T&L FUTURE READY

Future skills and training for the
Transport & Logistics industry.

REPORT PREPARATION
This report has been prepared by business2one Pty Ltd
for the Queensland Trucking Association (QTA Ltd)
under a Deed of Variation to the existing Services Agreement
with the Department of Employment, Small Business and Training;
for the provision of Industry Intelligence.

ACKNOWLEDGEMENTS
This paper benefited greatly from the suggestions and insights offered
by all sectors of industry. Notably, the following groups are appreciated
and acknowledged: Transport, Postal and Warehousing organisations,
State agencies, industry representatives and sector industry bodies.

Particular thanks goes to Australian Industry Standards (AIS),
the Transport and Logistics Workforce Advisory Committee and
TLI Connect at the Department of Transport and Main Roads.

T&L FUTURE READY

Introduction

Planning for workforce capability and workforce sustainability has never been more important than now, where industry faces an unprecedented rate of change and disruption due to the rapid advances in technology.

Understanding how technology will shape the future skills of the transport and logistics industry is critical so workforces can identify how drivers like automation, digital literacy and shifting skill sets will impact workforces across all sectors.

To further enhance the delivery of effective people-based solutions, Jobs Queensland has partnered with industry and its employers to identify the skill requirements for Queensland into the future.

Future focused, the research report (the Report) is evidence-based, outlining direct feedback from industry in relation to skills, training and workforce needs for the next three to five years. The Report also relies on secondary data sources to provide a high-level picture of the overall industry and identify key trends and impacts, challenges and opportunities faced by each sector within the broader transport and logistics industry.

Under the banner of T&L Future Ready (Figure 1), a project was formed to meet the deliverables identified by Jobs Queensland. The T&L Future Ready project (the Project) has undertaken research and lead industry engagement activities to obtain qualitative and quantitative data. Using a range of research methods, the Report provided businesses of varying size and from a range of sectors, locations and sector sub-sections the opportunity for participation and contribution.

Additionally, a range of awareness raising activities and a co-ordinated communication campaign has raised the profile of this Project and highlighted to industry the importance of forward planning for the future transport and logistics workforce.

PURPOSE

This research report was commissioned by Jobs Queensland under a Deed of Variation to the existing Services Agreement with the Department of Employment, Small Business and Training; for the provision of Industry Intelligence by Queensland Trucking Association Ltd: Transport Warehousing - (Agreement Number: MT3270) intended to alert and inform a survey seeking information on priority skill needs, skill shortages and issues relating to workforce training and;

- consult with a broad range of stakeholders to ensure a whole-of-industry view about the opportunities and challenges for the future workforce of all sectors within the transport and logistics industry.
- identify areas where the current Training Package meets industry needs or identify gaps.

Figure 1: T&L Future Ready – Project Identity

ANZSIC Classifications

The report is focussing on Division I – Transport, Postal and Warehousing, as outlined under the Australian Bureau of Statistics Australian and New Zealand Standard Industrial Classifications (ANZSIC) to include:

SECTOR	SUB-DIVISION	GROUP	CLASS	TITLE	DESCRIPTION
ROAD	46	461	4610	Road Freight	Includes furniture removal services, postal services, log haulage, road freight services, vehicle towing, taxi trucks (with driver) and truck hire services (with driver).
	51	510	5101	Postal Services	Includes mail service, mailbox rental, post office operation, postal agency operation.
	51	510	5102	Courier Pick-up and Delivery Services	Includes postal services, customised express pick-up and delivery, grocery delivery, home delivery, messenger services, pickup and delivery.
	50	502	5021	Pipeline	Includes pipeline operation for the transport of gas, oil and other material.
	50	502	5029	Other Transport n.e.c.	Transport operation n.e.c.
	52	529	5299	Other Transport Support Services n.e.c.	Includes road, rail and container terminal operations, freight brokerage, road passenger terminal, road vehicle driving service, taxi radio base operation (for couriers), toll bridge operation, toll road operation and weighbridge operation. Excludes hiring and leasing of pallets.
	52	529	5292	Freight Forwarding Services	Includes road, rail, sea and air freight forwarding.
PASSENGER	46	462	4621	Interurban and Rural Bus Transport	Includes charter bus and bus transport services outside the metropolitan area.
	46	462	4622	Urban Bus Transport	Includes airport, metropolitan, metropolitan charter, school and urban bus services and tramway passenger services.
	46	462	4623	Taxi and Other Road Transport	Includes hire car services, road passenger transport (n.e.c.), taxi cab management services and taxi services.
	50	501	5010	Scenic and Sightseeing Transport	Includes aerial cable cars, airboats, chair lifts, charter fishing, glider operations, harbour sightseeing, helicopter rides, hot air balloons, hovercraft operations, scenic railways, sightseeing buses, steam trains and whale watching cruises.
RAIL	47	471	4710	Rail Freight	Excludes repair of above and below rail infrastructure.
	47	472	4720	Rail Passenger	Includes light, mono and heavy rail.
	52	529	5292	Freight Forwarding Services	Includes road, rail, sea and air freight forwarding.
n	48	481	4810	Water Freight	Includes units mainly engaged in the operation of vessels for the transportation of freight or cargo by water. Excludes ship repair or refit and bareboat chartering.

