

INDUSTRY PROFILE - Road Transport Freight



**Transport, Postal & Warehousing
Road Transport Freight**

ANZSIC: 4610, 5102

Report Prepared June 2022

Industry Regulatory / Licencing Bodies

- The Department of Transport and Main Roads WA are the entities responsible for licensing and regulatory requirements in the road transport industry.

Industry Development and Workforce Opportunities and/or Challenges for Industry

2.1 Industry opportunities affecting the current and future supply and demand of industry's skills and workforce

- The Road transport industry accounts for 2% of the Australian workforce. ABS data show that the number of workers in the Road transport industry has grown by 16% over the 13 years from 2003 to 2015.
- WA's freight task is expected to continue experiencing exponential and sustained growth over the next few years. This has been seen in the past year alone, whereby the increase in freight task increased substantially due to the Impact of COVID-19 and the rise in road freight created by online shopping. The increase in State infrastructure as well as new mining projects (i.e. Lithium) will also increase the freight task and see the demand for these Drivers increase even further.
- It is anticipated the demand for road freight will continue to be boosted over the next 5 years as more consumer goods are shipped intrastate and within urban areas as population growth and increased and sustained uptake of online shopping continues. As a result of this it is anticipated the road freight task will grow at a faster annualised growth than coastal shipping or rail freight (even with National investment into rail infrastructure to reduce the number of trucks on Australian roads as a result of increased traffic congestion in major cities). This will continue to increase demand for drivers.
- Other key impacts to freight rate have been due to the change in technology contributing to sharp rise and fall in freight rates, as well as the progressive shift from smaller higher cost vehicles to larger lower cost vehicles, the diesel fuel price, infrastructure and logistics changes. As a result, the outlook for freight rates is predicted to continue in a flat or upward trend depending on oil prices (which is due to the Russian and Ukraine sanctions will continue to rise significantly).
- Although the mining sector continues to use Driverless vehicles (i.e. dump trucks) they have recently partnered with a automation specialist to develop driverless road trains in the Pilbara; it is unlikely this technology will be seen on Australian public roads for some time. The extensive infrastructure needed to support these systems, and will not impact the number of workers required in this area for many years. It should be noted, the US already allows Driverless truck trials on some highways, however these trucks still require a licenced driver to travel with them. As such, these advancements will need to be monitored to determine how it will affect the workforce and the skills required to interact with this technology.
- As more Heavy Vehicle Drivers are required there will be a call for more driving instructors with experience to train and supply qualified HR/HC/MC drivers needed to meet this demand. As such there is high demand for this occupation which will extend to the medium term (3 – 5 years).
- Competition for roles such as Transport Company Manager, and Driver roles are in short supply. The demand for these roles will continue to increase as experienced workers are lured away into other industries experiencing growth (i.e. mining sector). As there is a long lead time to develop people into these roles, these workers and their accumulated experience cannot be quickly or easily replaced.
- Affecting this industry are also critical shortages being experienced within the Department of Main Roads WA. The loss of critical and experienced technicians may cause delays in the issuing of permits needed to transport freight as well as critical advice and experience in the safe piloting of vehicles.

2.2 Existing and anticipated supply and demand for skills

- The Road Transport sector is made up mostly of an ageing workforce across many facets across the Road Freight, Passenger and Furniture Removal areas. This is limiting industry's ability to implement succession planning, particularly for smaller operations who do not have the same level of flexibility as larger companies.
- In addition, challenges associated with the national and global skills shortages for truck drivers will continue to have a significant effect on industry's ability to maintain services particularly for the freight sector given the significant growth of the nation's freight task over the past year.
- Industry is already made up of a diverse workforce, however both metropolitan and regional businesses have made attempts to increase Indigenous, female or CALD participation in their workforce with limited

success. Companies continue to investigate and implement strategies designed to attract and retain these workers (i.e. one large metropolitan company has worked closely with Pilbara Heavy Haulage Girls, to increase female participation in their workforce). However this has been met with limited success, particularly for line haulage roles. Companies, both regional and metropolitan areas believe a large deterrent to attracting female workers is the lack of suitable amenities and road rest stops available both within the State and intrastate.

