INDUSTRY PROFILE - Warehousing & Logistics



Transport, Postal & Warehousing Warehousing and Storage Services

ANZSIC: 5301

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1. Background

1.1 Industry Regulatory / Licencing Bodies

- WorkSafe WA is an agency within the Department of Mines, Industry Regulation and Safety (DMIRS)
 and is responsible for the administration of the Occupational Safety and Health Act. This includes the
 licencing and registrations for forklifts.
- Main Roads WA is responsible for the enforcement of Chain of Responsibility legislation. Anyone who
 has control within the transport chain can be held legally accountable if by action, inaction or demand
 they cause or contribute to road safety breaches.

2. Workforce Opportunities and/or Challenges for Industry

Please note, that as transportation, and retail are also part of the Supply Chain (end to end) that the Maritime & Ports and Stevedoring, Road Transport, Aviation, Postal and Retail Industry Profiles are also relevant to read in combination with the below.

2.1 Industry Overview

• Supply Chain Overview

A number of factors (i.e. labour shortages, war in Ukraine, Covid-19, natural disasters, rail/road and maritime disruptions, high fuel prices, geopolitical tensions, trade wares etc) have continued to disrupt supply chain and highlighted their vulnerabilities leading to changes in consumer behaviour, growing e-commerce demand, and increased pressure on costs and labour in the logistics landscape. Limited supply in industrial land and warehousing have also placed pressures on supply chains and influenced the way they have operated during and as we move out of the impacts of the pandemic. These factors have also led to changes within the workforce, adoption of technologies and changes to operating (i.e. just in time, just in case models, emergence of 4PL etc). As a result, efforts are underway both internationally and within Australia to decrease global supply chain vulnerabilities where possible and to increase strengthen supply chain resilience (particularly global bottlenecks).

Supply chains have also become more complex as a result of diversifying the number of organisations from which suppliers can access goods (known as product proliferation) in shorter turnaround time. However, the more partners in the supply chain the greater the level of information enhance and coordination is requires. This has also increased the complexity of jobs for those related to import-export, as well as schedulers.

• Warehousing and Logistics Overview:

The warehousing and logistics industry is a \$5.3 billion industry in Australia, with predicted growth to continue in coming years. Consumer demand and online shopping will continue to influence the growth of this industry, with online retailers not relying on physical stores to sell their products, warehouses are needed to store the goods until a sale has been made. Across Australia, there's increasing demand for workers in the warehousing and logistics sector, and a shortage of workers with the required skills and qualifications to do the job. Rising material costs, stressed supply chains and extreme weather events are putting construction profit margins under pressure. Global e-commerce sales are expected to grow to \$7.4 billion by 2025, more than double since 2018, leading to increased last-mile logistics complexity and heightened consumer expectations.

2.2 Industry opportunities

• Responsiveness and Resiliency of the Supply Chain:

The last four years have seen marked impacts to the supply chain and the way it operates, from the initial impact of COVID-19, digital innovations, environmental disruptions (such as bushfires and/or floods which impeded rail and road goods), to the war in Ukraine and the rising cost of living

and fuel prices. As a result of all of these factors has caused rapid and marked changes to the supply chain in Australia, with operators pivoting to keep up with new delays and rising costs.

There are more concerted efforts by industry to break don silos in supply chain execution operations and to enable longer term strategies and actions in locations infrastructure, and technology to help minimise future shocks.

This resulted in several strategies and initiatives being made such as the Supply Chain Taskforce to better understand the complexities and impacts to the suppl chain in order to build more resilient supply chains that can withstand these pressures.

• Supply Chain Taskforce

Recently the Federal government initiated a Federal taskforce to evaluate the supply chain and make modifications. However, although the term supply chain was used, the taskforce only reviewed one aspect of the supply chain which was maritime/ports. This is presents a wider issue for industry due to unclear understanding of the supply chain (beyond the means to transport freight) which needs to be considered (and better defined).

In addition, although the taskforce aimed to improve the resiliency of the supply chain, industry reported that in order to build true resiliency into the supply chain (i.e. other factors such as (i.e. warehousing internal space and leasing property (warehousing distributions hubs/intermodal areas), impact of technology and automation, restricted manufacturing/services supply (mostly outsourced now), pallet and container shortages plus much more) also need to be addressed.

Industry reports this knowledge/understanding and appreciation is often missing (such as how Industry / employers / workers / customers all understand what a supply chain is and how they each inter-relate inside it, and how their parts impact the supply chain as a whole) which will also impact on the development and use of training products as well as the wider understanding of occupations within the supply chain. This a lack of understanding is clouding the issue/definition of what a supply chain is and thus what training should look like around these areas. In addition, when transport within the supply chain is disrupted, this is a significant issue for supply chains, however the delays experienced went beyond only the means to transport goods (and the ports roles) and without consideration of these other aspects, then true resiliency cannot captured. These areas also need to be addressed to take the supply chain out of "reactive mode" into a "resilient mode" and should form part of any future task supply chain taskforce. The warehouse is a critical point in supply chain management.