	48	482	4820	Water Passenger	Includes boat charter, lease or rental for passenger services, ferry operation, passenger ferry service, passenger ship management, ship charter, lease or rental, water passenger transport service and water taxi service.
	52	521	5211	Stevedoring Services	Includes ship loading or unloading service (provision of labour) and stevedoring services.
	52	5212	5212	Port and Water Transport Terminal Operations	Includes coal loader operation (water transport), container terminals, grain loader operations, port operations, ship mooring services, freight terminals, passenger terminals, wharf operations. Excludes construction, port planning, ship repairs.
	52	5219	5219	Other Water Transport Support Services	Includes ship agency, towage, lighterage, navigation services, pilotage, salvage, ship registration and agency.
	52	529	5292	Freight Forwarding Services	Includes road, rail, sea and air freight forwarding.
	52	529	5291	Customs Agency Services	Includes custom clearance service, export & import documentation. Excludes customs and border control.
AVIATION	49	490	4900	Air and Space Transport	Includes passenger and freight transport and time charter of aircraft. Excludes repair of aircraft, ticket sales and sightseeing services.
	52	529	5292	Freight Forwarding Services	Includes road, rail, sea and air freight forwarding.
	52	529	5291	Customs Agency Services	Includes custom clearance service, export & import documentation. Excludes customs and border control.
WAREHOUSING AND LOGISTICS	53	530	5301	Grain Storage Services	Includes grain elevator and grain silo operation and grain storage.
	53	530	5309	Other Warehousing and Storage Services	Includes bond store operation, bulk petroleum storage, cool room storage, controlled atmosphere storage, free store operation, furniture storage, refrigerated storage, other storage, warehousing and wool storage. Excludes self-storage renting or leasing.

Note: n.e.c. – not elsewhere classified **Source**: *Australian Bureau of Statistics (2006)*

As defined by the Australian Bureau of Statistics; the Transport, Postal and Warehousing Division "*includes units mainly engaged in providing transportation of passengers and freight by road, rail, water or air. Other transportation activities such as postal services, pipeline transport and scenic and sightseeing transport are included in this division.*"[1]

Where possible, the report identifies the organisations who may report their activities under alternative industry classifications and not included the data in the report, such as providing transport services to the Mining or Resources sector. Also, the report doesn't focus on data collection from organisations predominantly providing transport services classed as scenic and sightseeing, leaving this sector for reporting as a component of Tourism, Hospitality and Recreational Services.

[1] ABS ANZSIC Classifications http://www.abs.gov.au/ausstats/abs@.nsf/0/4BE1EED426A86AC2CA25711F00146E40?opendocument

Deliverables

The focus of the Report, as agreed by Jobs Queensland, will be to provide an analysis of the future skills and workforce needs for your industry training group(s) over the next 3-5 years, taking into account the following factors:

a. Projected employment and skills growth

- the current and emerging occupations that are likely to grow in the next 3-5 years (drawing upon both qualitative and quantitative information)
- the skills that will be required to support the growth of those occupations and how these skills requirements are changing over time

b. Employer-identification of known and emerging future skills needs

- What your networks are reporting as the known and emerging skills needs for the industry that are not related to the occupational needs identified above, e.g. skills for employment, business capability etc.

