



AUSTRALIAN  
INDUSTRY  
STANDARDS

# TRANSPORT AND LOGISTICS IRC WORKPLAN

A black and white photograph of a large industrial facility, possibly a port or manufacturing plant, with several large cranes and complex metal structures.

**SECTOR  
OVERVIEW**

A photograph of a person working in a warehouse or distribution center, handling boxes. The image is overlaid with a semi-transparent magenta filter.

**EMPLOYMENT**

A photograph of a person in a light-colored shirt, possibly a manager or professional, looking towards the camera. The image is overlaid with a semi-transparent magenta filter.

**SECTORAL  
INSIGHTS**

A photograph of a warehouse interior with high ceilings, metal shelving units, and a forklift. The image is overlaid with a semi-transparent magenta filter.

**SKILLS  
OUTLOOK**

A photograph of a man in a dark jacket looking at a tablet device. The image is overlaid with a semi-transparent magenta filter.

**TRAINING  
PRODUCT  
REVIEW PLAN  
2016-17 – 2019-20**

A photograph of a white van or truck, possibly a delivery vehicle, with a person visible in the driver's seat. The image is overlaid with a semi-transparent magenta filter.

**IRC  
SIGNOFF**



## TRANSPORT AND LOGISTICS IRC WORKPLAN

This Four-Year Workplan has been submitted by the Transport and Logistics Industry Reference Committee (IRC) to Australian Industry and Skills Committee (AISC) for approval.

The Workplan identifies the priority skill needs of the Transport and Logistics industry following a research and stakeholder consultation process conducted by Australian Industry Standards on behalf of the IRC.

Once approved by the AISC the Workplan informs the development of a four-year rolling National Schedule for development and review work of the TLI Transport and Logistics Training Package. More information on the National Schedule can be found at:

[www.aisc.net.au/content/national-schedule](http://www.aisc.net.au/content/national-schedule)

This Workplan was agreed to by the Transport and Logistics IRC Chair on Monday, 26 September 2016:

Mark McKenzie

**TRANSPORT AND LOGISTICS IRC CHAIR**

### HOW TO USE THIS DOCUMENT



This document contains links to assist the reader to navigate efficiently through the content of the Workplan. The tiles on the cover page, and the divider pages will link to the relevant content when clicked with a mouse, or touched on a tablet device.

The tiles at the bottom of pages can be clicked to return to the beginning of each section, or the front page of the Workplan as required.

## TRANSPORT AND LOGISTICS INDUSTRY REFERENCE COMMITTEE

The Transport and Logistics Industry Reference Committee has been assigned responsibility for the TLI Transport and Logistics Training Package components relating to Road Transport, Logistics, Warehousing and Ports.

The TLI Transport and Logistics Training Package provides the only nationally recognised Vocational Education and Training (VET) qualifications for occupations involved in: Warehousing and Logistics Operations, Driving Operations, Stevedoring, Yard Operations Freight Handler, Furniture Removals, International Freight Forwarding, Mobile Crane Operations, Waste Driving Operations, Driving Instruction for car, heavy vehicle and motorcycles, Materiel and Deployment Logistics, Traffic Operations, Bus and Coach Operations and Customs Broking.

More information about the Transport and Logistics IRC and its work can be found here: <http://www.australianindustrystandards.org.au/committee/transport-and-logistics-industry-reference-committee/>

Name	Organisation
Anne Maric	TNT
Bill McKinley	Australian Trucking Association
Bill Murphy	Customs Brokers and Forwarders Council of Australia Inc
Cam Dumesny	Western Australia Road Transport Association Inc
Cathi Payne	Payne Haulage
Damien Davies	BORAL
David Hine	Woolworths Limited
David Rogers	Supply Chain and Logistics Association of Australia
Greg Spence	DP World Australia
Joe Lopino	Australian Furniture Removers Association
Kim Hassall	Chartered Institute of Logistics and Transport
Lindsay Eisemann	Origin Energy
Lynda Douglas	Department of Defence
Mark McKenzie	ACAPMA
Mark Haley	Border Express
Michael Kilgariff	Australian Logistics Council
Peter Nemtsas	Linfox Logistics
Peter Anderson	Victorian Transport Association
Umme Hoque	Transport Workers Union of Australia
Warren Smith	Maritime Union of Australia

# TRANSPORT AND LOGISTICS SECTOR OVERVIEW

**TRANSPORT AND LOGISTICS  
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## TRANSPORT AND LOGISTICS INDUSTRY OVERVIEW

With Australia's freight task forecast to increase by 26 per cent over the next decade, the Road Transport sector which employs more than 260,000 people, will continue to be the predominant mode of transport for moving freight around Australia. The increasing adoption of e-commerce platforms by Australian retailers is expected to support industry expansion while also increasing the need for upskilling workers to adapt to evolving technology and systems.

The logistics and warehousing sector is an integral part of Australia's supply chain employing more than 225,000 people across occupations including warehousing, logistics, storage and handling distribution.

Computerisation and automation have changed the nature of work in the Logistics sector. Specialised and higher-level computer skills, problem-solving and analytic skills, and more sophisticated contract management practices are driving a more integrated approach to logistics management.

Australia is witnessing increased activity in the Ports sector in part due to expansion activities as well as the need to accommodate larger vessels (due to increased trading volumes) in some existing ports. In 2013-14, \$405.7 billion worth of sea freight moved through Australian ports. Container traffic is forecast to nearly triple in the next 20 years. More than 19,000 people are employed in landside activities in the Ports sector.

With the biggest growth driver in resources over the next decade expected to be Liquefied Natural Gas (LNG), as of mid-2014 there were 62 million tonnes of LNG capacity under construction in Australia – it is expected that Australia will be the world's largest exporter of LNG by the end of the decade, in turn increasing the demand for skilled workers in the sector.

The TLI Transport and Logistics Training Package components relating to Road Transport, Logistics, Warehousing and Ports provide the only nationally recognised Vocational Education and Training (VET) qualifications for occupations involved in: Warehousing and Logistics Operations, Driving Operations, Stevedoring, Yard Operations Freight Handler, Furniture Removals, International Freight Forwarding, Mobile Crane Operations, Waste Driving Operations, Driving Instruction for car, heavy vehicle and motorcycles, Materiel and Deployment Logistics, Traffic Operations, Bus and Coach Operations and Customs Broking.

The TLI Transport and Logistics Training Package components relating to Road Transport, Logistics, Warehousing and Ports comprise 36 qualifications, 461 units of competency and 38 skill sets covering these sectors.