- Other States/Territories have also produced their own versions of Leadership training and truck driver training programs with varying success. These programs are designed to not only address current shortages but to develop long lasting opportunities for career development for a younger cohort as incentive to remain in industry.
- Industry are interested in seeking avenues to promote and boost Veteran employment in WA as well to addressing some of the current labour shortages being felt across the Road and Warehousing and Logistics industries. The road passenger and freight industries view Veterans as possibly possessing many desirable and transferable skills and traits which may make them successful in the road transport sector. It is estimated each year almost 1000 Western Australians join the ADF from Perth, and these workers may be attracted to returning to WA once they are ready to re-enter civilian life. The road freight and road passenger industries have identified a need to better map opportunities with the RPL needs of Veterans to be able to enter roles in the private sector. Working Spirits' Corporate Fellowship Work Experience Program has been developed to allow companies to capture the talent of Veterans by providing work experience within the private sector ahead of opportunities for full employment. Leveraging off these existing programs may offer further potential in linking Veterans with opportunities in WA.
- There is a global shortage of qualified drivers with the right skills and attributes (experience and licence) for these roles. Although some companies have successfully relocated their FIFO workforce to WA this has been reported as unviable to sustain in the long-term (due to the high costs associated with relocation) and some workers will continue to be sourced from interstate. During the height of COVID-19, some employers (Pilbara based) also adapted contracts to retain employees for longer periods, rather than have them travel home to the Eastern States as there was no guarantee these employees could be replaced. As a result of these measures companies are able to retain workers for longer periods. However, there is still considered to be an undersupply of workers. In addition, effects of environmental factors (floods, fires) and pandemic impacts have also created a misleading issue where some trucks are idle because there simply are not enough drivers or support staff to assist in their operation resulting in critical supplies not being able to be delivered on a national scale.
- Due to an ageing workforce, and younger workers not entering industry further skills and labour pressures are being felt by industry to replace their current workforce. As this sector competes with other less skilled jobs which do not carry the same risks or involve unsociable hours younger workers are often lured away from considering these roles.
- The Transport and Logistics industry is receptive to the idea of accessing the workers through the Forestry Transition package. As Native Forestry is ending in 2024, the government is working with employers to assist workers transition and upskill into other industries. Many of these workers already possess the licences required for transport and logistics. In addition to their familiarity with manual handling and outdoor aspects of the work, employers are seeking ways to be involved further to attract these workers into transport and logistics careers, either with regionally based operators/depots or in the metropolitan area.

2.3 The impact of COVID-19 to the workforce

- Trucking businesses continued to be in high demand throughout the Pandemic as well as post COVID-19 with an increase in container freight being seen throughout the supply chain resulting in an increase in demand for qualified and experienced Truck Drivers across industries. As this industry was already experiencing a labour shortage these demands have seen additional pressures placed on operators to source and retain workers, with some qualified workers being lured away to work in other industries (i.e. mining). Some small to medium operators State-wide experienced reduced demand for work requiring drivers to be temporarily furloughed or reassigned (such as specialized niche markets such as Titanium). However with the current opening of new titanium mines in the Goldfields region it is expected demand for this freight will grow (including for the transportation needed to support the infrastructure of these and other infrastructure and mining projects (i.e. wind farms).