c. Issues associated with the supply and demand of labour and skills

- Identification of the labour and skills supply and demand issues for your industry and the reasons for these issues, e.g. remoteness, emerging / niche industry sector etc.
- the strategies that your industry and/or government is adopting to address these issues
- assessment of how successful these strategies have been to date
- identification of other strategies that could assist the industry to meet its labour and skills supply and demand issues

d. Emerging industry disruption influences including

- innovation and technological changes
- demographic and environmental changes (e.g. ageing workforce, climate change)
- other disruptive influences relevant to the industry

e. Demographic factors and regional variations

- the strategies that industry has in place and the challenges it faces in employing workers from diverse backgrounds, with a particular focus on:
    - Aboriginal and Torres Strait Islanders,
    - youth,
    - the long term unemployed
    - migrants and refugees; and
    - mature aged workers
- specific regional factors impacting on future supply and demand of skills and labour in your industry (by SA4 region)

f. Emerging workforce challenges and opportunities

- challenges that your industry has identified for the next 3-5 years and any opportunities that it has also identified
- how the industry plans to address the challenges and make the most of opportunities

g. Training and skills strategies (accredited and non-accredited) for your industry that will assist it to meet future skills needs

- current engagement with and use of the training system, including the apprenticeship and traineeship system
- current engagement with training outside of the national training system to meet industry skills needs
- what the training system will need to provide for industry for it to meet its future needs in the next 3-5 years
- any limitations to the current training system that will inhibit the industry to meet its future skills needs.

Deliverables Mapped to Inputs

	Survey/ Interview	Data Analysis	Research
Projected employment and skills growth			
- the current and emerging occupations that are likely to grow in the next 3-5 years (drawing upon both qualitative and quantitative information)	■	□	■
- the skills that will be required to support the growth of those occupations and how these skills requirements are changing over time	■	□	■
Employer-identification of known and emerging future skills needs			
- What your networks are reporting as the known and emerging skills needs for the industry that are not related to the occupational needs identified above, e.g. skills for employment, business capability etc.	■	□	□
Issues associated with the supply and demand of labour and skills			
- Identification of the labour and skills supply and demand issues for your industry and the reasons for these issues, e.g. remoteness, emerging / niche industry sector	■	□	■
- the strategies that your industry and/or government is adopting to address these issues	■	□	■
- assessment of how successful these strategies have been to date	■	■	□
- identification of other strategies that could assist the industry to meet its labour and skills supply and demand issues	■	□	■
Emerging industry disruption influences			
- innovation and technological changes	□	□	■
- demographic and environmental changes (e.g. ageing workforce, climate change)	□	■	■
- other disruptive influences relevant to the industry	□	□	■
Demographic factors and regional variations			
the strategies that industry has in place and the challenges it faces in employing workers from diverse backgrounds, with a particular focus on: ● Aboriginal and Torres Strait Islanders, youth, the long term unemployed migrants and refugees; and mature aged workers ● specific regional factors impacting on future supply and demand of skills and labour in your industry (by SA4 region)	■	□	■
Emerging workforce challenges and opportunities			
- challenges that your industry has identified for the next 3-5 years, any opportunities that it has also identified	■	□	■
- how the industry plans to address the challenges and make the most of opportunities	■	□	■
Training and skills strategies (accredited and non-accredited) for your industry that will assist it to meet future skills needs			
- current engagement with and use of the training system, including the apprenticeship and traineeship system	■	□	■
- current engagement with training outside of the national training system to meet industry skills needs	■	□	■
- what the training system will need to provide for industry for it to meet its future needs in the next 3-5 years	■	□	□
- any limitations to the current training system that will inhibit the industry to meet its future skills needs	■	□	□

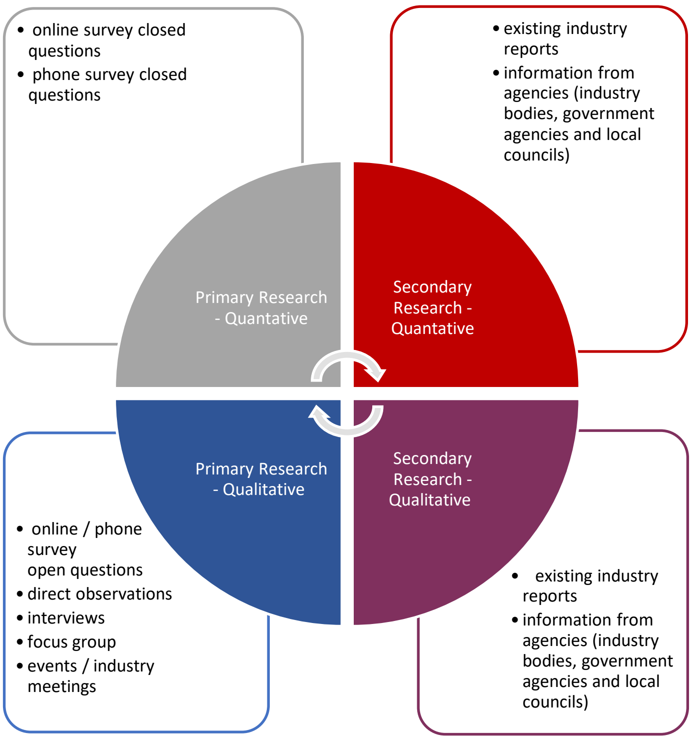
■ Main input □ Supporting input

Methodology

The research methods supporting this Report's findings are from primary and secondary data sources, with reliance on secondary where time constraints for the project govern the success of the direct industry engagement approach.

