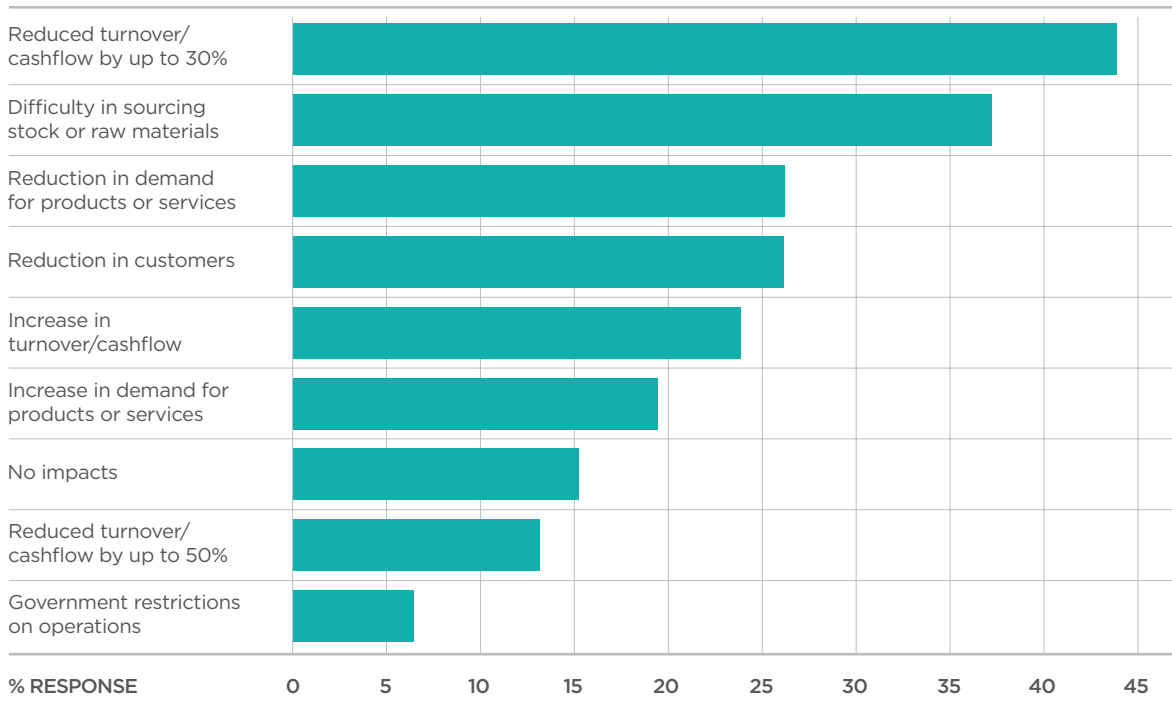
Queensland

Queensland emerged as one of the least affected economies from the COVID-19 pandemic during 2020. Whilst data from the 2020 Automotive Industry National Survey shows the impact of the pandemic varied across Queensland regions, most automotive businesses experienced only slight to moderate repercussions overall. This was also reflected by the fact that Queensland reported the lowest industry uptake of the federal JobKeeper Payment scheme nationally (53.2 per cent of automotive businesses).

Of the businesses that were affected, Chart 20 shows that the main impacts were a reduction in turnover/cashflow of up to 30 per cent (43.5 per cent response) followed by difficulties in sourcing stock or raw materials and a reduction in demand for products or services (37 and 26.1 per cent response respectively). The data, however, indicates that these impacts were most prevalent during the first trimester of the pandemic (March to May 2020), with a recovery in activity reported by many businesses from June onwards.

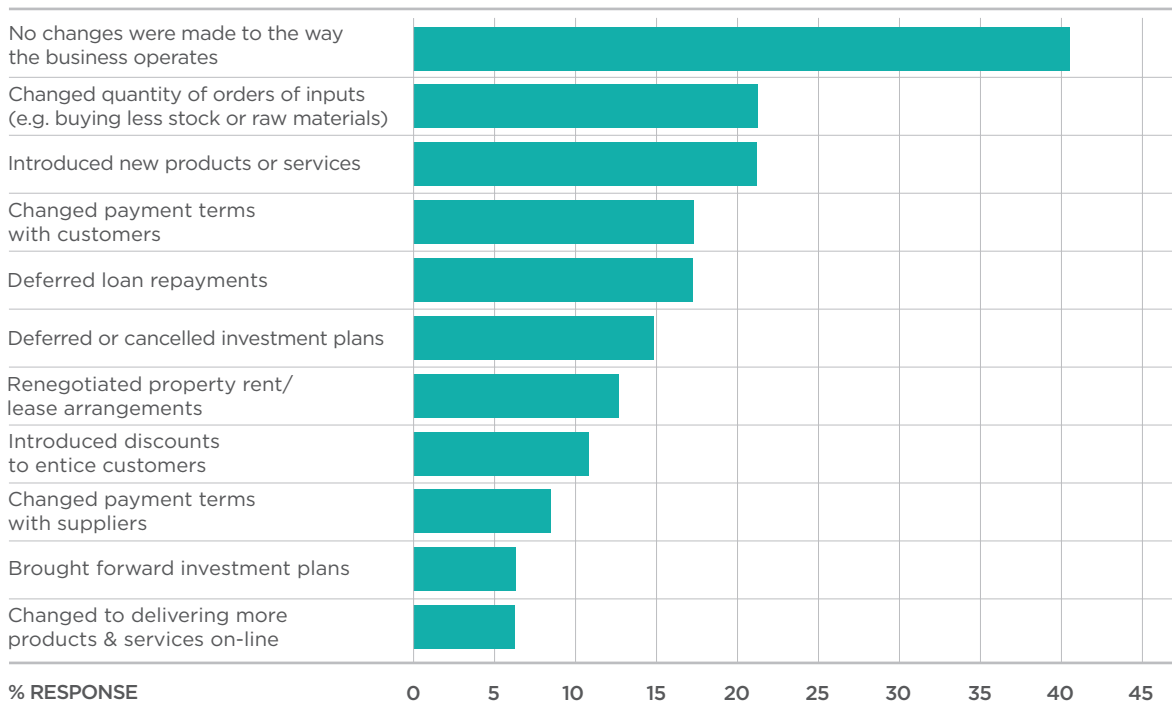
Consequently, as a result of this 'less adverse' trading environment, many automotive businesses were not compelled to make changes to either their business models or workforce structures, as reflected by the results in Charts 21 and 22. Therefore, beyond June/July 2020, it was almost a case of 'business as usual' for a large proportion of Queensland's automotive industry.

Chart 20: Main Business Impacts of COVID-19, QLD, 2020



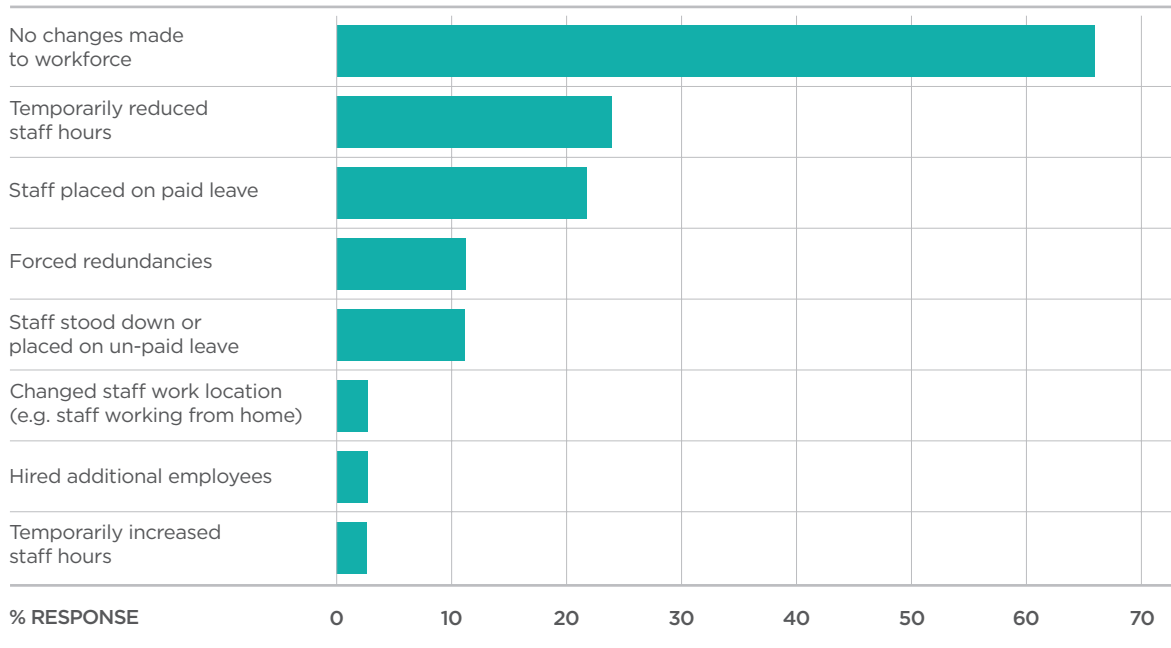
Source: 2020 Automotive Industry National Survey

Chart 21: Main Business Responses to COVID-19, QLD, 2020



Source: 2020 Automotive Industry National Survey

Chart 22: Business Changes to Workforce from COVID-19, QLD, 2020



Source: 2020 Automotive Industry National Survey

South Australia

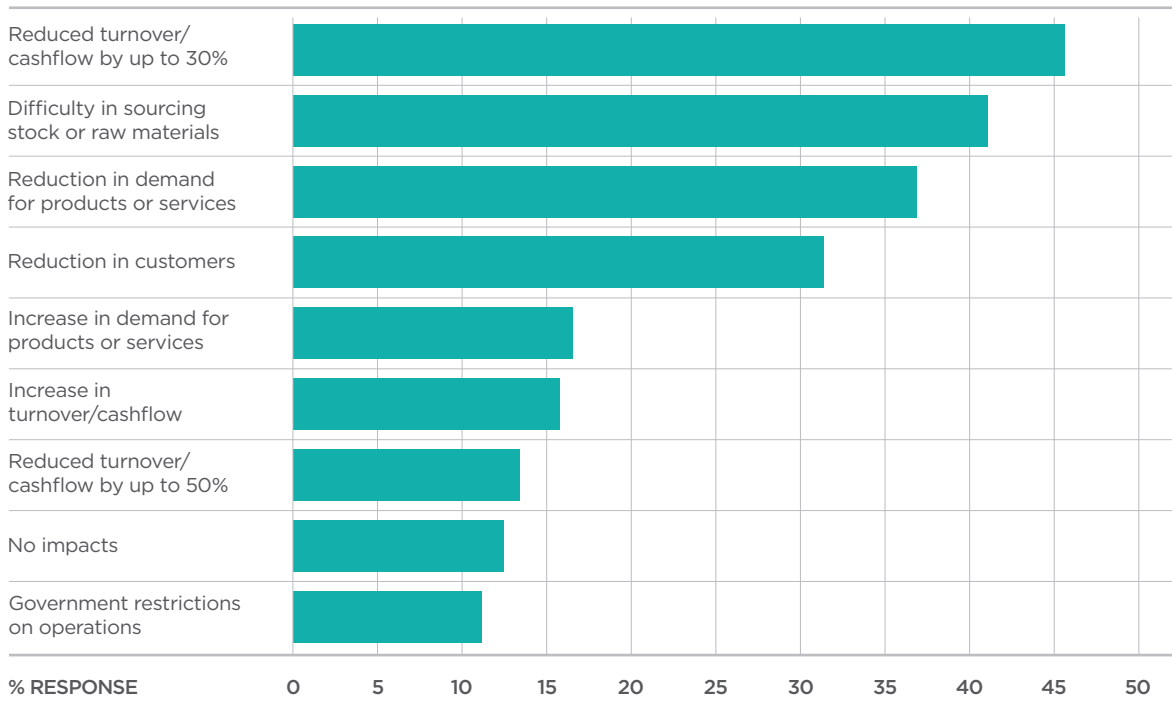
Data from the 2020 Automotive Industry National Survey shows that most automotive businesses in South Australia experienced moderate to high levels of disruption, particularly during the first and second trimesters of the pandemic in 2020. This was also reflected by the fact that 72.4 per cent of South Australian automotive businesses had utilised the federal JobKeeper Payment Scheme to maintain their operations, which is only slightly lower than Victoria (74.7 per cent). Bolstered by government and other support measures however, many South Australian businesses were able to absorb much of the economic impact arising from the pandemic and return to some form of stability after July 2020.

Chart 23 shows the key impacts on automotive businesses in South Australia during 2020 were a reduction in turnover or cashflow of up 30 per cent (45.6 per businesses response), followed by difficulties in sourcing stock (41.1 per cent

response) and a reduction in demand for products or services (36.7 per cent). These impacts were distributed uniformly across all sectors of the industry, and were generally limited to the first and to a lesser extent the second trimester of the pandemic.

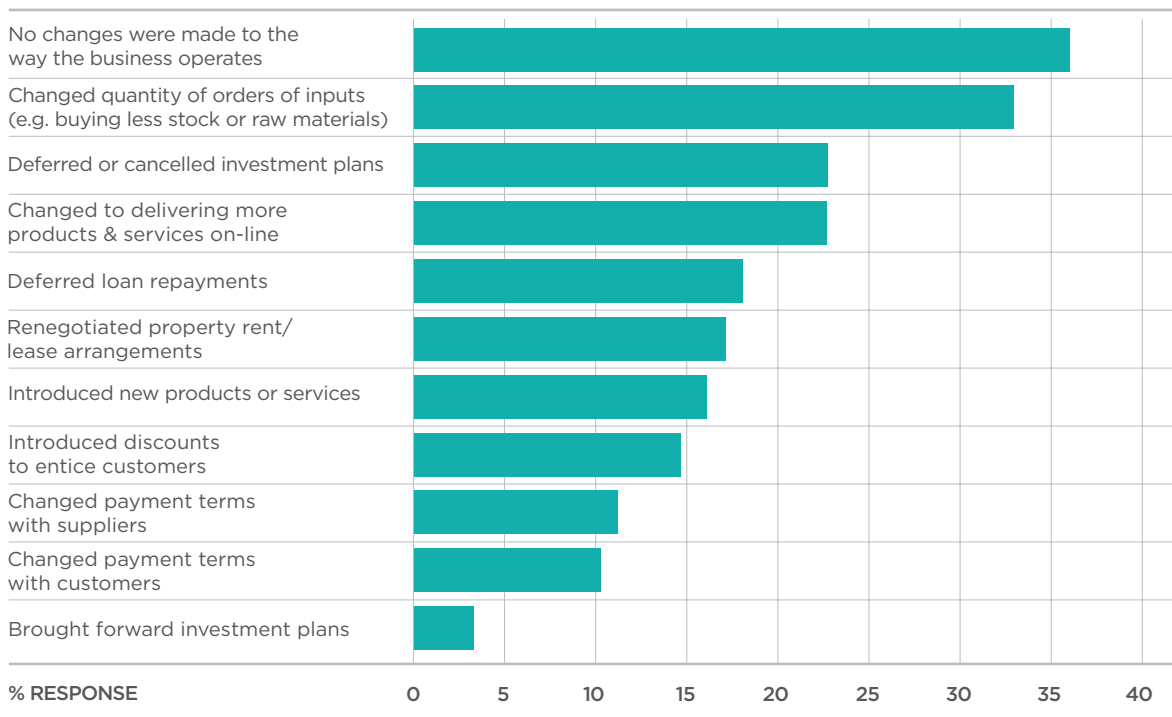
South Australian business owners responded to the challenges of the pandemic in a variety of ways. Chart 24 shows that 36.4 per cent of businesses made no changes to their operations, whilst others responded by buying less stock (33 per cent response), and/or deferring their investment plans and by switching to delivering more products and services on-line (22.7 per cent response each). In terms of changes to the workforce, Chart 25 shows that most South Australian businesses either temporarily reduced their staff hours or did not make any changes to their workforce as such (44.2 and 43 per cent response respectively).

Chart 23: Main Business Impacts of COVID-19, SA, 2020

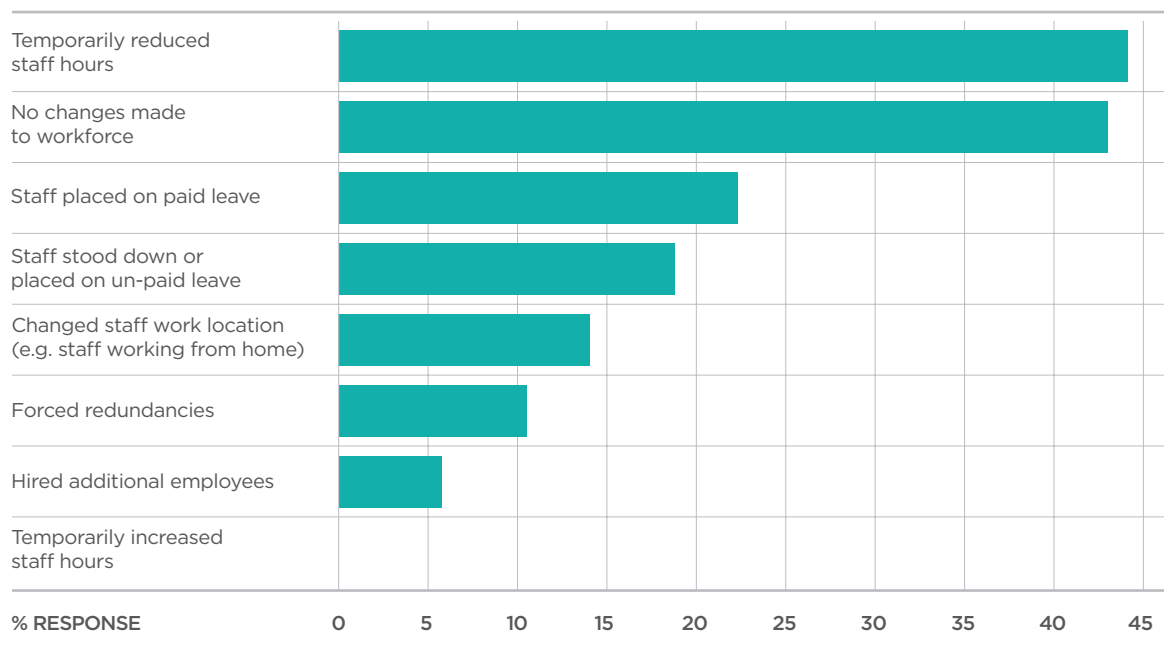


Source: 2020 Automotive Industry National Survey

Chart 24: Main Business Responses to COVID-19, SA, 2020



Source: 2020 Automotive Industry National Survey

Chart 25: Business Changes to Workforce from COVID-19, SA, 2020

Source: 2020 Automotive Industry National Survey

Western Australia

Western Australia was one of the more successful jurisdictions that was able to effectively contain and control the spread of COVID-19 in 2020 through direct interventions. These control measures were most intense during the March to May 2020 period, and by early June, with few active cases and no evidence of community transmission, most restrictions had eased. This early success meant the impacts of the pandemic on the local automotive industry was milder compared to most jurisdictions. This was also reflected by the fact that uptake of the Federal Government's Jobkeeper Payment Scheme amongst automotive businesses in Western Australia, was amongst the lowest nationally (55.5 per cent of businesses).

Nevertheless, the survey data indicates that many automotive businesses were negatively impacted during the pandemic and this impact was most prevalent during the first trimester (March to May 2020) and to a lesser degree the second trimester of the pandemic (June to August 2020). Regionally based automotive repairers in Broome and other locations that were largely dependent on the tourist trade were notably affected.

The key impacts as shown in Chart 26 include:

- Difficulties in sourcing stock or raw materials (48.1 per cent business response)

- Reduced turnover/cashflow of up to 30 per cent (38.9 per cent response)

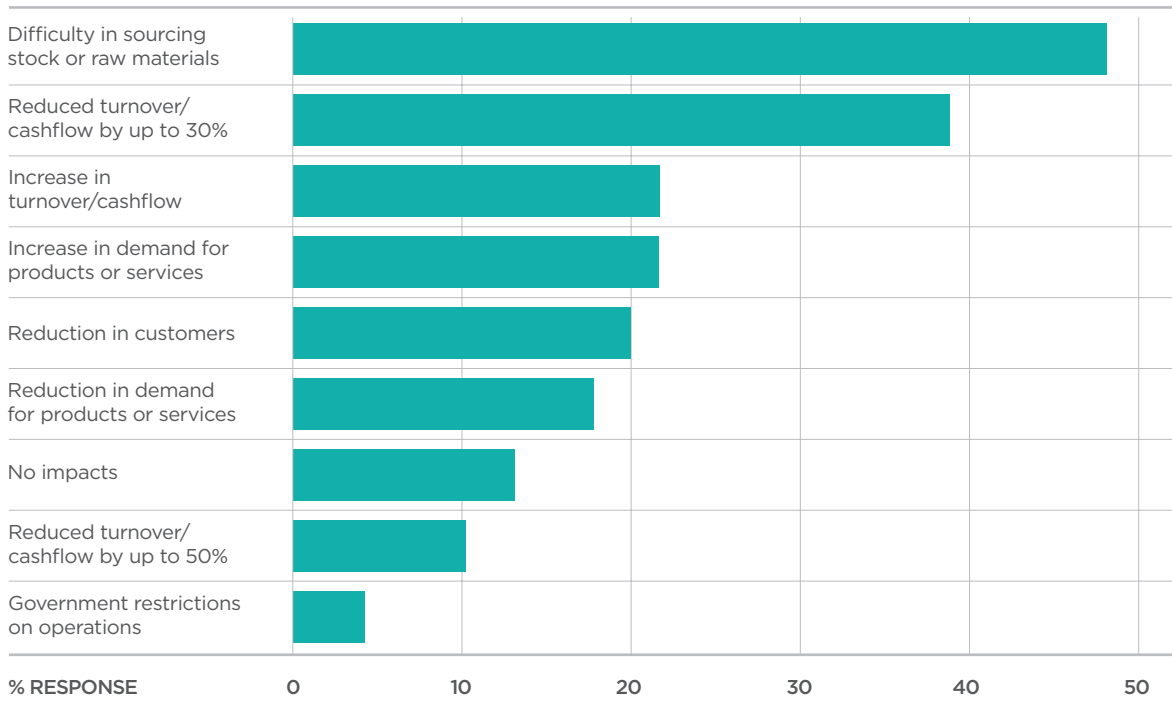
The survey data also shows that a sizeable cohort of Western Australian businesses reported an increase in demand for their products or services and an increase in turnover or cashflow over the period (22 per cent response). The increase in turnover amongst this cohort was evenly distributed across most sectors of the industry and in both metropolitan and regional areas.

In terms of how automotive businesses in Western Australia responded to the COVID-19 threat in 2020, Chart 27 shows that 42.2 per cent of businesses made no changes to their operations, which is the largest proportion of all jurisdictions, whilst 47.5 per cent made no changes to their workforce structure (Chart 28).

Of the remaining businesses that made interventions because of COVID-19, the most significant responses included:

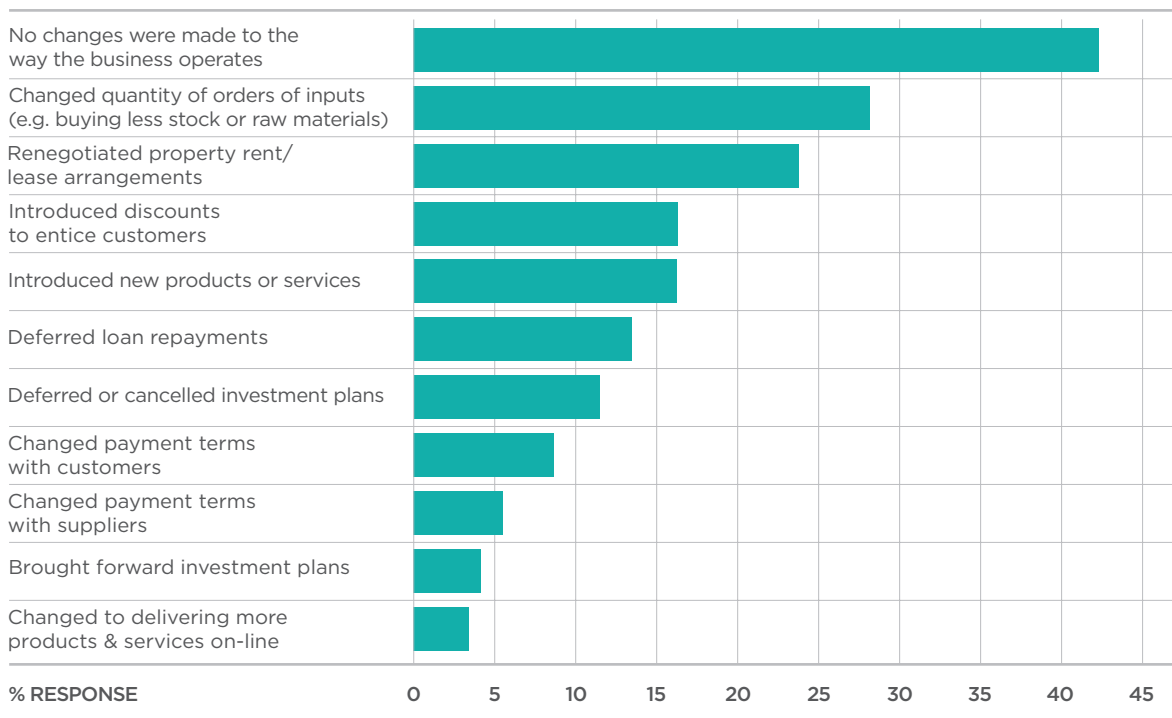
- Temporarily reducing staff hours (39.9 per cent response)
- Changing the quantity of orders, e.g. buying less stock (28.1 per cent response), and
- Renegotiating property rent/ lease arrangements (23.8 per cent response).

Chart 26: Main Business Impacts of COVID-19, WA, 2020

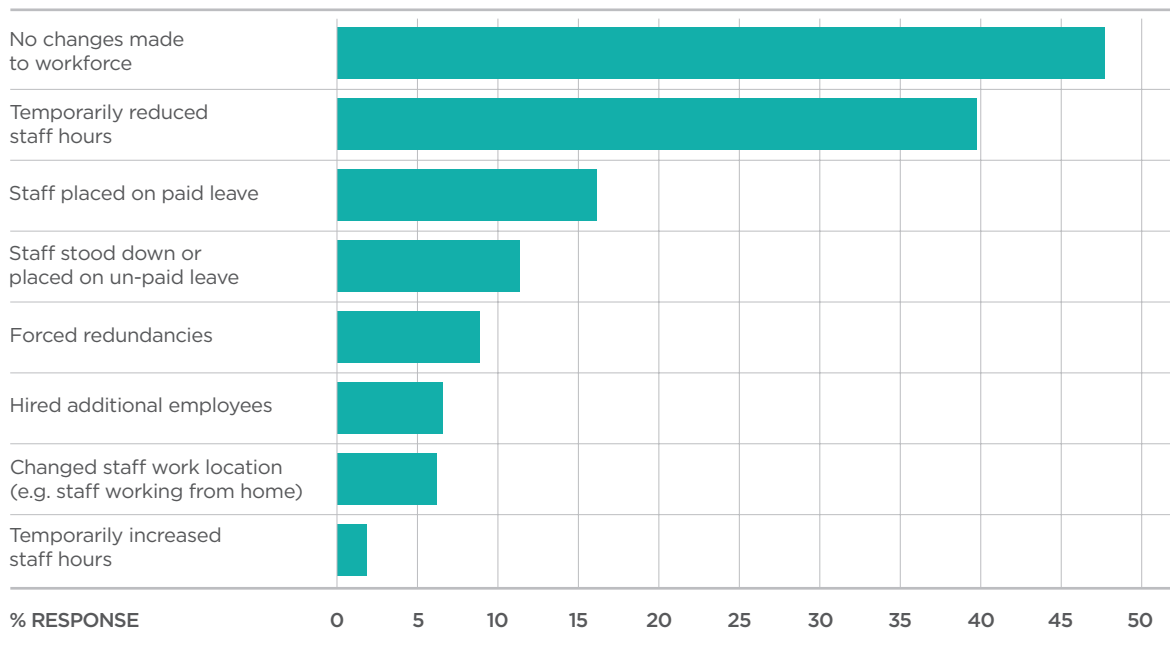


Source: 2020 Automotive Industry National Survey

Chart 27: Main Business Responses to COVID-19, WA, 2020



Source: 2020 Automotive Industry National Survey

Chart 28: Business Changes to Workforce from COVID-19, WA, 2020

Source: 2020 Automotive Industry National Survey

Tasmania

Tasmania responded strongly to its COVID-19 outbreak on the north-west coast during March/April 2020 and was able to establish effective control over the virus and limit the effects on its economy. This was achieved through a series of interventions including border controls, travel restrictions and generous government support measures for businesses and employees that were adversely affected by the virus. Consequently, job and business losses remained well below forecasts, with Tasmania being one of the few jurisdictions to record economic growth during 2019/20.