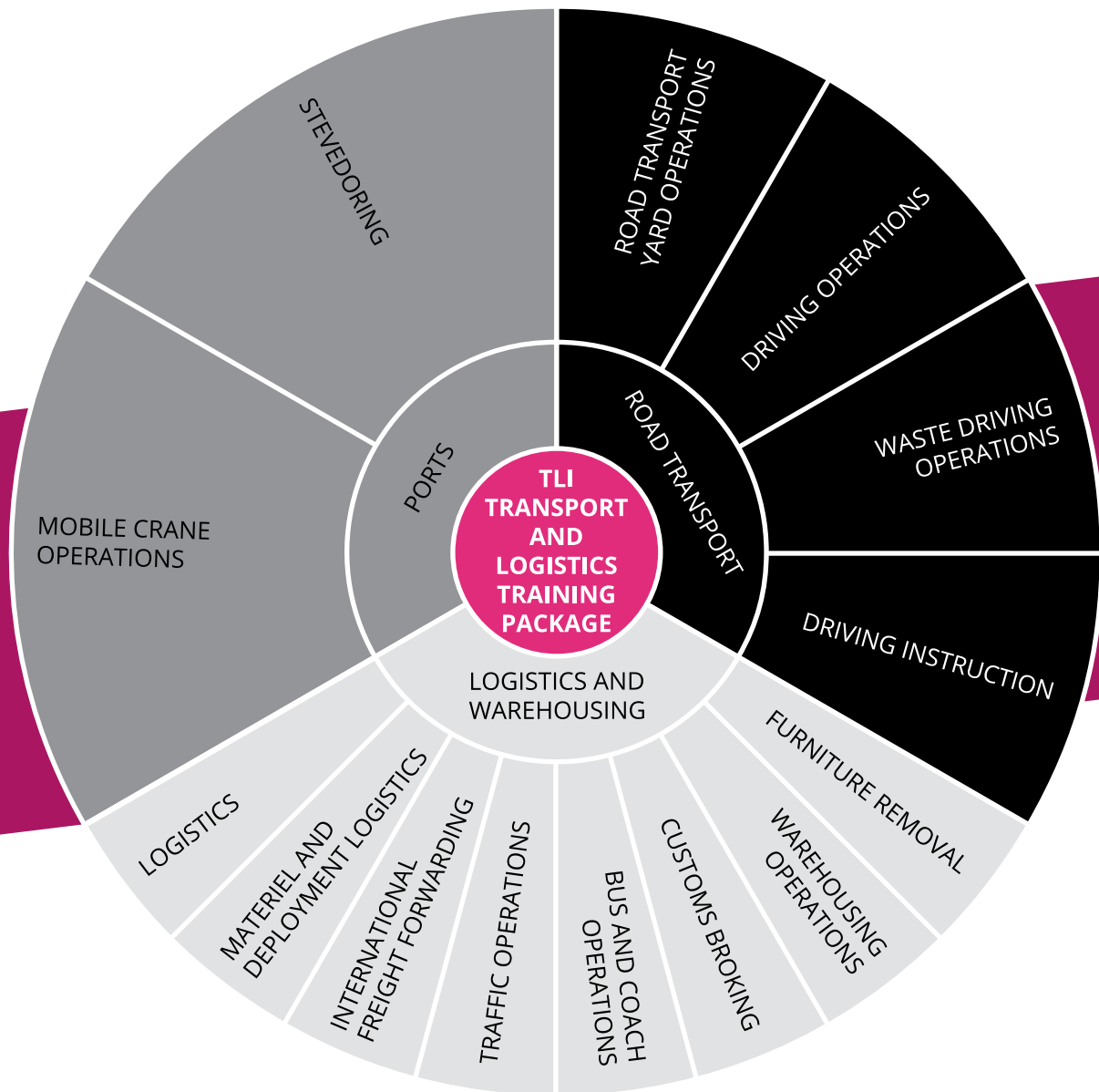


**The TLI Transport and Logistics Training Package contains the following qualifications that are overseen by the Transport and Logistics IRC:**

- Certificate I in Warehousing Operations
- Certificate I in Logistics
- Certificate I in Transport and Logistics (Pathways)
- Certificate II in Logistics
- Certificate II in Stevedoring
- Certificate II in Driving Operations
- Certificate II in Furniture Removal
- Certificate II in Road Transport Yard Operations (Freight Handler)
- Certificate II in Warehousing Operations
- Certificate III in International Freight Forwarding (Operator)
- Certificate III in Mobile Crane Operations
- Certificate III in Stevedoring
- Certificate III in Waste Driving Operations
- Certificate III in Logistics
- Certificate III in Furniture Removal
- Certificate III in Warehousing Operations
- Certificate III in Driving Operations
- Certificate IV in Stevedoring Operations
- Certificate IV in Materiel Logistics
- Certificate IV in International Freight Forwarding (Senior Operator)
- Certificate IV in Warehousing Operations
- Certificate IV in Transport and Logistics (Road Transport - Heavy Vehicle Driving Instruction)
- Certificate IV in Driving Operations
- Certificate IV in Transport and Logistics (Road Transport - Car Driving Instruction)
- Certificate IV in Logistics
- Certificate IV in Mobile Crane Operations
- Certificate IV in Transport and Logistics (Road Transport - Motorcycle Riding Instruction)
- Certificate IV in Traffic Operations
- Diploma of Logistics
- Diploma of Deployment Logistics
- Diploma of Materiel Logistics
- Diploma of International Freight Forwarding
- Diploma of Bus and Coach Operations
- Diploma of Customs Broking
- Advanced Diploma of Deployment Logistics
- Advanced Diploma of Materiel Logistics



## TRANSPORT AND LOGISTICS TRAINING PACKAGE ARCHITECTURE



**SECTOR OVERVIEW**

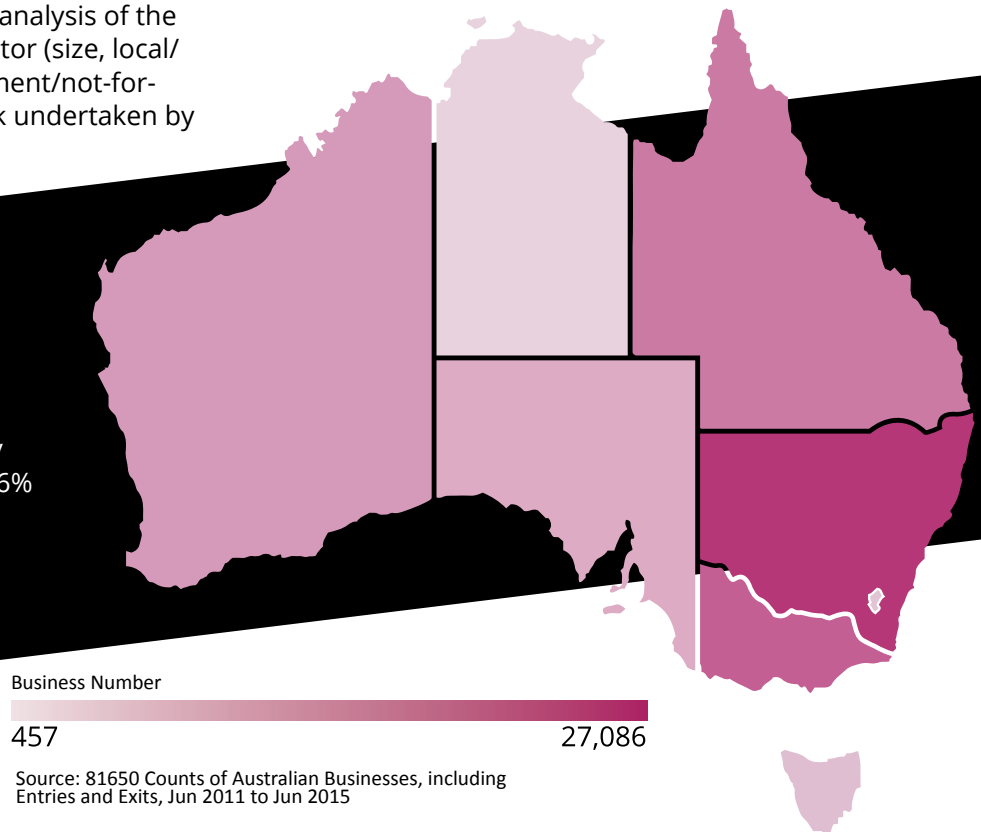
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## TRANSPORT AND LOGISTICS BUSINESS ANALYSIS

The following image provides analysis of the businesses involved in the sector (size, local/state/national/global, government/not-for-profit/for-profit, scope of work undertaken by those businesses).

