



Transport, Distribution & Logistics Change Driver Report 2006

Report prepared for the
**Victorian Office of Training & Tertiary
Education**
by
Transport & Distribution Training Victoria



Contents

Executive Summary	1
Purpose	2
Change Drivers	2
Economic	2
Employment	2
Growth	3
Regional and Metropolitan issues including Infrastructure,	5
Demographic and Social	7
Government Intervention and Policy Change Drivers	7
Legal/Regulatory	7
Security	8
Industry Response	9
Skills Shortages Strategies	9
Skills Needs	9
Skills Development	10
National Training Packages	10
Emerging Skills Sets	11
Logistics	11
E-business	11
Conclusion	11
Appendix 1	i
Tables	i
Appendix 2	v
Job Vacancies	v
Appendix 3	vi
Acronyms	vi
Appendix 4	vii
Employment Campaign	vii
End Notes	viii

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Transport & Distribution Training Victoria ABN 92 388 502 466
 Level 3, 33 Walsh Street WEST MELBOURNE VIC 3003
 Tel: 03 9326 7211 Email: info@tdtvictoria.org.au Web: tdtvictoria.org.au www.careersintransport.org



Executive Summary

This Report highlights the role of vocational training and skills recognition as vehicles for attracting, building and retaining a sustainable workforce, and reiterates the importance of providing strategic training and skills recognition to the industry. The multitudes of skilled workers across the transport, distribution and logistics (TDL) industry who frequently do not possess formal qualifications, together with the rapid pace of technological advancements, provide opportunities for reform, growth and renewal.

The detail of the report identifies the major change drivers impacting the industry including:

- investment in infrastructure,
- expansion in activity,
- technology,
- the likely impact on labour supply with respect to such drivers,
- emerging or likely industry response for the skills needs of the industry, and
- the relative importance of changing skills sets for training provision.

New and changing regulations; an increasingly demanding customer base; increasing competition, globalisation, and rapid advancements in technology continue to present complex challenges to the industry. There is an ever present need to develop a coordinated approach to address skills needs and gaps, including:

- innovation in skills development;
- support for industry in identifying and addressing skills shortages;
- better labour market intelligence and better planning; and
- effective marketing of skill shortage occupations.

The key issues for future training development and provision are:

- Operator training at Certificates II and III as a fundamental need in all sectors, delivered on an ongoing basis for both new entrants and existing employees.
- Increase in the need for training at AQF 4-6 to meet the shift towards whole of supply chain management and the corresponding changes for supervisory and management occupations,
- A broader approach to using TDL training packages to reflect the industry's skill needs.
- In devising training plans especially at operator levels, seek a better balance between product movement and customer service skills and knowledge.
- Quick response to initiating and promoting one-off short training programs to address aspects such as new regulations, for example security related training.
- Focus on skill sets to meet immediate needs – using TDL and other packages according to client needs.
- Promote and implement skill development for the adoption of new technologies by small business.
- Promote recognised training to operator levels in aviation and maritime sectors, where training effort concentrates on regulatory compliance rather than whole of job.
- New partnerships between the training system, industry, agencies and regulators in promoting and implementing training for the industry.
- Partnerships between the training system, business and industry organisations to promote the industry as one which is developing, vibrant and responsible with global links and expanding career development opportunities.



Purpose

The purpose of this report is to identify the factors that will create change in the skills needs of the transport, distribution and logistics (TDL) industry immediately, in the 5 to 10 year medium term and in the long term well beyond ten years. The industry coverage of Transport and Distribution Training (TDT) Victoria includes logistics, distribution and warehousing, along with freight and passenger tasks for road, rail, air and marine. Using the previous change driver report as a starting point, this report reflects a consultation/validation process conducted by TDT Victoria to identify contemporary change drivers and presents a picture of the industry from a skills-focused multi-sector perspective.