According to Argo and Co Supply Chain transformation does not relation to warehouses or DCs. Instead this term relates to the source of where materials/goods originate through to the end customer (an end to end process or supply chain lifecycle). In this way both retail and warehousing could be considered aspects of the supply chain. According to industry stakeholders this needs to be better incorporated into training products so that students better understand this relationship and cycle; and can be better prepared for the challenges and opportunities within the supply chain. This will be a critical skill for supply chain analysts to possess. Innovate supply chain thinking is becoming important to companies to foster to create positive work environments and to overcome challenges.

2.3 Supply and Demand for Workforce (challenges and opportunities)

The below trends will impact on Industry requirements and future workforce needs for this sector; for both the overall supply chain and the warehousing and logistics industry. Trends that will impact 2023 will include skills shortages, sustainability, technology and innovation and cyber resilience which are outlined below:

• Skills and Labour Shortages

There are global shortages of workers. Amazon US has recently recognised they may run out of workers to hire by 2024. This has resulted in companies evaluating ways to become employers of choice due to increased hiring competition from other logistics companies within Australia. This has also been seen internationally, for instance, Amazon identified six methods for its warehouse workers, including raising wages or increasing reliance on robots, to fix the issue, but that the problem is coming at the company pretty quickly, especially in certain parts of the country. Another strategy being seen internationally and within Australia is transferring workers from warehouse to warehouse depending on demand.

According to the International Labour Organisation, 93% of the world's workers resided in countries experiencing COVID-19 related restrictions (such as border closures or curfews). This resulted in the global working hours falling by 8.8% in December 2019, equivalent to the loss of 255 million full time jobs, placing additional pressure on organisations on top of any labour shortages being felt. As the labour market tightens, demand for supply chain and tech talent is at an all-time high. With the skills shortage posing a major threat to organisations' resilience, efficiency, and profitability. According to the Hays report, more than 91% of Australian and New Zealand businesses are currently experiencing a skills shortage. The Hays Salary Guide 22/23 revealed 83% of responding businesses stated the insufficient supply of local skilled professionals will hinder growth and operations this year – the highest level the recruiter has recorded in the 43 years it's been producing its report. In a recent Körber Master Class Survey, 73% of respondents indicated that it takes at least 30 days to fill an open warehouse position. This is linked to the perception of manual labour, and low paying jobs. Hiring and retaining skilled staff was identified as the second greatest challenge for the year ahead. With the industry suffering from a brain drain (Construction) with this contributing to delays within the supply chain.

According to Swinburne University, the low unemployment rate, the great resignation are flow on effects from tighter immigration restrictions globally, creating greater demand and competition for skilled and unskilled labour. This is creating pressure across industries. This is forcing industry to think outside of the box in creating ideal working conditions (i.e. company culture) to attract and retain workers. Coaching and leadership skills are being more actively recognised as necessary in creating cultures that workers want to stay in. Additionally, "co-opetition" (i.e. collaboration with competitors) is also being seen to create win-win scenarios, including the sharing of information and cross pollination of ideas to create benefits to industry. This approach, if adopted by industry may assist in industry creating scenarios to recruit new entrants to industry, creating a larger talent pool to supply industry. However, this is still a new concept and yet to be adopted in any formal way in WA.

Gender Disparity

Although industry has a diverse workforce, and gender imbalances continue to need improvement, Gartners recent Women in Supply Chain survey showed the highest percentage of women in the supply chain since 2016. Women now comprise 41% of the supply chain workforce (up from 39% in 2020). This was echoed int eh LDSC Industry Survey 2023, where one employer also commented that better pathways, internal and external need to exist for women to become managers or assistant managers

To better attract women to industry, stakeholders are highlighting the benefits of identifying career progression pathways for women and creating more visibility and awareness of the sector (particularly around women being in the industry) and highlight it as a viable career path from a younger age. In particular mentoring processes have been shown to offer great benefit, however, this can only be done on a smaller scale. Within WA the Supply Chain & Logistics Association (SCLAA) offers mentorships to those working in industry to gain the expertise needed to progress their career as well as to new entrants.

• Potential Licensing Barriers for entry-level roles into Transport, Warehousing and Logistics

In most roles for transport and logistics a C class drivers' licence is necessary for driver and other associated roles. However, delays in attaining this due to age requirements or other issues (i.e. sitting the Practical Driving Assessment) can also result in delays for younger cohorts to enter industry if they do not possess this or have the ability to attain it. A new driver's licence training initiative to remove barriers for young people training in the building and construction industry has also been recently launched in efforts to increase workers within the construction industry. The Construction Training Fund's \$1.26 million Driver's Licence Training Support Program will give students the opportunity to obtain a driver's licence while ensuring apprentices entering the construction workforce are job ready.

As a driver's licence is a key requirement for many transport/construction roles. Access to a driver's licence was identified as a key barrier to apprenticeship employment for young people at the State Government's 2021 Skills Summit. The pilot program offers standard driver training and supervision to help participants gain a valid Western Australian driver's licence. In addition, specialised training for driving in a construction environment, such as towing, safe management of vehicle loads, vehicle maintenance and driving in the sand will assist young people to develop awareness and skills in road safety and vehicle management. This will also increase the demand for both Assessors and Driving Instructors. This program would also be of benefit for the transport industry given that these roles are often seen as the entry-level point of many occupations with transport, warehousing and logistics industries.