- There are many trends/developments which may further exacerbate the demand for skilled workers for the Road Transport industry and across the Supply Chain within WA. Employers may experience this 'gap' on two fronts – with a need for the temporary replacement of the current workforce (as they are required/forced to undergo leave if experiencing COVID-19 symptoms or adhering to other State Directions); but also the future supply of workers to fill ongoing gaps, such as those for Heavy Vehicle Truck Drivers.
- COVID-19 and its continuing impact on the supply chain, for instance access to filters, or AdBlue; as well as recent environmental challenges such as the flooding impacted the ability of rail to transport freight. Due to this disruption, road freight, particularly via road train increased temporarily utilising a “land bridge” to ensure supply to WA. Some operators had to temporarily stand down their contractors due to delays in the supply chain (a result of the floods) which meant there wasn't enough work for drivers. However, this has since been resolved, and demand is expected to continue to increase.
- In addition, the rollout of the COVID-19 vaccine will further aid the recovery of domestic economic conditions as lockdown restrictions and capacity constraints are eventually eased across which will also have an impact on domestic freight activity, nationally. However, surges in COVID-19 cases, isolation/quarantine requirements and uncertainty surrounding virus variants and other changes may restrict some road transport activity. Particularly as organisations across the supply chain work with the anticipated and current limited access to staff which is further compounded by ongoing existing skills shortages.
- Due to the surge in online shopping established during initial COVID-19 waves, new buying habits, the rise in shipping/parcel postage costs and lengthy delays in parcel delivery some retailers are now utilising their own driver delivery schemes for local metropolitan based deliveries. This has allowed these retailers to offer competitive services to their customers with same day and guaranteed/reliable delivery timeframes. For instance, Pet Stock, a large national pet supplier now offers three options for delivery and has established a program whereby items purchased before 4pm will be delivered to a local address via their “dasher” a courier/delivery driver type scheme. This often utilises an existing store employee, or subcontractor courier agent to deliver their parcels for a standard fee (no matter item size or quantity). Bunnings Hardware has also been utilising a similar concept, where items will be delivered for a set fee within a day of purchasing items online where an existing employee from a local store is used to deliver purchases within their local area. This has implications across not only the retail chain (i.e. in expanding the retail role to become a dual role with that of delivery and courier drivers), but also in addressing issues such as skill shortages/labour demand, and other pressures within both the courier/postal and delivery networks. This rise in additional service offerings by retailers will continue to increase demand for those drivers/workers who are able to undertake these roles (particularly those who possess local road network knowledge and can thus add greater efficiencies to the process).
- Companies have highlighted there will be an ongoing need for training regarding hygiene and decontamination practices and protocols to continue to exist outside and beyond the response to the COVID-19 pandemic. This will form part of their occupational health and safety requirements in the future.

Part 3: Training and Education Needs

3.1 Current and anticipated training needs of industry

- Certificate III in Driving Operations which is also a traineeship may be preferred however many companies do not pursue training beyond the licensing component. However this is not a mandatory qualification.
- Industry is supportive of the traineeship pathway for this role, for taking on unqualified candidates and providing the necessary skills and, with a view to progressing individuals to other roles experiencing shortages within the organisation once they have accumulated the experience needed. However, they find that business pressures have made it difficult to take on trainees due to the need for experienced workers. They have also had difficulty attracting potential trainees through the JobActive network and the school system due to a lack of interest in these careers and the physically demanding nature of the role.
- Within WA, there are no formal qualifications required to become a Truck Driver and training is usually provided on the job. However, Certificate III in Driving Operations is well regarded by industry, which includes six licensing units to drive a commercial vehicle, light rigid (LR), medium rigid (MR), heavy

rigid (HR), heavy combination (HC) and multi-combination (MC) vehicle and can lead to employment outcomes as a Heavy Vehicle Driver. Organisations typically require applicants to have either a Heavy Rigid (HR) or a Heavy Combination (HC) / Multi Combination (MC) licence, with the organisations then providing in house training to further upskill participants to the role.