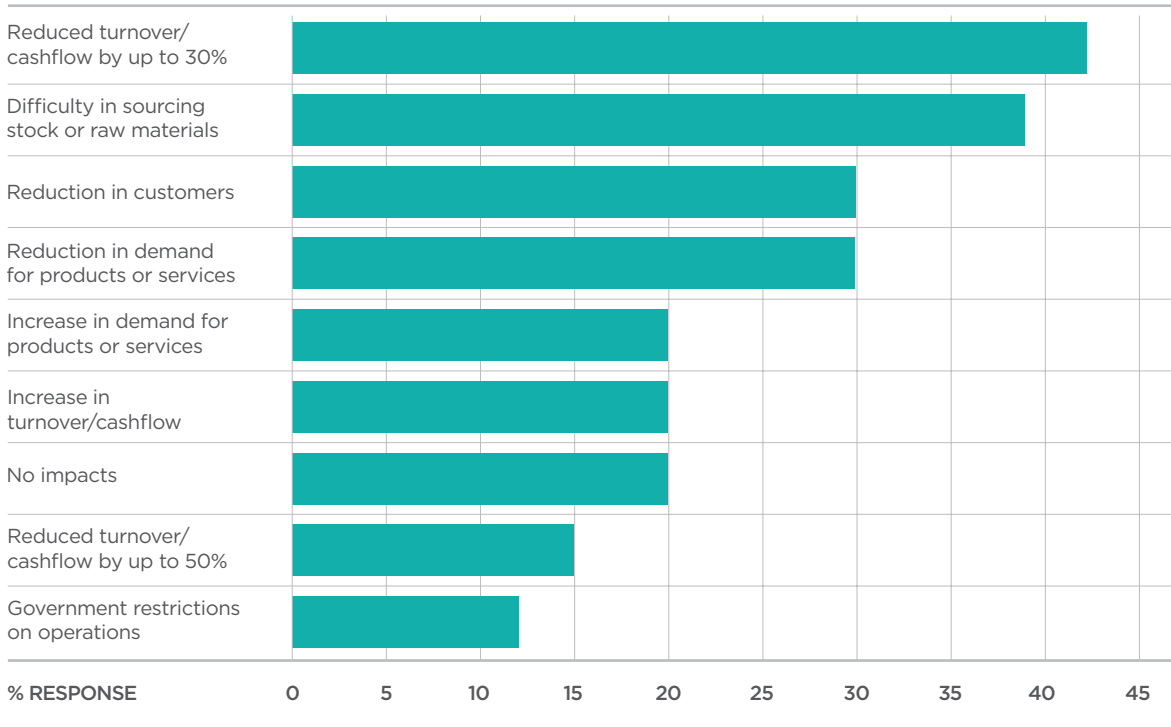
Chart 29 displays the main impacts of the pandemic on automotive businesses in Tasmania during its peak in 2020. This primarily consisted of:

- A reduced turnover/cashflow of up to 30 per cent (42 per cent response)
- Difficulties in sourcing stock (39 per cent response), and
- A reduction in customers and/or demand for products or services (30 per cent)

Businesses initially responded to threats posed by the pandemic by buying less stock, changing payment terms with suppliers, renegotiating rent/lease arrangements and deferring loan repayments (Chart 30).

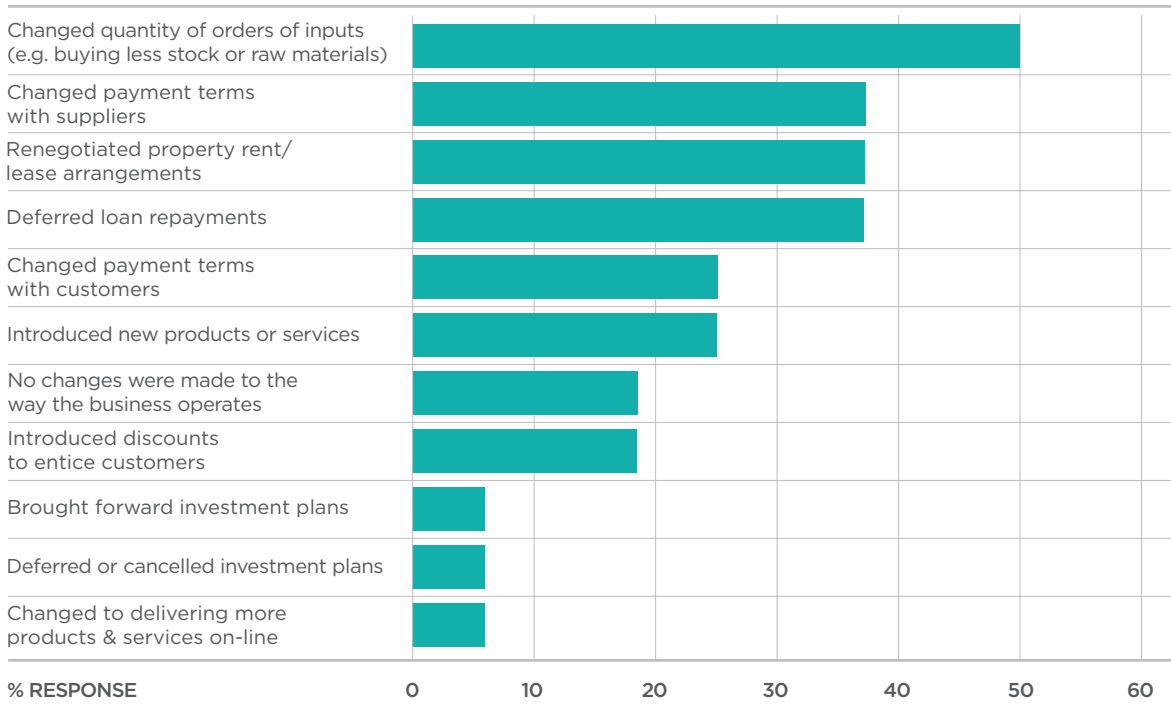
In terms of changes made to the workforce, half of the survey respondents reported making no changes as such, whilst others either placed staff on paid leave, and/or temporarily reduced staff hours (43 per cent response respectively) (Chart 31).

Chart 29: Main Business Impacts of COVID-19, TAS, 2020



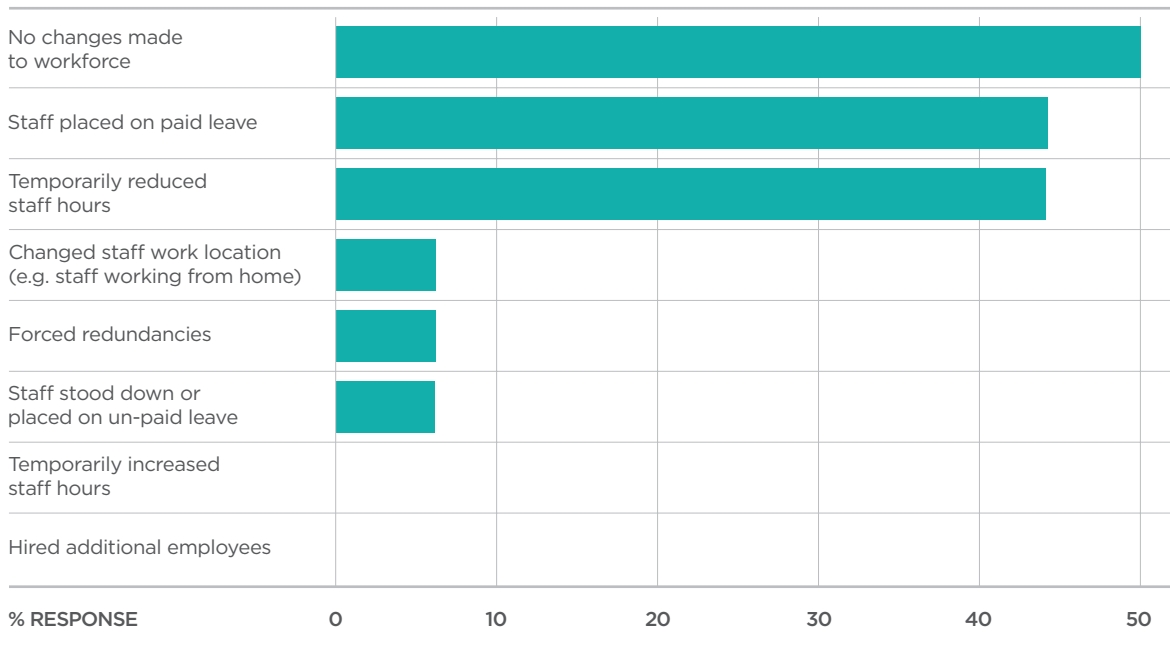
Source: 2020 Automotive Industry National Survey

Chart 30: Main Business Responses to COVID-19, TAS, 2020



Source: 2020 Automotive Industry National Survey

Chart 31: Business Changes to Workforce from COVID-19, TAS, 2020



Source: 2020 Automotive Industry National Survey

Northern Territory

Data from the 2020 Automotive Industry National Survey indicates that automotive businesses in the Northern Territory (NT) experienced only mild to moderate levels of disruption in 2020 due to COVID-19. This was a result of many factors including:

- NT having the lowest rate of COVID-19 infections of all jurisdictions in 2020
- A suite of Federal and State Government stimulus and support measures to businesses and households
- The fact that NT had the highest proportion of automotive businesses that utilised the federal Jobkeeper Scheme to support staff employment of all jurisdictions (78 per cent of businesses).

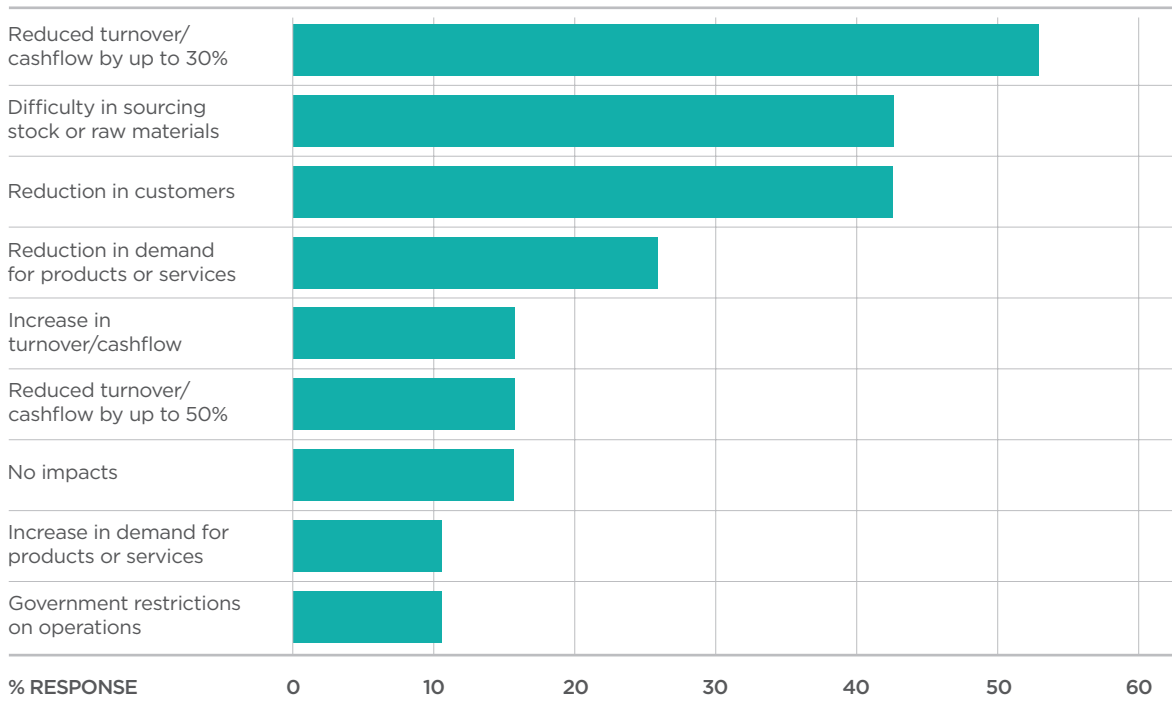
Whilst these measures cushioned the impact on automotive businesses to a large extent, the period between March to May 2020 saw a subdued trading environment with constrained cash flows and lower demand for automotive products and services for many businesses.

Chart 32 displays the key impacts on automotive businesses which include:

- Up to a 30 per cent decline in business turnover/cashflow (52.6 per cent response)
- Difficulties in sourcing stock or raw materials (42 per cent response), and
- A reduction in customers (42 per cent response).

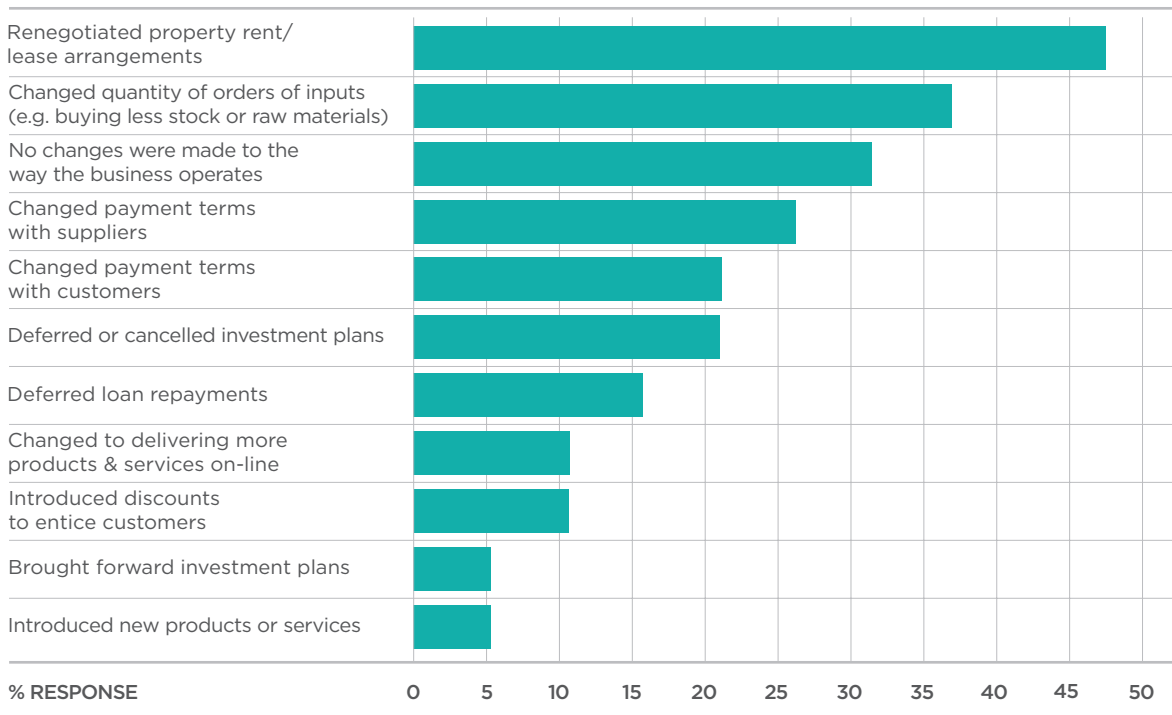
Businesses responded to the challenges over the period in a variety of ways. Primarily, this consisted of renegotiating property rent/lease agreements with landlords for more favourable terms and conditions, and by purchasing less stock (Chart 33). In terms of changes made to the workforce, most businesses either temporarily reduced their staff hours, or equally did not make any changes to their staff structures (Chart 34). In this respect, the JobKeeper Payment scheme was viewed as a critical enabler in allowing businesses to continue their operations as normally as possible.

Chart 32: Main Business Impacts of COVID-19, NT, 2020



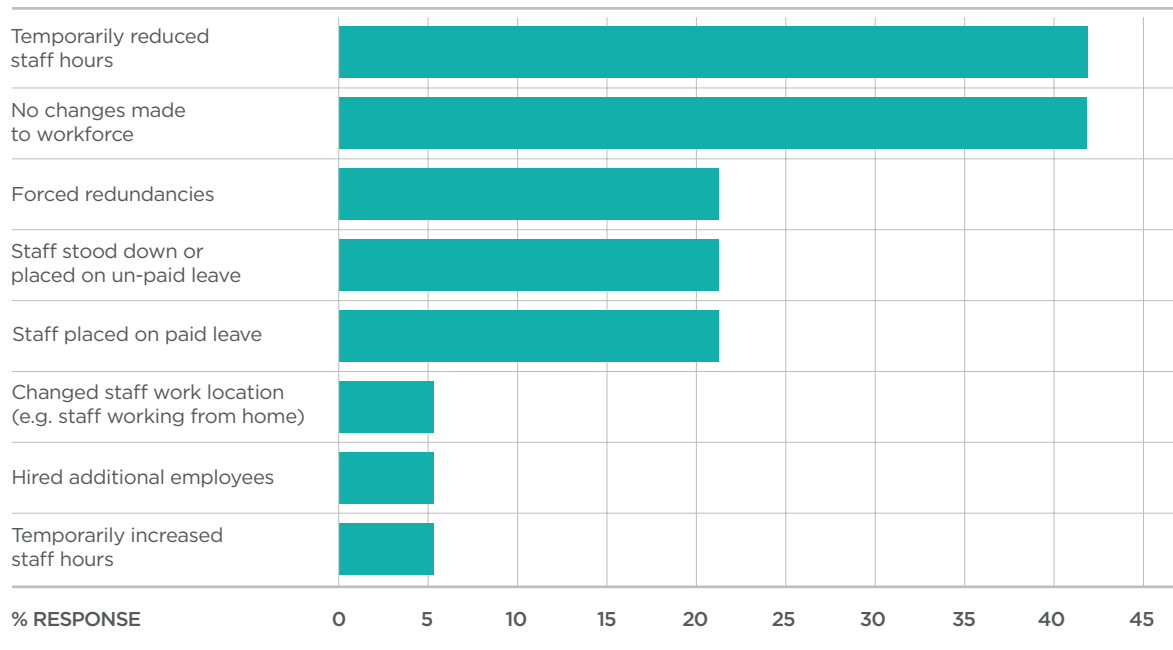
Source: 2020 Automotive Industry National Survey

Chart 33: Main Business Responses to COVID-19, NT, 2020



Source: 2020 Automotive Industry National Survey

Chart 34: Business Changes to Workforce from COVID-19, NT, 2020



Source: 2020 Automotive Industry National Survey

Section 4. What trends are impacting on the automotive industry?



Key Findings

- In 2019/20, business growth was highest within two sectors - automotive body, paint and interior repair sector and the automotive mechanical repair sector (net growth of 295 and 227 businesses respectively over the previous year). The largest decline was recorded in car retailing (loss of 75 businesses).
- The car retailing sector is forecast to decline more than any automotive sector over the next three years (expected loss of 151 business by 2022/23).
- Industry growth in 2019/20 was heavily driven by the growth in sole trader businesses across the automotive industry (growth of 989 sole trader businesses). Small and medium sized automotive businesses declined by 454 and 34 businesses respectively, whilst large businesses grew by four over the period. These results represent a continuation of trends observed within these business cohorts over the past three years.
- Industry intelligence reveals that many skilled technicians are increasingly leaving their employers to set up their own businesses as sole traders. This redistribution of skilled labour is representative of structural change occurring within the industry, and has left a void for many business owners that are struggling to replace these skilled tradespeople.
- The most significant issues for automotive businesses over the next three years are economic conditions, maintaining business profitability, and the availability of skilled labour. The least important issues are technological change and electric vehicles.
- New vehicle sales over the next three years are forecast to be below sales levels recorded in 2018 and previous years. Shortages of vehicle stock and parts as a result of the COVID-19 pandemic are still a major issue, with an average waiting period of up to six months for most dealers.
- Industry research shows that 52 per cent of automotive businesses nationally are currently experiencing a shortage of skilled labour, up from 45.7 per cent in 2016/17. Skill shortages in regional areas are more severe than in metropolitan areas. Queensland and Western Australia have the highest skill shortages, and the Northern Territory the lowest.
- The current industry skilled labour deficit is estimated at 31,143 positions nationally, the highest number ever recorded. This deficit is forecast to rise to 38,700 positions by 2022/23. Light vehicle mechanics represent the largest single skill shortage (deficit of 17,509 positions in 2020/21).
- Demand for automotive apprentice is expected to be more subdued over the next two years. Potentially, there could be up to 11,000 fewer automotive apprentices hired by automotive businesses over the next two years.
- The main technology focus of automotive manufacturers over the next decade is electric mobility; hydrogen technology; connected vehicles; autonomous vehicles and shared mobility. Electric vehicles remain at the forefront of advancements in zero emissions mobility.
- By 2030, battery electric vehicles are expected to comprise up to 26 per cent of new vehicle sales in Australia.
- Electric vehicles could be the catalyst that significantly alters or dispenses with the existing dealership network model, by the supply of electric vehicles directly from the manufacturer to the consumer.

GROWING AND DECLINING AUTOMOTIVE SECTORS

In Section 1, Chart 1 showed that Australia's automotive industry has been growing at a trend rate of 1.1 per cent per annum, with an additional 2,460 businesses expected to be added to the industry between 2019/20 and 2022/23. Whilst, the industry has been declining in real terms, the growth rate is anticipated to create around 3,700 additional jobs across the industry by 2022/23. A deeper analysis, however, reveals that not all sectors of the industry are sharing in this growth. Furthermore, the structure of this growth may be an issue of wider concern for the industry.

Table 9 provides a snapshot of net business growth for key automotive sectors for the 2019/20 financial year, including sector business projections for 2022/23. The sectors that recorded the highest annual growth in terms of the number of businesses were:

- Automotive body, paint, and interior repair (+295 businesses)
- Automotive mechanical repair (+227 businesses)
- Passenger car rental and hiring (+102)
- Motor vehicle dismantling and used part wholesaling (+67)
- Automotive electrical component manufacturing (+25)

Table 9: Net Business Growth and Decline, Actual and Projected, Key Automotive Sectors

Sector	No. of businesses 2019/20	Change in businesses from previous year (No.)	Percentage growth from previous year (%)	Net Business projection 2022/23 (No.)	Projected Business growth 2022/23 (No.)
Automotive mechanical repair	24,618	+227	0.9	25,971	+1,353
Automotive body, paint and interior repair	12,422	+295	2.4	13,045	+623
Automotive electrical services	3,180	+1	0.03	3,209	+29
Motor vehicle dismantling and used part wholesaling	1,406	+67	5.0	1,516	+110
Passenger car rental and hiring	2,134	+102	5.0	2,384	+250
Fuel retailing	3,972	+23	0.6	3,992	+20
Tyre retailing	2,091	-11	-0.5	2,077	-14
Car retailing	4,266	-75	-1.7	4,115	-151
Motorcycle retailing	632	-30	-4.5	592	-40
Trailer and other motor vehicle retailing	463	-13	-2.7	440	-23
Car wholesaling	1,101	-1	-0.1	1,096	-5
Commercial vehicle wholesaling	279	-8	-2.8	291	+12
Motor vehicle parts retailing	2,194	-45	-2.0	2,218	+24
Motor vehicle new parts wholesaling	2,495	-34	-1.3	2,570	+75
Trailer and other motor vehicle wholesaling	207	-10	-4.6	218	+11
Motor vehicle manufacturing	346	-24	-6.5	300	-46
Automotive electrical component manufacturing	449	+25	5.9	515	+66
Other motor vehicle parts manufacturing	995	+5	0.5	995	0
Motor vehicle body and trailer manufacturing	1,358	-38	-2.70	1,395	+37
Agricultural machinery retail and repair	1,417	+14	1.0	1,425	+8
Marine equipment retailing	818	-5	-0.6	823	+5

Source: ABS data. Business projections are modelled by VACC.

Examining growth on a percentage basis, however, shows a different result, with the highest growth rate being recorded within the following sectors:

- Automotive electrical component manufacturing (5.9 per cent growth)
- Motor vehicle dismantling, and used part wholesaling (5.0 per cent)
- Passenger car rental and hiring (5.0 per cent)
- Automotive body, paint, and interior repair (2.4 per cent)

Whilst the 2019/20 data captures only the first half year impact of the COVID pandemic, the aforementioned sectors are projected to grow out to 2022/23, with the automotive mechanical repair sector expected to grow the most, by a further 1,353 businesses.

In terms of declining automotive sectors, small declines were recorded across many automotive sectors during 2019/20, however, the largest decrease was recorded within car retailing (-75 businesses), whilst in percentage terms, motor vehicle manufacturing exhibited the largest decline (-6.5 per cent). Table 9 also shows car retailing is forecast to shed the most businesses over the next three years, with an expected net loss of a further 151 businesses by 2022/23.

Table 10 displays the number of automotive businesses by sector and business type for 2019/20, whilst Table 11 reveals the change in the number of businesses by sector and business type.

Table 10: Number of Businesses by Sector and Business Type, 2019/20

Sector	Sole trader businesses (no employees)	Small businesses 1-19 employees	Medium businesses 20-199 employees	Large businesses 200+ employees	Total
Automotive repair and maintenance	10,941	13,518	157	5	24,618
Automotive body, paint and interior repair	6,218	5,957	246	0	12,422
Automotive electrical services	1,617	1,543	17	0	3,180
Motor vehicle dismantling and used part wholesaling	689	698	11	0	1,406
Passenger car rental and hiring	1,588	496	46	10	2,134
Fuel retailing	1,195	2,572	194	10	3,972
Tyre retailing	535	1,493	59	0	2,091
Car retailing	2,102	1,534	584	41	4,266
Motorcycle retailing	232	376	24	3	632
Trailer and other motor vehicle retailing	224	209	34	0	463
Marine equipment retailing	384	420	18	0	818
Car wholesaling	693	364	43	7	1,101
Commercial vehicle wholesaling	121	123	37	10	279
Motor vehicle parts retailing	918	1,224	47	5	2,194
Motor vehicle new parts wholesaling	1,068	1,287	131	13	2,495
Trailer and other motor vehicle wholesaling	104	84	21	0	207
Motor vehicle manufacturing	185	130	26	3	346

Table 10 Continued: Number of Businesses by Sector and Business Type, 2019/20

Sector	Sole trader businesses (no employees)	Small businesses 1-19 employees	Medium businesses 20-199 employees	Large businesses 200+ employees	Total
Automotive electrical component manufacturing	255	161	25	0	449
Motor vehicle body and trailer manufacturing	581	594	175	12	1,358
Other motor vehicle parts manufacturing	457	439	89	10	995

Source: ABS data

Table 11: Change in the Number of Businesses by Sector and Business Type, 2019/20

Sector	Sole Traders (No employees)	Small Businesses (1-19 employees)	Medium Businesses (20-199 employees)	Large Businesses (200+ employees)
Automotive mechanical repair and maintenance	+284	-49	-10	0
Automotive body, paint and interior repair	+381	-102	+19	0
Automotive electrical services	+1	+10	-1	0
Motor vehicle dismantling and used part wholesaling	+51	+5	-5	0
Passenger car rental and hiring	+111	-5	+10	-4
Fuel retailing	+92	-52	-19	+3
Tyre retailing	+2	-5	-5	0
Car retailing	+31	-77	-16	-6
Motorcycle retailing	-10	-18	0	0
Trailer and other motor vehicle retailing	+14	-24	-2	0
Marine equipment retailing	+10	-29	+8	0
Car wholesaling	+15	-5	-7	0
Commercial vehicle wholesaling	-8	+9	+2	0
Motor vehicle parts retailing	-16	-28	+1	+2
Motor vehicle new parts wholesaling	+2	-32	+1	+1
Trailer and other motor vehicle wholesaling	-4	-3	-1	0
Motor vehicle manufacturing	-5	-17	0	0
Automotive electrical component manufacturing	+18	+4	-1	0
Motor vehicle body and trailer manufacturing	-3	-28	+2	+4
Other motor vehicle parts manufacturing	+23	-8	-10	+4
TOTAL	+989	-454	-34	+4

Source: ABS data

Table 11 reveals several key observations about the automotive industry. Firstly, industry growth during 2019/20 has been heavily driven by growth in sole trader businesses, and this trend is consistent across most sectors of the automotive industry. Whilst growth in sole trader businesses has been a feature of the automotive industry for the past three years, the data shows that this trend has gained in momentum during 2019/20, accounting for almost the entire business growth over the year (+989 businesses). At the other end of the business spectrum, the data shows a small net increase in the number of large businesses containing 200 employees or more (net increase of four businesses).

In what is considered the traditional core of the industry however, i.e. small businesses containing between 1-19 employees, the data shows a net annual reduction of 454 businesses within this cohort over the year. This represents a continuation of a declining trend for this business cohort over the past few years. The other source of decline, albeit on a much smaller scale, was in medium size automotive businesses containing between 20-199 employees, which decreased by 34 businesses during 2019/20. These changes are displayed in Chart 35.