• Companies Going into Administration

A number of National and WA based trucking companies have gone into administration following rising costs and labour shortage pressures (For example, Rivet Mining Services and Scotts Refrigeration. Rivet Mining Services (RMS) provides bulk haulage to mining companies in Australia, particularly in Western Australia. RMS was deeply affected by a number of adverse economic factors including extreme weather events, project delays, labour shortages, and cost pressures. According to the Transport Workers Union, almost 200 companies in the transport industry became insolvent in 2022 alone. Scott's Refrigerated Logistics entered voluntary administration last Monday, making redundant 1500 employees Nationally. Scotts Refrigerated was a massive freight business for supermarkets, moving on average 8000 pallets daily to major grocery retailers, independent supermarkets, food manufacturers and exporters, with industry moving to close any deficits this may create in the supply chain. Industry stakeholders report that some of these employees have already been snapped up by large, national transport companies in WA, with efforts to relocate them if needed also being offered.

Scott's has 24 warehouses across Australia that need to be emptied due to the company's collapse, but because there are limited alternative cold storage facilities, these products risk being binned. Within WA some of the cold storage is being relocated to Geraldton due to the lack of facilities with the metropolitan areas.

Additionally, Woolworths is closing its struggling export business that has been hit by global supply chain disruptions and the Ukraine war. The grocery sector has experienced tough conditions in the international export business. Woolworths International is part of B2B Food, an arm of Woolworths' Australian B2B business. The supermarket giant was exporting some own-brand products. The closure of Woolworths International is expected to be completed by June 30, this will impact 51 jobs will be lost, largely in Australia, and staff have already been offered jobs in other areas of the company or redundancies. World trade is gradually recovering after war in Ukraine and the COVID-19 pandemic disrupted the global supply chain network for almost three years. This trend is also being seen internationally. For instance, after 10 years, UK retail giant Tesco scrapped its ownbrand exports in 2021 due to poor performance, lack of stock availability and compromised supply chain. Sainsbury's followed last year.

With Australia, the UK and the US officially launching the new AUKUS defence programme, the Australian Government is confident that the pack will create huge supply chain opportunities for the country. Minister for Defence Industry and the Pacific Pat Conroy states that they will be working with AUKUS partners to identify specific opportunities for the Australian industry to participate in the nuclear submarine supply chain. This will help ease the supply chain constraints being felt in the UK and US. The programme will contribute to skills development in Australia on a massive scale. Tens of thousands of jobs will eventually be created requiring upskilling as well as skill sharing among our AUKUS partners.

However, it is currently unclear what exact percentage of the AUKUS supply chain will be contributed by Australian companies.

• Changes in Maritime Freight

Two of the largest shipping companies Maersk and MSC are parting ways because of their divergent predictions on the future of global trade. Geopolitical tensions, climate change and its mitigation, and wider supply chain disruptions are leading countries to restore manufacturing capabilities back to their own land). Companies are also seeing 'friendshoring' (manufacturing in allied countries) which could dramatically change the structure of trade routes.

The increase in e-commerce during the pandemic also triggered an unexpected surge in import demand, which created bottlenecks, capacity limitations, and rate increases. Ports became jammed, with ships required to wait for days before they could unload freight. This resulted in higher shipping costs, particularly for those with contracted terms and conditions, and saw higher than usual logistics costs and container space rented at high premiums that were then passed onto consumers (contribution to the rise in inflation).

The Australian Financial Review (AFR) says freight and shipping costs for consumer goods are expected to stay as low as possible in 2023 as global trade bounces back this year. The Freight Trade Alliance says spot prices for freight from China to Australia is a major indicator that declining volumes are helping lower prices, with trends expected to continue into 2023. This should help offset some costs for freight networks and the supply chain.

• Global Shortage of Welders will impact the supply chain

A shortage of welders in Australia threatens to disrupt the country's drive for renewable energy infrastructure, with a forecasted shortfall of 70,000 welders by 2030. In America, it is anticipated they will be short half a million welders and Japan will need 250,000 workers. This shortage will have a flow on effect as Australia does not have the welders to deliver the nation's critical energy, defence, rail and infrastructure projects. Furthermore, this will create greater demand, competition and procurement of fabricated steel products from the global supply chain.

• Warehouse Space

As online retail growth has expanded e-commerce networks are looking to expand with many individual sellers outgrowing their own spaces (often their homes/garages). In some instances, these suppliers are looking for 3PL logistic arrangements with companies that can lease warehouse space and fulfilment to e-tailers. Increasingly more warehousing space in major metropolitan areas is needed, with transport options for workers to access it. Additionally, the just in case model has meant that more organisations are choosing to hold more inventory to deal with any potential disruptions. Warehouse space continues to be in undersupply in the Perth area, with construction and/or other infrastructure delays impacting the availability of warehousing space. Due to many companies overordering using just in case model, saw many warehouses overstocked, with some companies continuing to house goods in sea containers. Perth currently has the lowest total development and highest vacancy rate of the entire country, which dropped considerable in 2022.