- Typically, employers utilise skill sets to add-on to their drivers knowledge once employed, as the licence and experience component are the most critical for employment, with most training occurring once on the job. Due to safety aspects related to the job, it is not practical for employers to hire learner drivers for any heavy vehicle driver role (i.e. HR to MC) until they have obtained experience and competency, and so new graduates are not immediately employable.
- In reference to Logging or Wood Truck Drivers there are critical safety and environmental aspects involved in the role which require additional training. Typically, employers bear the cost of training to ensure these Drivers have developed an awareness of how to operate vehicles in specific, high-risk and complex environments (i.e. unsealed roads and plantations).
- Additionally, there are other courses such as load restraint, dangerous goods etc that are essential for drivers to undertake during the initial stages of employment, dependent on the type of goods being carted and the organisations needs.
- The newly funded Heavy Vehicle Driving Operations Skills Set has been well regarded by smaller to medium sized industry for entry-level positions, with a view to take them onboard and progress them through the licencing levels over 2 years. It is believed this program will also assist in developing the skills and experience needed for heavy vehicle drivers and will be more beneficial once rolled out to other regional zones and may assist in addressing the skills shortages. Although the Heavy Vehicle Driving Operations Skills Set, is well regarded by smaller to medium sized industry, larger metropolitan and national employers have identified these candidates do not meet the experience requirement needed to operate larger vehicles (i.e. quad/multi-combination vehicles).
- Last year Australian Industry Standards (AIS) advised the Transport and Logistics Industry Reference Committee (IRC) proposed a Heavy Vehicle (HV) Apprenticeship which would assist in professionalising the Heavy Vehicle Driver occupation and potentially assist in addressing the national skills shortage for these in-demand drivers. Following public consultation seeking endorsement and support for this model, AIS have advised the HV apprenticeship will be established following each State and Territories processes.

3.2 Training challenges/opportunities existing for industry within the training sector

- Industry reports more exposure is required at all levels (school age and above) to attract new workers to Transport and Logistics roles. It is felt an apprenticeship in truck driving may assist in creating a cultural shift to promote this occupation to student or school leavers as well as uplifting the competency standards of the profession beyond attainment of the licence.
- Industry continues to make efforts to better engage with schools to promote career pathways to students. However there is acknowledgement that this could be better done. Initiatives from the School of Isolated and Distance Education (SIDE) have had some success in exposing VET coordinators to the breadth and variety of roles for industries within the agricultural sectors. This type of strategy would also work well with Transport and Logistics and businesses across road transport (inclusive of furniture removalists) would be supportive (in offering workplaces to tour) if this were to occur.
- The global and national shortages of experienced truck drivers have widened the discussions of unique models to address these issues which might be adaptable in an Australian context. One example from overseas is an American model training high school students to driver 18 wheelers (Patterson Calif) this is one of the first high school programs for students at a non-vocational high school-
- Recently the National Transport Commission (NTC) launched a female-only trucking program for new driver in NSW to address the skills shortage and the under-representation of women in the transport and logistics sector. The Tasmanian Transport Association is also developing a pilot program to put drivers with a Heavy Rigid (HR) licence through a short four-to-six-week course. This program is still in the embryonic stage.
- Other States/Territories have created training programs, as an example, the Victorian Transport Association's Driver Delivery program in partnership with the Victorian Government, providing fully subsidised tuition in an intensive eight-day course that trains participants, and then puts them in paid

employment with a transport operator. Participants achieve driving skills, confidence and the competency of operating heavy vehicles safely with specific training is provided in:

- Occupational Health & Safety
 - Cabin Drills
 - Load Restraint
 - Road Craft
 - Fatigue Management
 - Loading Docks
 - Metropolitan Driving
 - Rural Driving
 - Risk Reduction Techniques
 - Vehicle Inspection
 - Chain of Responsibility
- Virtual Reality has been identified as a possible means to allow for the further exploration of workplaces and role tasks. Particularly for school age children when they are planning their career pathways at a young age. However, the cost-prohibitive nature of the technology will prevent many workplaces, particularly those smaller and regionally located operators to utilise this as an option. Industry would be supportive of partnerships which can provide this opportunity to develop content for demonstrating the unique aspects of their sectors which may attract school age children to seek careers in their industries.
 - According to the Community Colleges Australia (CCA) report training efforts need to be redoubled to ensure the 1 in 4 Australians who are currently digitally “excluded” and the 11% of Australians who are “highly excluded” from digital life are reached in order to close the “digital divide” that disproportionately impacts lower income people, regional and rural residents, and the less well-educated (particularly in light of COVID-19 impact to the workforce and operational requirements).
 - For medium to larger organisations interaction with technology is required particularly as there has been a shift away from paper-based systems to digital platforms, requiring drivers to utilise some technology to enter data as required on handheld devices (i.e. tablets or scanners). This technology has allowed for greater visibility for the supply chain, with organisations able to offer their customers increased tracking capabilities for their products, or to identify and improve efficiencies within the supply chain (i.e. monitoring fuel consumptions, electrical systems or fatigue breaks). In addition, employers are also able to capture more data via telematics to assist with fatigue management, GPS tracing, asset maintenance and scheduling. Drivers are now required to have written communication skills and some rudimentary digital literacy to operate these features, however, most organisations are prepared to work with individuals and provide additional support and/or training to upskill their workers or new employees as required (i.e. for those with low LLN or CALD backgrounds).
 - Within the regions state-wide RTOs and accredited training is limited to specific courses (i.e. forklift), with other courses unavailable unless a trainer is brought in (at additional cost to the employer). In addition, as access to trainers is also limited, smaller companies face additional challenges in relating to the high costs associated with bringing a metro-based RTO trainer to their area to deliver to their specific training needs (i.e. Goldfields-Esperance or the Northwest). This limits the uptake of accredited courses by those in regional centres.
 - Industry has identified the need for relationships between training providers and industry need to be two way ensuring both industry and TAFE and private RTOs are working in a collaborative capacity. In particular, TAFE/RTOs need to promote training to industry employers to create awareness of available training and pathways, rather than promoting training exclusively to employees or career seekers. This would also assist both industry and job seekers to better understand the many varied career pathways available within transport and logistics industries beyond the more visible roles (such as Driver).
 - In addition, better links with industry through, partnerships and industry working groups are needed. This would assist RTOs and TAFEs to foster more and varied opportunities for staff to return to industry to maintain their currency. In addition, it would assist RTOs and TAFEs to ensure they are aware of industry issues, challenges and any barriers to training, particularly for those in regional and remote areas.

3.3 Career pathways and graduate outcomes

- Recent graduates without experience may not be suitable immediately employable for driving roles. As drivers are required to load, transport and unload bulk petroleum products at retail, depot and commercial sites, some companies also require drivers to change between multiple vehicles, including single, b-double and road-train combinations. As a result, previous experience with these vehicle types is considered desirable by employers. However, as many of the vehicle types and trailer combinations used overseas may not be directly comparable to industry in WA this may not always be possible. Most employers would require the licence only and are prepared to provide the necessary upskilling.
- There is a long lead time (2+ years) to get a new Scheduler fully autonomous in the role due to the time taken to foster and develop the internal organisational knowledge needed before fully competent. For this reason, many organisations prefer to promote internally from within their business, finding that external candidates may take longer to develop the knowledge of the internal workings of a business and that this can impede their progress/success in undertaking the role (given the complexity and nature of the scheduling decisions involved). In some instances this can also result in higher turnover of candidates as they are unprepared for how to incorporate the internal workings of the business into scheduling decisions. Thus, this qualification is best suited to those already employed within the business who are undertaking additional training as part of their role, or promotion to scheduler.

References:

- LDSC Road Transport Industry Profile 2020
- LDSC Road Transport Industry Profile 2021
- LDSC Furniture Removalist Industry Profile 2020
- LDSC Furniture Removalist Industry Profile 2021
- LDSC VET Focus Areas, Industry Profile, Road Freight, 2021
- LDSC VET Focus Areas, Industry Profile, Road Furniture Removalists 2021
- LDSC VET Focus Areas, Industry Profile, Road Passenger 2021
- LDSC VET Focus Areas, Industry Profile, Postal 2021
- LDSC VET Focus Areas, Industry Profile, , Warehousing and Logistics Industry Profile 2021
- LDSC, Warehousing and Logistics Industry Profile, 2021
- LDSC, Warehousing and Logistics Industry Profile, 2020
- LDSC, Postal Industry Profile, 2021
- LDSC, Postal Industry Profile, 2020
- LDSC WAJET/SPOL response 2021
- LDSC Establishment and Variation of Apprenticeship (EVAC) Mobile Crane Certificate IV in Mobile Crane Operations, 2020
- LDSC, Addendum, Establishment and Variation of Apprenticeship (EVAC) Mobile Crane Certificate IV in Mobile Crane Operations, 2021
- Fully Loaded, LOGISTICS FIRM TO RUN FEMALE-ONLY TRUCKIE PROGRAM <https://www.fullyloaded.com.au/industry-news/2203/logistics-firm-to-run-female-only-truckie-program> [last accessed March 2022]
- Community Colleges Australia (CCA), Will Omicron Devastate Australian Vocational Education and Training in 2022? [last accessed March 2022]
- Australasian Bus and Coach (ABC), June 2021), E-Bus Training Via Volvo and TAFE partnership, [[available: <https://www.busnews.com.au/industry-news/2106/e-bus-training-via-volvo-and-tafe-partnership>] [last accessed:15 June 2021]
- [Rio Tinto, TAFE and the WA State Government join forces for mining jobs of the future; Automation \(riotinto.com\)](#)
- Australian Industry Standards Skill Forecast, Transport and Logistics, 2022
- Australian Industry Standards, Skills Forecast, Transport and Logistics, 2021
- Australian Industry Standards Skill Forecast, Transport and Logistics, 2019
- TAFE NSW and Australia Post join forces for training rollout [accessed via <https://www.tafensw.edu.au/media/-/blogs/tafe-nsw-and-australia-post-join-forces-for-training-rollo-1>] last accessed 26 May 2021
- Australia Post Annual Report, 2019
- Australia Post Annual Report 2021
- Australia Post, Diversity and Inclusion Report, 2021
- Supply Chain & Logistics Association of Australia: The Australian Supply Chain Tech Survey, April 2018
- CCIWA, WA Regional Pulse report, April 2021
- CCIWA, WA Regional Pulse report, April 2021; The West Australian, Chew M, 19 February 2021, WA's Big Scarcity of Skills
- BlackTree TV, 2019, Amazon Driverless Truck now driving 650 Mile Freight Route
- <https://www.youtube.com/watch?v=fnRz0JENL1Q> [last accessed March 2022]