The number of Transport and Logistics enterprises is slightly over-represented in NSW at 36%

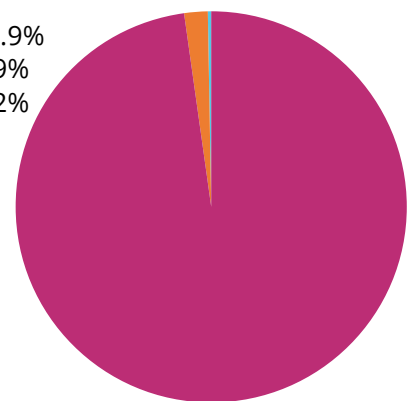


### Business Analysis Metrics

Revenue (\$ m)	86,003.90
Profit (\$ m)	9691.9
Average Wage (\$)	66,288.62
No. of Businesses	84545
Employment Growth (% to 2021)	6%

### Business Size (Composition)

Small	97.9%
Medium	1.9%
Large	0.2%



Note: The **Counts of Australian Businesses** data classifies industries by the single predominant industry class associated with a business' ABN. This can result in large organisations with wide responsibilities being left out of the data.





## KEY TRANSPORT AND LOGISTICS STAKEHOLDERS

Stakeholder Category	Organisation	
<b>Employers</b>	Allied Pickfords BORAL Australian Construction Materials Border Express DP World Australia Dyson Group Glen Cameron Group K & S Freighters	Linfox Logistics Mini Movers Origin Energy Patricks Payne Haulage TNT Toll
<b>Employer Representatives</b>	Australasian Convenience and Petroleum Marketers Association Australian Furniture Removers Association Australian Logistics Council Australian Taxi Industry Association	Australian Trucking Association Bus Industry Confederation Customs Brokers and Forwarders Council of Australia Queensland Transport Association Victorian Transport Association
<b>Employee Representatives</b>	Maritime Union of Australia National Union of Workers Transport Workers Union of Australia	
<b>Licensing/Regulatory</b>	National Heavy Vehicle Regulator Safe Work Australia State and Territory Licensing Authorities	State and Territory Work Health and Safety Authorities
<b>Government</b>	Federal, State/Territory Departments National Transport Commission	
<b>Industry Advisory</b>	Automotive Training Board - NSW Industry Skills Advisory Council - NT Logistics Training Council - WA TDT South Australia TLI Connect	
<b>Training Organisations</b>	TAFEs, Private RTOs, Enterprise RTOs	

The TLI Transport and Logistics Training Package is in the Scope of Registration of 550 Registered Training Organisations.

## INDUSTRY CHALLENGES AND OPPORTUNITIES

### AUTOMATION AND ROBOTICS

Increasing goods to person automation processes will continue to expand to make the fulfilment of e-commerce more effective and efficient. Innovations such as drone technology and robotics is propelling the industry. The first autonomous drone delivery was achieved recently in the US<sup>1</sup>. Automation of port operations is ongoing in Australia and the rapid uptake of technology is driving the need for higher order skills in the industry, as well as new skills such as required for maintenance of automated equipment.

Mining companies are already using autonomous vehicles. The effect of autonomous trucking routes in Australia would have a major impact on the economy, workforce as well as other supporting industries. Some predictions assert that driverless truck technology will be implemented in Australia within the decade<sup>2</sup>. Whether or not this will become a reality, the automation of tasks will continue to replace manual handling activities across the supply chain.

### DISRUPTIVE TECHNOLOGY

Crowdsourcing delivery or transport management systems is a reality<sup>3</sup>. As demonstrated above with drone parcel delivery; automation, robotics and other technology initiatives are being developed by disruptors who are looking to take a slice of the transport and logistics market. How businesses react or grow with technological disruption is yet to be seen, however lessons learnt from Uber and other service platforms, is that businesses need to be proactive when devising strategies for providing better services to customers or risk being left out of the market.

### INTERNET OF THINGS (IOT)

Companies are now using an expanding number of devices, sensors and data methods to connect networks – linking the physical environment to collect data and turn it into useful information. Growth of these analytics is leading to new innovations across communications, systems engineering and security environments to improve transport systems<sup>4</sup>. IoT will also have an impact on the workforce, driving demand for new skill sets to effectively manage and operate within changing environments.

## OMNI-CHANNEL LOGISTICS

Customers now expect that they can buy products 24hrs a day, online and instore, on multiple devices simultaneously with the same level of customer service as shopping instore. The change from traditional single channel and multi-channel logistics, to omni-channel logistics seamlessly connects the market with highly personalised customer service. It affects marketing, mechanising, ordering systems, fulfilment and returns<sup>5</sup>. Logistics and supply chains are the key enablers that ensure retailers achieve inventory visibility and optimisation to meet customer demand. The growth in this area presents a number of challenges for the sector particularly around freight and warehousing. For example, a partnership between eBay and Woolworths is now seeing eBay customers pick up their online purchases at Woolworths and Big W Stores.<sup>6,7</sup>

## SUPPLY CHAIN SUSTAINABILITY

Sustainable operating practices are increasingly part of key performance indicators within the industry.<sup>8,9</sup> Pressure to reduce greenhouse gas emissions as well as manage environmental compliance parameters have increased the requirement to undertake sustainable business practices. New technologies and innovative approaches are being implemented to address environmental issues such as driving, energy, vehicles, fuel efficiency and facilities.

Supply chain sustainability goes much further than environmental compliance, and also includes workforce sustainability. Companies are looking to streamline operations through savings on resourcing and improved productivity performance. These savings have a trickledown effect onto the workforce. In addition, companies are being required to focus more strongly on environmental, social and governance (ESG) performance. Companies will require innovative approaches to workforce development and to standards of performance expected by investors and the workforce alike, into the future. This will have a flow-on effect on labour relations, safety and approaches to addressing multi-factor productivity requiring a greater depth in human capital performance that will need to be reflected in workforce skills.

## REGULATORY ENVIRONMENT

Any changes made to the regulatory environments within the Transport and Logistics industry directly affects the workforce, with companies requiring to upskill or retrain workers to meet these requirements e.g. fatigue management.

Australia's preparedness for global system changes is also critical as companies don't want to be hindered by regulatory barriers that stops competition beyond Australia's borders. Harmonisation between international and domestic regulatory markets will be critical.