At the moment, there is much more cargo moving than there is available space, although some organisation such as Colliers in Perth is actively looking to unlock more industrial development and investment opportunities for commercial warehouse space (i.e. Perth Airport, Jandakot and

Hesperia); with industrial and logistics assets in Perth at their highest level on record in 2021. This has been due to the rebound of the resources sector, and industry recovery post-COVID with Perth Vacancy space falling sharpy. Additionally, new speculative products across the Perth market are forecast in 2023. Whilst this trend has been seen nationally, it has only begun growing in prominence over the last 24 months. Consequently, the relationship with ocean carriers is growing in importance, as buyers need to massage relationships to secure space in containers when importing goods, or hold onto containers for longer instead of unloading them and taking freight to their DCs. Across Australia, more companies are making their warehouses more efficient by "squeezing" as much stock as possible into the space, or yards.

Supply chain disruptions have altered the way companies operate. Supply chain design and execution continues to grow and pivot to changes. Retail has increased and accelerated it's reliance on e-commerce and as a result are recognising the value of automation to complement their existing workforce. E-shoppers increased by 112% between 2019-21 alone! Robotics, software, AI, machine learning is continuing to influence the retail, postal and warehsouto9ing landscapes. Companies now are realising that rather than an entire system overhaul, agile automation (using automation solutions or components of automation) is more useful for relieving bottlenecks, with less cos and disruption to the existing workforce. For instance, Booktopia is using robots to improve fulfilment and put away rates at is national DC. These technologies, such as plug and play options, are enabling both e-commerce and bricks and mortar retailers to access these advances.

2.4 Technology and Innovation

Changes to consumer shopping behaviour has influenced the way DC and warehouses operate. The scale of this trend was captured in the financials of Metcash (a supermarket wholesaler) which reported sales among its food retailers has increased 13.4% in the past two years.

Automation continues to offer advances and has resulted in more streamlined approach to worker onboarding processes. For instance, Linfox has recently reduced their onboarding timeline from four months to 4-6 weeks, making it more effective for customers as well as workers.

However, some companies also note that when AI automation, robotics or autonomous vehicles are used, it can complicate labour forecasting and scheduling.

The National Location Registry is a Federal strategy designed to assist in the sharing of location data to improve track and trace capabilities of goods as they move across the supply chain. This digital infrastructure will help industry digitise an important part of the supply chain management process (for safety and efficiency of Australian supply chains).

DHL Supply Chain says it has announced a \$150 million investment in warehouse robotics solutions and automation at its Australian warehouses, which will offer several benefits. The contract logistics solutions provider notes this initiative will support faster delivery to customers, improve operational efficiency, and reduce employee workloads. It adds this is the largest investment in robotics and automation it has made in Asia-Pacific, with 1000 robots to be deployed by 2025. In addition to the investment in robotics, DHL Supply Chain aims to grow its Australian workforce over two years and will provide retraining and development opportunities to existing employees.

Collaborative robots, known as cobots are one solution helping to enhance DC workflows which are growing in usage. These robots interact with humans in a shared workspace, and are being seen in shopping centres as well as DC (i.e. Kmart Rockingham). Whilst most training is done in house for workers interacting with cobots this will need to be monitored to ensure the work placements and industry currency of trainers remains up to date with these technological advancements as they are deployed throughout WA. Additional as technology progresses automation, including autonomous guided vehicles will be increasingly used in a variety of warehousing roles, such as unloading inbound good, return logistics (i.e. returned stock) storage, picking, packing and despatch.

Coles has introduced IoT technology to monitor the location of and measure stock for 4,500 smart food bins moving poultry between farms and its DC (rather than relying on truck telematics only). This is expected to improve the resilience of its critical supply chain (i.e. protein cold chain).

Dark Stores and Ghosting

new fulfillment concepts including dark stores (shuttered stores opportunistically converted into fulfillment centres), warerooms and automated order facilities are being trialled and are growing in Australia. Dark stores (aka shadow warehouses) look like regular supermarkets, however there are no customers, and they are dedicated to fulfilment only. These stores can be as much as three times more efficient than regular supermarkets as the layout of the store is designed for optimal picking/packing (not customer engagement). The first Woolworths dark store was opened in 2014. Several dark store variations, through delivery, are enabling merchants to enter markets where they do not operate physical locations via "ghosting." Wendy's, Chick-fil-A and other fast-food chains, for example, have introduced "ghost" kitchens that operate expressly to serve delivery orders - no dining room or carryout. Wendy's has said ghost kitchens would play a significant role in its expansion strategy, including in markets where it did not operate stores. Other brands also are using shared retail, or ghost kitchen locations, to expand their reach. Although traditional stores will still exist to provide the typical customer experience, these models are growing in number with more sites being trialled in Australia (mostly on the East coast). These models will have a significant impact on the staff and training needed to service these locations with some cross over between traditional retail and warehousing/logistics and transportation roles. As these stores are more like miniwarehouses than supermarkets, the tasks/duties, and occupations will need to be monitored to ensure correct alignment with training still occurs. See personal Shopper comments for more details.