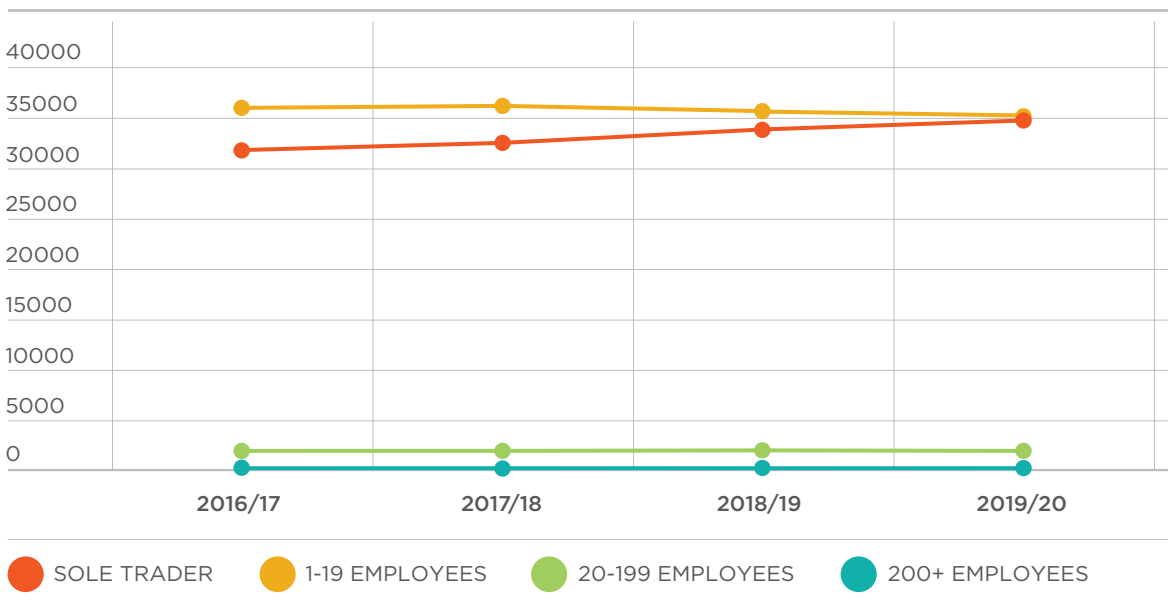
Whilst some of the business decline can be attributed to natural attrition due to age related retirements of business owners, a lack of succession planning and other factors, industry survey data suggests that this only accounts for between five to ten per cent of the total business churn. This leaves structural change as one of the major determinants of the changing composition of the automotive industry.

STRUCTURAL CHANGE WITHIN THE INDUSTRY

In terms of the strong rise in sole trader businesses recorded during 2019/20, around two-thirds of the growth is attributable to two sectors – automotive mechanical repair and automotive body repair. Industry intelligence reveals that many skilled technicians employed within small and medium sized businesses within both sectors, are increasingly leaving their employers to set up their own businesses as sole traders. Whether the motivating factors are centred around pay or other reasons, these technicians, many of whom are highly skilled in diagnostics and repairs for specific vehicle brands and makes, are having the confidence to initiate their own business start-ups. The implications of this trend, however, are profound, as this redistribution of skilled labour has left a void for many business owners that are struggling to replace these skilled tradespeople, with apprentices not being the solution. This has led to calls for urgent increases in skilled migration from this business cohort to address what is seen as a crippling industry skills shortage. Also, sole traders do not employ apprentices and this acts to further constrain apprentice demand.

In terms of the growth in large and medium businesses exhibited within the industry, this has been mainly associated with patterns of business acquisitions and consolidation of smaller players by larger companies. The automotive body repair sector is a prime example of such activity, where in recent years insurance companies have been aggressive consolidators within the sector, where as recently as October 2019, the AMA Group expanded its market share in Australia with the

Chart 35: Change in number of Automotive businesses by Business Type, 2016/17 to 2019/20



Source: ABS data

acquisition of Suncorp's Capital SMART crash repair business, thereby increasing its network of outlets across Australasia. Similar patterns of business acquisitions and consolidation have also been observed within fuel retailing, car retailing, motor vehicle parts retailing and many other automotive sectors. These trends, however, only explain part of the changing business landscape. For example, the loss in small businesses and the growth in medium to large businesses within the motor vehicle parts retailing sector, can also be attributed to the fact that many small businesses may have been unable to survive the disruptions to parts supply chains resulting from the COVID-19 pandemic, whereas larger players with greater stockpiles of inventory could continue to trade and even grow their businesses over the period. Equally, there has also been an increased sourcing of vehicle parts over the internet by consumers, which has impacted negatively on many small parts retailers and may have played a part in their demise.

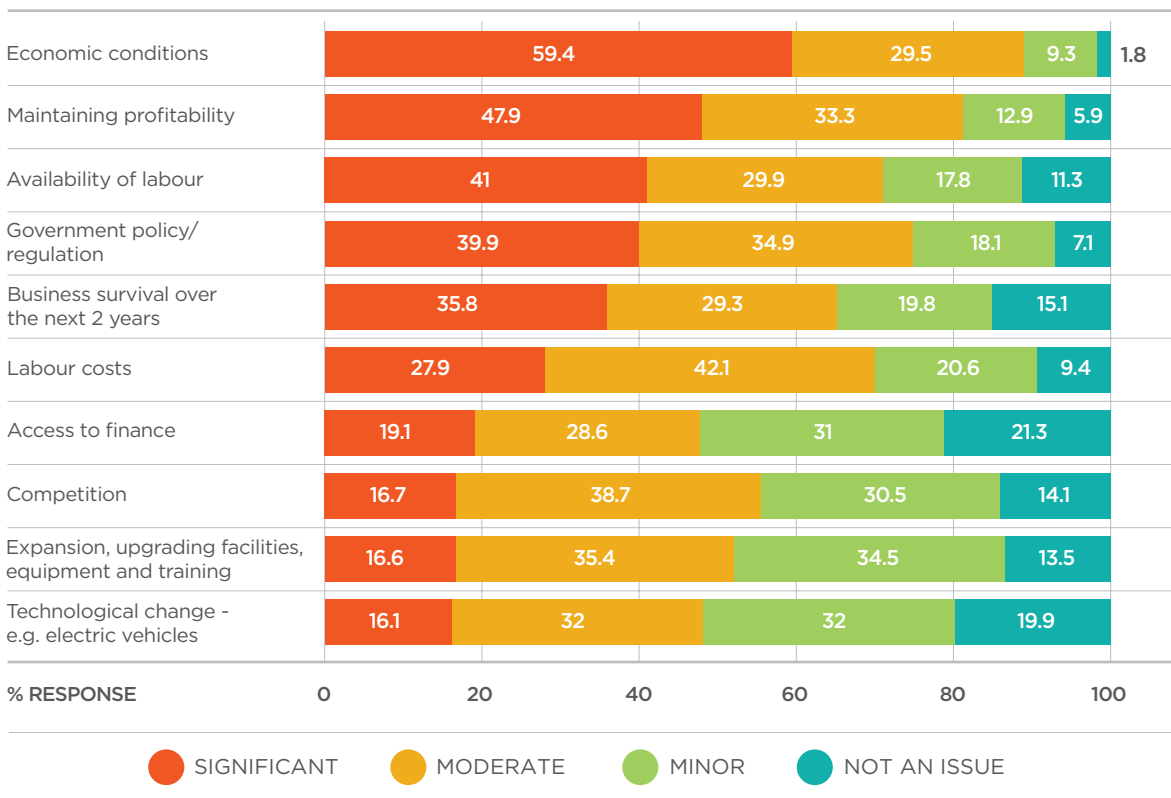
In capital intensive sectors such as motor vehicle manufacturing and motor vehicle body and trailer manufacturing, the decline in smaller business operators and growth in large companies within these sectors, may be indicative of the fact that such manufacturing activity requires significant capital expenditure on machinery and equipment, of which only larger industry players may possess the financial resources to undertake such expenditures and grow their businesses.

KEY BUSINESS ISSUES

Results obtained from the 2020 Automotive Industry National Survey provide valuable insights into the expectations, and practices of automotive business owners across the country. Section 3 outlined the strong position the automotive industry was in before the COVID-19 pandemic and the impact the pandemic had on the industry. Beyond COVID-19, automotive businesses have identified a series of issues, which they deem to be most important over the next three years.

Chart 36 reveals that economic conditions are by far the most significant issue going forward for most automotive businesses (59.4 per cent response), followed by maintaining profitability and the availability of labour (47.9 and 41 per cent response respectively). Surprisingly, the least important issue for automotive businesses is technological change, namely electric vehicles, with only 16.1 per cent of businesses rating it as a significant issue. These results indicate that for most of the industry, economic growth and a focus on internal business efficiency and profitability over the short to medium term, are far more relevant than issues that are perceived to be a decade away from fruition, such as electric vehicles. The implications of this sentiment are discussed more fully in Section 5.

Chart 36: Key Industry Issues over the Next 3 Years



Source: 2020 Automotive Industry National Survey

NEW VEHICLE SALES FORECASTS

Since the industry sales peak achieved in 2017, new vehicle sales have fallen consecutively over the past three years, by 3.0 per cent, 7.8 per cent and 13.7 per cent respectively. As detailed in Section 3, economic factors have played a key role in this overall decline, especially during 2020 where 145,899 fewer new vehicles were sold than in 2019 as a result of COVID-19.

Modelling conducted by the Victorian Automotive Chamber of Commerce (VACC) indicates that new vehicles sales are expected to show a recovery in 2021 through to 2023, with sales volumes anticipated to be below the peak levels achieved in 2017 and prior years (Chart 37). A contributing factor to this moderate growth scenario are on-going disruptions to global supply chains for motor vehicles and vehicle parts, which remain an issue in 2021 and beyond. Currently, there are major shortages of semi-conductors and other vehicle components that are causing delays to vehicle production and shipment globally. According to VACC research, as at February 2021 over 95 per cent of franchise car dealers are experiencing significant delays in obtaining vehicle stock and parts, with an average waiting period of up to six months for most dealers.

In terms of the mix of vehicles sold by fuel type, VACC modelling predicts limited growth for petrol and diesel vehicles out to 2023, whilst recent strong growth in hybrid vehicle sales is expected to continue with hybrid sales in 2023 forecast to be more than double that of 2020. (Chart 38).

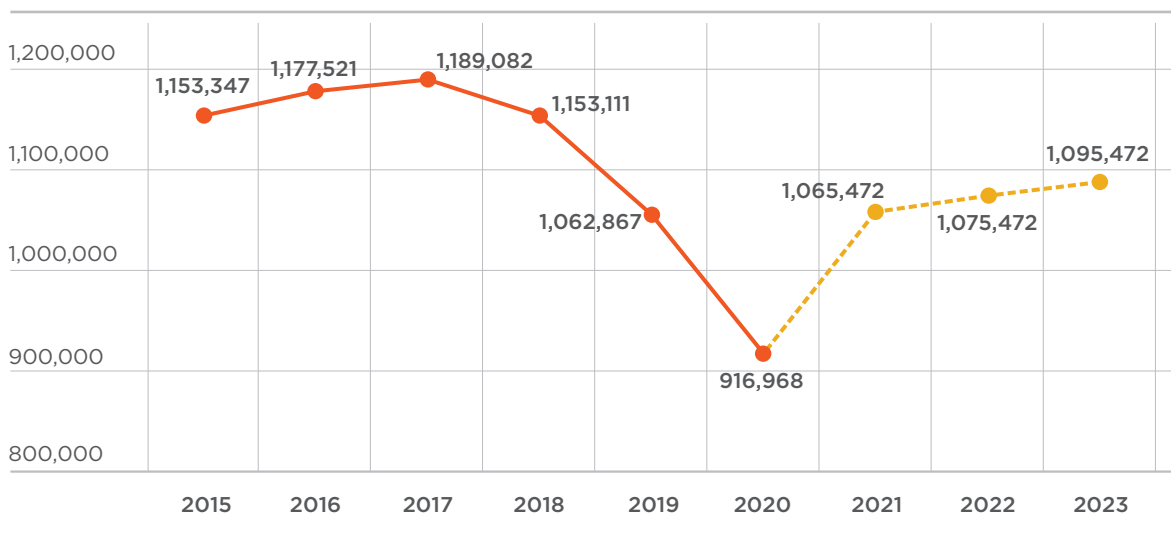
The strongest sales growth, however, albeit of a much lower base, is reserved for electric and plug-in-hybrid electric vehicles (Chart 39).

SKILL SHORTAGES AND THE DEMAND FOR LABOUR

Skill shortages are defined as difficulties experienced by firms in finding or securing skilled labour to fulfill critical job roles within a business, and/or within a reasonable time frame. Results from the 2020/21 Automotive Industry National Survey show that nationally, 52 per cent of automotive businesses are experiencing a shortage of skilled labour. This represents a higher proportion than that recorded during the previous industry survey (2016/17) where 45.7 per cent of businesses reported being affected by skill shortages.

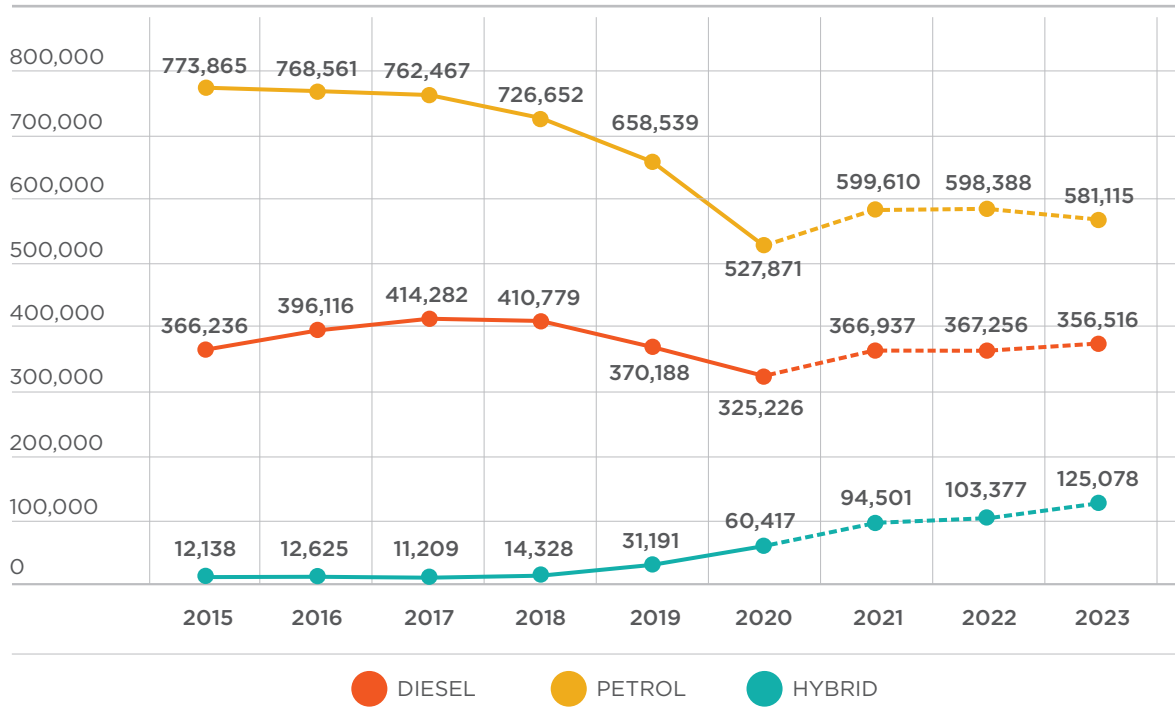
In terms of the distribution of skill shortages, the data shows a much higher proportion occurring within regional areas (56.6 per cent) compared to metropolitan areas (47.5 per cent). This is in contrast to 2016/17, where the proportion of businesses reporting skill shortages in metropolitan and regional areas was approximately equal (around 46 per cent each). This suggests that over the past three years, automotive skill shortages have intensified considerably more in regional areas relative to metropolitan areas. Furthermore, the survey data shows that the average time taken for regionally based employers to fill skill vacancies within their business is approximately nine months, compared to an average of 6.5 months for metropolitan based businesses.

Chart 37: New Vehicle Sales, Actual and Forecast, Australia 2015-2023



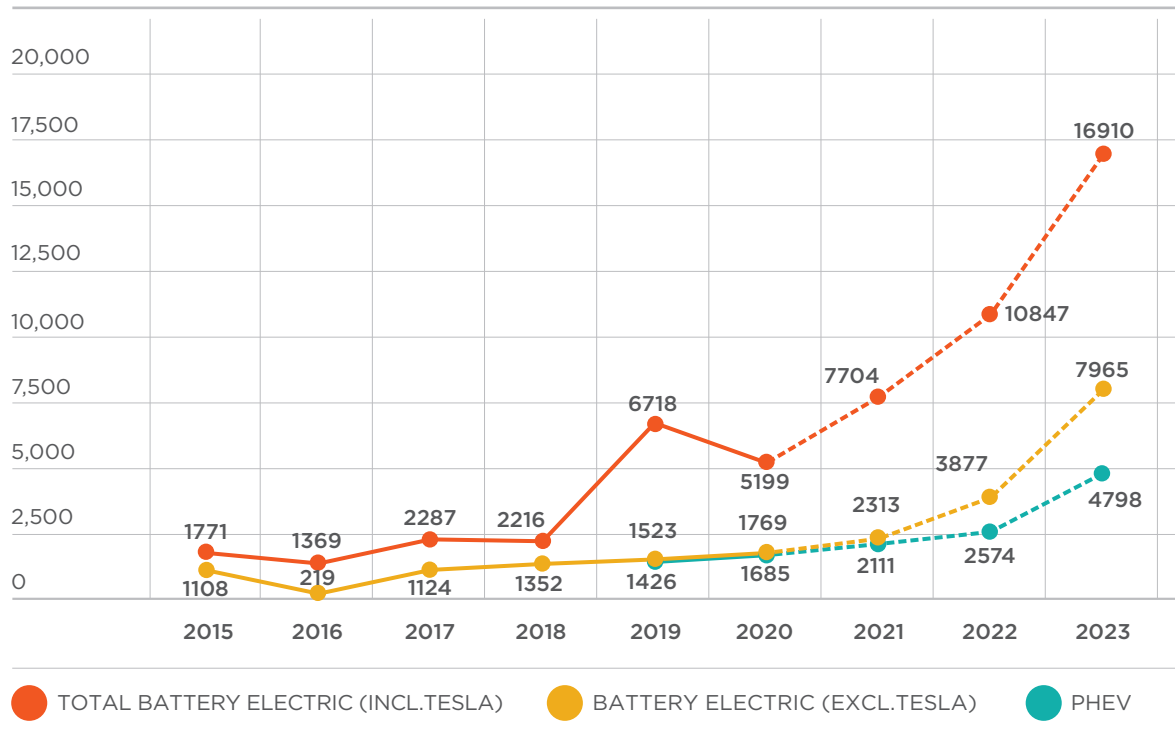
Source: VACC modelled estimates, based on FCAI data. Excludes Tesla sales which are not officially reported.

Chart 38: New Vehicle Sales, Actual and Forecast, by Fuel Type, Australia 2015-2023



Source: VACC Modelled estimates, based on FCAI data.

Chart 39: New Vehicle Sales, Actual and Forecast, Battery Electric and PHEV, Australia 2015-2023



Source: VACC modelled estimates. Figures are based on FCAI data and incorporate assumptions for TESLA sales, which are not officially released.

SKILL SHORTAGES BY JURISDICTION

Table 12 provides a breakdown of current skill shortages by jurisdiction. Queensland and Western Australia have the highest recorded skill shortages (56.8 and 54.4 per cent of automotive businesses respectively), while the Northern Territory contains the lowest (40.5 per cent). In all jurisdictions, skill shortages are considerably higher in regional areas compared to metropolitan areas, and this disparity is most prevalent in Western Australia, where 66 per cent of recorded skill shortages are in regional locations compared to 48 per cent in metropolitan locations.

It is certainly the case that in Western Australia and other jurisdictions, it has been reported that attracting skilled technicians with children to rural areas is very difficult, particularly with deficiencies in schools and other social and physical infrastructures, that may be limiting the movement of families to rural locations.

REASONS FOR SKILL SHORTAGES

Chart 40 records the key reasons for automotive skill shortages as reported by businesses. The most significant reason according to respondents is that there are not enough people entering automotive trades (71.8 per cent response). Other key reasons include, competition from other industries (67.8 per cent response),

attraction of labour toward other industries (62.2 per cent), poor quality of available candidates (61.3 per cent) and that candidates lack the required skills to do the job (59.2 per cent response). Industry wage levels are the least important reason for automotive skill shortages according to respondents. The implications of this business sentiment are discussed more fully in Section 5.

QUANTITY AND TYPE OF SKILL SHORTAGES

VACC modelling of industry skill shortage data for 2020/21 shows that there is an estimated deficit of 31,143 skilled positions within the automotive industry nationally (Table 13). This represents the highest level of skill shortages ever recorded for the industry. Furthermore, Table 13 also shows that this industry skills deficit is forecast to increase to an estimated 38,700 skilled positions by 2022/23.

Whilst most automotive trades are in shortage to varying degrees, the survey data shows that in terms of the sheer weight of numbers, the highest demand for skilled labour is within the vehicle mechanical trades, in particular:

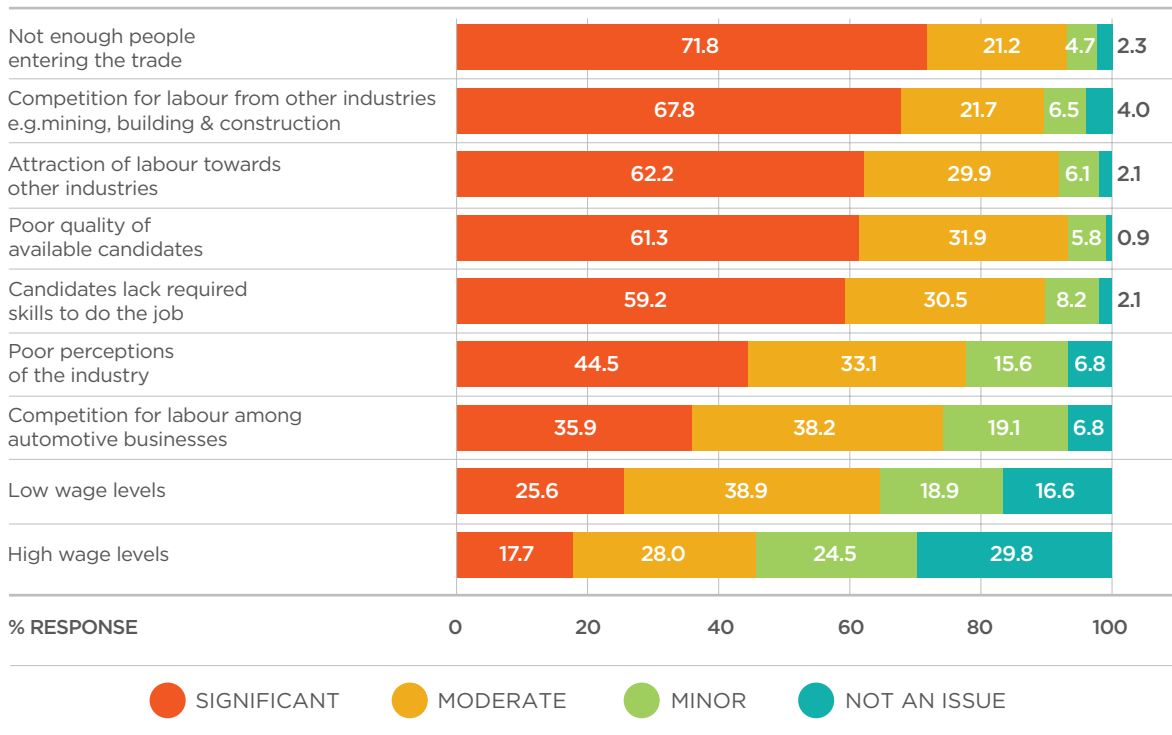
- Light vehicle mechanics (deficit of 17,509 positions)
- Heavy vehicle mechanics (deficit 2,711 positions)

Table 12: Percentage of Automotive Business experiencing a Skill Shortage, by Jurisdiction, 2020/21

	Overall %	Metropolitan %	Regional %
NSW &ACT	48.1	48.6	50.0
VIC	49.7	46.2	55.4
QLD	56.8	52.1	60.0
SA	51.3	42.1	55.6
WA	54.4	48.0	66.0
TAS	52.5	52.0	56.2
NT	40.5	37.5	44.4

Source: 2020/21 Automotive industry National Survey

Chart 40: Business Reasons for Occupational Skill Shortages



Source: 2020/21 Automotive industry National Survey

Whilst it is difficult to ignore the fact that there is a national shortage of over 17,500 light vehicle mechanics compared to a shortage of only 35 engine re-conditioners, it is important to place these estimates into perspective, as there are far fewer engine re-conditioning businesses in existence and the impacts of small skill shortages on small sectors or business populations can be just as detrimental.

The other key observation from the data is that it is not just the supply of skilled labour that is in deficit, but also the quality of the skills base which has atrophied according to many employers. For example, even amongst applicants that present as qualified technicians, employers are witnessing

a poor level of diagnostic, technical and fault-finding capability, electrical knowledge, as well as practical experience across different vehicle marques. Unlike past years, increased business pressures have meant that many businesses do not have the time or resources to dedicate towards training or upskilling staff, and are seeking people with the appropriate skill level and acumen that can make an immediate contribution to the productivity and efficiency of the business. For many employers, finding this balance within the workforce is extremely difficult, and is compounding the delays and frustrations in securing suitable candidates to work within their businesses.

Table 13: National Automotive Skill Shortages by Occupation and Quantity, 2020/21 – 2022/23

ANZSCO Code	Occupation	2020/21 Shortage (No.)	Projected 2021/22 Shortage (No.)	Projected 2022/23 Shortage (No.)
321211	Light vehicle mechanic	17,509	19,970	23,904
321212	Heavy vehicle mechanic	2,711	2,984	2,995
321213	Motorcycle mechanic	119	184	220
321212	Mobile plant mechanic	173	185	190
321211	Engine reconditioner	35	66	70
321212	Mechanic - farm machinery	915	945	920
324111	Panel beater	1,602	1,690	1,710
324311	Vehicle spray painter	1,593	1,600	1,650
324212	Vehicle trimmer	34	125	154
321111	Automotive electrician	1515	1650	1790
621311	Motor vehicle salesperson	1644	1680	1529
621312	Motor vehicle parts and accessories salesperson	783	725	730
899415	Tyre fitter	609	750	755
621312	Spare parts interpreter	1294	1350	1380
321214	Mechanic - outdoor power equipment	212	188	210
324211	Vehicle body builder	199	225	259
321214	Marine mechanic	103	104	110
899911	Bicycle mechanic	93	110	124
Total Shortage		31,143	34,531	38,700

Source: 2020/21 Automotive Industry National Survey; ABS data; VACC modelled estimates.

BUSINESS DEMAND FOR AUTOMOTIVE APPRENTICES

Results from the 2020/21 Automotive Industry National Survey show that nationally, 50 per cent of automotive businesses employ apprentices. This proportion has remained relatively stable within the industry over time, with the evidence showing that most businesses that employ apprentices have a past history of doing so, along with a culture of raising the next generation of technicians.

In terms of future apprentice demand from this traditional business cohort, the outlook is more subdued, with only 60 per cent signifying that they intend to hire apprentices during 2021 and

2022. If these apprentice hiring intentions come to fruition, then potentially this translates into around 11,000 fewer automotive apprentices that will be hired over the next two years. Whilst this scenario is somewhat alarming, it is unlikely to reach these proportions given that these business intentions were captured during September 2020 when there was considerable business angst and uncertainty from the COVID-19 pandemic, particularly in Victoria.

There are, however, other underlying factors that suggest there may be less demand for automotive apprentices over the next two years from the traditional employer base. Central to this is a growing disenchantment around the level of technical knowledge and capability of apprentices,

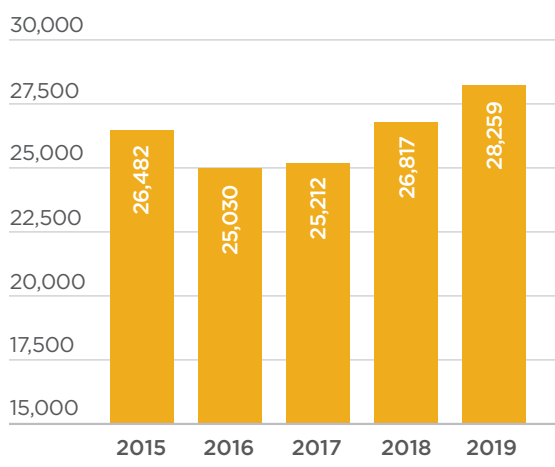
which is in turn linked to the system of training delivery, which is considered to be well below par in terms of modern workshop requirements. The survey results indicate that employers are becoming increasingly more selective in their choice of apprentices, demanding only those that are most competent and possess the aptitude and motivation to work hard within the business. Such applicants can be very difficult to find, particularly for regionally based employers.