# EMPLOYMENT



## EMPLOYMENT STATISTICS

## WORKFORCE CHALLENGES AND OPPORTUNITIES

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## EMPLOYMENT

### EXPLANATORY NOTES

#### Workforce

The size of an industry's workforce is established by the Australian Bureau of Statistics (ABS) using two different approaches. The Labour Force survey, which provides a 30-year view of the industry, assigns each industry a category based on the main job of the respondent. The Australian Industry dataset (which the Workforce Projections charts are based on), uses a top-down approach where industries are primarily classified by the single predominant industry class associated with a business' ABN. An industry's workforce therefore is bounded in the first instance by the occupations of workers and in the second by the primary business of an enterprise. The different approaches can therefore result in quite different workforce figures.

AIS has chosen to distinguish these approaches using the terms **Workforce – Occupation based** and **Workforce – Employer based**.

#### Enterprise size

Industry definition by ABN also applies to the Counts of Australian Businesses data (size and distribution). Furthermore, low level values in these tables are subject to perturbation to anonymise the data. This may result in some areas with a low level value being perturbed to zero.

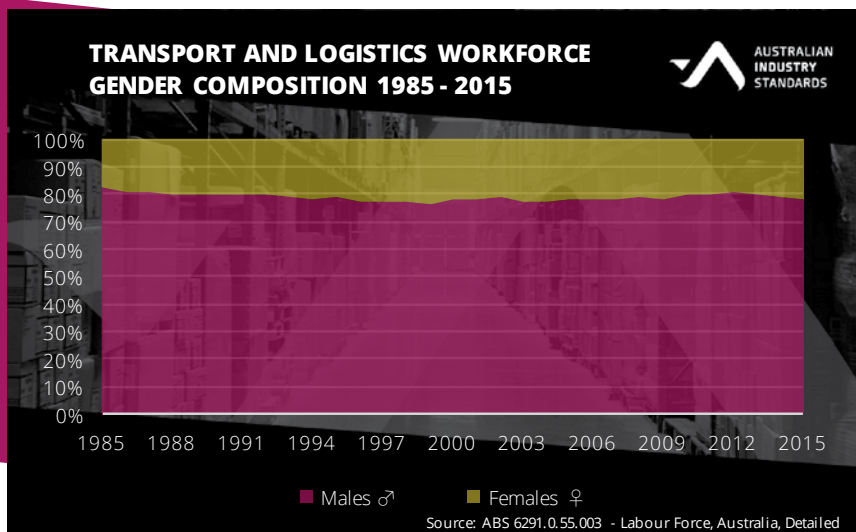
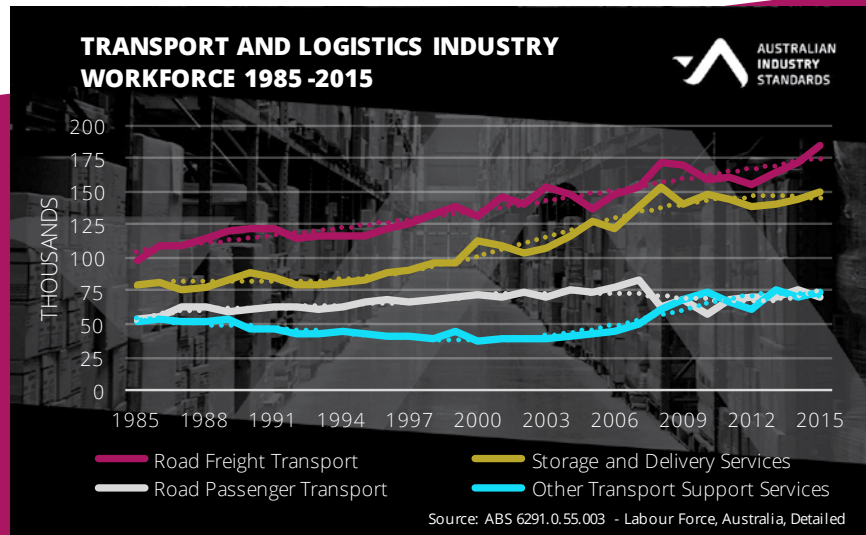
#### Exemptions

The scope of the Labour Force Survey is limited to the civilian population of Australia and therefore members of permanent defence forces are excluded from the survey.



## EMPLOYMENT HISTORY - OCCUPATION BASED

Road Freight Transport comprises the largest sector of Transport and Logistics at 38 per cent and the greatest growth at 89 per cent over 30 years.

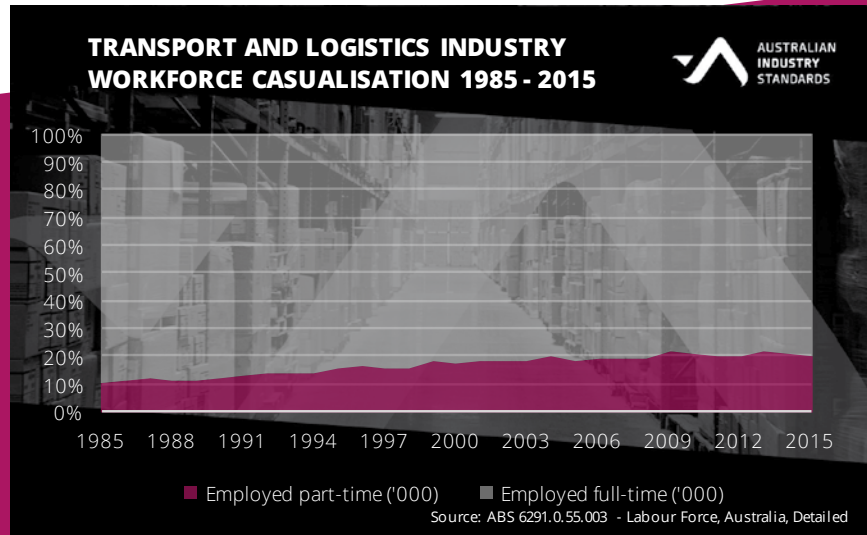


Despite significant growth in 30 years, participation among women has remained very stable at 20 per cent of the workforce.

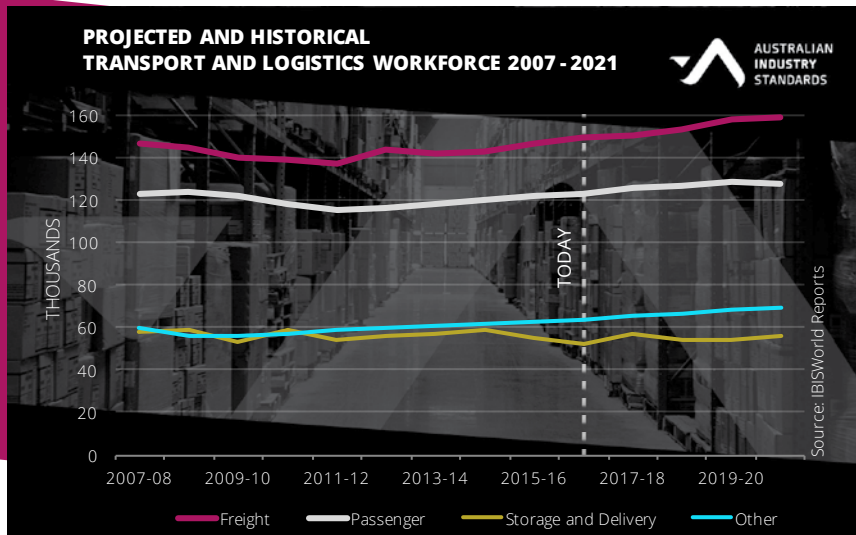
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Part-time work has doubled from 10 per cent to one in five in 30 years.