ChatGPT and AI

The area of AI and it's impact on the assessment practices will need to be monitored. ChatGPT is a chatbot launched by OpenAI in November 2022 and has the ability to generate human-like text, making it capable of using natural language conversations. Due to this ChatGPT is having an impact on the Assessment space both at secondary schools and for those offering online learning in determining the authenticity of individuals work for assessment who may be using the AI to submit work not of their own making. Schools are looking for ways to mitigate these effects, with some planning to return to paper and pencil based assessments conducted in the classroom to ensure they are accurately assessing individuals understanding of concepts in their submitted work. This trend will need to be monitored to see how/if it affects the VET area. Within the UK they have also recognised the potential for students utilising ChatGPT with permission and if it may create biases in grading, as well as the possibility it could replace human instructors and how this may affect the fair grading and assessment of individuals work. Some National retailers are also investigating it's potential to provide training.

In addition ChatGPT has also been identified as a possible area to assist in career planning. In particular it can Level up your job searches by targeting opportunities for career moves, assist in elevating résumés, and assist in preparing responses to interview questions. As not everyone has access to career resources this can be a hidden benefit of AI.

Further there are concerns around the roll-out of such technologies (i.e. ChatGPT) and the lack of consultation, from both from a consumer/public perspective - large companies tend to trial new technologies on their customers without informing them (i.e. Kmart and Bunnings face recognition as an example). This has the potential to impact customers (i.e. customer experience/satisfaction) as well as workers (in regards to understanding how and when to utilise these technologies). These technologies are often introduced into workplaces without consultation with the workforce. The Award states there is a requirement for this to occur however, industry feedback has been that this is rarely enforced. Further this area will need to be monitored to ensure that workers gain the

requisite skills to understand, interact with or use this technology. As well as to understand their rights if used in the workplace from an industrial relations perspective.

3.Environmental, Social and Corporate Governance (ESG)

- The sustainability of supply chains is set for a rapid and widespread digitalisation in the next two years, resulting in a step change in the management of supply chain sustainability. In addition, many warehouses are exploring other sustainable options such as solar panels, and other initiatives.
- Due to the requirement for lower carbon emissions, industry is investigating how to incorporate electric or hydrogen fuelled vehicles into their fleets. Currently, the infrastructure does not exist in Australia to support Hydrogen refuelling. However, BOC and BP Australia have announced a new agreement to build a hydrogen refuelling station at the bp Truckstop in Lytton, Queensland. It will be the first service station in Australia with hydrogen refuelling capability. This will need to be monitored as training and upskilling will need to be available for those interacting with this infrastructure.
- Coles reported it is using an electric-powered truck provided by transport partner Linfox Logistics under a trial to deliver stock to its New South Wales stores. The Fuso eCanter truck is powered entirely by 100% renewable electricity and will avoid producing more than 60 tonnes of carbon dioxide equivalent emissions annually. It is unclear at this time when this will expand to WA. This will need to be monitored to ensure those interacting with these vehicle receive appropriate training, similar to those within the bus passenger transport industry when it underwent a similar process.
- Within WA work is underway by the State government subsidise a new network of electric vehicle charging infrastructure throughout the state. The grants will meet about half the costs of buying and installing charging stations and associated software. The grant program is designed to maximise opportunities for daytime EV charging, promote off-peak EV charging, support the conversion of organisation fleets to EVs and, over time, stimulate a second-hand EV market. This will likely encourage a wider adoption of these vehicles for WA businesses over time.

4. Training and Education Needs

4.1 Current and Anticipated Training Needs

- Some organisations plan to create more strategic and targeted career pathways by partnering with universities and VET institutions. This is intended to offer graduates with links to relevant work experience and to create more flexible opportunities in the future.
- The Supply Chain and Logistics Association of Australia (SCLAA) has partnered with Comprara to provide a Supply Chain Assessment Platform, a skills gap analysis tool. The tool identifies areas of professional development and growth for existing workers and encourages continuous learning. This may be a potential avenue for future collaboration and partnerships between industry and TAFE/RTOs to provide targeted/tailored training to industry across common areas where skills development needs have been identified.

4.2 Training Challenges and Opportunities

As these higher-level roles become increasingly complex, additional training and specialisations
will be required (within the Certificate IV and Diploma levels) which does not currently exist within
the training packages. The current Certificate IV and Diploma in Supply Chain/Logistics may need
to be reviewed to ensure these newer skills identified in section 2.1 are embedded at the higher
levels.