- Business Insider, Amazon is reportedly buying 1,000 autonomous truck-driving systems, which could pave the way for one day ditching drivers Available <https://www.businessinsider.com/amazon-orders-autonomous-self-driving-semi-truck-delivery-systems-report-2021-6> [last accessed March 2022]
- WRF, personal communication, 2021
- IBISWorld, February 2021, Road Transport, I4610, Road Transport in Australia Report
- The Guardian [available:<https://www.theguardian.com/business/2021/feb/17/mining-boom-commodity-supercycle-copper-nickel-price-investments-clean-energy>] last accessed 20 April 2021; Road Transport IWG 2020, 2021; WRF, personal communication, 2021
- News.com.au, Source: <https://www.news.com.au/national/moving-hell-australian-backyard-furniture-removal-businesses-thriving-at-consumers-expense/news-story/494a1d6d504a62dd54174ddc60bf8dbb>
- Australian Furniture Removers Association (AFRA), last accessed 31 July 2018, source: <http://afra.com.au/>
- IBISWorld: [Removalists in Australia - Industry Data, Trends, Stats | IBISWorld](#)
- Australian Taxation Office, [Furniture removalists | Australian Taxation Office \(ato.gov.au\)](#)
- What is on-demand transport? <https://www.transport.wa.gov.au/On-demandTransport/what-is-on-demand-transport.asp> [last updated 22 January 2019]
- Department of Transport, source: <https://www.transport.wa.gov.au/On-demandTransport/voluntary-buy-back-for-taxi-plate-owners.asp>, [last updated 1 February 2019]
- Department of Transport <https://www.transport.wa.gov.au/On-demandTransport/safety-management-for-authorised-booking-services.asp> [last updated 27 February 2019]
- Industry Consultation 2020, 2021; Road Transport IWG 2020, 2021; LDSC Industry Snapshot Road Transport 2020
- National Industry Insights Report, Transport, 2021
- Media Release, 14 April 2021, Fewer Australians Using Public Transport After COVID-19
- Australasian Bus and Coach (ABC), June 2021), E-Bus Training Via Volvo and TAFE partnership,][available: <https://www.busnews.com.au/industry-news/2106/e-bus-training-via-volvo-and-tafe-partnership>] [last accessed:15 June 2021]
- Transport Workers Union (TWU) Trucking Survey, <https://www.twu.com.au/trucking/survey-of-over-1000-truck-drivers-reveals-horrific-statistics/> [last accessed march 2022]
- Working Spirit, Available <https://workingspirit.org.au/wp-content/uploads/2018/10/TheListeningPost-2018March.pdf> last access March 2022] <https://www.safeworkaustralia.gov.au/system/files/documents/1705/road-transport-industry-profile.pdf>
- Media Statement, Road Trains Permits Extended to help resupply State Supermarkets [available <https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/03/Road-train-permits-extended-to-help-resupply-State-supermarkets.aspx>] [last accessed march 2022
- IbisWorld 2022) (IbisWorld, January 2022, Australia Business Environment Profiles Report D3126, Domestic Freight Task
- PerthNow More pain for drivers as oil prices rise, <https://www.perthnow.com.au/politics/more-pain-for-drivers-as-oil-prices-rise-c-5691405> [last accessed march 2022
- ABC News, Uber now able to drive people disability using taxi subsidy, <https://www.abc.net.au/news/2021-02-03/uber-now-able-to-drive-people-disability-using-taxi-subsidy/13113136>[last accessed march 2022
- NineNews, Retailers and consumers are increasingly looking for alternatives to Australia Post amid ongoing delivery delays, 7 October 2021
- Business Insider, Woolworths joins online marketplace gold rush, April 22 2021
BusinessInsider, 21 October 2020, Australian e-commerce enjoying \$4billion boom during the pandemic – and online small businesses are reaping the reward
- ItNews, Toll group Suffers second ransom attach this year <https://www.itnews.com.au/news/toll-group-suffers-second-ransomware-attack-this-year-547757> [last accessed March 2022]
- World Economic Forum, The Future of Jobs Report, 2020, https://www.weforum.org/reports/the-future-of-jobs-report-2020?mc_cid=684280dd74&mc_eid=420ef5834f [last accessed March 2022]
- Digital Skills Organisation, https://digitalskillsorg.com.au/?mc_cid=684280dd74&mc_eid=420ef5834f, [last accessed march 2022]
- National Skills Commission, 2021 State of Australia's Skills 2021: Now and Into the Future, https://www.nationalskillscommission.gov.au/2021-state-australias-skills-2021-now-and-future?mc_cid=684280dd74&mc_eid=420ef5834f [last accessed March 2022]
- Australian Industry Standards, Skills Outlook 2020
- Australian Industry Standards, Skills Outlook 2021
- Inquiry into National Freight and Supply Chain Priorities, March 2018
- Australian Industry Standards, Skills Forecast, 2019, 2020, 2021
- Cross Sector Supply Chain Skills and Careers Hub, Australian Industry Standards, Careers in Supply Chain [last accessed December 2020] <https://supplychainskills.org.au>
- Centre for Supply chain and logistics, 2020, Executive Summary: The underrepresentation of women in supply chain and logistics
- Pricewaterhouse coopers, Workforce of the future, the views of 10,000 workers report, 2017 [www.pwc.com/futureworkforce
- MHD, Optimism for Logistics Industry Heading into 2022, December 2022
- Wayfinder Supply Chain Careers for Women, A view from the top: Current workforce challenges in Supply Chain and Logistics (2021)
- MHD, optimism for Logistics industry heading into 2022, 21 December 2021
- MHD, Supply chain chaos disrupted 2 out of 3 Australian businesses this year, with experts warning the crisis will continue into 2022, 21 December 2021
- MHD, Amazon joins label-free returns with Australia Post, 21 December 2021
- Australia Post Newsroom, Pandemic Fuels Australian Online Shopping Boom, [31 March 2021]