## EMPLOYMENT PROJECTION - EMPLOYER BASED



The Transport and Logistics workforce is expected to grow by 6 per cent in the coming five years, keeping pace with growth over the previous five years.

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## WORKFORCE SUPPLY-SIDE CHALLENGES AND OPPORTUNITIES

### AGEING WORKFORCE, INDUSTRY ATTRACTION AND WORKFORCE FLEXIBILITY

The Transport and Logistics workforce is the second oldest workforce in the country<sup>10</sup>, with a large proportion of workers set to retire in the next decade<sup>11</sup>. Succession planning will impact the industry.

The industry currently faces a recruitment challenge, whereby attracting, training and retaining young workers to undertake a career in the sector is proving to be a challenge. Compounding the issue is the increase use of sub-contracting and other new forms of employment engagement within the industry.

Stakeholders report that part of the difficulty attracting young drivers is that the occupation isn't seen as a professional position which when coupled with the industry's poor perception in the broader community amounts to a significant barrier. Career progression is often limited in driving roles, and career pathways are often not clear. Growth tends to be within existing roles instead of progressing further in the industry.

### RESPONDING TO TECHNOLOGICAL CHANGE

The Transport and Logistics industry is changing at a phenomenal pace, and companies require their workforce to be agile and responsive to meet the skills demands created by new technologies, automation and other innovations as they evolve.

Providing the right training at the right time will be crucial for companies. Forecasting the skills gaps within the industry and then skilling the workforce in preparation for these changes will be an essential part of workforce planning.

Lean management styles often mean that companies cannot afford the loss of key staff to training. Companies will require high quality training that allows for flexibility in training options.



## DIVERSITY

Transport and logistics is characterised by immense diversity in types of business and range of occupations. However, this does not translate to diversity in workforce demographics. The majority of the workforce are men and stakeholders report a perception that most work undertaken is stereotypically 'masculine'. Women are predominately employed in support roles such as administration, human resources, procurement and finance. Initiatives to make roles more flexible and attractive to sections of the broader community not traditionally engaged in the Transport and Logistics workforce would benefit in this regard.

While the advancement in technology has arguably increased employment opportunities for women, barriers still exist, certain jobs roles considered too dangerous or impractical for females in the minds of those doing the recruiting. There is evidence that shows females in the transport and logistics sectors on average have higher education levels than their male counterparts, with 18.3 per cent achieving a diploma or higher, compared with 11.7 per cent of males. This demonstrates that women have the desire, skills and knowledge to meet job requirements in this changing and advancing industry.



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# SKILLS OUTLOOK



**INTERNATIONAL  
/ NATIONAL  
WORKPLACE  
TRENDS**



**PRIORITY SKILLS**

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## SKILLS OUTLOOK

### TECHNOLOGY

The Transport and Logistics industry is changing at a phenomenal pace as globalisation and technological advances affect global supply chain activities. Companies require their workforces to be agile and responsive to meet the skills demands created by new technologies, automation, robotics and broad based innovations as they emerge.

The ongoing globalisation and technology practices that will continue to impact include:

- Increasing goods to person automation processes continue to expand the fulfilment of e-commerce efficiency
- Autonomous (driverless) trucking routes will have a impact on the economy, workforce as well as other supporting industries
- Automation, robotics and other technology initiatives are being developed by disruptors who are looking to take a slice of the transport and logistics market
- Companies are now using an expanding number of devices, sensors and data methods to connect networks – linking the physical environment to collect data and turn it into competitive information
- Omni-channel logistics connects the market with highly personalised customer service.

The industry is largely being shaped by new technologies, robotics and automation which is determining workplace and job design. Workers require skills to be able to interact with these technologies as tools, and the industry will see a growth in demand for higher order skills to work with big data and robotics.

The use of higher productivity transport systems in Australia will likely put the current competent driver shortages under more pressure as we try to find suitable drivers to operate these larger trucking units across Australia.

### FUNDING

Variations in jurisdictional funding and traineeship arrangements are reported as impacting the viability of delivering training, in particular for narrow markets and in specialist technical areas. Longer-term this situation may lead to capacity constraints for employers and training organisations alike. These conditions also present challenges for RTOs when considering future investment in training infrastructure and equipment, particularly those involved in new technology.

## PRIORITY SKILLS

### TRANSPORT AND LOGISTICS TECHNICAL SKILLS

Australian Industry Standards has developed a list of technical skills from analysis of the qualifications in the TLI Transport and Logistics Training Package that relate to Road Transport, Logistics, Warehousing and Ports.

These skills can be grouped into two categories:

1. Licensed Vehicle Operation
2. Logistics Operations

An overwhelming number of IRC responses indicated that Transport and Logistics Technical Skills were the highest priority for the industry.

### GENERIC SKILLS

Ranking of the twelve generic workforce skills in order of importance to the Transport and Logistics industry.

Skill	Priority
Learning agility / Information literacy / Intellectual autonomy and self-management	1
Customer service / Marketing	2
Communication / Virtual collaboration / Social intelligence	3
Design mindset / Thinking critically / System thinking / Solving problems	4
Managerial / Leadership	5
Language, Literacy and Numeracy (LLN)	6
Technology	7
Financial	8
Data analysis	9
Science, Technology, Engineering, Mathematics (STEM)	10
Entrepreneurial	11
Environmental and Sustainability	12

13 per cent of Transport and Logistics IRC responses indicated that Generic Skills were more important than Technical Skills



## CROSS-SECTORAL SKILLS

A list of cross-sector skills was derived from analysis of the qualifications in the Transport and Logistics, Aviation and Maritime Training Packages.

The five most important cross-sectoral workforce skills are listed below in order of importance to the Transport and Logistics industry

Skill	Priority
Safety	1
Vehicle Operation	2
Cargo/Load Handling	3
Equipment and Systems Operations	4
Equipment Testing and Maintenance	5

8 per cent of IRC responses indicated that the five most important Cross-Sectoral workforce skills were more important than Technical Skills.



## TRANSPORT AND LOGISTICS SKILLS - RELATED INSIGHTS

The Transport and Logistics industry is a cornerstone of Australia's economy, ensuring freight and transport movements around a large country with a disparate population. The road transport sector employs more than 260,000 people, with the logistics and warehousing workforce numbering more than 225,000.

Collectively, the Road Transport, Logistics, Warehousing and Ports industry have an estimated annual revenue of \$86 billion, adding \$45 billion to the Australian economy in 2015-16.

Australia's freight task is forecast to increase by 26 per cent over the next decade, and alongside the increasing take up of technology to support industry operations, infrastructure and expansion, the pressure to ensure a well-trained and skilled workforce is clear.