- One of the issues identified by the LDSC through industry consultations and as part of our engagement into the Parliamentary Enquiry into VET perceptions and other training products (i.e. the Heavy Vehicle Driver Apprenticeship); is that employers are not able to easily navigate or find training products or training providers. This has limited their ability to engage with the VET system, with some employers commenting that the VET products exist already, employers just don't know how to make use of them. Strategies to engage employers and to develop this knowledge, some of these include:
 - Exploring the school-based pathway into industry (at year 12 and post year 12) and identifying what these job roles may look like for younger entrants prior to attaining some of the licences (due to age restrictions).
 - Working with VET Coordinators, Employment Service Providers (through DEWR) and Careers Advisors to raise the profile of transport and logistics careers through an industry tour day. Such a day would seek to identify the breadth and variety of roles, career pathway progressions of school leavers, job seekers etc, and the associated training/licences needed to enter industry at these various points.
 - An employer forum to create better links between industry employers and high schools, migrants, refugees, veterans and women and other under-represented groups to foster employment pathways into industries.
- There continues to be high interest by industry to employ veterans into TLI roles with industry anticipating the outcome of skills mapping project/s currently underway.
- Personal shoppers and workers in Dark stores may both need to be evaluated for how they best fit in the ANZSCO framework, or if a new coding is appropriate, given the crossover between retail and supply chain roles.
- Industry actively seeks opportunities to attract underrepresented and under utilised group to industry. The new State Governments Life Experience campaign may be an asset in encouraging under-represented groups to industry and TLI careers. The campaign targets participation in vocational education and training and the WA workforce by women, mature age workers and retirees re-entering the workforce, youth at risk, Aboriginal and Torres Strait Islander people, people from culturally diverse backgrounds and people with disability. Available support includes a range of specialist programs and services, free and low-cost training opportunities, pre-employment pathways and free career support through the State-wide network of Jobs and Skills Centres. There are also free and subsidized courses in foundation skills, and support to get people with a disability skilled for success in their studies and the workplace.
- The State governments Digital Inclusion in WA Blueprint which outlines the Government's aims and strategic approach to address digital disadvantage across the State will be vital in ensuring this is addressed. (Digital inclusion aims to give people of all ages, cultural and linguistic backgrounds, abilities, income levels, and locations, the skills and tools to access and engage with digital technology and online services.)
- The Road Transport Industry Advisory Group commented that the Year 9 Career Taster Program is pitched too low for industry's needs, as the most critical occupations within TLI require licences most students would be unable to participate in training opportunities until they are in at least year 12 (and/or turning 18). Instead industry would value a program that can offer these opportunities to an older cohort, particularly for those occupations such as truck driver, furniture removalist and officer roles which require licences).

4.3 Career Pathways and Graduate Outcomes

• Industry values the accumulated experience (particularly of Managers more highly than qualifications. Just doing higher qualifications does not guarantee a position at the higher levels without the experience to back it up. For this reason, industry prefers to promote internally from within the organisation for higher level roles as sourcing external candidates can take longer to develop the knowledge of the internal workings of the business. This can often impede the progress/success of external candidates (including graduates) given the complexity and nature of the knowledge needed for these occupations, making new and inexperienced graduates unsuitable for these roles for any company state-wide (i.e. Fleet Manager, Supply and Distribution Manager and/or Procurement Manager).

Skills sets do not necessarily help new graduates to attain a job; however they will assist newly
employed workers to hone requisite skills needed within an existing area once they have been hired.

4 References

- Nine News, Meacham, S., (2023), Another transport company collapses amid rising financial pressures, [available https://www.9news.com.au/national/rivet-mining-services-administration-transport-freight-industry/ccfa4633-910d-4ac2-9982-179a5bca6cd3 last accessed 28 March 2023
- Nine News, Wood, R. (2023) https://www.9news.com.au/national/scotts-refrigerated-logistics-collapse-update-half-a-billion-dollars-worth-of-food-at-risk/1f335c75-62f9-4806-9ba6-f1f32fe61772 last accessed 28 Mach 2023]
- Nine News, Vidler, (2023) <a href="https://www.9news.com.au/national/trucking-industry-facing-major-pressures-costs-staff-exodus-scotts-refrigerated-logistics/d9ad1806-63f8-418b-b583-cf713682fb2a last accessed 28 March 2023]
- MHD magazine, April 2022 issue
- MHD Magazine, February 2023 issue
- https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/05/Support-for-under-represented-groups-to-enter-training-and-work.aspx
- Whitehouse Communications, Fact Sheet, Biden-Harris Administration announces supply chain disruptions task force to address short-term supply chain discontinuities
- PerthNow. (2023). WA responds to calls to DOUBLE learner driver hours. [online] Available at: https://www.perthnow.com.au/news/wa/wa-not-bending-to-calls-to-nationally-standardise-learner-driver-supervised-hours-rules-c-10099916 [Accessed 5 Apr. 2023].
- Supply Chain Channel (n.d.). Aust signs biggest procurement deal in history with AUKUS agreement. [online] Supplychainchannel.co. Available at: https://supplychainchannel.co/aust-signs-biggest-procurement-deal-in-history-with-aukus-agreement/?utm_campaign=SCC%20Newsletter&utm_medium=email&_hsmi=251994062&_hse nc=p2ANqtz--XMDg0YGFWCL8LY5NLTmQzxPqTVZxyt1ZsRYYpqGT1kvM2sKgj0W3smTJWCtpF58pMud49V UgFjFKUzuLMcpN061G5RA&utm_content=251994062&utm_source=hs_email [Accessed 5 Apr. 2023].
- www.9news.com.au. (n.d.). Woolworths scraps export business, 51 jobs to go. [online] Available at: https://www.9news.com.au/national/woolworths-international-axes-fifty-one-jobs/482fa5b6-074c-41a1-b111-dae73510068f.
- IST. (n.d.). Warehousing and Logistics Your Career Awaits! [online] Available at: https://www.ist.edu.au/blog/warehousing-and-logistics-your-career-awaits/ [Accessed 5 Apr. 2023].
- Forbes, The dark stores in retails future, prepare to be ghosted, 3 February 2022
- FullyLoaded.com.au. (n.d.). Mondiale VGL celebrates expansion with new appointment. [online]
 Available at: https://www.fullyloaded.com.au/logistics-news/2303/mondiale-vgl-celebrates expansion-with-new-appointment [Accessed 5 Apr. 2023].
- www.9news.com.au. (n.d.). Thousands more welders needed for Australia's green energy push.
 [online] Available at: https://www.9news.com.au/national/australian-welder-shortage-puts-renewable-energy-future-at-risk-industry-body-warns/64c4b3f0-32b0-4de4-ac5d-185c334e44e2
 [Accessed 5 Apr. 2023].
- Bienasz, G. (2022). Amazon says it knows it could run out of available workers for its warehouses, according to leaked memo. [online] www.BusinessInsider.com. Available at: https://www.businessinsider.com/amazon-internal-memo-company-could-run-out-of-workers-