The Report includes both quantitative findings and qualitative information to inform the identified future skill, training and workforce needs over the next 3-5 years. Several targeted strategies were employed to collect industry intelligence about the Transport and Logistics workforce and the related training packages, these included:

- stakeholder interviews about key issues affecting current and future skills and workforce development
- a survey seeking information on future skill needs, current skill shortages and issues relating to workforce capacity and training
- a comprehensive review of data and research sources.



RESEARCH TOOLS

A multi-tool approach to consultation directly with industry was used to provide a comprehensive and accurate snapshot of the current and future skills challenges faced by industry across both metro and regional areas:

1. Industry Interviews – including email / phone survey

In consideration of the timeframes for the draft report and final report, *T&L Future Ready* used telephone calls / Skype meetings and personal emails to directly engage a representative sample of industry.

2. Online survey

An online survey was developed to support more broadcast awareness activities, as a link to an immediate call to action.

Survey Design

A combination of closed and open-ended questions were developed based on the specific research undertaken by the Australian Industry Standards which looked at current and future in demand job roles and skill needs for each industry sector that makes up the broad Transport and Logistics Industry[2].

3. Focus Groups

As a part of developing TLI Connect's Transport and Logistics Strategy and Action Plan, the Department conducted focus groups across the all sectors of the transport, logistics and supply chain.

The priority of this research was to develop an evidence-based approach in identifying and prioritising where government and industry need to focus their efforts to most effectively address industry's future workforce requirements.

The TLI Connect team within the Department of Transport and Main Roads (TMR) works in collaboration with industry stakeholders to facilitate innovative solutions to current and emerging workforce issues impacting the transport and logistics industry. Their work is informed by the **Transport and Logistics Workforce Advisory Committee (TLWAC)**. Formed in 2007, the committee represents a cross-section of industry modes including road transport, passenger transport, port and supply chain sectors.

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[2] Australian Industry Standards*: 2018 Key Findings Discussion Paper and* Australian Industry Standards *Skills Forecast 2018*

Outcomes will include a report *Transport and Logistics Workforce Current and Future Trends 2018* along with a transport and logistics workforce strategy and action plan, developed in consultation with industry and government stakeholders to provide clear direction for TLWAC to best support industry in workforce planning.

With considerable overlap in planned project outcomes as well as stakeholder groups, TLI Connect and the T&L Future Ready project formed a collaborative approach between projects to get the best possible workforce planning outcomes for industry. With agreement, these related projects are sharing relevant industry intelligence and combining meetings, reducing consultation fatigue and mixed messaging for all stakeholders.

4. Industry Association Interviews
Key industry associations were consulted at a state and national level to provide input on behalf of the broader industry and share the collective knowledge about foreseeable trends and workforce challenges.

5. Industry Events
Where possible, existing industry events were attended as a way to directly engage with industry about the project, raise awareness of the project goals and obtain anecdotal input into the Report deliverables.

6. Direct observations
This included using information and knowledge available under the existing VET 4 T&L project.

7. Desktop Review
Desktop and literature reviews were used as the basis for the research findings. Future skilling, workforce composition and identified skill gaps were identified using established data sources. This research was relied on to inform conversations throughout the qualitative information gathering process and across other points of industry consultation. Specific research references are noted throughout the Report which include but are not limited to, the following sources:

- Australian Industry Standards (AIS) and reports released previously under the Transport and Logistics Industry Skills Council (TLISC)
- Department of Education and Training – including training data provided by DETE under the VET 4 T&L project
- Jobs Queensland
- Queensland Department of Transport and Main Roads
- Australian Logistics Council (ALC)
- Queensland Transport and Logistics Council (QTLC)
- Futurist papers around emerging technology / Telematics
- NCVER Publications
- VOCSTATS
    - ABS Labour force data
    - ABS Census data
    - The Bureau of Resources and Energy Economics (BREE)
    - IBISWorld.