Demand for apprentices is also heavily dictated by the workload of the business and the availability of competent senior staff to supervise and train apprentices. The industry shortage of senior skilled staff is limiting the capacity of many businesses to facilitate apprentices within the workplace. Additionally, the increased responsibilities and liabilities on employers for workplace health and safety have also made many employers more risk averse and thus more reluctant to hire apprentices than in the past. All these factors suggest that a lower apprentice intake over the next two years may be imminent.

APPRENTICES AND TRAINEES IN-TRAINING

In Section 2, Chart 8 showed student enrolments in automotive training package qualifications over the past five years, with 42,888 students enrolled nationally in automotive training package qualifications in 2019. This includes Certificate III level apprentices and trainees; students undertaking Certificate I and II level training as well as skill-set training and VET in-schools activity.

Chart 41: Apprentices and trainees in-training, AUR Training Package



Source: NCVET

In terms of apprentice and trainees in-training, Chart 41 shows that there were 28,259 apprentices and trainees in-training nationally within the Automotive Retail, Service and Repair (AUR) Training Package in 2019. The past four years has seen only a modest increase in the number of apprentices and trainees in-training. Specifically, from 2018 to 2019, there was an increase of 1,442 or 5.4 per cent.

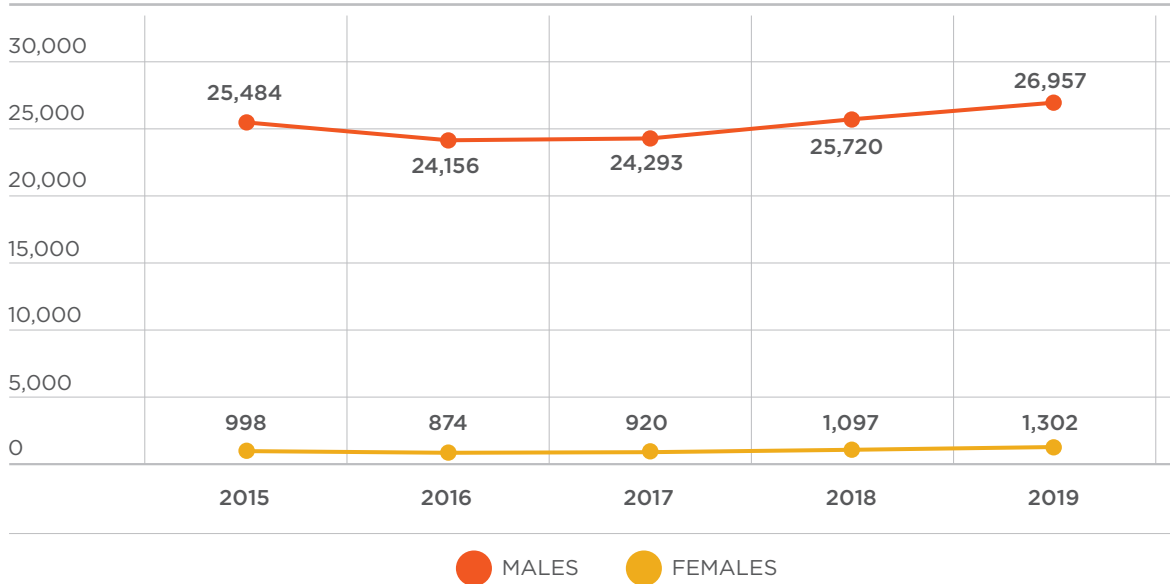
MALE AND FEMALE APPRENTICES

Chart 42 shows the split between male and female apprentices and trainees in-training within the AUR Training Package. In 2019, males accounted for 95.4 per cent of all apprentices and trainees in-training (26,957 males), and females 4.6 per cent (1,302 females). Between 2018 and 2019, however, female apprentices and trainees grew at a much faster rate (18.7 per cent) compared to males (4.8 per cent).

Chart 43 shows trends in the age profile and proportion of apprentices and trainees in-training within the AUR Training Package. Since 2015, the 20-24 age group has accounted for the largest proportion of apprentices and trainees in-training, at just over 40 per cent. The next largest cohort is the 25-44 year age group, which accounted for 21 per cent of apprentices in 2019, and is the only apprentice cohort that been growing over the past few years. By comparison, all other age groups have shown small declines in their share of apprentices and trainees over recent years.

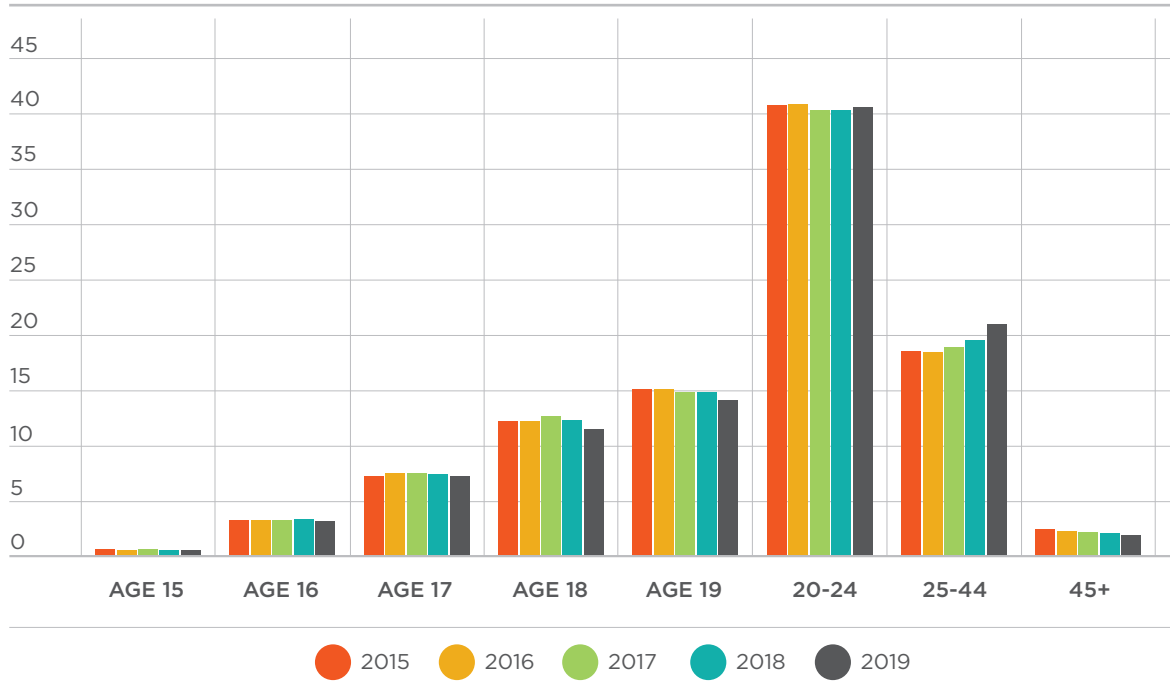
Chart 44 displays the age profile and proportion of female apprentices and trainees in-training since 2015. The 20-24 year and 25-44 year age groups also account for the largest share of female apprentices in training, however, the proportion of females apprentices in the largest group (20-24 years) has fallen from 45.1 per cent in 2016 to 40.8 per cent in 2019. Also, the proportion of female apprentices in-training in the 25-44 year age group is much higher (27.4 per cent in 2019) than that of all apprentices (males and females combined at 21 per cent). Overall, the data shows that there is a greater level of year to year volatility for female apprentices in-training within each age group, compared to male apprentices and trainees.

Chart 42: Male and Female Apprentices & Trainees In-Training, AUR Training Package



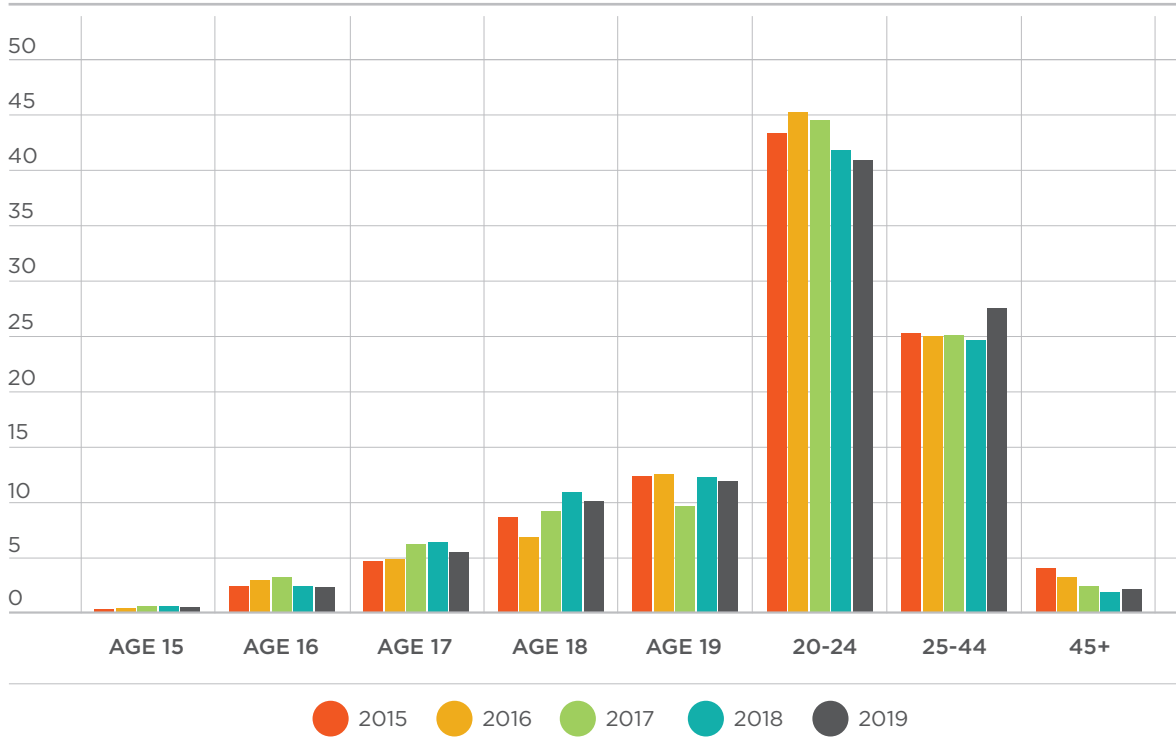
Source: NCVER

Chart 43: Apprentices and Trainees In-Training, By Age, AUR Training Package, 2015-19 (%)



Source: NCVER

Chart 44: Female Apprentices and Trainees In-Training, By Age, AUR Training Package, 2015-19 (%)



Source: NCVER

APPRENTICE AND TRAINEE COMMENCEMENTS

In terms of annual apprentice and trainee commencements, there were 11,597 automotive apprentice and trainee commencements in 2019, of which the vast majority (98.7 per cent) were in the AUR Training Package (11,446 commencements) as shown in Table 14. Overall, growth in annual apprentice and trainee commencements within the AUR Training Package has been very low over the past few years.

Table 14: Annual Commencements, Apprentices and Trainees, 2015-19

	AUR Training Package	AUM Training Package	Total
2015	10,778	159	10,937
2016	10,924	134	11,058
2017	11,415	140	11,555
2018	11,436	172	11,608
2019	11,446	151	11,597

Source NCVER

APPRENTICE COMPLETION RATES

NCVER data shows that the completion rate for automotive apprentices that commenced in 2015 was 50.9 per cent. By contrast, the completion rate for bachelor level higher education students, is 62.3 per cent. Just over one quarter (25.9 per cent) of apprentices withdrew from training within their first year, whilst around 45 per cent withdrew by the third year of training. These rates have shown little variation over the past decade.

In terms of why almost half of all automotive apprentices do not complete their training, the evidence shows most common reasons include:

- Employment related problems – i.e. interpersonal difficulties with employers or co-workers
- Not liking the work/not being suited to the work
- Low wages
- A lack of support
- Personal/family reasons
- Problems with transport

It is also the case that higher completion rates are achieved by employers with a high training capacity, who can offer variety, mentoring support, formal and structured programs, good wages and working conditions. Generally, these tend to be larger employers, although there is evidence that smaller experienced companies can also achieve good outcomes. Also, apprentices with a passion for the trade tend to have higher completion rates than those who 'fell into an apprenticeship' or were ambivalent about their decision to begin one.

TECHNOLOGY TRENDS

In response to regulatory pressure from governments around the world to reduce pollution, congestion and meet climate change objectives, automotive manufacturers have invested heavily over the past decade in new technologies centred around five key pillars. These include:

- Electric mobility
- Hydrogen technology
- Connected vehicles
- Autonomous vehicles
- Shared mobility

Whilst the COVID-19 pandemic saw a global slowdown in the development and uptake of these technologies during 2020, they are still the focus of automotive manufacturers moving forward. Automotive businesses today, however, are still experiencing financial and supply chain constraints from COVID-19, and these pressures may cause carmakers to reassess their priorities, which may mean prioritising areas with quicker payback periods such as electrification and vehicle connectivity. Consequently, areas with more challenging business cases may get pushed behind in terms of investment focus, such as shared mobility or Level 4 and 5 vehicle autonomy.

ELECTRIC VEHICLES

Electric vehicles (EV's) are arguably at the forefront of advancements in zero emissions mobility. Globally, it is forecast that the automotive industry will introduce an estimated 600 new battery-electric vehicles (BEVs) and plugin-hybrid electric vehicles (PHEVs) through to 2025¹, increasing customer choice significantly. Capital investments for BEVs are also expected to double over the next 5 years, along with associated investments in electric-grid infrastructure and charging networks by

the public and private sector. Investment in internal combustion engine (ICE) vehicles by carmakers, however, will decline, with many governments around the world planning to ban sales of ICE vehicles by 2030.

The next decade will also likely see a continuation in the rise of new EV start-up companies, such as Fisker, Lucid, Rivian, Xpeng and Nio. In turn, the growth in EV start-ups is expected to give rise to other industry players offering open-source EV platforms. These would enable upcoming EV start-ups to easily develop a new car by simply adopting an 'off-the-shelf' platform. In 2019, Volkswagen announced that its modular system for manufacturing electric vehicles (MEB platform) would be made available to other companies on an open source model, and similar commitments were made by Chinese manufacturers to place open source EV platforms on the market. These initiatives will make it easier for new entrants to join the EV race.

The biggest technological breakthrough in terms of EV's over the ensuing decade, however, is expected to be solid state batteries. Solid-state batteries have a higher energy density and can travel up to 80 per cent further than today's lithium batteries. They also weigh considerably less, have a quicker charging time and are much safer. It is estimated that it would take approximately 10 minutes to fully recharge an electric vehicle equipped with a solid-state battery, thus presenting the technology as a potential cure-all for the drawbacks facing today's electric vehicles, such as the relatively short distance travelled on a single charge as well as charging times.

Like all technologies, however, EV's are subject to a technology adoption cycle that is generally shaped in the form of a bell curve, where pricing plays a key role in the transition points across the adoption cycle. Australia is still very much at the beginning of this adoption cycle, and price remains a major barrier for mass EV uptake in Australia, given that Australia is predominantly relying on market forces to drive cost reductions in EV's. This is different to many other countries where governments directly intervene in the market by offering generous price subsidies, tax credits and many other key incentives to facilitate a more aggressive transition of their vehicle fleets to electric.

In terms of the expected uptake of EV's in Australia over the next decade, the federal Department of Industry, Energy, Science and Resources in their most recent report *Australia's Emissions Projections 2020, December 2020* estimate that electric vehicles are projected

¹ McKinsey & Company: From no mobility to future mobility: *Where COVID-19 has accelerated change*, December 15, 2020. <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/from-no-mobility-to-future-mobility-where-covid-19-has-accelerated-change>.

to comprise 26 per cent of new vehicle sales in Australia by 2030. By way of comparison, earlier modelling conducted by VACC in 2017 in their report *VACC's Response to the Victorian Government's Electric Vehicle Inquiry*, November 2017 indicates that electric vehicles are forecast to reach 20 per cent of new vehicle sales in Victoria by 2030, without government intervention.

There is now evidence that the total cost of ownership of battery electric vehicles (BEVs) over their life has reached parity with ICE vehicles in some vehicle segments. Whilst this may be the case, psychologically for consumers, it is still the upfront cost of BEVs that matters the most. Battery packs still account for just under one quarter of the cost of an electric vehicle, and it is generally accepted within industry that USD \$100 per kWh for battery packs is the price point needed for EV's to become cost-competitive with ICE vehicles, without government subsidies. In 2020, average battery costs had fallen to \$137/kWh and are forecast to reach \$100/kWh by 2023. Recently, however, it was reported that for the first time, a cost under \$100 per kWh was achieved for battery packs for electric buses in China². Whilst battery prices may vary by manufacturer and geography, the fact that this price milestone has been achieved, albeit in a limited application, makes the transition to mass EV adoption more imminent.

HYDROGEN TECHNOLOGY

Hydrogen powered vehicles have long been touted as credible future alternative to ICE vehicles. Technology to create hydrogen from renewable sources (green hydrogen) and from natural gas when emissions are captured in the conversion process (blue hydrogen) are being increasingly funded by governments around the world amid efforts to meet their carbon reduction goals. Hydrogen is also being embraced by oil and gas producers as a possible lifeline through which they can diversify.

As part of the National Hydrogen Strategy, Australian state and territory governments are currently staging hydrogen fleet and refuelling trials for forklifts, cars, shuttle and regional buses, as well as heavy trucks for mining and refineries. In its Future Fuel Strategy and \$18 billion energy plan, the Federal Government has also identified hydrogen as one of its five priority low-emissions technologies for co-investment with state governments for the deployment of hydrogen refuelling infrastructure.

Unlike battery electric vehicles which get their power from a built-in battery charged from an external power source, hydrogen vehicles produce energy internally using a fuel cell. Hydrogen stored in the vehicle's fuel tank reacts with oxygen in the fuel-cell stack through a process called reverse electrolysis, which produces electrical energy, heat and water. While heat and water are emitted through the exhaust as water vapour, the electricity either flows to the electric motor to power the vehicle directly or charges a battery that stores the energy until it's required. Hydrogen fuel cell cars can be refuelled in less than five minutes and have a similar driving range to conventional ICE vehicles.

There are currently two hydrogen car models in Australia – the Toyota Mirai sedan and Hyundai Nexo SUV, that are being trialled by various organisations, and only two hydrogen fuel cell refuelling points (Sydney and Canberra), however more public refuelling stations are being developed across the country. Due to the limited refuelling stations, hydrogen-powered cars will not be available for the public to buy for many years to come, and the current Toyota and Hyundai hydrogen cars are estimated to cost around \$100,000 each³.

The cost to refuel hydrogen cars is also a major barrier. It currently costs around AUD \$20 per kilogram to refuel a hydrogen-powered car, which equates to around AUD\$138 to fill up the Hyundai Nexo's 6.9-kilogram tank, compared to up to \$25 at a public charging station to recharge an EV. Whilst hydrogen refuelling costs are anticipated to fall over the decade, the price needs to fall to around \$2 per kilogram to be competitive with EV's.

The most promising applications for hydrogen over the next decade are considered to be in industrial manufacturing such as ammonia, steel, and chemical manufacturing. Many industry commentators also see hydrogen as a more logical fit for heavy-commercial vehicles, given that hydrogen trucks and buses that are pulling large masses need to refuel quickly. A hydrogen bus or truck could refuel with 50 kilograms of hydrogen in approximately 10 minutes, compared to much longer times to recharge an electric truck or bus. Also, batteries take up significant room and weight in such vehicles. To this extent, it is quite conceivable that by 2040 and beyond, most passenger cars and SUVs will be battery electric powered, while light and heavy commercial vehicles could run on hydrogen. Hyundai, Toyota/Hino, Kenworth, Daimler/Volvo and US start-up Nikola are all in various stages of hydrogen truck development.

² BloombergNEF: Battery Pack Prices Cited Below \$100/kWh for the First Time in 2020, While Market Average Sits at \$137/kWh, December 16, 2020. <https://about.bnef.com/blog/battery-pack-prices-cited-below-100-kwh-for-the-first-time-in-2020-while-market-average-sits-at-137-kwh/>.

³ Joshua Dowling, 2021 Toyota Mirai confirmed for Australia, 20 cars coming next year, Caradvice, <https://www.caradvice.com.au/901918/2021-toyota-mirai-confirmed-for-australia-20-cars-coming-next-year/>.

AUTOMATION

After considerable delays, 2021 will see the market deployment of Level 3 autonomy by several carmakers, including Daimler, Ford, GM, Honda, Toyota and Xpeng. The United Nation's (UN) new regulation on automated lane keeping systems is now being rolled out to at least 60 countries, hence offering carmakers the regulatory clarity needed to finally move forward.

Level 4 autonomy, however, remains a very different proposition. Making Level 4 autonomy work with full safety and reliability in every main city around the world is an enormous challenge and undertaking that is expected to take the rest of this decade to realise. In all likelihood, the financial pressures placed on carmakers from the pandemic, may force them to rely much more on technology companies to achieve this long-term goal, as shown by the recently formed partnership between Daimler and the American autonomous driving technology development company Waymo LLC.

MICRO-MOBILITY

Micro-mobility is one of the fastest growing branches of transport globally, including Australia. At its simplest, micro-mobility involves joining up different forms of transport to make journeys as quick and easy as possible. This can involve using a bicycle or electric bicycle (e-bike) or e-scooter, and mixing this with a car, public transport or ride-hailing/sharing to obtain an effective commuting solution within congested cities.

In Australia, the fear of infection caused by the COVID-19 pandemic in 2020 witnessed a major shift of people from public transport to cars, bicycles, e-bikes and e-scooters. This trend is expected to continue in 2021 and beyond, not only because COVID-19 will still be present, but also because many commuters will have become accustomed to these new alternatives, with those who bought e-bikes to travel to work unlikely to make a quick return to public transport. Globally, this has also given rise to the growth of shared micro-mobility companies, many of which have partnered with carmakers to develop micro-mobility offerings, such as Mercedes branded e-scooters or Peugeot e-bikes, to tap into this growing market.

CONNECTED VEHICLES

Once limited to luxury cars but now increasingly commonplace in mainstream vehicles, connected vehicle technology allows vehicles to exchange data cooperatively through wireless communication. A vehicle could exchange information with other vehicles and road users, road infrastructure, public transport systems, cloud based services, or with anyone that has a mobile device.

Traditionally, it has been difficult for carmakers to demonstrate the value of connected car services beyond connected navigation or infotainment streaming, as well as justifying the associated costs to consumers. However, driven by the successes of Tesla in this area, carmakers will increasingly transition to connected services where it's easier for consumers to associate price with value, such as with digital function upgrades. In addition, car connectivity is expected to become an enabler to other services like connected subscription and leasing, where it can be used to lower monthly fees according to vehicle usage patterns. Overall, this transition will be crucial in achieving increased connected car profitability as well as turning software into the main revenue generator and key point of differentiation over the long run for carmakers.

It is also expected that these changes will drive strong growth in the cybersecurity market. Currently there are only narrow standards and guidelines for specific technical procedures for securing hardware and software in vehicles, such as standards for hardware encryption or secure communication among electronic control units (ECUs). This may change soon as the UN Economic Commission for Europe has released new regulations on cybersecurity and over-the-air software updates⁴. It is also expected that there will be a strong demand for ECUs, domain control units, software functions, operating systems, and middleware. Middleware is software that provides common services and capabilities to applications outside of what's offered by the operating system, e.g. data management, application services, messaging, authentication.

⁴UNECE: Three landmark UN vehicle regulations enter into force, 05 February 2021. <https://unece.org/sustainable-development/press/three-landmark-un-vehicle-regulations-enter-force>.

RETAIL AND AFTER-MARKET SALES

The transformation to electric, connected, and autonomous vehicles in the automotive industry is also bringing visible changes to the automotive value chain, especially in terms of retail and after-market sales. The spate of dealership closures witnessed during the COVID-19 pandemic has led to an increased industry focus on on-line sales, with several carmakers including Volvo and Daimler now defining targets to sell a substantial part of their volume on-line by 2025.

EV's could be the catalyst that significantly alters the dealership network model. Encouraged by the success of Tesla, one of China's largest electric vehicle companies BYD, has recently signed an agreement to sell cars on-line in Australia through a local distributor next year. This effectively dispenses with the dealership model by supplying EV's directly from the manufacturer to the consumer with up to a 30 per cent cost saving being passed on to the consumer. Similar trends amongst other manufacturers may bring forward price parity between electric and ICE vehicles sooner than expected.

As retail sales margins have declined over time, dealerships have become increasingly reliant on revenues from vehicle servicing, finance and insurance to remain profitable. The growth in EV's, however, is expected to further erode dealership profitability given that EV's contain fewer moving parts, are generally more reliable and require less in terms of scheduled servicing than ICE vehicles. Therefore, a rise in the uptake of EVs over the decade is expected to further redefine retail and after-market sales. This may culminate in downsizing and cost-cutting, but the most innovative incumbents will transform the way they sell cars and attend to their customers' needs. This may entail a higher adoption of digital solutions that interact holistically with customers to meet their needs.

Another key development involves the move of energy companies into the electric vehicle domain. Australian energy supplier AGL in partnership with existing car subscription service Carbar, has recently launched an electric car subscription service. This service involves delivering the latest EV model to the customer's homes, the installation of home charging facilities but with the flexibility to swap, upgrade or cancel the service at any time for a weekly fee of \$299 for a Hyundai Ioniq or Nissan Leaf (as at 9 September 2020), which also includes insurance, registration, roadside assistance and carbon neutral credits⁵. To some degree, this may eliminate the barrier of paying the high upfront cost of an electric vehicle.

Irrespective of the impact of electric vehicles, there is also other evidence that the traditional dealership model may be changing over the next decade. Honda Australia is currently in the process of commencing a new fixed-price agency model as of 1 July 2021, where all customers will pay the same price for a Honda vehicle. Under the new agency model, customers will buy the cars directly from Honda Australia because it will hold the new vehicle stock rather than the dealers (who will receive a set fee for each new car sold). This represents a change from the current volume driven, low margin sales model, to a focus on higher unit profits for each vehicle sold. It is possible that other manufacturers may engage in similar business practices over the decade, with less of a pre-occupation with volume driven price discounting in a small and highly saturated vehicle market such as Australia.

⁵ Carsales.com.au: AGL to launch EV subscription service, September 9, 2020.
<https://www.carsales.com.au/editorial/details/agl-to-launch-ev-subscription-service-126122/>.

Section 5.

Industry challenges

Key Findings

- Electric vehicles are the biggest challenge facing Australia's automotive industry. Norway's experience shows that on an EV, there is an average reduction in revenue on labour hours of 25 per cent, and an average reduction in revenue on parts sold of 55 per cent. This translates into a total reduction in revenue per vehicle of 42 per cent for an automotive workshop or dealership.
- Significant capital investment is required by workshops for EV tooling and training of EV technicians. Norway's experience shows the typical EV tooling cost is around €50,000 (approx. \$77,000 AUD) and up to 10 days training for an EV technician above normal training requirements.
- Not all automotive workshops will be able to compete in the automotive service and repair market for EVs. By 2030, it is forecast that every fifth automotive workshop will exit the repair market in Norway.
- Whilst Australia's EV uptake is very gradual, ongoing technological advancements and economies of scale may bring forth a quicker than expected price advantage to EVs over ICE vehicles, and this may sway many consumers towards purchasing EVs very quickly. Such a scenario could place many automotive businesses in an exposed position.
- All automotive businesses will need to obtain as much information as possible to make an informed decision on the future opportunities and risks of participating in the ensuing EV ecosystem.
- Governments have a duty and obligation to understand the major changes and impacts that electric vehicles will have on Australia's automotive industry and broader community. This would allow for long-term planning that oversees the transition of the industry and mitigates any employment and business losses within the community.