Computerisation and automation have changed the nature of work in the Logistics sector. Specialised and higher-level computer skills, problem-solving and analytic skills, and more sophisticated contract management practices are driving a more integrated approach to logistics management.

The Transport and Logistics Industry Reference Committee (IRC) has overwhelmingly indicated that Transport and Logistics Technical Skills are the highest priority for the industry. Technical skills focus on areas related to Licensed Vehicle Operations and Logistics Operations with the IRC identifying driver training and as a priority issue, particularly skills involving driver fatigue, alongside adaptation to technology and ensuring safety.

Industry stakeholders have also highlighted the fact that employee attraction and retention is challenging, and a range of innovative workplace responses are emerging. Many of these focus on opportunities to engage in vocational education and training delivered through qualifications or skill sets from the TLI Transport and Logistics Training Package.

The skills involved in transport and logistics are wide ranging, and stakeholders also note the many opportunities for employment, career development and training for small businesses and independent operators.

The massive increase in on-line retail purchasing means customers now expect to buy products 24 hours a day, online and instore. The change from traditional single channel and multi-channel logistics to omni-channel logistics directly connects the market and presents challenges for the sector, particularly around freight and warehousing.

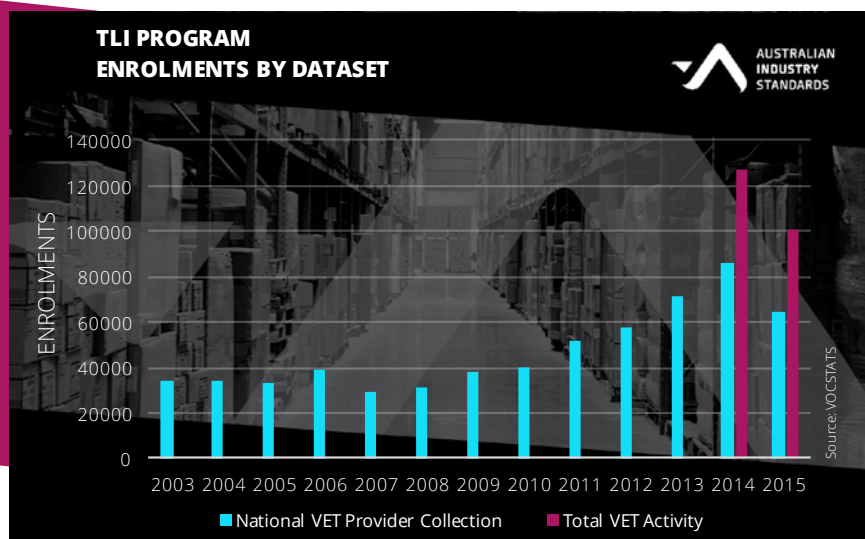
Drones and robotics are providing new solutions for the industry. Technology is driving the need for higher-order skills in the industry, and consequently the demand for new skill sets to effectively manage and operate within changing environments.

Any changes made to the regulatory environments within the Transport and Logistics industry directly affect the workforce, with companies requiring to upskill or retrain workers to meet these requirements (e.g.: fatigue management).

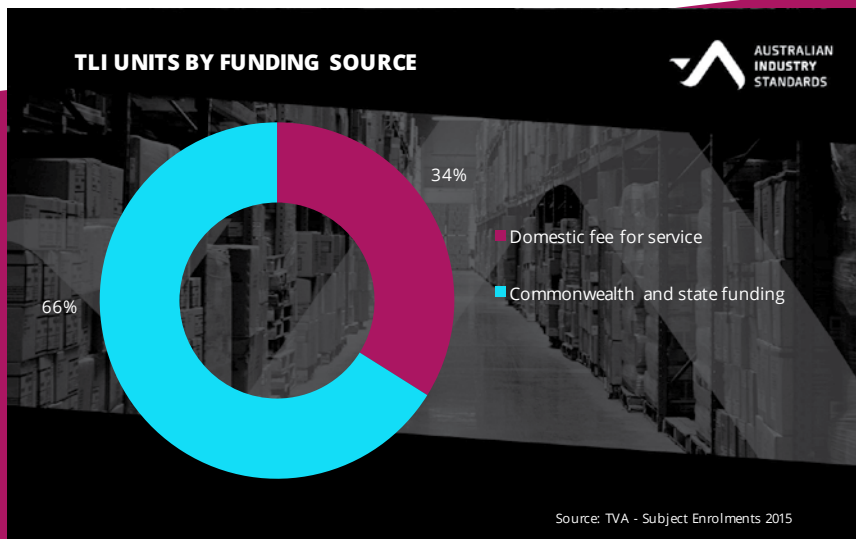
The Transport and Logistics industry is supported by the TLI Transport and Logistics Training Package, consisting of a range of qualifications in Logistics and Warehousing, Road Transport, International Freight Forwarding and Customs Broking, Materiel and Deployment, Logistics and Ports.

Total VET activity enrolments dropped by 20 per cent in 2015, an apparently substantial reduction. However, the drop off can be more than accounted for in the decline of enrolments in only two qualifications. Certificate II and III in Warehousing fell 29 per cent and 61 per cent respectively, or more than 30,000 enrolments across almost all States and Territories (particularly Victoria). These reductions can be mostly attributed to a reduction in government subsidies and restricted eligibility for funding. Removing these qualifications from the data, the remaining TLI Transport and Logistics Training Package enrolments actually grew by 7 per cent in the same period.

Enrolment growth almost tripled from 2007 to 2014 before falling by a quarter. Total VET Activity corroborates the data with a drop of 20 per cent in the same period.







Industry funds two thirds of funding for the TLI Transport and Logistics Training Package

The Transport and Logistics workforce is the second oldest workforce in the country, with a large proportion of workers set to retire in the next decade. Compounding the issue is the increase use of sub-contracting and other new forms of employment engagement within the industry.

The industry workforce is predicted to increase by 6 per cent through to 2021.

The Transport and Logistics industry needs to improve recruitment, training and worker retention. Providing the right training at the right time will be crucial for companies. Forecasting the skills gaps within the industry and then skilling the workforce in preparation for these changes will be an essential part of workforce planning.

## EXPLANATORY NOTES

The Training Enrolments charts compare two datasets; the **National VET Provider Collection** and the **Total VET Activity (TVA)** dataset. The primary distinction between the two is that Total VET Activity data is collected from all types of providers and not only those in receipt of Commonwealth or state funding. TVA data collection commenced in 2014.

## Exemptions

Where the submission of training data to TVA conflicts with defence or national security legislation, or jeopardise the security or safety of personnel working in defence, border protection, customs or Australian police departments, an exemption from reporting training data is available.

Organisations that deliver training for vital services to the community (such as emergency, fire, first-aid and rescue organisations) may have received an exemption to submit data to TVA. From 1 January 2016 however, the exemption from reporting will apply only in respect of training activity not delivered on a fee-for-service/commercial basis.