2022-

6?nr_email_referer=1&utm_source=Sailthru&utm_medium=email&utm_content=Business_Inside r_select&pt=385758&ct=Sailthru_BI_Newsletters&mt=8&utm_campaign=Business%20Insider%2 0-%20Algorithm%20Test%202022-06-18&utm_term=INSIDER%20SELECT%20-%20ENGAGED%2C%20ACTIVE%2C%20PASSIVE%2C%20DISENGAGED%2C%20NEW [Accessed 5 Apr. 2023].

- Partner News, MHD, 4/11/2022 www2.primecreative.com.au. (n.d.). Körber AG. [online] Available at:
 - https://www2.primecreative.com.au/webmail/401112/1942559226/27b2a7888906e5a90c1e55b7 41c174f54a190002798de2cd1a146479a5b9cd14 [Accessed 5 Apr. 2023].
- Webinar, Project 44, Connecting the Extended Supply Chain Through Data
- · Webinar: Procore, leadership Series,
- Pearson, B. (n.d.). The 'Dark' Stores In Retail's Future: Prepare To Be Ghosted. [online] Forbes.
 Available at: https://www.forbes.com/sites/bryanpearson/2022/02/03/the-dark-stores-in-retails-future-prepare-to-be-ghosted/?sh=6eaf77423c4a [Accessed 5 Apr. 2023].
- MHD Magazine, June 2022
- Korber Webinar, Tackling the Labour Crisis, https://www2.primecreative.com.au/webmail/401112/1942559226/27b2a7888906e5a90c1e55b7 41c174f54a190002798de2cd1a146479a5b9cd14
- Igentia webinar: Achieving supply chain resilience in a post-pandemic world.23/11/23
- MHD, Working Smarter in Logistics, August 2022
- MHD, Digitizing Location Data, August 2022
- MHD, Australia's Vacancy Rates Falling, August 2022
- MHD Magazine, December 2022 issue
- MHD, Success in a seller's market, August 2022
- The Sydney Morning herald, Woolworths opens first online-only dark store, August 2014
- MHD Supply Chain, February 2023
- MHD, Supply Chain reconsidered, August 2022
- US Government Accountability Office Report to Congressional Committees, Supply Chain Resilience, Agencies are taking steps to expand diplomatic engagement wand coordinate with international partners, February 2023
- MHD Australia's e-commerce boom: Is agile automation the answer? July 2022
- MHD, Moving the dial on gender equality, may 2022
- Business Insider, Amazon Knows it could run out of available workers for it's warehouses in leaked memo
- MHD blue yonder transporting warehousing, DC and the workforce, May 2022.
- Business News, Pressure Mounts for Supermarkets, September 2022
- Tim Carmody ENews, 22/06/2022, Two Ways Amazon Misjudged Its Workforce Pipeline
- Australia Post, 2022 Inside Australian Online Shopping, e-Commerce Industry Report Available: https://auspost.com.au/content/dam/auspost_corp/media/documents/ecommerce-industry-report-2022.pdf [last accessed 31 March 2023]
- Australia Post, 2023 Inside Australian Online Shopping Report
- MHD Supply Chain, October 2022, https://mhdsupplychain.com.au/2022/10/13/talent-crisis-how-to-attract-retain-and-upskill-your-workforce/
- MHD Supply Chain, November 2022, Available https://mhdsupplychain.com.au/2022/11/14/dhl-investing-150m-in-robotics-and-automation/
- The White House (2021). FACT SHEET: Biden-Harris Administration Announces Supply Chain Disruptions Task Force to Address Short-Term Supply Chain Discontinuities. [online] The White House. Available at: https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/08/fact-sheet-biden-harris-administration-announces-supply-chain-disruptions-task-force-to-address-short-term-supply-chain-discontinuities/.
- Cushman and WakefieldReport, the role of Asia Pacific in Global Supply Chains
- The West Australian, February 2023, Woolies Mammoth WA Error
- The West Australia, 13 October 2022, Blockchain Boost to ease skills shortages