- Recent analysis on the uptake of electric vehicles in China, Norway and the United States reveals that from the perspective of cost effectiveness, investing in electric charging stations is much more effective than subsidising consumer purchases to promote EV sales.
- There is considerable apprehension amongst consumers and businesses as to whether the Federal Government will also impose its own tax regime on low emission vehicles, on top of the state levies already being designed, i.e. 'double dipping'. If double dipping occurs, this will create a major disincentive for the purchase of electric vehicles.
- The automotive industry is in the bottom third of all industries in terms of average weekly earnings. Low wage levels cannot be dismissed as a reason for skill shortages within the industry.
- Over 70 per cent of automotive apprentices and trainees still enrol in mechanically based qualifications, and only a small percentage undertake electrical training that is more relevant towards hybrid, plug-in-hybrid and battery electric vehicles.
- The introduction of a legislative bill to establish a mandatory scheme for the sharing of technical service and repair information by vehicle manufacturers, will promote greater competition in the motor vehicle repair market. It will, however, still be a work-in-progress and subject to further challenges.
- Relationships between body repairers and insurers and the operation of the Motor Vehicle Insurance and Repair Industry Code of Conduct, are a constant source of tension. The lack of independence of vehicle assessors and disagreements over the hourly rate the repairer can charge for labour costs are on-going challenges for the sector.
- Recent landmark reforms to automotive franchising follow many years of hard work by industry stakeholders. The challenge for the automotive industry is to persevere with government to ensure that these reforms commence as quickly as possible.
- More than 750,000 vehicles reach the end of their economic or safe operating life each year. The lack of regulatory requirements for these end-of-life vehicles (ELVs) means that many ELVs are simply destroyed, dismantled, or left to rot, without any attempt to remove pollutants such as oil, batteries, and other toxic substances, to the detriment of our environment.



ELECTRIC VEHICLES

EV's are undoubtedly the biggest challenge facing Australia's automotive industry. In Section 2, it was shown that the transport sector is a major contributor to greenhouse gas emissions, accounting for around 18 per cent of Australia's total greenhouse gas emissions. EV's are the primary response of automotive manufacturers globally to reduce harmful emissions from motor vehicles, and Australia, being a signatory to the Paris Agreement, is committed towards reducing greenhouse gas emissions in the environment.

The reality, however, is that electric vehicles and internal combustion engine vehicles (ICEs) will exist in parallel in Australia for many years to come, given that Australia's car fleet is not expected to be fully electrified until 2050. Despite this long time horizon, the shift to EV's will pose major challenges for the automotive industry, with both positive and negative implications for automotive businesses and governments.

An insight into the future effects of EV's on the automotive industry and broader community can be gained by an examination of Norway, a country that is well advanced on the path of electric mobility, with the highest number of EVs per capita in the world, and with over 50 per cent of its vehicle fleet being electric. Recent collaborations and intelligence sharing between the Motor Trades Association of Australia (MTAA) and the Norwegian Automotive Association (NAA) provide critical insights into Norway's transition to electric vehicles and the associated impacts on its automotive industry. Norway's experiences stand as a useful indicator of what can be expected for Australia over the next decade and beyond.

Below is a summary of how the uptake of EV's has affected Norway's automotive industry to date, according to data provided by the NAA.

Impact on automotive workshops

- There is a significant decrease in revenue for automotive workshops from EVs, as there are very few moving parts and serviceable items in an EV beyond tyres and brakes. An analysis of over 100,000 battery electric vehicles in Norway shows that compared to an ICE vehicle, on an EV there is an average reduction in revenue on labour hours for repair and maintenance of 25 per cent, and an average reduction in revenue on parts sold of 55 per cent. This translates into a total reduction in revenue per vehicle of 42 per cent for an automotive workshop or dealership

- Significant capital investment is required by workshops for EV tooling and training of EV technicians. The typical EV tooling cost is around €50,000 (approx. \$77,000 AUD) and up to 10 days training for an EV technician is necessary above the normal training requirements
- Most of the service and repair work for EV's has remained with the dealer groups for the first five years. Many independent automotive repair workshops in Norway have invested in tooling and skills training to join the EV repair market, and there are now independent workshops in Norway that work exclusively on EVs
- Two classes of automotive technicians have emerged in Norway – older mechanics that work exclusively on ICE vehicles, and newer EV trained technicians. There is little evidence that older mechanics want to transition into EV related work. It is also not clear if EVs are attracting any more or less people to work in the industry
- In terms of EV training, it was also found that trade teachers in Norway are reluctant to change from teaching ICE skills to EV skills. This could also be an issue for Australia, and therefore this must be anticipated and planned for to ensure that existing skill shortages are not made worse
- Not all automotive workshops are able to compete in the automotive service and repair market. By 2030, it is forecast that every fifth automotive workshop will exit the repair market in Norway.

Impact on car dealerships

- In addition to the workshop investments in tooling and training, car dealerships are required to make significant capital expenditures on electric charging stations. Typically for a dealership in Norway, this investment includes: a fast charger (100kw DC with 22 kw AC) at a cost of €40,000; five double 11kw AC chargers at a cost of €3,000 each; three normal home chargers at €750 each; installation of the chargers at around €25,000, and extra supply of electricity at around €25,000. Overall, this amounts to an investment of over €107,000 (around \$165,000 AUD)
- Dealer profit margins on new EV sales in Norway are similar to that of ICE vehicles (around 2.5 per cent), which is also similar to Australia

- Dealers have sought to bring more work into their dealerships through the provision of tyres, windscreens, vehicle body repairs and other services to maintain profitability in the face of reduced service and repair incomes. Insurance premiums are also higher for EV's due to the cost of the batteries, and even a small accident can render an EV as an economic write-off
- Larger dealer groups have grown to dominate the market in Norway, whilst the number of smaller dealers has declined. As in the case for workshops, every fifth car dealer in Norway is forecast to exit the market by 2030
- Rural car dealers in Norway have tended to focus on selling and repairing used internal combustion engine vehicles, as customers in these areas still require petrol and diesel cars
- In Norway's experience, there is little in the way of brand loyalty in regard to EVs. Consumers switch EV brands regularly based on the cost of the EV, the vehicle range, battery life and other factors.

Impact on fuel retailing

- Traditional fuel retailers in Norway have adapted to include EV chargers within their offerings. They have also developed their space to accommodate coffee shops, restaurants and even places for people to work on their laptops, thus becoming destinations in their own right.

Implications for Australia's automotive industry

The industry adjustment experienced by Norway reflects what can be expected for Australia's automotive industry as our share of EVs on road rises in the ensuing decades. Inevitably, there will be financial losses and businesses closures across the industry. Industry modelling on the impact of EVs conducted by VACC in 2018, shows that a 20 per cent uptake of EVs by 2030 in Victoria alone, would result in a projected loss of around 2,000 automotive businesses and a displacement of 5,900 people¹.

Earlier analysis in Section 4 showed that Australian automotive businesses regard EVs as the least important issue for their businesses over the next few years. Whilst in the current policy environment, Australia's EV uptake is very gradual and therefore such business sentiment may be understandable, it also harbours a false sense of security. Ongoing technological advancements and economies of scale may bring forth a quicker than expected price advantage to EVs over ICE vehicles, and this may sway many consumers towards purchasing EVs more quickly than

anticipated. Such a scenario could place many automotive businesses in an exposed position unexpectedly.

Given that the costs for EV tooling, training, and charging infrastructure are significant, it would be prudent for automotive businesses to start planning and preparing from now, their respective strategies and business models for the onset of electric mobility this decade. Norway's experience shows that businesses need to be proactive in determining where their revenue streams will come from in future, along with the new business opportunities which EVs will bring. For dealerships this could include:

- Offering special services and concepts for EVs
- Extending the warranty and service included on used cars
- Several ways to offer mobility and financing
- Developing telematic related services on new platforms
- Finding new business partners or building relationships with larger dealer groups
- Developing services that increase customer loyalty

Essentially, all automotive businesses will need to obtain as much information as possible to make an informed decision on the future opportunities and risks of participating in the ensuing EV ecosystem.

Role of government in industry adjustment to electric vehicles

A key factor that is often overlooked in the transition towards electric vehicles is the role of government in the industry adjustment process. Governments have a duty and obligation to understand the major changes and impacts that electric vehicles will have on Australia's automotive industry and broader community. This would allow for long-term planning that oversees the transition of the industry and mitigates any employment and business losses within the community.

For this to occur, there must be an early and mutual interaction between government, automotive associations, and other industry stakeholders, where industry intelligence concerning the impact of EV's is shared and appropriate policy measures are developed in agreement with affected parties. What would be detrimental to industry are unexpected lurches in government policy that create uncertainty for automotive businesses and undermine industry's faith in the transition process.

¹ VACC: Response to the Victorian Government's Electric Vehicle Inquiry, November 2017. <https://vacc.com.au/Portals/0/VACC%20EV%20submission%20Nov%20202017.pdf>

It is also important that the Federal Government provide leadership and certainty to businesses and the broader community on road user charging. Currently we are witnessing the development of a patchwork of state-based levies on battery electric cars, plug-in hybrids and other low emission vehicles in response to rapidly falling revenue from fuel excise. There is, however, considerable apprehension amongst consumers and businesses as to whether the Federal Government will also impose its own tax regime on low emission vehicles, on top of the state levies already being designed, i.e. 'double dipping'.

If such double-dipping occurs, this will create a major disincentive for the purchase of electric vehicles, as there would be the perception amongst consumers that they will be paying significantly more to use roads. This is where the Federal Government must show leadership by developing a nationally coherent taxation framework for road usage, that provides certainty for the community and addresses the declining revenue from fuel excise.

In terms of the debate surrounding the role of government in stimulating the electric vehicle market, recent analysis on the uptake of electric vehicles in China, Norway and the United States reveals that from the perspective of cost effectiveness, investing in electric charging stations is much more effective than subsidising consumer purchases to promote EV sales. In the case of China, investing in charging stations was found to be nearly four times as effective as subsidising consumer purchases, whilst in the United States and Norway, subsidising charging stations was more than twice as effective as subsidising consumer purchases on a per dollar basis². For Australia, these findings lend support to recent investments by the Federal Government through the Clean Energy Finance Corporation to better integrate EV charging stations into Australia's electricity grid, as well as the direct investment of state and territory governments in EV charging infrastructure.

Skill Shortages

Section 4 outlined the gravity of the skills crisis afflicting Australia's automotive industry, with a current skilled labour deficit of 31,143 positions nationally, that is forecast to rise to 38,700 positions by 2022/23. Section 4 also showed that structural change within the industry through a redistribution of skilled labour from small and medium size businesses to sole trader start-up businesses, is a key contributor to this crisis.

The problem, however, is much wider than this, as the industry has struggled to attract and retain skilled labour over the past two decades.

Automotive trades have always suffered from negative public perceptions, such as the work being considered as 'dirty' or hard, with poor working conditions, and despite the pristine work environment often found in modern car dealerships, such stigmatisation has been difficult to overcome and has resulted in a less than adequate supply of new entrants to the industry. The irony, however, is that such perceptions can also similarly apply to other trades such as plumbing, electrical, building and construction and mining industry trades. Many of these trades are also afflicted by skill shortages, yet the difference is they appear to be more successful in attracting and retaining skilled labour than the automotive industry.

The issue of remuneration is not widely accepted by the automotive industry as being a significant factor for its problems in attracting and retaining labour. According to ABS data however, full-time adult average weekly ordinary time earnings for automotive trade workers, are almost 30 per cent below the national average³. Also, in terms of comparisons with like industries, automotive trade wages are 23 per cent below that of the construction industry, 17.6 per cent below manufacturing, and are half that of the mining industry.

Despite the automotive industry being in the bottom third of all industries in terms of average weekly earnings, in Section 4 Chart 40, it was shown that automotive business owners consider low wage levels to be amongst the least important reasons for skill shortages within the industry. The reality is that whilst industry wage levels are not the only factor, in a competitive labour market they cannot be dismissed so easily. However, it is also a complex matter, where, as highlighted in Section 1, many small business owners are constrained in their capacity to raise prices on vehicle repairs to consumers, to pay for higher wage levels.

Furthermore, even if employers were to lift wages significantly, in the absence of any restrictions on sole traders or 'back-yard' operators, in all likelihood they would be priced out of the market by these operators that have lower business costs and lower operating margins. Nevertheless, the wage issue is one that the industry cannot continue to ignore and needs to come to terms with.

² World Bank Group, The Role of Government in the Market for Electric Vehicles, Evidence from China, Policy Research Working Paper 9359, August 2020. <https://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-9359>

³ Australian Bureau of Statistics, Average Weekly Earnings, Australia, November 2020.

Other underlying causes of skill shortages in the automotive industry arise from:

- The segmentation of the industry into large corporate businesses and much smaller independent operators which is having an impact on the kind of workforce needed and skills in demand. There is also a further segmentation of skills relating to modern vehicle technologies as well as vehicle brands. These changes are not readily understood or promoted among young people looking for new career opportunities
- The high apprentice attrition rate during the training period – only half of automotive apprentices are completing trade training and attaining the qualifications necessary for highly skilled/technical work in the trades
- Better careers being offered in other industries/sectors such as the mining, construction and resource sectors which continue to attract skilled automotive labour, especially in Western Australia and Queensland to the detriment of local automotive businesses
- A failure in the delivery of automotive training to ensure that the quality and relevance of training provision is keeping up with rapidly changing skills needs in the workforce
- An insufficient level of activity by the existing trade workforce in upgrading skills once initial trade qualifications have been attained. A key factor in this is the lack of a financial incentive for workers to upgrade their skills to a Certificate IV level qualification, given that in all probability they won't receive a higher level of remuneration for doing so
- Reduced inflows of skilled migration due to COVID-19, and in recent periods, increases in financial costs and administrative red-tape and constraints on businesses seeking to sponsor skilled migrants in Australia
- A combination of all the above.

Unpacking some of the above issues is a major project in itself, however some key observations help to shed light on these issues. Firstly, the segmentation of the industry into large corporates and smaller independent operators has led to a different diffusion of skills and skill requirements within each group. Dealerships typically have a workforce structure of one qualified tradesperson and up to four apprentices, with the complex vehicle diagnostic fault finding, electrical and warranty repair work being undertaken by the qualified tradesperson, and the more basic routine vehicle servicing being conducted by the apprentices, all generally working

on one vehicle marque. This system, whilst cost efficient from a business perspective, only allows for a very narrow transfer of skills.

Smaller independent workshops, however, generally conduct more out-of-warranty vehicle servicing and repairs on a multitude of vehicle brands, types, and technologies, thus requiring technicians with a broader skillset and experience. Hence, many mechanics that have become qualified under a dealership model are reported to struggle when moving to work for smaller independent workshops. This leads to claims of a degradation in skills amongst qualified mechanics from this small business cohort, thus adding a further dimension to the issue of skill shortages. Some of this sentiment carries over to apprentices, with many small business owners being very picky about choosing apprentices, and only hiring those that are deemed to be most competent as they generally don't have the time to teach them the practical skills.

When it comes to the actual delivery of automotive skills training, it is no secret that the sector is underfunded to properly deliver automotive courses. This is due to a national decline in funding across the entire vocational training sector from \$7.6 billion in 2012 to \$6.1 billion in 2019. While part of this decline reflects some issues with the former VET-FEE-HELP scheme, these funding cuts have resulted in reduced expenditure on training aids, machinery and equipment which have hampered the delivery of quality automotive training or seen not-for-profit training providers deliver automotive training at a loss in order to service the industry.

Regrettably, these cost pressures have meant that an increased amount of automotive training by TAFEs is now conducted virtually via simulators, rather than with actual vehicles. Unlike with a real vehicle where there is the potential for costly errors to be made, training via simulations removes the risks with engine management systems and in assessing and repairing vehicle faults. It is claimed that this reduction in hands-on training with real vehicles has reduced the skill base of apprentices and trainees, with many workshops, especially those that specialise in expensive European vehicle brands, being very hesitant in hiring apprentices to work on their customers vehicles in case they make an expensive mistake. Also, for many students, the COVID-19 pandemic has resulted in a large proportion of training being delivered on-line during 2020, and in some cases, a year's worth of practical classroom training being effectively lost.

It is also the case that over 70 per cent of automotive apprentices and trainees still enrol in mechanically based qualifications, and only a small percentage undertake electrical training that is conceptually more difficult, however perhaps becoming increasingly more relevant given the trends towards hybrid, plug-in-hybrid and battery electric vehicles. There is also little evidence that mechanically trained apprentices have the desire to upskill into the diagnosis and repair of these vehicle technologies or vehicle electrical systems more generally. Literacy and numeracy remains a problem for many apprentices and trainees, and whilst schooling is an issue, TAFEs have a role to play in this space, however they are not funded adequately to do so, and do not place standards for literacy and numeracy into training packages. Furthermore, literacy and numeracy is not measured, nor regulated.

There has also been a lack of administrative flexibility within training packages in incorporating new information as needed. Whilst training packages are supposed to be designed in consultation with industry to reflect industry requirements, reports are that this has been hampered by bureaucracy, and poor design in the Australian industry skills advisory process.

Access to Repair Information

For the past decade, the automotive maintenance and repair sector has lobbied for more equitable access to manufacturer technical repair information for independent vehicle repairers. The week of the 24 March 2021 saw the introduction of a legislative bill into the Australian Parliament, to establish a mandatory scheme for the sharing of technical service and repair information by vehicle manufacturers and other data providers. The bill details the creation of a motor vehicle service and repair information scheme, scheme rules and a scheme adviser that will operate the Scheme.

A data provider may be a vehicle manufacturer, information owner, or licensee. This could include an Australian subsidiary of an overseas vehicle manufacturer, an affiliated car dealership, or a data aggregator who sells service and repair information in their own right.

In summary, the scheme imposes obligations on data providers to:

- Offer to supply information used for conducting diagnostic, service or repair activities in relation to certain vehicles to all Australian repairers and RTOs
- Charge no more than the fair market value for the information; and

- Supply scheme information (immediately in most circumstances) once the repairer has paid the agreed price
- Failure to comply with these main obligations can attract a maximum pecuniary penalty of \$10 million for a body corporate and \$500,000 for other persons.

Data providers also have to:

- Publish details of scheme offers on the internet and notify the scheme adviser of certain matters, to provide transparency about the operation of the scheme
- Restrict access to safety and security information to those who meet specified access criteria and keep records regarding access to security information;
- Protect sensitive personal information collected under the scheme; and
- Pay compensation to any third parties that hold copyright in relation to scheme information for the supply of that information.

The role of scheme adviser includes facilitating dispute resolution and sharing of information about the scheme and reporting to the ACCC and the relevant Minister about the operation of the scheme. The intent is for five peak national automotive bodies to form an entity to become the Scheme Adviser who will operationalise the legislation. These include:

- Federal Chamber of Automotive Industries (FCAI)
- Motor Trades Association of Australia (MTAA)
- Australian Automotive Aftermarket Association (AAAA)
- Australian Automotive Dealers Association (AADA), and
- Australian Automobile Association (AAA)

As the bill progresses through Parliament, attention will turn to the development of scheme rules, oversight of the creation of the scheme adviser entity, and detailing arrangements for a one-off government grant to assist with the bodies' establishment. It is anticipated that the bill will progress through the Australian Parliament with bipartisan support and come into effect on 1 July 2022.

Whilst the scheme is a significant achievement that will promote greater competition in the Australian motor vehicle repair market and increased choice and price competition for consumers, it will be a work-in-progress and will not be without its challenges.

A key shortcoming of the scheme is that it does not include two or three wheeled vehicles, farm, construction or heavy vehicles, motor homes or buses. Whilst a rule-making power has been included to enable other vehicle types to be brought into the scheme in the future, this would be a lengthy and convoluted process, as it would be subject to appropriate consultation and regulatory impact assessment processes being undertaken.

Also, the scheme information does not include training materials prepared for or on behalf of a manufacturer (or related bodies corporate) to train their own repairers, those in affiliated workshops or enrolled in a course they provide or sponsor. Whilst a data provider may make its training materials available for sale if it wishes to do so, it is at their discretion to provide these materials as they are not mandated by the provisions of the scheme. Telematics, access to electronic logbooks for the purpose of updating the service record and information relating to the automated driving system in an automated vehicle, that is, SAE level 3 or greater, are also excluded under the scheme rules.

A further issue in regard to the supply of vehicle technical information under the scheme relates to registered training organisations. Under the current provisions of training, RTO's do not conduct extensive training in vehicle diagnostics, service or repair activities. In addition to this, they may not have the resources to purchase these materials and upskill their trainers to provide this training to students.

Finally, there is also the cost of compliance with the scheme and the Treasury has assessed the annual regulatory burden on businesses to be \$1.509 million. In addition, the scheme advisory body, consisting of a number of stakeholders, would need to be committed to the Scheme to ensure its operational success.

Whilst there are many challenges ahead for the operation of the scheme, these challenges are outweighed by the potential benefits of the scheme. These benefits include that existing protections in the Australian Consumer Law (ACL) and the Competition and Consumer Act (CCA) will also apply to the terms and conditions imposed by data providers. For example, the ACL provides protections against the inclusion of unfair contract terms in standard form contracts with small businesses. The CCA also prohibits exclusive dealing, that is, where a supplier refuses to supply goods and services unless the purchaser agrees not to buy from a competitor, if it has the effect of substantially lessening competition in the relevant market.

Ultimately, the scheme removes a barrier to participation in the vehicle service and repair market and is expected to increase consumer choice of repairer. It will also help to protect the safety of repairers performing service and repair activities by ensuring they have access to the information they need to do their job safely. It will also ensure vehicle dismantlers have access to the information they need to safely remove hazardous vehicle components such as computers and flammable substances to improve workplace safety and reduce the risk of fires and environmental contamination.

Motor Vehicle Insurance and Repair Industry Code of Conduct (MVIRI)

The vehicle body repair sector has endured many challenges over the past decade, yet despite a number of inquiries at both federal and state level, including an updated Motor Vehicle Insurance and Repairer Industry Code of Conduct (the Code), relationships between body repairers and insurers and the operation of the Code, remain a constant source of tension.

In the first instance, conflicts arise over disagreements between body repairers and insurers on the actual tasks required to complete a repair. A key factor in the negotiation process is the role of the assessor. Most assessors are employed directly by insurance companies, and hence, have a vested interest in controlling both the parameters of vehicle repairs and minimising costs on behalf of the insurer. Many body repairers consider this lack of independence of vehicle assessors as a conflict of interest, and this has given rise to growing tensions between the parties over recent years. Ideally, in terms of assessment tasks, there should be a separation between assessors and insurance companies.

The other key point of disagreement between the two stakeholders remains over the appropriate hourly rate the repairer can charge for labour costs. It is alleged that insurance companies seek to control repair costs by reducing hourly labour rates paid on vehicle repairs and presenting these reduced estimates to vehicle repairers on a 'take it or leave it' basis. Direct evidence which shows an unwillingness to negotiate on the part of the assessor would be consistent with an abuse of market power and sufficient grounds for further investigation at a Commonwealth level.

In terms of the Code itself, whilst the Code proposes best industry practice and has been useful in improving the visibility of insurer conduct, it has several limitations that impede its proper functioning. Firstly, the Code is voluntary, with New South Wales being the only state to mandate the Code. This dichotomy limits the coherence and effectiveness of the Code, with many industry stakeholders arguing that the Code should be legislated in all jurisdictions.

Other shortcomings include that there are no financial penalties for breaches of the Code, even where legislated. Furthermore, it is insurers that decide in the first instance whether they have breached the Code, which also represents a conflict of interest. The Code also contains many nebulous terms, such as insurers are required to 'consider estimates in a fair and transparent manner, and will not refuse to consider an estimate on unreasonable or capricious grounds'. Many of these terms are unclear and open to wide interpretation. Additionally, the dispute resolution process contained within the Code can be very costly for small businesses, whilst outcomes can be non-binding in regard to future behaviour.

Whilst the internal dispute resolution (IDR) departments of insurers are regulated by ASIC regulatory guidelines (RG 165 and from 5 October 2021 RG271), there is also evidence that insurer IDR departments lack transparency in consumer/repairer and insurer disputes, despite this being their main objective. Given that a dispute is predominantly between an assessor and a repairer in relation to costs or methods of repairs, assessors that operate outside their scope of authority to deal with complaints when they are the source of the complaint, is also inherently a conflict of interest.

Automotive Franchising

Following on from amendments made to the Franchise Code of Conduct that commenced in June 2020, the Federal Government on 12 March 2021 announced its intention to make further reforms for the automotive industry which aim to address the significant power imbalance between dealers and multi-national car companies. In summary, these reforms include:

- Dealers are to get better protection under the Franchising Code
- Agency Agreements are to be covered by Franchising Code; and
- That increased penalties and mandatory principles are to be established.

These announcements are welcome news for the automotive industry and are in addition to other proposed changes scheduled to be made to the franchising code later in 2021. Importantly these new reforms include:

- Increased available penalties - a fine of up to \$10 million could be given to international car companies that undertake systemic breaches under the Franchising Code, including unilaterally changing contracts, poor compensation and renegeing on warranties. The Government indicated that strengthening penalties for wilful, egregious and systemic breaches of the Franchising Code by large and profitable multinational companies will act as a strong deterrent to this kind of conduct
- New mandatory principles - existing voluntary principles will be made compulsory and a new mandatory automotive code will be strongly considered, following consultation. This will establish best practice and address concerns multi-national manufacturers won't follow voluntary principles
- Ensuring the Franchising Code keeps pace with changes to business practice by explicitly recognising that dealers operating as a manufacturer's agent in relation to new vehicle sales would still gain the protections afforded by the Franchising Code.

In addition, the Federal Government has committed to working further with the automotive industry to consult on:

- Ensuring appropriate protections for automotive dealerships from unfair contract terms in their agreements with manufacturers
- Options to achieve mandatory binding arbitration for automotive franchisees, to address power imbalance when there is a dispute; and
- The merits of a standalone automotive code.

These represent landmark reforms for the automotive industry and their accomplishment follows many years of hard work by industry stakeholders. At this stage there is no published commencement date for these reforms, and the challenge for the automotive industry is to persevere with government to ensure that these reforms commence as quickly as possible, ideally from 1 July 2021. Franchisors should also start updating their franchise agreements and disclosure documents to ensure they are operating their network as per the most recent version of the Franchise Code.

Management of End-of-life Vehicles

In Australia, more than 750,000 vehicles reach the end of their economic or safe operating life each year. Very few of these end-of-life vehicles (ELVs) are retired through the formal process of surrendering their registration, with the registration on most of these vehicles simply being allowed to lapse thus leaving their status largely unknown.

The fact that there is no regulatory oversight of a vehicle's full life cycle, nor a framework that supports the environmentally sound, legal destruction and recycling of vehicles, has significant implications for both the automotive industry and wider community. The lack of regulatory requirements means that many ELVs are simply destroyed, dismantled, or left to rot, without any attempt to remove pollutants such as oil, batteries, and other toxic substances, to the detriment of waterways and the environment.

Furthermore, the absence of a formal ELV scheme also contributes to vehicle crime through 'theft for scrap' and 'theft for parts' rackets. It is estimated that such criminal activity accounts for around 50 per cent of stolen vehicle costs per annum, according to the National Motor Vehicle Theft Reduction Council⁴. Although some regulations exist to monitor businesses, which receive parts or scrap for money, it appears that the regulations are either limited in scope, lightly enforced, or both.

With more vehicles entering the market each year, these issues are only expected to get worse. The material composition of these vehicles has increasing proportions of valuable materials (particularly metals other than steel and aluminium) and plastics which should either be recovered or disposed of appropriately. Australia is effectively lagging much of the developed world in this area, with Japan, the European Union and many other countries already possessing regulatory frameworks for the proper disposal of ELVs. The UK provides one example, where cradle to grave oversight requires a Certificate of Destruction from an Approved Treatment Facility (ATF) before the owner's obligations regarding a vehicle are discharged. Each ATF must meet high standards for environmental disposal of waste.

There is an emerging global movement towards Product Stewardship, where manufacturers take some responsibility for the ultimate disposal of a product. Australia has taken a first step through the Product Stewardship Act. While batteries, oils and tyres are covered, complete motor vehicles are not included.

Ultimately, there is an opportunity in Australia for the development of a set of national principles which can be adopted by jurisdictions to oversee the disposal of ELV's. Whilst it may be difficult to introduce a fully integrated scheme simultaneously across all jurisdictions, having national principles will facilitate consistency and minimise the opportunity for cross-jurisdictional loopholes to be exploited. The development of these principles along with oversight of the ELV destruction process through an accredited recycling/treatment facility, are supported by the automotive industry.

⁴ Austroads, Better Management of End-of-Life-Vehicles, Research Report AP-R563-18.

Section 6.

State and territory snapshots



NEW SOUTH WALES AND ACT

In 2019/20, there were 21,535 registered automotive businesses in NSW, employing 104,079 people in aggregate (Table 15). This represents an increase in industry employment of 1,150 people or 1.1 per cent over the previous year, and a growth of 201 businesses. At the time of writing, data for the full 2020/21 financial year was not available, however, year-to-date estimates for 2020/21 (as at Feb 2021) show industry employment at 109,163 people.

Table 15: Automotive Industry Summary Snapshot, NSW & ACT, 2019-20

	NSW	ACT
Industry employment	104,079 people	3,506 people
Motor vehicle fleet – Jan 2020	5,779,039 vehicles	311,048 vehicles
Average age of vehicle fleet	9.7 years	9.5 years
No. of vehicles scrapped between 2019 and 2020	262,979	13,874
Number of automotive businesses as at June 2020	21,535	575
Industry contribution to Gross State Product GSP (\$)	\$12.47 billion	\$826.35 million

This employment increase of approximately 5,000 people, is observed within the automotive repair and maintenance sector. The 2020/21 estimates, however, are based on three quarters of data and hence must be used with caution. The contribution of the automotive industry to the Gross State Product (GSP) of New South Wales is estimated at \$12.47 billion.