VET 4 T&L – a project being delivered by Queensland Trucking Association Ltd for the Department of Employment, Small Business and Training. This project focuses on the ‘here and now’ state of the industry and vocational education and training system and product development in Queensland.

CONTEXT SETTING

Developed as an output of the project, the **Regional Hub Profiles** provide the landscape for the future in terms of infrastructure and environmental considerations.

Location specific, the Regional Hub Profiles also informed the conversations with industry and underpinned some of the questions relating to future workforce capability and capacity for each of the identified SA4 areas (Table 1).

Queensland Statistical Areas Level 4 (SA4)	Grouped Areas Level 4 (SA4)
Brisbane - East	Brisbane
Brisbane - North	
Brisbane - South	
Brisbane - West	
Brisbane Inner City	
Logan - Beaudesert	Gold Coast and Logan-Beaudesert
Gold Coast	
Ipswich	Ipswich
Moreton Bay - North	Sunshine Coast, Moreton Bay and Wide Bay
Moreton Bay - South	
Sunshine Coast	
Wide Bay	
Toowoomba	Toowoomba and Darling Downs - Maranoa
Darling Downs - Maranoa	
Central Queensland (Fitzroy)	Central Queensland (Fitzroy)
Mackay - Isaac - Whitsunday	Mackay - Isaac - Whitsunday
Townsville	Townsville
Cairns	Cairns
Queensland - Outback	Queensland - Outback

Table 1: SA4 areas and related Hub profile

Related Survey Question

In the next 3-5 years, there are several location specific factors such as improved infrastructure, do you think will this impact your business/ workforce/ skill needs? How? (see Hub Profiles which outline future infrastructure or initiatives that may impact workforce capability).

AWARENESS TOOLS

1. Engagement HQ

To support the project, the project has used a best-practice online engagement platform 'Engagement HQ' (http://demonstration.engagementhq.com/).

Also, a primary industry engagement tool being used for the VET 4 T&L project: https://www.yoursaytlsc.com.au/

T&L Future Ready has its own separate project page to drive engagement activities and act as a single source of information about this project for industry associations and organisations:

https://www.yoursaytlsc.com.au/tl-future-ready

2. Existing industry channels

Leveraging our existing database of more than 5000 contacts, the Project was advertised via the VET 4 T&L e-news (as a separate project that is seeking consultation) as well as being cascaded through existing industry publications and monthly newsletters.

3. Social media

Awareness of the Project was supported by a low-cost social media campaign, reaching out to non-member individuals and organisations who may not be reached using the established networks.

Queensland Industry Snapshot

See Regional Hub Profiles for more detailed location specific information

Number of transport businesses in the state: 27,476[3].
(Businesses include those that are non-employing through to 200+ employees)

Transport, postal and warehousing accounts for employment for 107,676 workers which is 5.1% of the state total[4].

Hours worked in Transport, postal and warehousing[5]:
77,975 - 72.4% (full time) |24,155 22.4% (part time)
107,676 (total)

Note: *A person's industry of employment was classified based on responses to a range of questions from the Census. For Census purposes, a person is considered to be working full-time if they worked 35 hours or more in all jobs during the week before Census Night. Data are based on employed persons aged 15 years and over by place of work.*

Registered businesses by industry, Queensland, 2016–17 Transport, postal and warehousing: 27,734 - 6.3%[6]

Projected growth of 9.2% over five years in the Transport, Postal & Warehousing sector in Qld[7]

Employment level in May 2017 129.8 ('000)
Projected level in May 2022 of 141.7 ('000)

Note: The 2017 regional employment projections provide ANZSIC Industry employment projections for States and Territories, Capital Cities and Rest of States, and Statistical Areas Level 4 (SA4) regions, as defined in the Australian Statistical Geography Standard (ASGS).