- MHD Supply Chain, December 2022, https://mhdsupplychain.com.au/2022/12/07/key-transport-logistics-trends-in-australia-to-watch-out-for-in-2023/
- Brookes, S. (2022). Supply chain mess means roast spuds, bubbles in short supply for WA Christmas feasts. [online] WAtoday. Available at: https://www.watoday.com.au/national/western-australia/supply-chain-mess-means-roast-spuds-bubbles-in-short-supply-for-wa-christmas-feasts-20221207-p5c4d0.html [Accessed 5 Apr. 2023].
- www.realcommercial.com.au. (n.d.). Several new Costco warehouses planned across Australia. [online] Available at: https://www.realcommercial.com.au/news/several-new-costco-warehouses-planned-across-australia?rsf=ps%3Afacebook%3Arcanews%3Anat&fbclid=lwAR20owgYuzAQ14pK0QKfLajOVFv2BQUdN6B3-qJ5MHIIB9pw2NiTBtVnZEM [Accessed 5 Apr. 2023].
- www.9news.com.au. (n.d.). Queensland opens first new 'dark' grocery store in Brisbane. [online]
 Available at: https://www.9news.com.au/national/queensland-opens-first-new-dark-grocery-store-in-brisbane/dc4bfcc8-6b5f-4ae5-ac0e-19ed6a6298bc?ocid=Social-9News [Accessed 5 Apr. 2023].
- WA Today, Time is Running out to subdue Al's overwhelming power, [available:https://www.watoday.com.au/technology/time-is-running-out-to-subdue-ai-s-overwhelming-power-20230130-p5cgdf.html last accessed 29 march 2023
- Business Insider, Zinkula J (7 Feb 2023), Even if ChatGPT doesn't take your job it could help another human replace y, says the economist who famously concluded AI could eliminate nearly half of US jobs.
- JISC, Does ChatGPT end the essay as an assessment tool? [available: https://www.jisc.ac.uk/news/does-chatgpt-mean-the-end-of-the-essay-as-an-assessment-tool-10-jan-2023 last accessed 29 march 2023]
- https://mkt-cdn.procore.com/downloads/reports/HowWeBuildNow_ANZ.pdf
- The Conversation, CHATGPT students could use AI to cheat, but it's a chance to rethink assessment altogether, [available: https://theconversation.com/chatgpt-students-could-use-ai-to-cheat-but-its-a-chance-to-rethink-assessment-altogether-198019 last accessed 29 march 2023]
- Business Insider, Everything you need to know about ChatGPT, [available https://www.businessinsider.com/everything-you-need-to-know-about-chat-gpt-2023-1 last accessed 29 march 2023]
- Nine News, MS unveils revamped Bing search, [available: https://www.9news.com.au/technology/microsoft-unveils-revamped-bing-search-engine-using-ai-technology-more-powerful-than-chatgpt/a6c2ad6d-b5a2-4a17-a75b-8ab875affff6 last accessed 29 march 2023]

4 Industry Consultation:

Regular industry consultation is undertaken by the LDSC through the Road Transport Industry Advisory Group (IAG), the Registered Training Organisations (RTOs), LDSC Annual RTO Forum, the LDSCs Board of Management (BoM) meetings, regional consultations, participation in industry advisory committees, teleconferences, email and social media and the use of online surveys.

Participation in group and individual meetings varies year on year. Comprising: the Road Transport IAG (41 members; 18 small, 8 medium, 15 large organisations located in the metropolitan and regional areas of WA covering organisations in the freight, passenger, and on-demand transport area); the Furniture Removalist IAG (comprising 10 members of the Furniture Removalist Industry; 4 National, 6 small to medium); the Mobile cranes IAG (14 organisations comprising small medium and large operators in the Metropolitan, Goldfields-Esperance, northwest and southwest regions); the Warehousing and Logistics IAG (comprising 10 members made up of small, medium and large organisations, located predominantly in the Metropolitan area with depots or service provision and facilities in the Southwest and Northwest); and the RTO IAG (we invite 120 RTO Comprising small, medium and large private and public training providers). Please note, Industry union and association members are also invited to provide feedback.

Continued and ongoing contact is made throughout the year via emails, newsletters, surveys (our most recent State of the Industry Survey had 89 industry respondents: across all industries under the LDSC remit. This data has also been included in these responses); and other channels by the LDSC to members and non-members of the Road Transport IWG and RTO IAG networks.

In addition, participating organisations for the Road Transport and the Warehousing and Logistics sector included many small, medium and large companies with interests in Freight and passenger transport, local Chamber of Commerce and Industries (CCIs)) across WA. Industry Associations (i.e. Crane Industry Council of Australia (CICA WA), Australian Furniture Removalists Association (AFRA), the Ride Share Drivers Association of Australia (RSDAA), WA Country Taxi Operators Association, Western Roads Federation (WRF) Transafe WA, Livestock and Regional Transport Association (LRTA), iMove, Freight and Logistics Council WA, Australian Trucking Association; The Chartered Institute of Logistics and Transport (CILTA), Freight and Transport (FT Alliance), and Supply Chain And Logistics Association of Australia (SCLAA)); Unions (i.e., the Transport Workers Union (TWU)); Maritime Union of WA, CFMEU WA, Crane and Industry Council Australia (CICA) the licensing/regulatory body for Road (i.e. Main WA, Worksafe WA); Local and Commonwealth Government Departments (i.e. the Department of Transport, Department of Infrastructure, Regional Development and Cities, and Defence West, the Western Austrian Defence Industry Workforce Office (WADIWO), Road Safety Commission); and the WA Industry Training Council Network and Registered Training Organisations (RTOs).