For the Australian Capital Territory (ACT), automotive industry employment is estimated at 3,506 people in 2019/20, a decrease of 375 people over the previous year. Year-to-date estimates for 2020/21 show industry employment to be at 3,286, a further net reduction of 233 people within the industry, with motor vehicle retailing being the only sector to record employment growth. The contribution of the automotive industry to the ACT economy in 2019/20 is estimated at \$826.35 million.

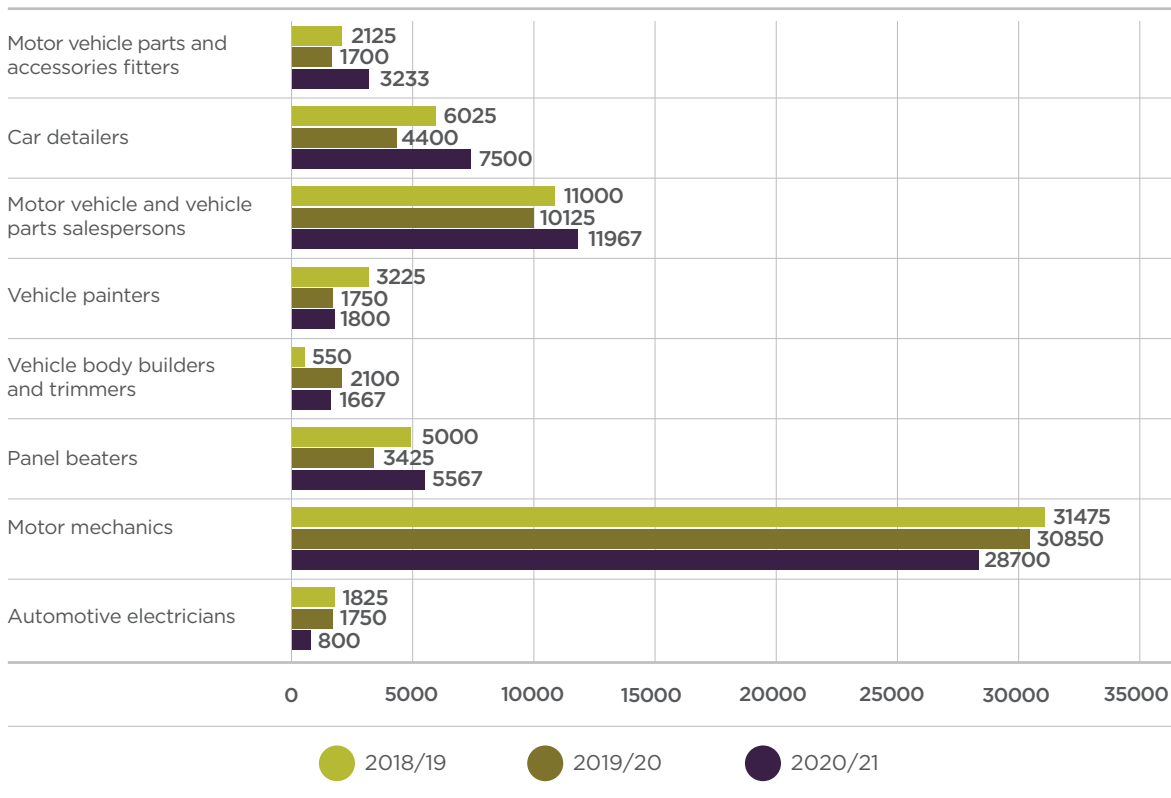
For NSW, data on employment by occupation (Chart 44) shows a declining trend in employment

of motor mechanics and automotive electricians since 2018/19, whilst fluctuating employment levels are observed across most other automotive occupations. NSW also experienced a net growth of 201 automotive businesses in 2019/20 compared to the previous year (Table 16), and this increase was largely driven by growth in sole trader businesses within the automotive maintenance and repair sector.

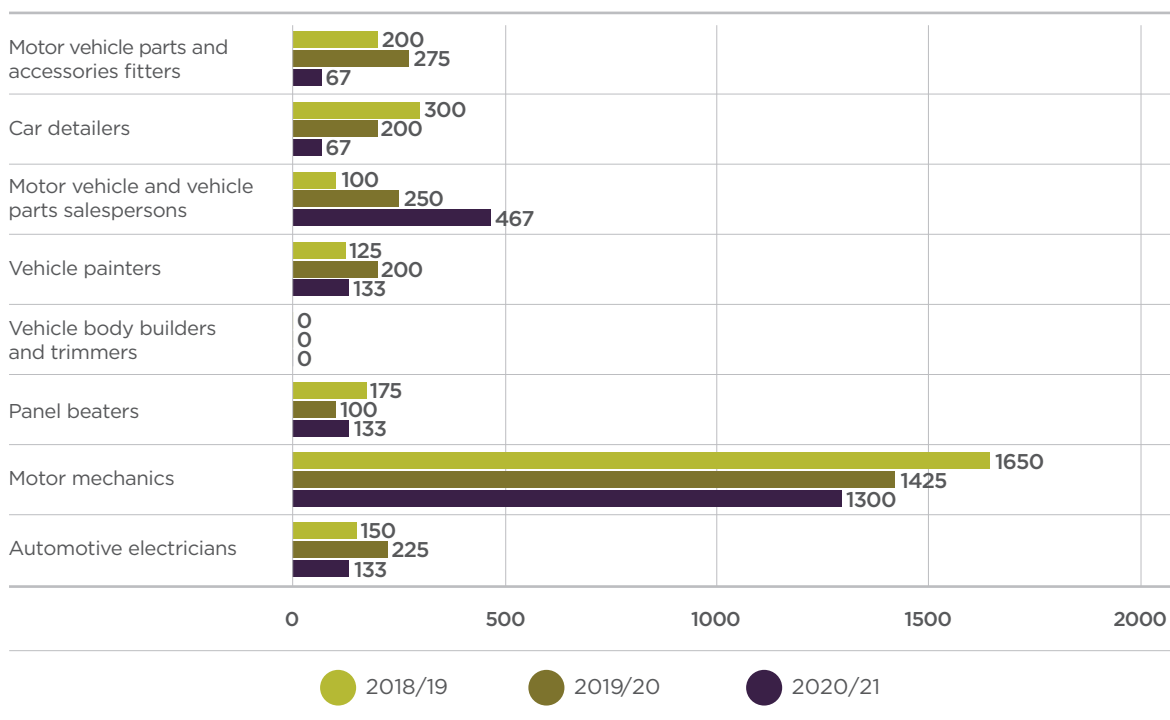
Like NSW, ACT exhibited a declining trend in employment of motor mechanics, with trend declines also observed in the employment of motor vehicle parts and accessories fitters, as well as car detailers (Chart 45). The only occupation to record consecutive yearly growth since 2018/19 was motor vehicle and vehicle parts salespersons.

The ACT also experienced a small net decrease of 29 automotive businesses in 2019/20 over the previous year, and this decrease was mainly concentrated in the automotive repair and maintenance sector.

Chart 44a: Number Employed in Key Occupations, NSW



Source: ABS data. Note: estimates for 2020/21 contain only three quarters of data, up to Feb Qtr 2021.

Chart 45: Number Employed in Key Occupations, ACT

Source: ABS data. Note: estimates for 2020/21 contain only three quarters of data, to Feb Qtr 2021.

Table 16: Automotive Industry Sector Profile, NSW

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	7,801	782	-17
Motor vehicle and parts wholesaling	7,076	1,699	+32
Motor vehicle retailing	22,144	1,594	-27
Motor vehicle parts and tyre retailing	7,961	1,268	-5
Fuel retailing	9,039	1,474	-2
Automotive repair and maintenance	41,561	12,027	+173
Passenger car rental and hiring	2,114	633	+29
Bicycle retailing	1,216	267	+10
Marine equipment retailing	947	249	+5
Outdoor power equipment retailing	1,255	370	+2
Towing services	948	767	-1
Agricultural machinery retail and repair	2,017	405	+2
Total	104,079	21,535	+201

Source: ABS data and VACC modelled estimates

Table 17: Automotive Industry Sector Profile, ACT

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	0	12	+1
Motor vehicle and parts wholesaling	116	18	-3
Motor vehicle retailing	769	39	-7
Motor vehicle parts and tyre retailing	193	38	1
Fuel retailing	145	20	-7
Automotive repair and maintenance	2064	349	-21
Passenger car rental and hiring	24	32	+6
Bicycle retailing	100	22	+1
Marine equipment retailing	0	0	0
Outdoor power equipment retailing	47	13	0
Towing services	36	30	0
Agricultural machinery retail and repair	12	2	0
Total	3,506	575	-29

Source: ABS data and VACC modelled estimates

Apprentice Training

National automotive qualifications are embodied within two Training Packages, the Automotive Retail, Service and Repair (AUR) Training Package, and the Automotive Manufacturing (AUM) Training Package, with the AUR Training Package accounting for the vast bulk of student enrolments both nationally and at state/territory level.

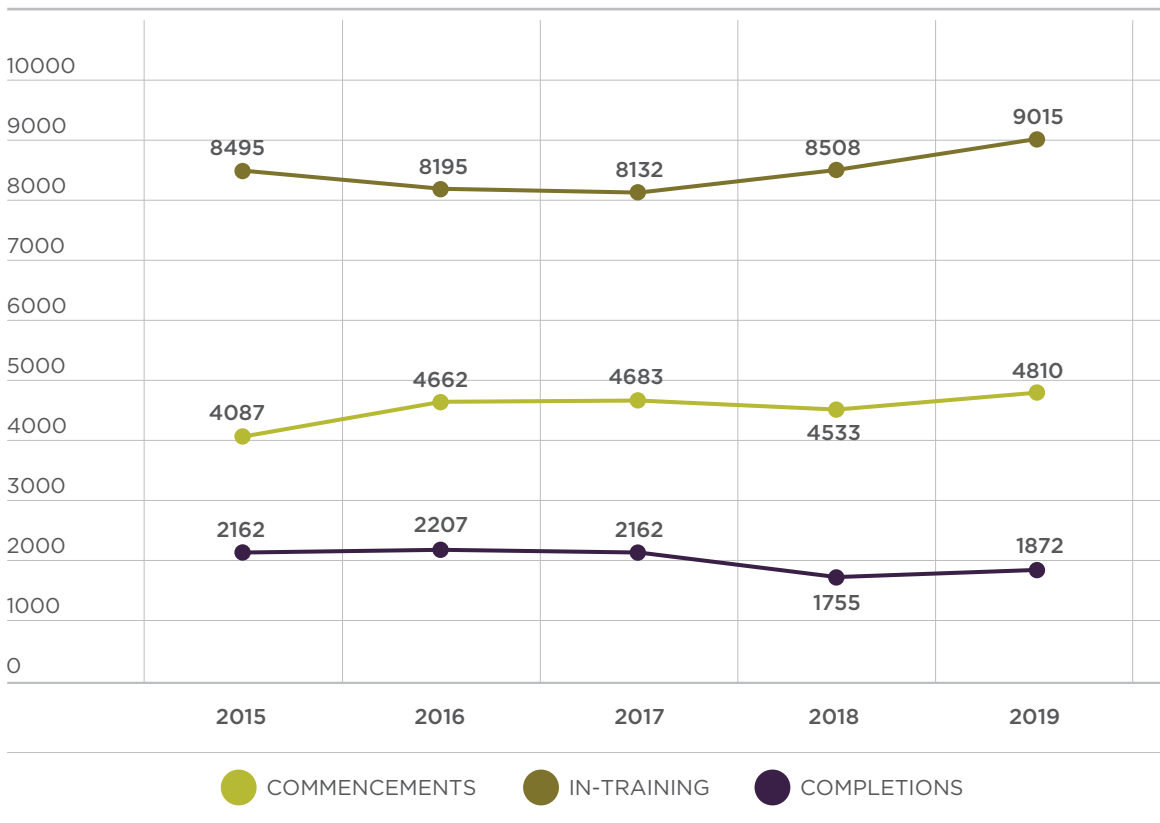
Charts 46 to 48 display the number of automotive apprentices and trainees in-training over the past five years in both Training Packages in NSW and ACT, along with annual commencements and completions.

In NSW, there were 9,015 apprentices and trainees in-training within the AUR Training Package in

2019, and this represents the highest number recorded over the past five years. The number of apprentices and trainees commencing every year in NSW has remained relatively stable over the period, whilst training cancellations have shown a small decrease since 2017. Training data for the full 2020 year was not available at the time of writing. In terms of the AUM Training Package, there were 137 apprentices and trainees in-training in NSW in 2019, with little variation in student numbers shown over the past five years.

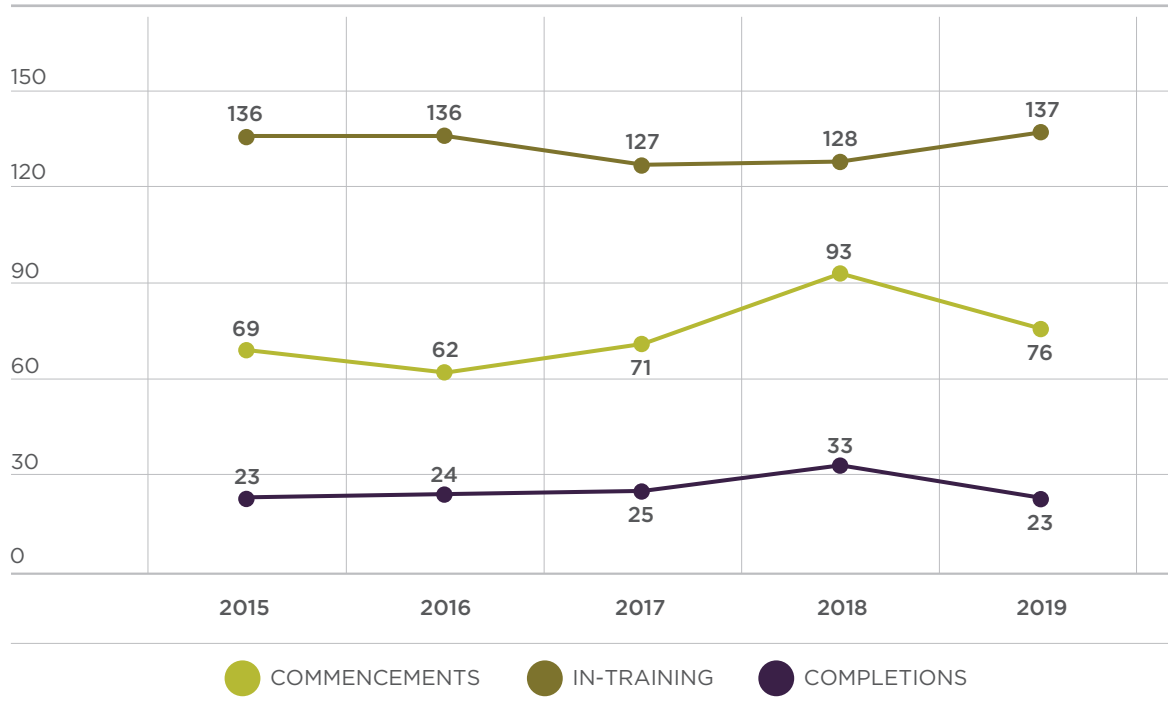
For the ACT, there were 390 apprentices and trainees in-training in the AUR Training Package in 2019, a decline of 37 students or 8.7 per cent over 2018. Despite this reduction, training numbers have remained relatively flat since 2015.

Chart 46: Apprentices and trainees, AUR Training Package, NSW



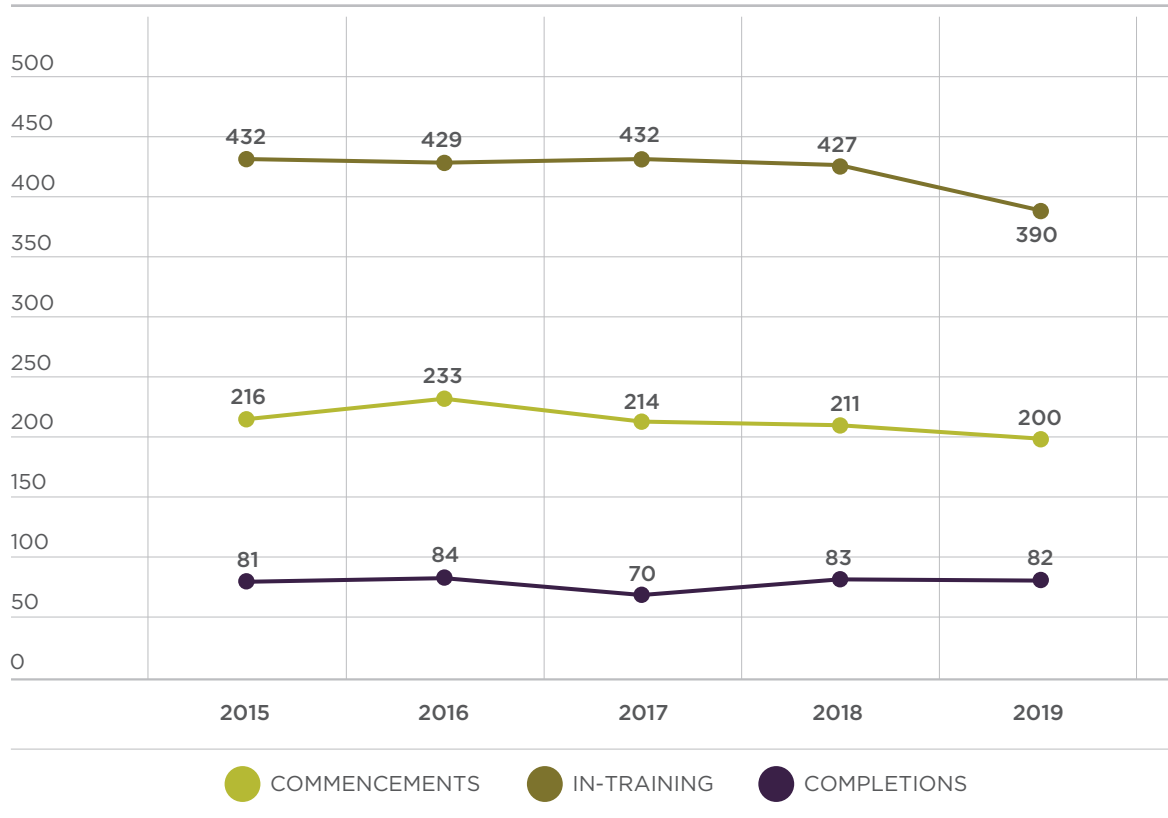
Source: NCVER

Chart 47: Apprentices and Trainees, AUM Training Package, NSW



Source: NCVER

Chart 48: Apprentices and Trainees, AUR Training Package, ACT



Source: NCVER

Current Skill Shortages

Table 18 presents numerical estimates of skill shortages by occupation and automotive sector for 2020/21 for NSW and ACT combined. The estimates were derived from data obtained from the 2020 Automotive Industry National Survey. For 2020/21, there is an estimated deficit of 9,883 skilled automotive positions across NSW and ACT, of which more than half (56.1 per cent) is comprised of light vehicle mechanics, and a further 10.9 per cent of heavy vehicle mechanics. The lack of availability of skilled labour is rated within the top three issues of significance by business operators in NSW and ACT, behind maintaining business profitability and economic conditions.

Table 18: Key Skill Shortages, NSW & ACT, 2020/21

Sector	Occupation	Estimated Shortage (Number)
Automotive repair and maintenance	Light vehicle mechanic	5,549
	Heavy vehicle mechanic	1,089
	Motorcycle mechanic	16
	Mobile plant mechanic	81
	Engine reconditioner	6
	Agricultural machinery mechanic	184
	Panel beater	620
	Vehicle spray painter	575
	Vehicle trimmer	12
	Automotive electrician	492
Motor vehicle retailing	Motor vehicle salesperson-new	292
Motor vehicle parts and tyre retailing	Motor vehicle parts & accessories salesperson	238
	Tyre fitter	109
	Spare parts interpreter	472
Vehicle manufacturing – bus, truck & trailer	Mechanic – outdoor power equipment	47
Outdoor power equipment	Vehicle body builder	53
Marine	Marine mechanic	30
Bicycles	Bicycle mechanic	18
		Total 9,883

Source: 2020 Automotive Industry National Survey, VACC modelled estimates



VICTORIA

Victoria recorded an aggregate employment of 109,223 people within the automotive industry in 2019/20, an increase of 1,024 people or 0.9 per cent from 2018/19. Most of this increase occurred within the motor vehicle and parts manufacturing and motor vehicle parts and tyre retailing sectors. Year-to-date employment data for 2020/21, as at February quarter 2021, shows a drop in industry employment of 10,290 people to 98,933. This reduction is mainly due to a decrease in employment of 4,942 people in the automotive repair and maintenance sector, and a decrease of 4,114 people in the motor vehicle and parts manufacturing sector in February 2021. The 2020/21 industry estimates, however, are based on three quarters of data and therefore are liable to change and must be used with caution.

There were 18,807 registered automotive businesses operating in Victoria as at June 2020, a growth of 281 businesses over the previous year, and the contribution of the automotive industry to Victoria's Gross State Product (GSP) is estimated at \$9.68 billion.

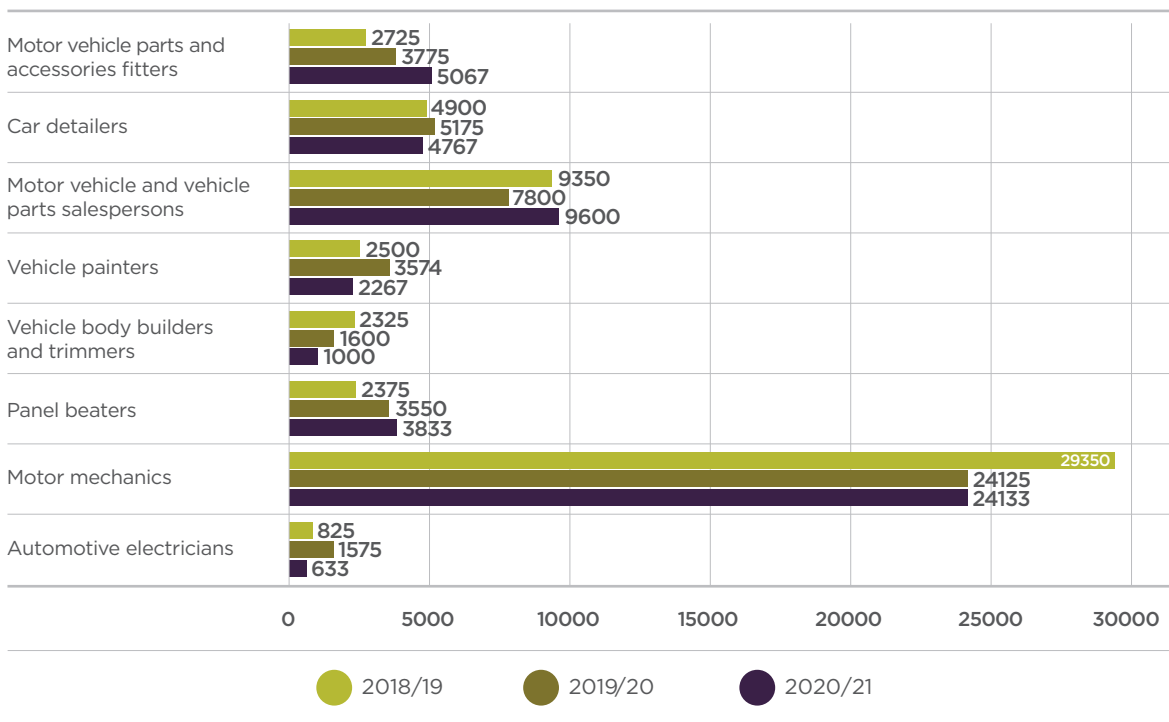
Table 19: Automotive Industry Summary Snapshot, Victoria

Industry employment	109,223 people
Motor vehicle fleet - Jan 2020	5,119,560 vehicles
Average age of vehicle fleet	10.2 years
No. of vehicles scrapped between 2019 and 2020	215,728
Number of automotive businesses	18,807
Industry contribution to state economy (\$)	\$9.68 billion

Source: ABS data

Data on employment by occupation (Chart 49) shows an increasing trend in employment for motor vehicle parts and accessories fitters and panel beaters since 2018/19 in Victoria, and a decreasing employment trend for vehicle body builders and trimmers. All other occupations show fluctuating employment levels over the period.

Chart 49: Number Employed in Key Occupations, VIC



Source: ABS data. Note: estimates for 2020/21 are as at Feb quarter 2021.

Table 20: Automotive Industry Sector Profile, VIC

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	19,945	1,034	+3
Motor vehicle and parts wholesaling	7,406	1,604	+16
Motor vehicle retailing	18,438	1,376	-12
Motor vehicle parts and tyre retailing	10,833	1,004	-13
Fuel retailing	8,666	1,030	+21
Automotive repair and maintenance	36,258	10,403	+206
Passenger car rental and hiring	1,945	623	+42
Bicycle retailing	1,428	314	+12
Marine equipment retailing	534	133	+3
Outdoor power equipment retailing	1,163	308	+2
Towing services	748	604	-1
Agricultural machinery retail and repair	1,859	374	+2
Total	109,223	18,807	+281

Source: ABS data and VACC modelled estimates

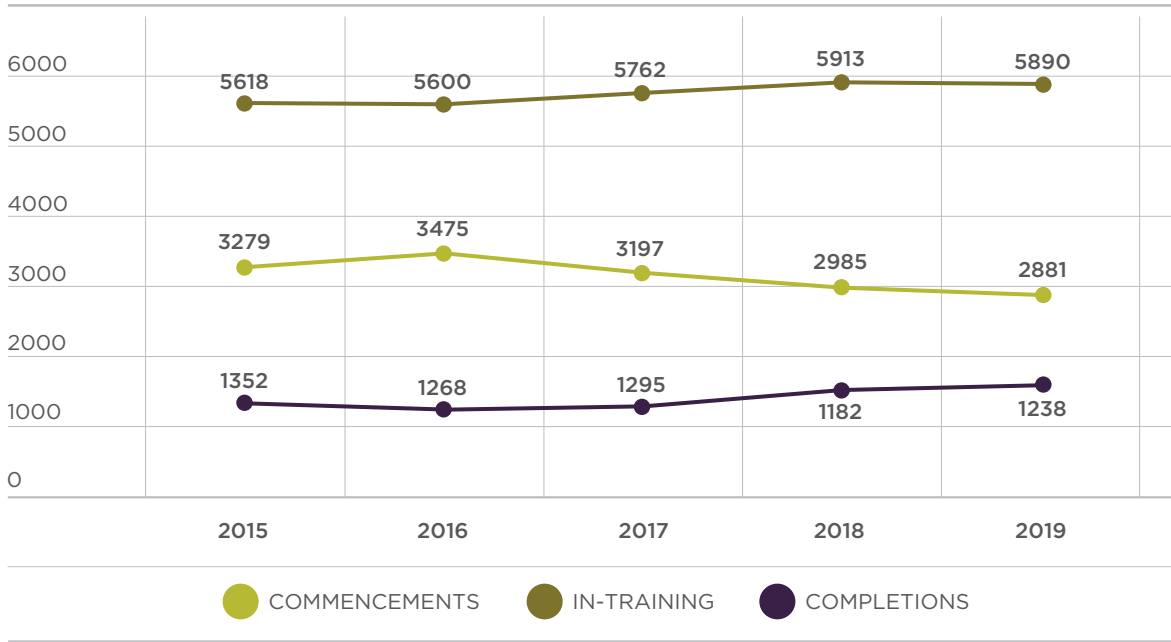
Apprentice Training

Charts 50 and 51 show that there were 5,890 apprentices and trainees in-training in the Automotive Retail, Service and Repair (AUR) Training Package in Victoria in 2019, and only 51 apprentices and trainees in the Automotive Manufacturing (AUM) Training Package. Training data for the full 2020 year was not available at the time of writing.