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[3] ABS, 8165.0 – Counts of Australian Businesses, including Entries and Exits, June 2017

[4] ABS, Census of Population and Housing, 2016, Working Population Profile - W09 (place of work in , Queensland Regional Profiles: Workforce Profile: Queensland, Queensland Treasury, 2018, p6)
https://statistics.qgso.qld.gov.au/profiles/qrp/workforce/pdf/ZP9G4KT4D17H8U093XJFVK1M6QGAI8U5RQKRFQSA6AWSSTPL05XAHQA5GPQNTNA4SR8NLTJA8F8NER77WDKZZ4B7GAE8D2FY24GDN8V9L5XVIICC3BNSSLC82MWZWY9A/qld-regional-profiles-workforce#view=fit&pagemode=bookmarks

[5] ABS, Census of Population and Housing, 2016, Working Population Profile - W11 (place of work), Queensland Regional Profiles: Workforce Profile: Queensland, Queensland Treasury, 2018, p8)
https://statistics.qgso.qld.gov.au/profiles/qrp/workforce/pdf/ZP9G4KT4D17H8U093XJFVK1M6QGAI8U5RQKRFQSA6AWSSTPL05XAHQA5GPQNTNA4SR8NLTJA8F8NER77WDKZZ4B7GAE8D2FY24GDN8V9L5XVIICC3BNSSLC82MWZWY9A/qld-regional-profiles-workforce#view=fit&pagemode=bookmarks

[6] Source: ABS 8165.0, Counts of Australian Businesses, including Entries and Exits, various editions in Queensland Regional Profiles: Workforce Profile: Queensland, Queensland Treasury, 2018, p16)
https://statistics.qgso.qld.gov.au/profiles/qrp/workforce/pdf/ZP9G4KT4D17H8U093XJFVK1M6QGAI8U5RQKRFQSA6AWSSTPL05XAHQA5GPQNTNA4SR8NLTJA8F8NER77WDKZZ4B7GAE8D2FY24GDN8V9L5XVIICC3BNSSLC82MWZWY9A/qld-regional-profiles-workforce#view=fit&pagemode=bookmarks

[7] ABS, 2017 Regional Projections – five years to May 2022, *http://lmip.gov.au/default.aspx?LMIP/EmploymentProjections*

Shared Sector Challenges

Common challenges shared across all sectors of the Transport & Logistics Industry include:

AGEING WORKFORCE

All sectors of the transport and logistics industry have an ageing workforce, most significantly Road Transport which is reported to have a rate 2.2 times faster than all other industries[8].

Skills shortages arising from population ageing and worker retirement are being compounded by increased regulatory and compliance measures. Anecdotally, this was confirmed at the ATA Conference 2018 where several operators indicated their drivers opted for early retirement rather than trying to navigate around the current and upcoming changes to the industry, such as Chain of Responsibility and Electronic Work Diaries.

WORKFORCE COMPOSITION

Offering ‘non-traditional’ job roles, diversity across industry sectors remains a challenge with road and rail reporting the lowest percentage of women in their workforce composition.

While still an under represented group, cultural diversity is growing as the sectors look to this workforce pool to meet the growing freight task. Large organisations such the Queensland Government[9], Qantas[10] and even SMEs are implementing programs around cultural awareness and inclusiveness.

WORKFORCE MOBILITY & TRAINING PREFERENCES

While workforce mobility has many merits as industry faces technological disruption, training investment in full qualifications is expected to reduce and be replaced by skill gap training. These shorter training programs have less financial and human resource investment, therefore represent a more attractive offering to an increasing casual workforce.

INDUSTRY IMAGE

Attracting new entrants is one of the biggest issues facing the transport and logistics industry, increasing skill shortages across industry. A theme in all industry conversations, is how this is directly related to the image of the transport and logistics industry[11]. There are several programs aimed to address this challenge in Queensland, however education and awareness around the breadth and depth of job roles across the entire supply chain remains a high priority.

TECHNOLOGY

Industry 4.0 is fast approaching and with it, new ways of how we will do business. What is unknown and somewhat debated is the speed of adoption. With many small to medium enterprises making up the transport and logistics industry, the uptake of the technology will need to be weighed against the affordability of the technology. Additionally, existing plant, equipment and vehicles requiring a capital expenditure will need to align with purchasing cycles, depreciation schedules and provide a short-to-medium term value-for-money outcome.

BUSINESS FUNCTIONS

Consideration needs to be given to other business functions within the transport and logistics industry. Technology is already impacting how businesses are recruiting, using online psychometric testing and automated video interviews.

In general, there will be a shift in skills across all aspects of businesses in all sectors, from using Virtual Assistants to transitioning office functions to cloud based systems that can be integrated with vehicles and dispersed workforce.

[8] TLISC 2015 e-Scan: http://tlisc.org.au/wp-content/uploads/TLISC_134_E-Scan_lores_singlepages_FA.pdf

[9] https://www.forgov.qld.gov.au/inclusion-and-diversity-commitment

[10] Australian Human Rights Commission and Deloitte http://www.primemovermag.com.au/featured/article/diversity-in-transport

[11] Volvo Report 2016