Skills Shortages Getting Critical

VACC Senior Research Analyst, Steve Bletsos breaks down current apprenticeship and traineeship numbers in Australia.

Apprenticeships and traineeships have had a long history in creating a pipeline of skilled labour for Australia's automotive industry. However, despite the Federal Government's financial support and incentives in recent times, it is disappointing to see the number of apprentices and trainees commencing annually has fallen substantially across key automotive trades. This is especially the case in Victoria, where some apprenticeships appear to be in free fall.

The latest statistics from the National Centre for Vocational Education Research (NCVER) show a significant decline in apprentice commencements over the past four years. Notwithstanding the influence of COVID-19, nationally there were approximately 500 fewer light vehicle apprentices that commenced in 2020 compared to 2017, a 10.6 percent reduction. For Australia's two largest states however, the situation is considerably worse.

In Victoria there were almost 1,200 light vehicle mechanical apprentices commencing in 2017, compared to 760 in 2020, a drop of 35.6 percent. New South Wales has also experienced a 14.2 percent decline over the same period.

The data shows an even more dire scenario for apprentice panel beaters and vehicle spray painters. Nationally, annual commencements of apprentice panel beaters have fallen by 31.1 percent since 2017, while vehicle spray painters have fallen by 25.6 percent. At a state level, the data shows that in Victoria, apprentice panel beater commencements have fallen from 203 in 2017, to only 80 in 2020, a massive reduction of 60.6 percent. Commencements of apprentice vehicle spray painters in Victoria have fallen by 45.7 percent over the same period.

While not all states have experienced such dramatic falls, the declining number of new apprentices across these key automotive trades, and within our largest training markets, is a major concern. In fairness, not all automotive occupations have suffered quite as badly. For example, heavy vehicle apprenticeship numbers have been relatively stable over this period, even exhibiting a slight growth in some states and territories. However, this is little consolation given their levels are still largely insufficient in addressing current skills shortages.

For decades, the industry has argued there are not enough people entering automotive trades and that a skills crisis is imminent, and this is largely supported by the data. Contextually, there have been approximately 1.4 million vehicles added to Australia's roads over the past four years, yet the quantity of people entering automotive trades, especially in our two largest states, has declined substantially.

Under this scenario, it was highly unlikely productivity increases could avert the effects of such a large increase in the fleet of vehicles on roads over such a short time frame, and that a skills crisis was largely inevitable without a major injection of skilled migrant labour.

It is also undeniable that the economic impact of COVID-19 over the past 18 months has had a distortionary effect on the demand and supply of apprentices in automotive, as well as many other industries. In this respect, Federal Government incentives such as the Boosting Apprenticeship Commencements wage subsidy scheme, while critically important, have not had the desired impact to attract enough new apprentices into the automotive industry. This makes it all the more imperative that a serious boost to skilled permanent and temporary migration become a national priority for government.

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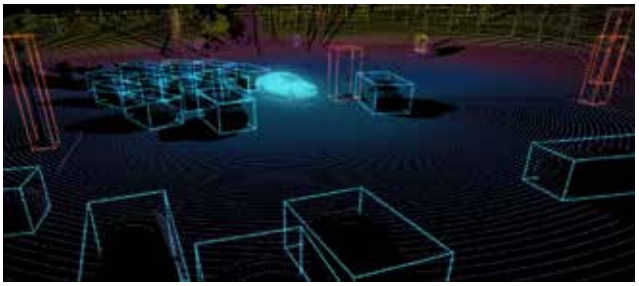
Valeo New Generation LiDAR



Valeo is a major player in driving assistance systems (ADAS), and has recently released its third generation scanning LiDAR, set to make its market debut in 2024.

This new technology, which offers significantly enhanced performance, makes autonomous mobility a reality and provides previously unseen levels of road safety, the company says.

The company added that this upgrade strengthens Valeo's technological and industrial leadership in the field, when it was already the only supplier on the market currently series-producing an automotive-grade LiDAR scanner.

The system reconstructs a 3D real-time image of the vehicle's surroundings at a rate of 4.5 million pixels and 25 frames per second. Compared to the previous generation, the resolution has been increased 12-fold, the range 3-fold and the viewing angle 2.5-fold.

Thanks to its unique perception capabilities, this new LiDAR can see things that humans, cameras and radars cannot. This means that driving can be delegated to the vehicle in many situations (level 2 automation and above), including on the highway at speeds of up to 130km/h. Even in such situations, a vehicle fitted with the third-generation scanning LiDAR can manage emergency situations autonomously.

Valeo's scanning LiDAR detects, recognizes and classifies all objects located around the car. If the objects are moving, it measures their speed and direction. The scanning LiDAR can adapt to all light conditions, whether it's dazzlingly bright or pitch black. It even measures the density of raindrops to calculate the right braking distance. It tracks nearby vehicles, even when they are no longer in the driver's line of sight, and uses algorithms to anticipate their trajectories and trigger the necessary safety manoeuvres.

It is predicted that up to 30% of premium new vehicles are set to reach level 3 automation by 2030, and to do so will need to be equipped with LiDAR technology. As well as cars, autonomous shuttles, robotaxis, delivery droids, autonomous trucks or the agriculture, mining and infrastructure sectors will need to be equipped with one or more LiDARs.