Since 2015, the number of apprentices and trainees in-training within the AUR Training

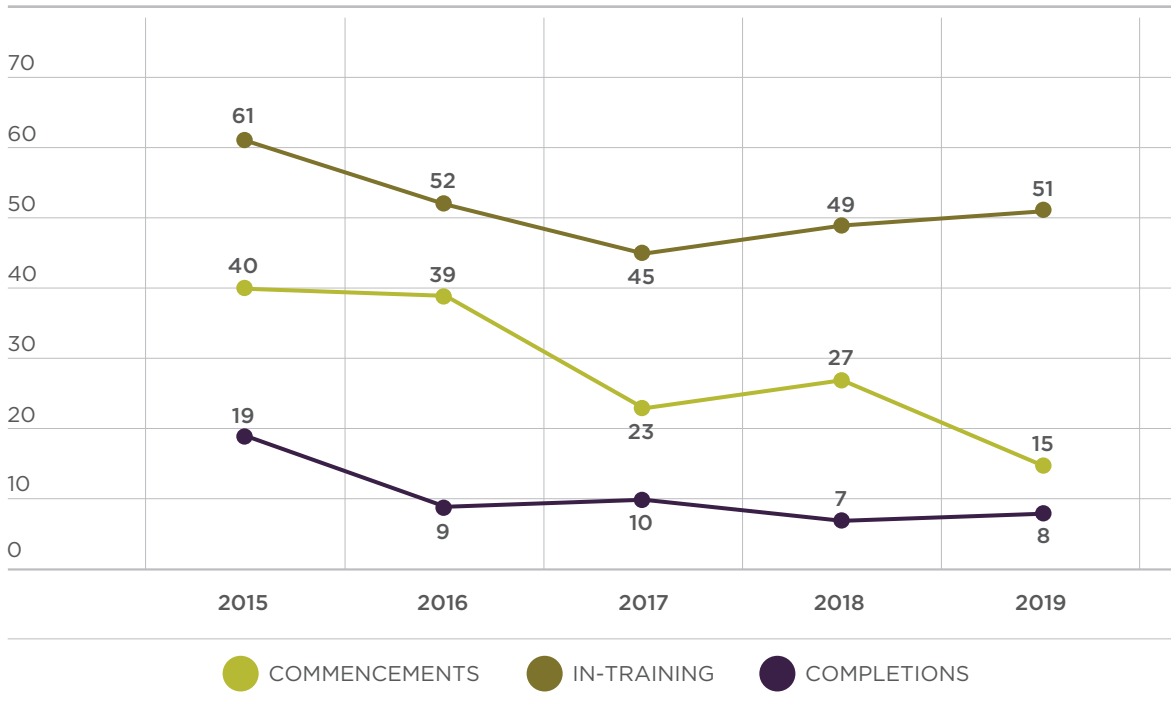
Package has remained relatively constant in Victoria, whilst annual apprentice and trainee commencements have been falling noticeably since 2016. This reinforces business assertions that declining numbers of new entrants into automotive trades are a key contributor to industry skill shortages. In terms of the AUM Training Package, Chart 51 shows that training numbers are very low and diminishing rapidly due to a declining trend in annual commencements and completions.

Chart 50: Apprentices and Trainees, AUR Training Package, VIC



Source: NCVET

Chart 51: Apprentices and Trainees, AUM Training Package, VIC



Source: NCVET

Current Skill Shortages

Table 21 presents numerical estimates of skill shortages by occupation and automotive sector for Victoria for 2020/21. The estimates were derived from data obtained from the 2020 Automotive Industry National Survey. For 2020/21, there is estimated deficit of 7,168 skilled positions within the automotive industry in Victoria, of which more than half (53.9 per cent) is comprised of light vehicle mechanics. Skilled labour shortages are identified as one of the top three business threats by Victorian automotive businesses, along with declining profitability and excessive government regulations.

Table 21: Key Skill Shortages, VIC, 2020/21

Sector	Occupation	Estimated Shortage (Number)
Automotive repair and maintenance	Light vehicle mechanic	3,863
	Heavy vehicle mechanic	421
	Motorcycle mechanic	39
	Mobile plant mechanic	30
	Engine reconditioner	12
	Agricultural machinery mechanic	195
	Panel beater	443
	Vehicle spray painter	393
	Vehicle trimmer	8
	Automotive electrician	287
Motor vehicle retailing	Motor vehicle salesperson-new	670
Motor vehicle parts and tyre retailing	Motor vehicle parts & accessories salesperson	145
	Tyre fitter	206
	Spare parts interpreter	310
Vehicle manufacturing – bus, truck & trailer	Mechanic- outdoor power equipment	76
Outdoor power equipment	Vehicle body builder	33
Marine	Marine mechanic	12
Bicycles	Bicycle mechanic	25
		Total 7,168

Source: 2020 Automotive Industry National Survey, VACC modelled estimates



QUEENSLAND

Queensland recorded an aggregate employment of 84,521 people within the automotive industry in 2019/20, an increase of 3,073 people or 3.2 per cent from 2018/19. This increase was primarily associated with an increase in full-time employment within the automotive repair and maintenance sector. Year-to-date industry employment data for 2020/21 as at February 2021, however, shows a large decrease in industry employment, with approximately 10,700 fewer people employed. This employment reduction is distributed across the automotive repair and maintenance, motor vehicle retailing and motor vehicle part and tyre retailing sectors. The 2020/21 employment estimates, however, are indicative only, as they contain data for only three quarters of the financial year, and hence must be used with caution.

There were 16,063 registered automotive businesses operating in Queensland as at June 2020, a slight decline of 12 businesses over the previous year, and the contribution of the automotive industry to Queensland's Gross State Product (GSP) is estimated at \$7.24 billion.

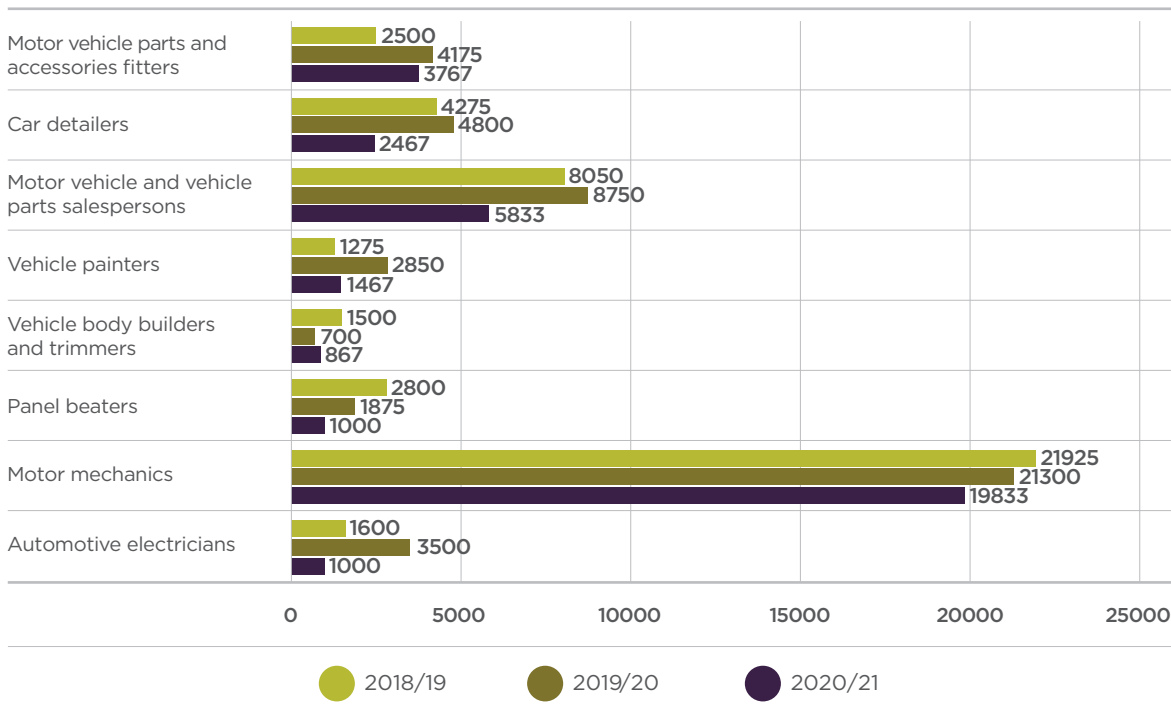
Data on employment by occupation (Chart 52) shows a decreasing trend in employment for motor mechanics and panel beaters since 2018/19, and fluctuating levels of employment across other automotive trades.

Table 22: Automotive Industry Summary Snapshot, QLD

Industry employment	84,521 people
Motor vehicle fleet – Jan 2020	4,205,100 vehicles
Average age of vehicle fleet	10.2 years
No. of vehicles scrapped between 2019 and 2020	144,070
Number of automotive businesses	16,063
Industry contribution to state economy (\$)	\$7.24 billion

Source: ABS data

Chart 52: Number Employed in Key Occupations, QLD



Source: ABS data. Note: estimates for 2020/21 are as at Feb quarter 2021.

Table 23: Automotive Industry Sector Profile, QLD

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	5,811	721	-19
Motor vehicle and parts wholesaling	7,192	1,192	-36
Motor vehicle retailing	14,484	1,242	-44
Motor vehicle parts and tyre retailing	8,754	1,032	-30
Fuel retailing	8,787	700	-8
Automotive repair and maintenance	32,682	9,189	+122
Passenger car rental and hiring	1,694	429	+3
Bicycle retailing	894	196	+5
Marine equipment retailing	972	246	-7
Outdoor power equipment retailing	1,070	287	+1
Towing services	641	519	0
Agricultural machinery retail and repair	1,540	310	+1
Total	84,521	16,063	-12

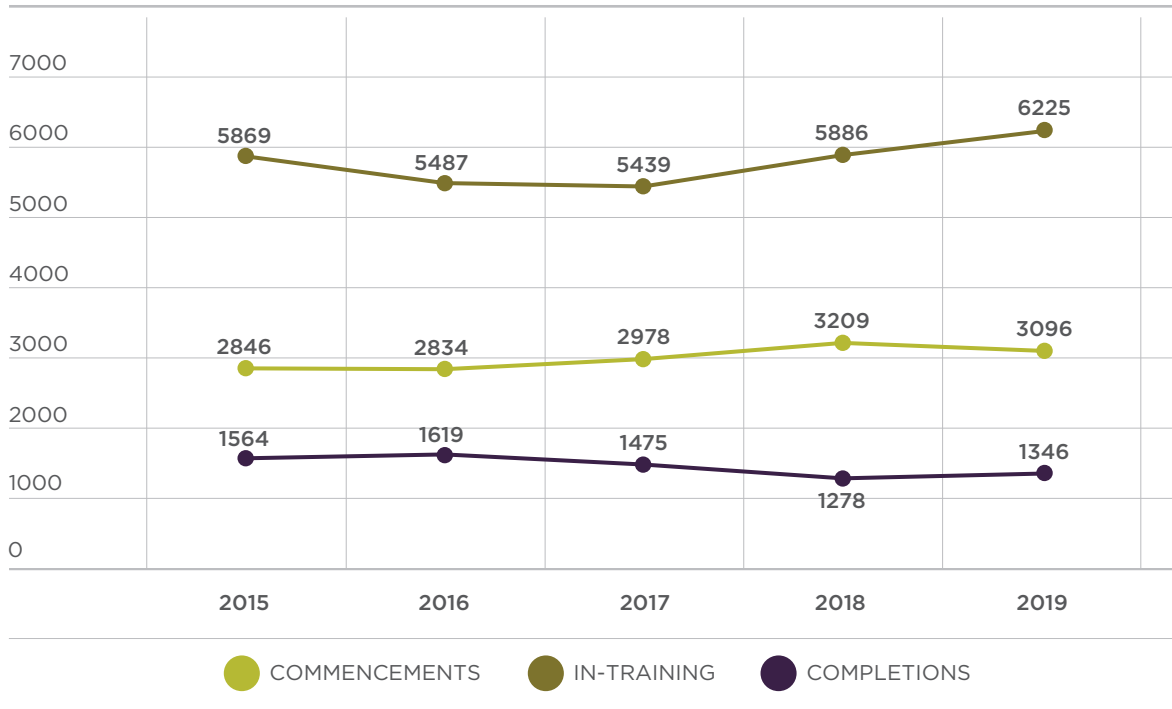
Source: ABS data and VACC modelled estimates

Apprentice Training

Charts 53 and 54 show that there were 6,225 apprentices and trainees in-training in the Automotive Retail, Service and Repair (AUR) Training Package in Queensland in 2019, and 84 apprentices and trainees in the Automotive Manufacturing (AUM) Training Package. Training data for the full 2020 year was not

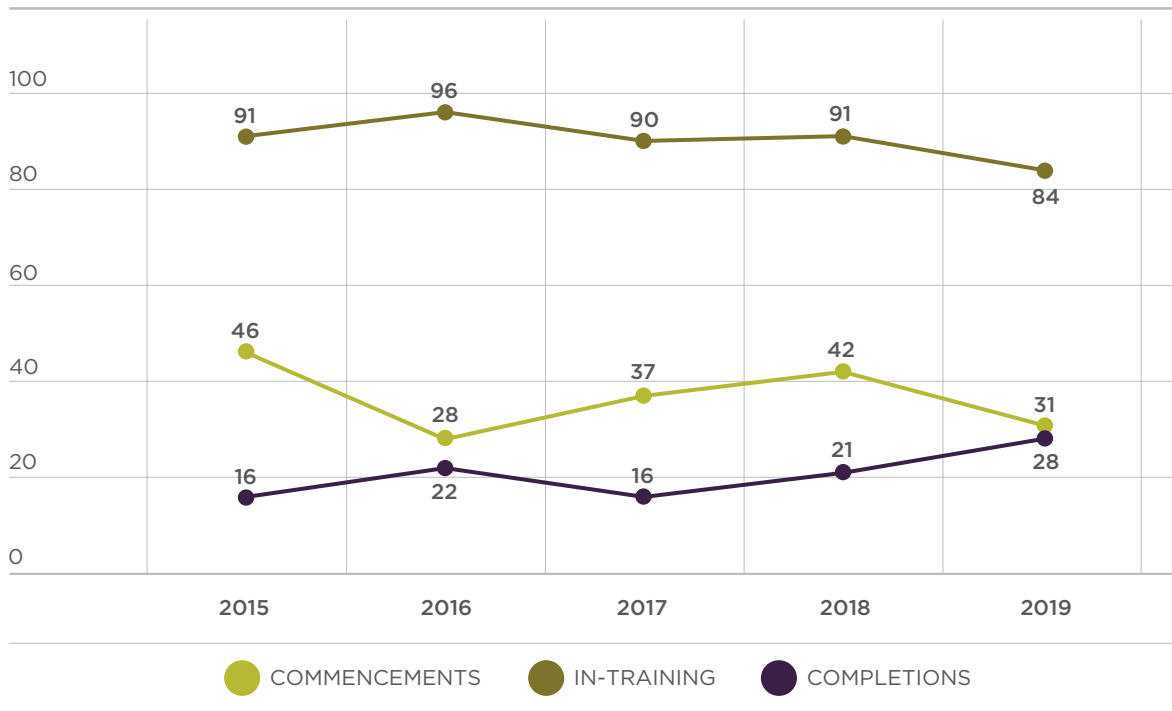
available at the time of writing. Since 2017, the number of apprentices and trainees in-training within the AUR Training Package has been rising in Queensland, whilst annual apprentice and trainee commencements have been relatively stable since 2015. In regard to the AUM Training Package, training numbers have shown small variations over the period.

Chart 53: Apprentices and Trainees, AUR Training Package, QLD



Source: NCVER

Chart 54: Apprentices and Trainees, AUM Training Package, QLD



Source: NCVER

Current Skill Shortages

Table 24 presents numerical estimates of skill shortages by occupation and automotive sector for Queensland for 2020/21. The estimates were derived from data obtained from the 2020 Automotive Industry National Survey. For 2020/21, there is estimated deficit of 6,868 skilled positions within the automotive industry in Queensland, of which more than 64 per cent is comprised of light vehicle mechanics. Automotive businesses view these shortages of skilled labour the single biggest threat to their operations, along with economic conditions and maintaining adequate profitability.

Table 24: Key Skill Shortages, QLD

Sector	Occupation	Estimated Shortage (Number)
Automotive repair and maintenance	Light vehicle mechanic	4,404
	Heavy vehicle mechanic	389
	Motorcycle mechanic	25
	Mobile plant mechanic	40
	Engine reconditioner	10
	Agricultural machinery mechanic	347
	Panel beater	246
	Vehicle spray painter	369
	Vehicle trimmer	6
	Automotive electrician	348
Motor vehicle retailing	Motor vehicle salesperson-new	140
Motor vehicle parts and tyre retailing	Motor vehicle parts & accessories salesperson	152
	Tyre fitter	120
	Spare parts interpreter	141
Vehicle manufacturing – bus, truck & trailer	Mechanic- outdoor power equipment	35
Outdoor power equipment	Vehicle body builder	48
Bicycles	Marine mechanic	28
	Bicycle mechanic	20
		Total 6,868

Source: 2020 Automotive Industry National Survey, VACC modelled estimates



SOUTH AUSTRALIA

South Australia recorded an aggregate employment of 27,380 people within the automotive industry in 2019/20, a decrease of 1,033 or 3.6 per cent over 2018/19 (28,413). This decrease was predominantly due to a decline in employment within motor vehicle retailing and to a lesser extent within the automotive repair and maintenance sector. Year-to-date industry employment data for 2020/21, whilst incomplete, shows a continuing declining trend in employment, with industry employment standing at 25,549 as at February 2021. This represents a further decline of 1,830 people, largely due to on-going contraction in the motor vehicle retailing sector.

There were 4,825 registered automotive businesses operating in South Australia as at June 2020, a slight rise of nine businesses over the previous year, and the contribution of the automotive industry to South Australia's Gross State Product (GSP) is estimated at \$2.16 billion.

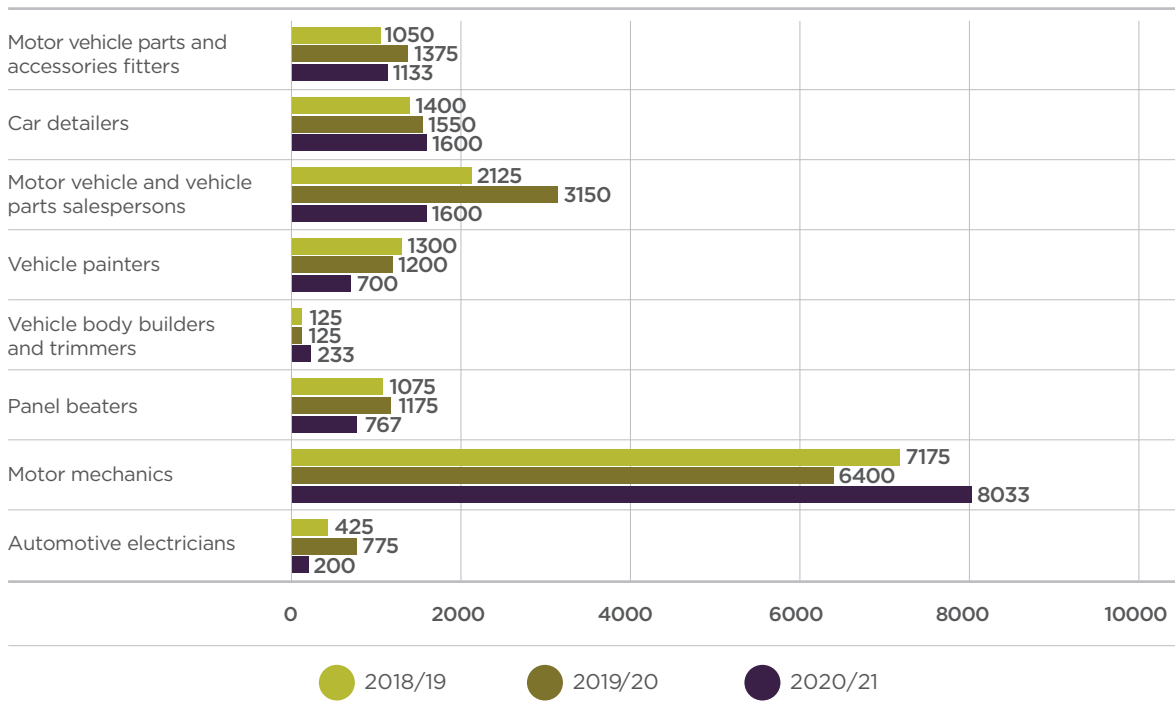
Table 25: Automotive Industry Summary Snapshot, SA

Industry employment	27,380 people
Motor vehicle fleet – Jan 2020	1,444,960 vehicles
Average age of vehicle fleet	11.8 years
No. of vehicles scrapped between 2019 and 2020	51,180
Number of automotive businesses	4,825
Industry contribution to state economy (\$)	\$2.16 billion

Source: ABS data

Data on employment by occupation (Chart 55) shows an increasing trend in employment of car detailers, and a decreasing trend in employment of vehicle painters since 2018/19 in South Australia. Fluctuating employment levels are observed across most other automotive occupations.

Chart 55: Number Employed in Key Occupations, SA



Source: ABS data. Note: estimates for 2020/21 contain only three quarters of data, up to Feb Qtr 2021.

Table 26: Automotive Industry Sector Profile, SA

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	1,371	222	-16
Motor vehicle and parts wholesaling	1,764	360	+7
Motor vehicle retailing	5,503	429	-7
Motor vehicle parts and tyre retailing	2743	329	-6
Fuel retailing	3,981	243	+25
Automotive repair and maintenance	10,078	2,595	-8
Passenger car rental and hiring	280	129	+18
Bicycle retailing	353	78	+2
Marine equipment retailing	182	43	-6
Outdoor power equipment retailing	325	90	0
Towing services	240	195	0
Agricultural machinery retail and repair	560	112	0
Total	27,380	4,825	+9

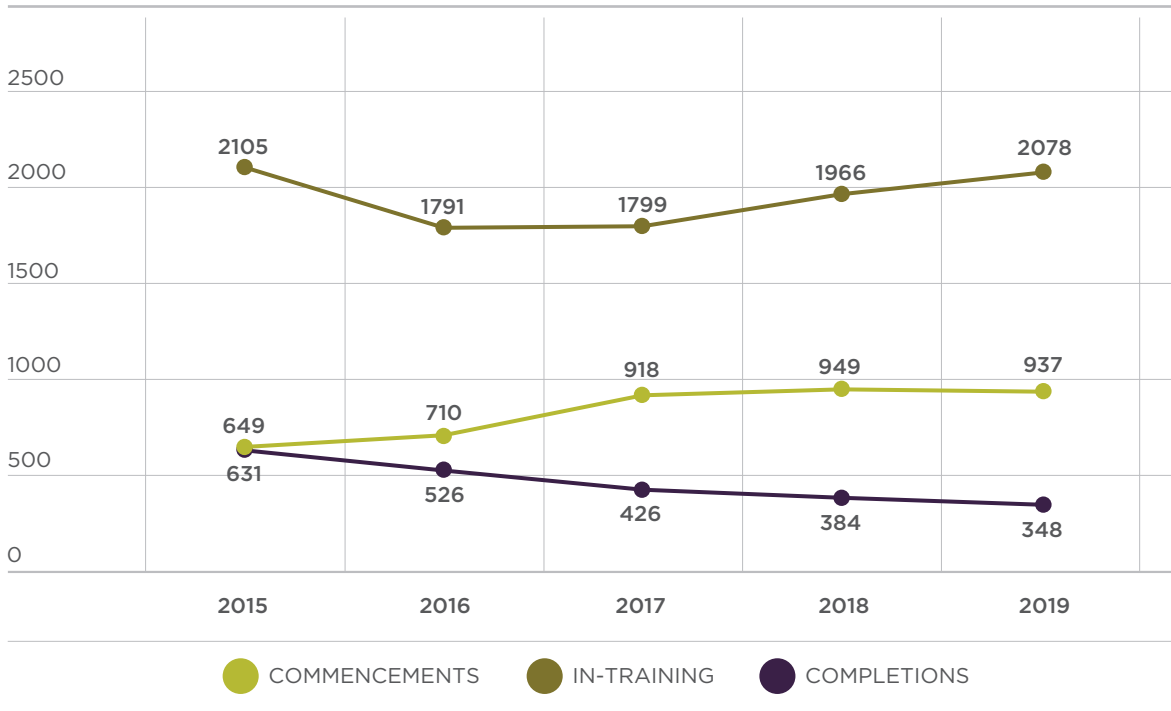
Source: ABS data and VACC modelled estimates

Apprentice Training

Chart 56 shows that there were 2,078 apprentices and trainees in-training in the Automotive Retail, Service and Repair (AUR) Training Package in South Australia in 2019. Training data for the 2020 calendar year was not available at the time of writing. The period between 2016 and 2019 has seen a growth of 16 per cent in the number of apprentices and trainees in training,

however training numbers in 2019 were still below that of 2015. Whilst annual commencements of apprentices and trainees within the AUR Training Package have grown since 2015, the number of apprentices completing their training qualifications has been steadily falling, with only 348 apprentices and trainees completing their training in 2019 compared to 631 in 2015. This represents a decline in training completions of almost 45 per cent since 2015.

Chart 56: Apprentices and Trainees, AUR Training Package, SA



Source: NCVET

Current Skill Shortages

Table 27 presents numerical estimates of skill shortages by occupation and automotive sector for South Australia for 2020/21. The estimates were derived from data obtained from the 2020 Automotive Industry National Survey. For 2020/21, there is estimated deficit of 2,049 skilled positions within the automotive industry in South Australia, of which almost half (45.8 per cent) is comprised of light vehicle mechanics. Automotive businesses in South Australia consider the lack of availability of skilled labour as the one of the biggest threats their businesses, along with the state of the economy and being able to maintain profitability.

Table 27: Key Skill Shortages, SA

Sector	Occupation	Estimated Shortage (Number)
Automotive repair and maintenance	Light vehicle mechanic	938
	Heavy vehicle mechanic	288
	Motorcycle mechanic	6
	Mobile plant mechanic	5
	Engine reconditioner	1
	Agricultural machinery mechanic	42
	Panel beater	76
	Vehicle spray painter	63
	Vehicle trimmer	1
	Automotive electrician	43
Motor vehicle retailing	Motor vehicle salesperson-new	209
Motor vehicle parts and tyre retailing	Motor vehicle parts & accessories salesperson	28
	Tyre fitter	100
	Spare parts interpreter	188
Vehicle manufacturing – bus, truck & trailer	Mechanic- outdoor power equipment	11
Outdoor power equipment	Vehicle body builder	36
Marine	Marine mechanic	6
Bicycles	Bicycle mechanic	8
		Total 2,049

Source: 2020 Automotive Industry National Survey, VACC modelled estimates



WESTERN AUSTRALIA

Western Australia recorded an aggregate employment of 35,092 people within the automotive industry in 2019/20, an increase of 374 people or 1.1 per cent over 2018/19 (34,718). Whilst this represents a relatively stable outcome, there were changes in the distribution of employment between sectors. Employment growth of 1,644 and 687 was recorded in the motor vehicle retailing and motor vehicle parts and tyre retailing sectors respectively during 2019/20, whilst small declines were recorded across most other automotive sectors. Year-to-date employment data for 2020/21 as at February 2021, shows a further strengthening in employment, with industry employment standing at 38,734, a rise of 3,642 people employed, primarily within the automotive repair and

maintenance sector. The 2020/21 estimates, however, are based on only three quarters of data and hence must be used with caution.

There were 7,708 registered automotive businesses operating in Western Australia as at June 2020, an increase of 24 businesses over the previous year, and the contribution of the automotive industry to Western Australia's Gross State Product (GSP) is estimated at \$5.82 billion.