- MHD, April 2021, Qantas to boost air freight recovery with 90 per cent domestic capacity by mid-year.
- Business Insider, Woolworths joins online marketplace gold rush, April 22 2021
- Big Rigs, 120 MC Driver in 12 Months, June 2021, <https://bigrigs.com.au/index.php/2021/06/11/120-mc-drivers-in-12-months/> [last accessed March 2022]
- Big Rigs, Big Rigs, Veteran Outback Truckie on the Struggle to find drivers <https://bigrigs.com.au/index.php/2021/06/22/veteran-outback-truckie-on-the-struggle-to-find-drivers/> [last accessed March 2022]
- Big Rigs, Truckie Shortage in WA costs Mining Giant \$120 Million, April 2021 <https://bigrigs.com.au/index.php/2021/04/23/truckie-shortage-in-wa-costs-mining-giant-120-million/> last accessed March 2022]
- NPR, High Schoolers are training to drive 18 Wheelers amid a shortage of truck Drivers (16 October 2021) <https://www.npr.org/2021/10/13/1045463623/high-schoolers-are-training-to-drive-18-wheelers-amid-a-shortage-of-truck-driver#:~:text=High%20schoolers%20are%20training%20to,a%20shortage%20of%20truck%20drivers&text=Patterson%20High%20School,Students%20at%20Patterson%20High%20School%20in%20Patterson%2C%20Calif.%2C%20are.high%20school%20in%20the%20country,> last accessed March 2022]
- Big Rigs, Driver licensing: What's wrong with our current system and how to fix it, <https://bigrigs.com.au/index.php/2021/05/15/driver-licensing-whats-wrong-with-our-current-system-and-how-to-fix-it/> [last accessed March 2022]
- Bitre, Department of Infrastructure and regional Development, Freight Rates in Australia, available, https://www.bitre.gov.au/sites/default/files/is_090.pdf [last accessed March 2022]
- MHD, Australian Government establishes Freight Data Hub, 1 June 2021
- Media Statement, Million Dollar Forestry Transition package, <https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/02/77-million-dollar-Safe-Transition-Industry-Support-Package.aspx> [last accessed march 2022]
- LabourForce, Truck Driver Shortages, a Perfect Storm Report, February 2020
- Department of Transport, On-demand Transport, a discussion paper for future innovation (2015)
- The West Australian, Sean Smith, 21 September 2021, SeaLink Snaps up bus operator in Swan Valley
- ABS, Fewer Australians using Public transport after COVID-19, Media Release (14/4/2021)
- Big Rigs, Driver Delivery: Your key to a rewarding careers in transport, <https://bigrigs.com.au/index.php/2021/09/17/driver-delivery-your-key-to-a-rewarding-career-in-transport/> [last accessed march 2022]
- Big Rigs, Research Report examines industry skills shortages, <https://bigrigs.com.au/index.php/2021/10/27/research-report-examines-industry-skills-shortage/> [last accessed March 2022]
- The West Australian, Stuart McKinnon, 6 December 2021, Mineral Resources partners with Hexagon to pioneer driverless road trains.
- WAToday, <https://www.watoday.com.au/national/western-australia/uber-frustrating-perth-ride-share-drivers-find-new-ways-to-price-gouge-20220216-p59x0d.html> [last accessed March 2022]
- CCIWA, WA Regional Pulse report, April 2021; The West Australian, Chew M, 19 February 2021, WA's Big Scarcity of Skills
- Industry Consultation, 2020,2021; Road Transport IWG 2020,2021; RTO IWG, 2020, 2021; Media Statement, Saffioti, and Ellery, 21 April, 2021; 3 February 2021; Jobs and Skills Centres (JSC), 2021.
- Media Statement, Further support for transport industry to keep WA moving, 2021; ATN, Millions Allocated for Truck Driver Training Program, 2021
- Media Statement, Further support for transport industry to keep WA moving, 2021; ATN, Millions Allocated for Truck Driver Training Program, 2021; Media Statement, 21 April 2021; 3 February 2021.