## REFERENCES

### INDUSTRY CHALLENGES AND OPPORTUNITIES

<sup>1</sup> First-ever FAA-approved drone delivery to customer's home. July 2016 <http://www.tandlnews.com.au/2016/07/27/article/23848/>

<sup>2</sup> In Australia self driving trucks are closer than you think. 2016. <https://www.allianz.com.au/car-insurance/news/in-australia-selfdriving-trucks-are-closer-than-you-think>

<sup>3</sup> Ti Crowd sourcing and uberisation. <http://vil-summit.be/wp-content/uploads/2015/11/Crowd-Sourcing-and-Uberisation-KenLyon.pdf>

<sup>4</sup> NICTA. July 2016. <https://www.nicta.com.au/category/industry-engagement/infrastructure-transport-and-logistics/blogs/internet-of-things/>

<sup>5</sup> Omni-Channel Logistics. A DHL perspective on implications and use cases for the logistics industry. 2015 [http://www.dhl.com/content/dam/downloads/g0/about\\_us/logistics\\_insights/dhl\\_trendreport\\_omnichannel.pdf](http://www.dhl.com/content/dam/downloads/g0/about_us/logistics_insights/dhl_trendreport_omnichannel.pdf)

<sup>6</sup> eBay 2015. <http://media.ebay.com.au/ebay-and-woolworths-reinvent-way-australians-shop>

<sup>7</sup> Simply collect 2016. <http://www.simplycollect.com.au/>

<sup>8</sup> DHL [http://www.dhl.com.au/content/dam/downloads/g0/logistics/green\\_logistics\\_sustainable\\_logistics\\_study\\_en.pdf](http://www.dhl.com.au/content/dam/downloads/g0/logistics/green_logistics_sustainable_logistics_study_en.pdf)

<sup>9</sup> TOLL <http://www.tollgroup.com/environmental-sustainability>

### WORKFORCE SUPPLY-SIDE CHALLENGES AND OPPORTUNITIES

<sup>10</sup> TLISC 2015 EScan.

<sup>11</sup> ABS, Retirement and Retirement Intentions.

## TRANSPORT AND LOGISTICS TRAINING PACKAGE REVIEW PLAN 2016/17 - 2019/20

### REVIEW PLAN – TIMING AND PRIORITISATION

The Transport and Logistics IRC have identified the need to address the challenge of an ageing workforce as one of the priorities for the industry. A proposed response through the review and development of the TLI Transport and Logistics Training Package will be to provide additional pathways for people of all ages, particularly school leavers, into careers in the industry.

Over both the short and long term future, changes including evolving technologies, robotics, automation, autonomous vehicles and increasing demands on supply chains from customers, will mean that specialist technical skills will continually need to be considered in TLI Transport and Logistics Training Package review and development. To be competitive it will be critical that workers have the necessary skills to ensure industry obtains full benefit from these new technologies.

#### 2016 – 2017

The following Training Package review and development activities, as identified in the 2016 - 2017 annual Workplan, have been approved by the AISC.

Training Package review in year one consists of:

- TLI21716 - Certificate II in Road Transport Yard Operations (Freight Handler)\*

Training Package development in year one consists of:

- Unit of competency for apply fatigue management strategies
- Unit of competency for administer the implementation of fatigue management strategies
- Unit of competency for manage fatigue management policies and procedures
- New qualification – Transport and Logistics Scheduling\*

\*These review and development activities are subject to the approval of Business Case submissions.

## 2017 – 2018

The following TLI Transport and Logistics Training Package products are proposed for review during 2017-18:

- TLI32416 – Certificate III in Logistics
- TLI42516 - Certificate IV in Traffic Operations
- TLILIC2005 - Licence to operate a boom-type elevating work platform (boom length 11 metres or more)
- TLILIC3003 - Licence to operate a bridge and gantry crane
- TLILIC3004 - Licence to operate a derrick crane
- TLILIC2001 - Licence to operate a forklift truck
- TLILIC2002 - Licence to operate an order picking forklift truck
- TLILIC3006 - Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)
- TLILIC3007 - Licence to operate a portal boom crane
- TLILIC3019 - Licence to operate a reach stacker (greater than 3 tonnes capacity)
- TLILIC4011 - Licence to operate a slewing mobile crane (over 100 tonnes)
- TLILIC4010 - Licence to operate a slewing mobile crane (up to 100 tonnes)
- TLILIC3008 - Licence to operate a slewing mobile crane (up to 20 tonnes)
- TLILIC4009 - Licence to operate a slewing mobile crane (up to 60 tonnes)
- TLILIC0012 - Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)

The Certificate III in Logistics and Certificate IV in Traffic Operations are proposed for review to ensure they meet the current and future skills needs of industry. Emerging technologies in Traffic Control centres and the growth in robotics, automation and the evolution of Supply Chains to meet customer demands, will have impacts on the skills requirements of both of these qualifications. Job roles in logistics are expected to change to meet these new demands on industry and workers will need a broader range of skills to ensure businesses remain viable and competitive.

The review of the thirteen High Risk Work licence units of competency has been requested by Safe Work Australia, in its role as the independent Australian Government statutory agency for the Commonwealth, State and Territory WHS/OHS authorities. These authorities have responsibility for High Risk Work licences within their jurisdictions. These units are used broadly across not only the Transport and Logistics industry, but over a broad range of industries throughout Australia. The review of the High Risk Work licence units has been identified as an industry priority to improve safety outcomes and meet the skills demands for workers and industry.

## TRAINING PACKAGE DEVELOPMENT PROPOSED FOR 2017-18:

### **New unit/s of competency and skill set to be developed for Pallet Control**

Pallet control has been identified by industry as a priority for Training Package development to meet a skills demand. Annually the Transport and Logistics industry, and industries across the Supply Chain are spending significant amounts of money in controlling the movement of pallets. The skills required to ensure pallet movements are effectively and efficiently controlled are critical for businesses operating in typically low margin industries where the high cost burden of poor pallet control can lead to significant financial losses.

## 2018 – 2020

TLI Transport and Logistics Training Package qualifications, skill sets and units of competency that have not had been subject to review or development between 2016-2018, will be reviewed in this period. The review will examine all stakeholder feedback and involve consultation with additional stakeholders, including regulatory bodies, on the currency and flexibility of the current qualifications.

Units of competency that are in multiple qualifications or skill sets will only be reviewed once in a four-year period, unless there is a regulatory requirement or urgent emerging demand required to meet specific industry requirements.

The IRC does not at this point in time anticipate that any qualifications, skill sets or units of competency, will require to be reviewed more than once in the four-year period. The exception to this will be where there is regulatory or legislative change, or industry driven change due to safety requirements specific skill needs or technology advancement.

The IRC has not identified any Training Package product review or development work that is expected to be contentious or lengthy in development.

## LEGISLATIVE / REGULATORY REQUIREMENTS

The TLI Transport and Logistics Training Package has multiple units of competency that are aligned to or form part of Australian legislative or regulatory requirements. The regulatory requirements range from Road Law to Work Health and Safety legislation. As legislation or regulations are updated the TLI Transport and Logistics Training Package and Companion volume affected need to be updated.



## INTERDEPENDENCIES

The TLI Transport and Logistics Training Package qualifications include imported units of competency, within core and elective qualification packaging rules. Industry sector interdependencies that will potentially initiate future TLI Transport and Logistics qualification reviews include imported units from 18 interdependent Training Packages (inclusive of predecessor releases).