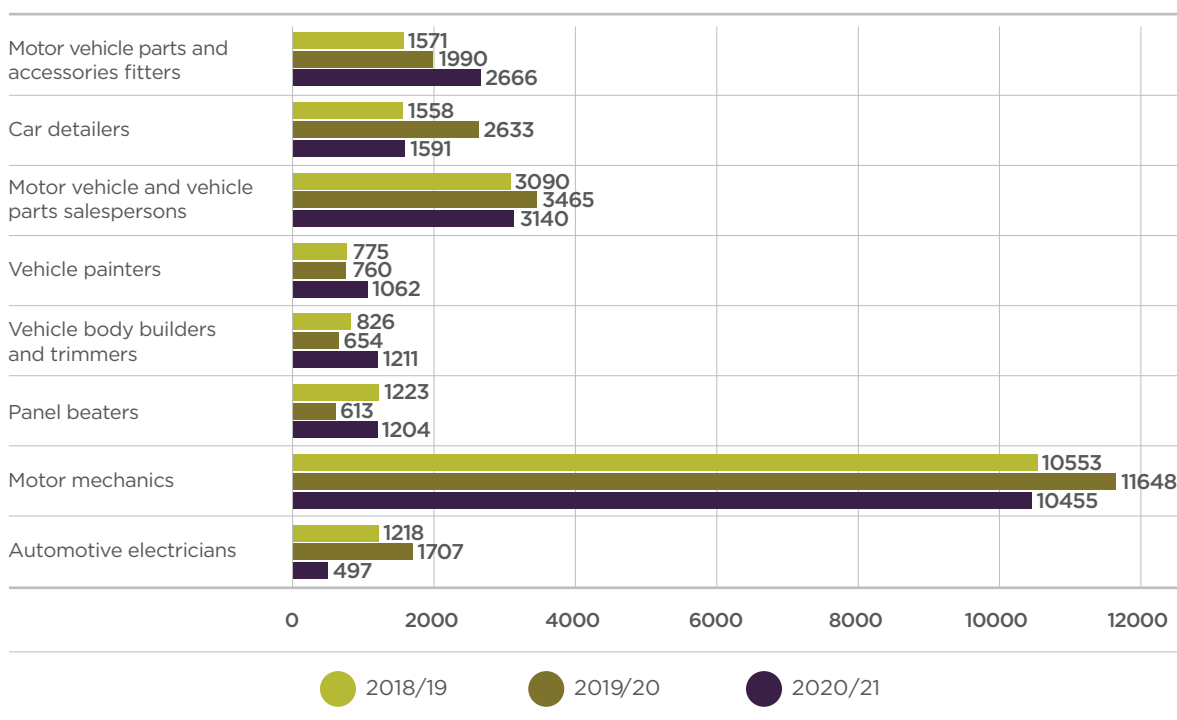
Table 28: Automotive Industry Summary Snapshot, WA

Industry employment	35,092 people
Motor vehicle fleet – Jan 2020	2,278,759 vehicles
Average age of vehicle fleet	11.5 years
No. of vehicles scrapped between 2019 and 2020	58,113
Number of automotive businesses	7,708
Industry contribution to state economy (\$)	\$5.82 billion

Source: ABS data

Data on employment by occupation (Chart 57) shows an increasing trend in employment of motor vehicle parts and accessories fitters since 2018/19 in Western Australia, along with fluctuating employment levels across most other automotive occupations.

Chart 57: Number Employed in Key Occupations, WA



Source: ABS data. Note: estimates for 2020/21 contain only three quarters of data to Feb Qtr 2021.

Table 29: Automotive Industry Sector Profile, WA

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	1,818	301	-3
Motor vehicle and parts wholesaling	2,358	527	+13
Motor vehicle retailing	7,771	523	-17
Motor vehicle parts and tyre retailing	3,551	515	-14
Fuel retailing	2,001	324	+6
Automotive repair and maintenance	14,124	4,495	+36
Passenger car rental and hiring	890	229	-3
Bicycle retailing	426	95	+4
Marine equipment retailing	496	124	0
Outdoor power equipment retailing	558	154	+1
Towing services	329	266	0
Agricultural machinery retail and repair	770	155	+1
Total	35,092	7,708	+24

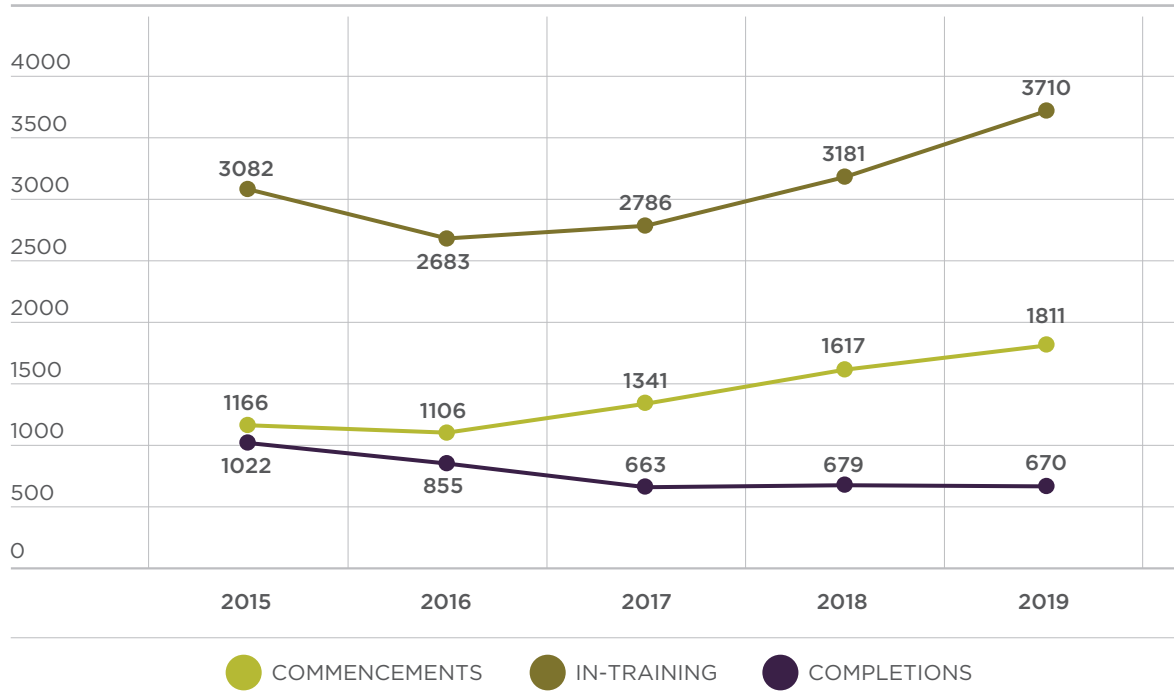
Source: ABS data and VACC modelled estimates

Apprentice Training

Charts 58 and 59 show that there were 3,710 apprentices and trainees in-training in the Automotive Retail, Service and Repair (AUR) Training Package in Western Australia in 2019, and 98 within the Automotive Manufacturing (AUM) Training Package. Training data for the entire 2020 calendar was not available at the time of writing. Between 2016 and 2019, the number of apprentices and trainees in-training grew by 38.3 per cent in the AUR Training Package and

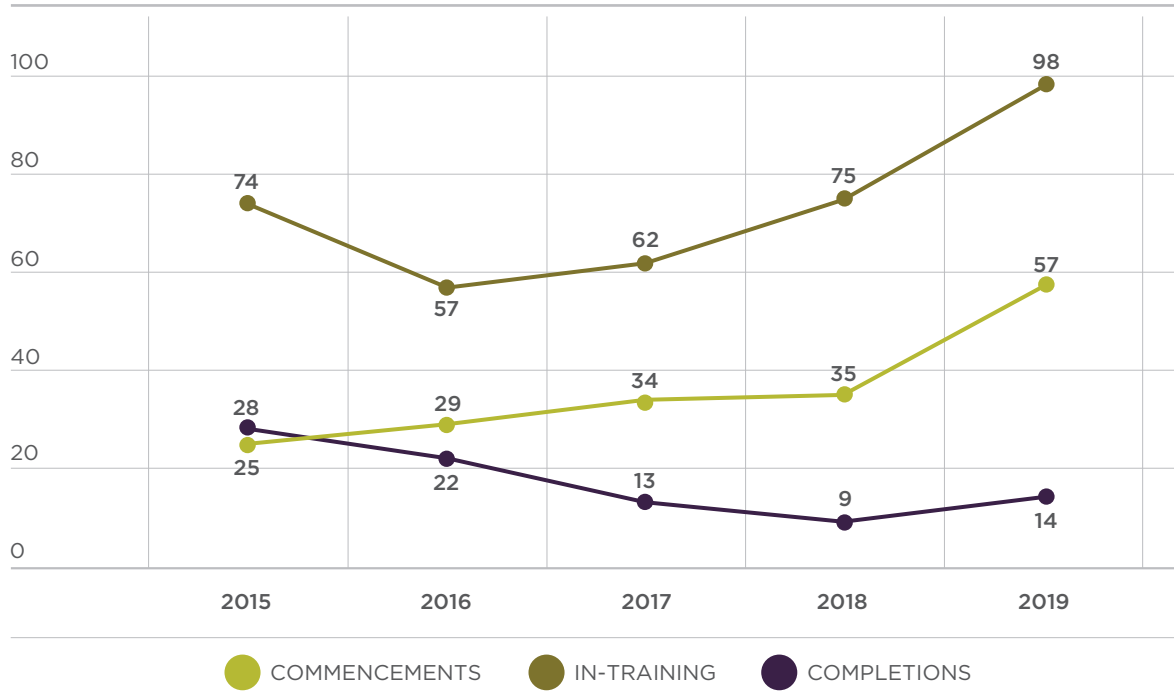
annual commencements grew by 63.7 per cent. In the AUM Training Package, the number of apprentices and trainees in-training grew by 71.9 per cent and annual commencements have almost doubled over the same period, albeit off a much lower base. Despite this growth, the number of apprentices and trainees completing their training has fallen over the period in both training packages. Annual completions within the AUR Training Package are 21.6 per cent lower in 2019 than in 2015, and 50 per cent lower within the AUM Training Package.

Chart 58: Apprentices and Trainees, AUR Training Package, WA



Source: NCVER

Chart 59: Apprentices and Trainees, AUM Training Package, WA



Source: NCVER

Current Skill Shortages

Table 30 presents numerical estimates of skill shortages by occupation and automotive sector for Western Australia for 2020/21. The estimates were derived from data obtained from the 2020 Automotive Industry National Survey. For 2020/21, there is an estimated deficit of 4,078 skilled industry positions in Western Australia, of which more than half (52.8 per cent) is comprised of light vehicle mechanics. Automotive businesses consider the lack of availability of skilled labour as a major threat to business growth, in conjunction with maintaining profitability and economic conditions.

Table 30: Key Skill Shortages, WA

Sector	Occupation	Estimated Shortage (Number)
Automotive repair and maintenance	Light vehicle mechanic	2,152
	Heavy vehicle mechanic	364
	Motorcycle mechanic	26
	Mobile plant mechanic	9
	Engine reconditioner	3
	Agricultural machinery mechanic	129
	Panel beater	172
	Vehicle spray painter	153
	Vehicle trimmer	5
	Automotive electrician	315
Motor vehicle retailing	Motor vehicle salesperson-new	289
Motor vehicle parts and tyre retailing	Motor vehicle parts & accessories salesperson	183
	Tyre fitter	54
	Spare parts interpreter	155
Vehicle manufacturing – bus, truck & trailer	Mechanic- outdoor power equipment	15
Outdoor power equipment	Vehicle body builder	25
Marine	Marine mechanic	14
Bicycles	Bicycle mechanic	15
		Total 4,078

Source: 2020 Automotive Industry National Survey, VACC modelled estimates



TASMANIA

Tasmania recorded an aggregate employment of 6,983 people within the automotive industry in 2019/20, a decrease of 1,052 people or 13.1 per cent over 2018/19 (8,035). This reduction in employment was primarily concentrated in two sectors, automotive repair and maintenance (loss of 762 people) and motor vehicle and parts wholesaling (loss of 490 people). Year-to-date employment estimates for 2020/21, as at February 2021, show a further decline in industry employment of 1,243 people to 5,740. This decline is mainly observed within fuel retailing and motor vehicle retailing. The 2020/21 estimates, however, are based on only three quarters of data and hence can change and must be used with caution.

There were 1,448 registered automotive businesses operating in Tasmania as at June 2020, a slight increase of 3 businesses over the previous year, and the contribution of the automotive industry to Tasmania's Gross State Product (GSP) is estimated at \$629.6 million.

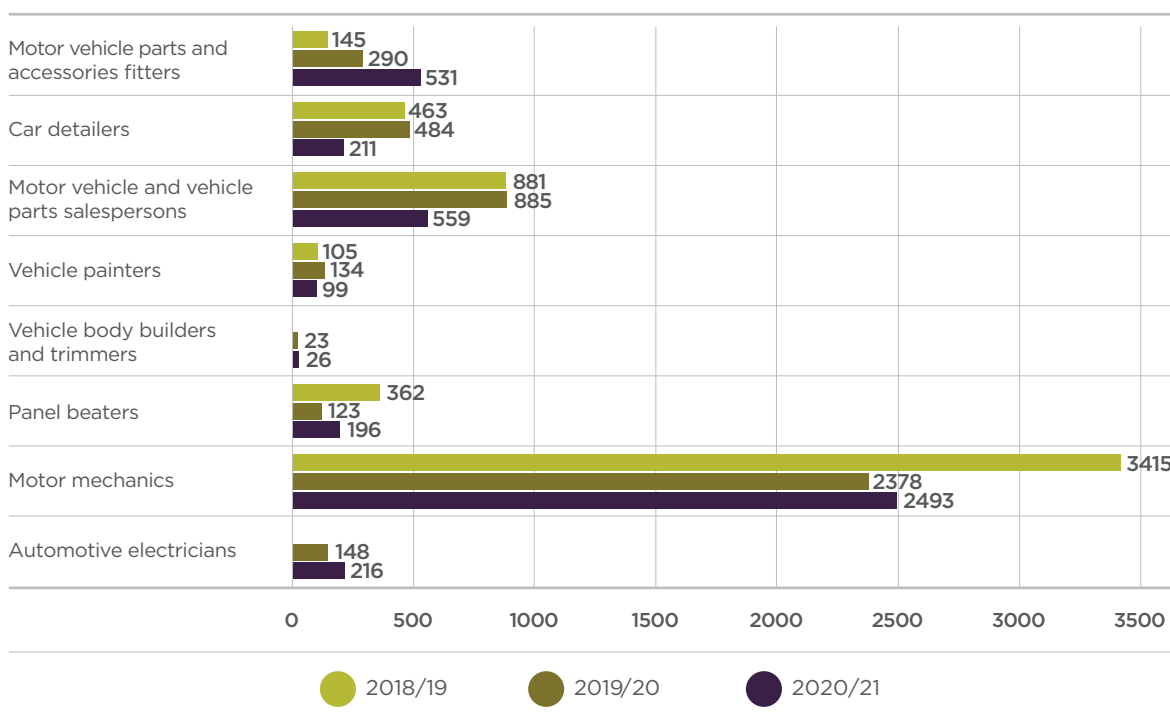
Table 31: Automotive Industry Summary Snapshot, TAS

Industry employment	6,983 people
Motor vehicle fleet - Jan 2020	506,391 vehicles
Average age of vehicle fleet	13 years
No. of vehicles scrapped between 2019 and 2020	7,063
Number of automotive businesses	1,448
Industry contribution to state economy (\$)	\$629.6 million

Source: ABS data

Data on employment by occupation (Chart 60) shows an increasing trend in employment of motor vehicle parts and accessories fitters and automotive electricians since 2018/19 in Tasmania, with volatile employment levels exhibited across most other automotive occupations.

Chart 60: Number Employed in Key Occupations, TAS

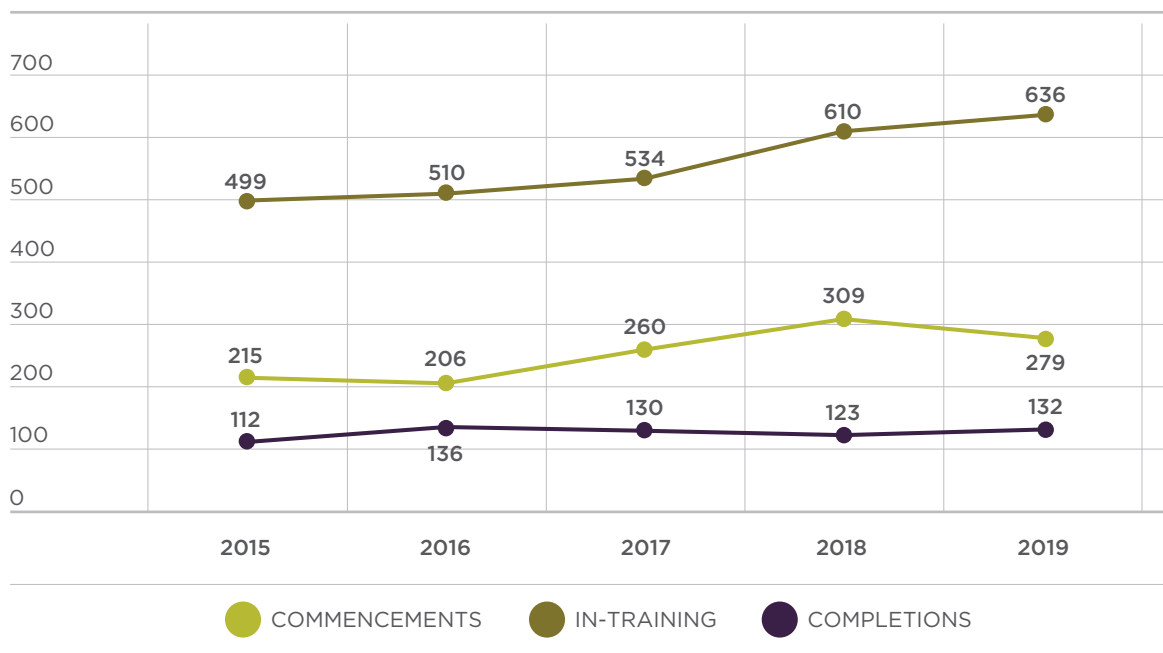


Source: ABS data. Note: estimates for 2020/21 contain only three quarters of data, to Feb Qtr 2021.

Table 32: Automotive Industry Sector Profile, TAS

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	232	43	-3
Motor vehicle and parts wholesaling	184	71	+2
Motor vehicle retailing	1,629	110	+1
Motor vehicle parts and tyre retailing	381	63	-1
Fuel retailing	1,159	130	+7
Automotive repair and maintenance	2,284	721	-1
Passenger car rental and hiring	105	34	-3
Bicycle retailing	544	119	+1
Marine equipment retailing	58	21	0
Outdoor power equipment retailing	137	37	0
Towing services	73	59	0
Agricultural machinery retail and repair	197	40	0
Total	6,983	1448	+3

Source: ABS data and VACC modelled estimates

Chart 61: Apprentices and Trainees, AUR Training Package, TAS

Source: NCVER

Apprentice Training

Chart 61 shows that there were 636 apprentices and trainees in-training in the Automotive Retail, Service and Repair (AUR) Training Package in Tasmania in 2019. Training data for the full 2020 year was not available at the time of writing.

The period from 2015-2019 has seen the number of apprentices and trainees in-training grow by 27.5 per cent, whilst annual commencements have grown by 29.8 per cent. Annual training completions have remained relatively constant over the period.

Current Skill Shortages

Table 33 presents numerical estimates of skill shortages by occupation and automotive sector for Tasmania for 2020/21. The estimates were derived from data obtained from the 2020 Automotive Industry National Survey. For 2020/21, there is an estimated deficit of 662 skilled automotive positions in Tasmania, of which the majority (60.9 per cent) is comprised of light vehicle mechanics. The lack of availability of skilled labour is one of the three most important issues identified by automotive businesses in Tasmania, along with maintaining profitability and economic conditions.

Table 33: Key Skill Shortages, TAS, 2020/21

Sector	Occupation	Estimated Shortage (Number)
Automotive repair and maintenance	Light vehicle mechanic	403
	Heavy vehicle mechanic	75
	Motorcycle mechanic	2
	Mobile plant mechanic	4
	Engine reconditioner	2
	Agricultural machinery mechanic	18
	Panel beater	26
	Vehicle spray painter	21
	Vehicle trimmer	1
	Automotive electrician	10
Motor vehicle retailing	Motor vehicle salesperson-new	30
Motor vehicle parts and tyre retailing	Motor vehicle parts & accessories salesperson	25
	Tyre fitter	5
	Spare parts interpreter	18
Vehicle manufacturing - bus, truck & trailer	Mechanic- outdoor power equipment	8
Outdoor power equipment	Vehicle body builder	2
Marine	Marine mechanic	8
Bicycles	Bicycle mechanic	4
		Total 662

Source: 2020 Automotive Industry National Survey, VACC modelled estimates



NORTHERN TERRITORY

The Northern Territory (NT) recorded an aggregate employment of 4,156 people within the automotive industry in 2019/20, a decrease of 592 people or 12.5 per cent over 2018/19 (4,749). This decrease in employment was evenly distributed across three sectors – motor vehicle and vehicle parts manufacturing, fuel retailing and motor vehicle retailing. Year-to-date estimates for 2020/21 as at February 2021, show a continued downward trend in employment with 397 fewer people employed within the industry. This decline is mainly observed within the fuel retailing, motor vehicle retailing and motor vehicle parts and tyre retailing sectors. The 2020/21 employment reduction is indicative only as it is based on three quarters of data, and therefore must be used with caution.

There were 708 registered automotive businesses operating in the Northern Territory as at June 2020, a slight decline of 3 businesses over the previous year, and the contribution of the automotive industry to the Northern Territory's Gross State Product (GSP) is estimated at \$511.5 million or 1.97 per cent of the NT economy.

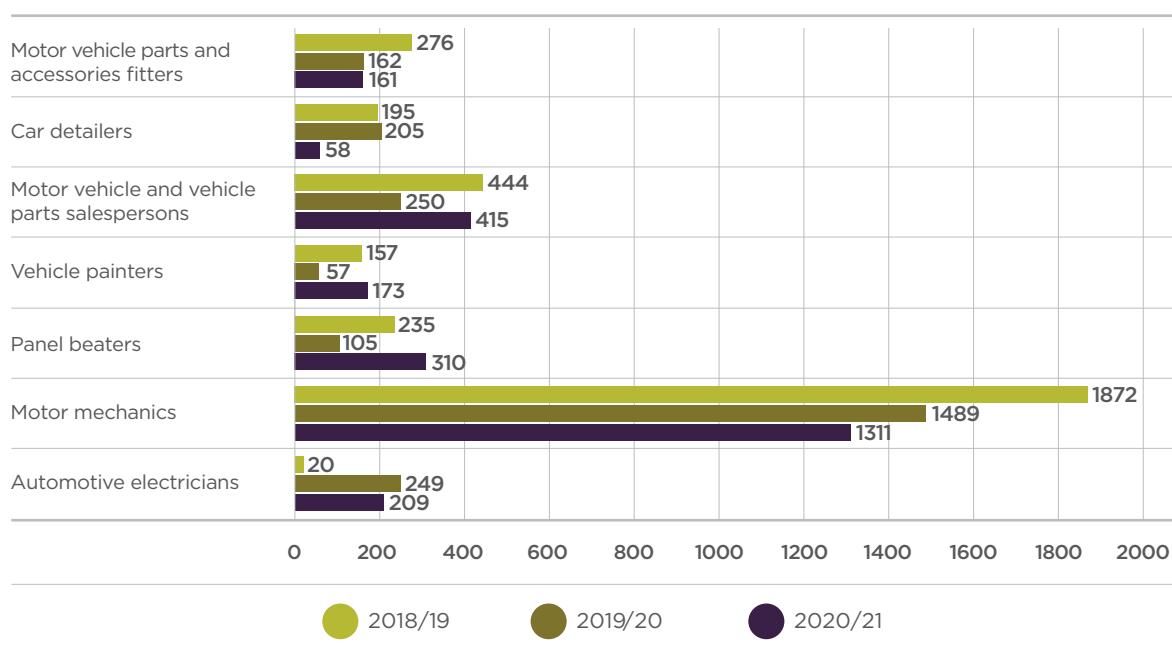
Table 34: Automotive Industry Summary Snapshot, NT

Industry employment	4,156 people
Motor vehicle fleet – Jan 2020	160,474 vehicles
Average age of vehicle fleet	9.8 years
No. of vehicles scrapped between 2019 and 2020	9,770
Number of automotive businesses	708
Industry contribution to state economy (\$)	\$511.5 million

Source: ABS data

Data on employment by occupation (Chart 62) shows a declining trend in employment of motor mechanics since 2018/19, and fluctuating employment levels across most other automotive occupations.

Chart 62: Number employed in key occupations, NT

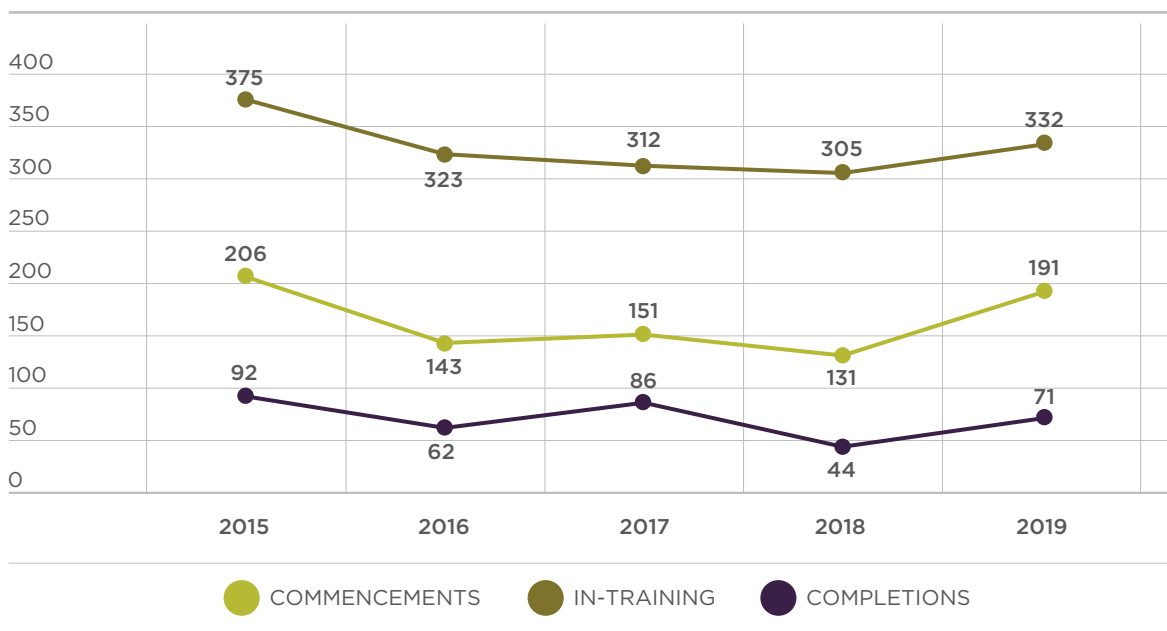


Source: ABS data. Note: estimates for 2020/21 contain only three quarters of data, to Feb Qtr 2021.

Table 35: Automotive Industry Sector Profile, NT

Sector	Employment 2019/20	Number of businesses as at June 2020	Change in number of businesses from previous year
Motor vehicle and parts manufacturing	78	6	-3
Motor vehicle and parts wholesaling	133	34	0
Motor vehicle retailing	794	55	+7
Motor vehicle parts and tyre retailing	356	34	-6
Fuel retailing	687	57	-2
Automotive repair and maintenance	1,801	419	-1
Passenger car rental and hiring	68	25	-1
Bicycle retailing	55	12	+1
Marine equipment retailing	19	10	0
Outdoor power equipment retailing	93	26	+1
Towing services	24	20	0
Agricultural machinery retail and repair	48	10	+1
Total	4,156	708	-3

Source: ABS data and VACC modelled estimates

Chart 63: Apprentices and Trainees, AUR Training Package, NT

Source: NCVER

Apprentice Training

Chart 63 shows that there were 332 apprentices and trainees in-training in the Automotive Retail, Service and Repair (AUR) Training Package in the Northern Territory in 2019. After a continuous decline from 2015 to 2018, the number of apprentices and trainees in-training grew by

8.9 per cent in 2019, however they remain 10.7 per cent below training levels recorded in 2015. Training data for the full 2020 year was not available at the time of writing. Annual apprentice and trainee commencements and completions of have also shown considerable volatility over the period.

Current Skill Shortages

Table 36 presents numerical estimates of skill shortages by occupation and automotive sector for the Northern Territory for 2020/21. The estimates were derived from data obtained from the 2020 Automotive Industry National Survey. For 2020/21, there is an estimated deficit of 435 skilled industry positions in the Northern Territory, of which almost half (46 per cent) is comprised of light vehicle mechanics. The lack of availability of skilled labour is ranked as the third most important issue by automotive businesses in the Northern Territory, behind maintaining profitability and economic conditions.

Table 36: Key Skill Shortages, NT

Sector	Occupation	Estimated Shortage (Number)
Automotive repair and maintenance	Light vehicle mechanic	200
	Heavy vehicle mechanic	85
	Motorcycle mechanic	5
	Mobile plant mechanic	4
	Engine reconditioner	1
	Panel beater	19
	Vehicle spray painter	19
	Vehicle trimmer	1
	Automotive electrician	20
Motor vehicle retailing	Motor vehicle salesperson-new	14
Motor vehicle parts and tyre retailing	Motor vehicle parts & accessories salesperson	12
	Tyre fitter	15
	Spare parts interpreter	10
Vehicle manufacturing - bus, truck & trailer	Mechanic- outdoor power equipment	20
Outdoor power equipment	Vehicle body builder	2
Bicycles	Marine mechanic	5
Marine	Bicycle mechanic	3
		Total 435

Source: 2020 Automotive Industry National Survey, VACC modelled estimates

Contributing automotive industry associations

Victorian
Automotive Chamber
of Commerce



Motor Traders
Association of
New South Wales



Motor Trade
Association of
Western Australia



Motor Trade Association
of South Australia and
Northern Territory



Tasmanian
Automotive Chamber
of Commerce