- BSB - Business Services Training Package
- HLT - Health Training Package
- MAR - Maritime Training Package
- SIR - Retail Services Training Package
- CPC - Construction, Plumbing and Services Training Package
- CPP - Property Services Training Package
- RII - Resources and Infrastructure Industry Training Package
- MSS - Sustainability Training Package
- FWP - Forest and Wood Products Training Package
- PMC - Manufactured Mineral Products Training Package
- UEG11 - Gas Industry Training Package
- PSP - Public Sector Training Package
- TAE - Training and Education Training Package
- AHC - Agriculture, Horticulture and Conservation and Land Management Training Package
- AUR - Automotive Retail, Service and Repair Training Package
- PUA12 - Public Safety Training Package
- SIT - Tourism, Travel and Hospitality Training Package
- FDF10 - Food Processing Training Package

Training Packages that import units from TLI Transport and Logistics qualifications:

- AVI - Aviation Training Package
- RII - Resources and Infrastructure Industry Training Package
- CUA - Creative Arts and Culture Training Package
- AMP - Australian Meat Processing Training Package
- MST - Textiles, Clothing and Footwear Training Package
- MSF - Furnishing Training Package
- PPM - Pulp & Paper Manufacturing Industry Training Package
- FWP - Forest and Wood Products Training Package
- AUR - Automotive Retail, Service and Repair Training Package
- MSM - Manufacturing Training Package
- SIT - Tourism, Travel and Hospitality Training Package
- PMC - Manufactured Mineral Products Training Package
- CHC - Community Services Training Package
- MAR - Maritime Training Package
- AHC - Agriculture, Horticulture and Conservation and Land Management Training Package
- PMB - Plastics, Rubber and Cabling Training Package
- PMA - Chemical, Hydrocarbons and Refining Training Package
- HLT - Health Training Package
- BSB - Business Services Training Package

**IRC Training Product Review Plan – 2016/17 – 2019/20**  
**Transport and Logistics Industry Reference Committee**  
**Contact details: GM IRC Operations, Australian Industry Standards**  
**Date submitted: 30 September 2016**

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2016 - 2017	TLI – Transport and Logistics Training Package	TLIF2010	Apply fatigue management strategies	<b>AISC Priority</b> Develop a new unit of competency to meet the National Heavy Vehicle Regulator (NHVR) requirements <i>(Note: Project commenced)</i>		
2016 - 2017	TLI – Transport and Logistics Training Package	TLIF3063	Administer the implementation of fatigue management strategies	<b>AISC Priority</b> Develop a new unit of competency to meet the National Heavy Vehicle Regulator (NHVR) requirements <i>(Note: Project commenced)</i>		
2016 - 2017	TLI – Transport and Logistics Training Package	TLIF4064	Manage fatigue management policies and procedures	<b>AISC Priority</b> Develop a new unit of competency to meet the National Heavy Vehicle Regulator (NHVR) requirements <i>(Note: Project commenced)</i>		
2016 - 2017	ZPO99 - P & O Ports	ZPO10199	Certificate I in Stevedoring Operations	<b>AISC Decision:</b> The department has identified an initial tranche of potentially obsolete or superfluous qualifications and units. It is proposed that the Industry Reference Committee undertake industry consultation about the impact of removing these qualifications and units from the system.  <i>(Note: Industry Consultation commenced)</i>		
2016 - 2017	ZPO99 - P & O Ports	ZPO20299	Certificate II in Stevedoring Operations (Bulk and General)			
2016 - 2017	ZPO99 - P & O Ports	ZPO20199	Certificate II in Stevedoring Operations (Containers)			
2016 - 2017	ZPO99 - P & O Ports	ZPO30299	Certificate III in Stevedoring Operations (Bulk and General)			

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2016 - 2017	ZPO99 - P & O Ports		ZPO30199	Certificate III in Stevedoring Operations (Containers)		
2016 - 2017	ZPO99 - P & O Ports		ZPO40199	Certificate IV in Stevedoring Operations Certificate IV in Stevedoring Operations		
2016 - 2017	TLI – Transport and Logistics Training Package		TLI21716	Certificate II in Road Transport Yard Operations (Freight Handler)		Activity Order Issued for the development of a Business Case. <b>(Note: Currently in development)</b>
2016 - 2017	TLI – Transport and Logistics Training Package		New qualification	Transport and Logistics Scheduling		Activity Order Issued for the development of a Business Case. <b>(Note: Currently in development)</b>
2017-2018	TLI – Transport and Logistics Training Package		TLI32416	Certificate III in Logistics		Review the qualification to ensure it meets skills demand of changing job roles
2017-2018	TLI – Transport and Logistics Training Package		TLI42516	Certificate IV in Traffic Operations		Review the qualification to ensure that it meets industry skills needs in relation to the changing technologies
2017-2018	TLI – Transport and Logistics Training Package		New units of competency skill set and	Pallet Control		Units of competency and skill set to be developed for Pallet Control to meet the growing industry demand covering multiple industry sectors

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
<b>2017-2018</b>	TLI – Transport and Logistics Training Package		Review of all high risk licence units	TLILIC2005 - Licence to operate a boom-type elevating work platform (boom length 11 metres or more) TLILIC3003 - Licence to operate a bridge and gantry crane TLILIC3004 - Licence to operate a derrick crane TLILIC2001 - Licence to operate a forklift truck TLILIC2002 - Licence to operate an order picking forklift truck TLILIC3006 - Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity) TLILIC3007 - Licence to operate a portal boom crane TLILIC3019 - Licence to operate a reach stacker (greater than 3 tonnes capacity) TLILIC4011 - Licence to operate a slewing mobile crane (over 100 tonnes) TLILIC4010 - Licence to operate a slewing mobile crane (up to 100 tonnes) TLILIC3008 - Licence to operate a slewing mobile crane (up to 20 tonnes) TLILIC4009 - Licence to operate a slewing mobile crane (up to 60 tonnes) TLILIC0012 - Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)		
<b>2018- 2020</b>	TLI – Transport and Logistics Training Package		Review all remaining qualifications within the TLI Training Package that have not been reviewed within the four-year period.			



## AUSTRALIAN INDUSTRY STANDARDS

Australian Industry Standards (AIS) provides high-quality, professional secretariat services to the Transport and Logistics Industry Reference Committee, in our role as a Skills Service Organisation.

AIS provide services to 11 allocated IRCs which cover the Gas, Electricity, Electrotechnology, Corrections, Public Safety (including Police, Fire Services, Defence), Water, Aviation, Transport and Logistics, Rail and Maritime industries. AIS supports these important industry sectors using our world-class in-house capability and capacity in technical writing, quality assurance, project management and industry engagement in the production of Training Packages.

AIS was established in early 2016, 20 years after its predecessor the Transport and Logistics Industry Skills Council (TLISC) was established in 1996. More information about AIS can be found at [www.australianindustrystandards.org.au](http://www.australianindustrystandards.org.au)

- We support industry growth and productivity through our modern innovative approach to establishing skills standards
- We provide high-quality, professional secretariat services to help our allocated industry reference committees develop the skills that industry needs
- We partner with industry to shape the workforce of the future



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**AUSTRALIAN INDUSTRY STANDARDS**

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