Change Drivers

Economic

The Bureau of Transport and Regional Services (BTRE), operating within the Department of Transport and Regional Services, undertakes research and analysis of transport and regional services issues. The economic impact of the TDL industry is illustrated in the tables that appear in Appendix 1 of this report and by the following statistics:

- Transport specific businesses contributed 4.9% of total GDP in 2003–2004 (Table 4). (Excludes transport activity performed by other businesses). This amounted to \$38.7 billion in 2002-03 constant prices.
- The transport sector provided 427,000 jobs in 2003-4, or 4.5% of total employment (Table 5).
- 1 553 million tonnes of freight are transported around Australia by road each year (Table 6). i

Employment

‘Employment has continued to grow rapidly through 2004-05, with the unemployment rate falling to a 28-year low of 5.1% in December 2004. Forward indicators of employment, such as measures of job vacancies, point to further solid employment growth in coming months. The unemployment rate, at a 28-year low, is forecast to remain near 5 per cent through 2005-06 after averaging around 5¼ per cent in 2004-05.’ii

Table 1: Major economic parameters

	Forecasts		Projections		
	2004-05	2005-06	2006-07	2007-08	2008-09
Real GDP	2	3	3 ½	3 ½	3 ¼
Employment (a)	2 ¾	1 ¾	1 ½	1 ½	1 ¼
Wages (b)	3 ¾	4	3 ¾	3 ¾	4
CPI	2 ½	2 ¾	2 ½	2 ½	2 ½

(a) Labour Force Survey (b) Wage Price Index

Source: Commonwealth of Australia, 2005, Australian Government, Budget 2005-06 Overview

‘...the Monash Centre of Policy Studies projections show employment in the Transport and Storage sector will increase by an average of 1.8 per cent per annum during the period 2000–01 to 2007–08. Over the same time period, All Industries employment is projected to increase by 1.6 per cent per annum.’iii

Recent surveys indicate that for road transport, storage and distribution, suitable labour is becoming more difficult to find. The online employment site Australian JobSearch (AJS) in mid November 2004 lists drivers and transport as one of the top ten vacancies and illustrates that in Victoria driver and transport job vacancies represent approximately 20% of the Australia wide figure (Appendix 2).

A decline in rail industry employment is indicated, due in part to technological advances. There are skills shortages in specific occupations, for example the current and projected shortfall of train drivers.



In maritime, the number of Australian flagged and owned ships continues to decline, with a resultant reduction in the already small local employment market in the 'blue water' sector. Similarly, small vessel operations are in decline in Victoria partly due to the reduction in commercial fishing licences. Tourism and leisure operations compensate for some of this decline, and there is opportunity for the 'non-regulated' deck occupations to gain recognised skills and knowledge. The historically fluid and seasonal small vessel employment market will continue to require new entrants who must comply with occupational licensing requirements.

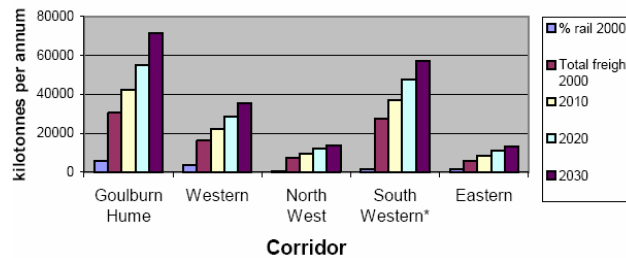
Aviation employment levels are expected to remain static or decline slightly. For flight operations the availability of qualified pilots and aircrew continues to be in excess of the available jobs. Air services and ground operations are benefiting from technological advances, meaning fewer employees.

Growth

The bulk of Victoria's freight originates in the Melbourne metropolitan region.

'Currently over 50% of production occurs within the Melbourne Statistical District, predominantly manufacturing industries. Strategic freight corridors flow radially from Melbourne to the regions connecting the areas of primary production to the export ports. This pattern of freight flow is expected to continue. The growth rates of freight to the regions will increase by 38.4% to 2010 and by 30.6% to 2020 respectively. Corresponding rates of growth for freight to Melbourne are 34% to 2010 and 27% to 2020. This trend is driven by an increase in demand for consumer goods and greater inputs for new regional industries like viticulture. All strategic freight corridors will experience greater volumes of freight. Interstate freight volumes to Melbourne will increase by 40% on all corridors, to 2010.'^{iv}

Table 2: Freight Task on Victoria's Strategic Freight Corridors



Note *South Western corridor includes petroleum products moved by pipeline Rail movements to regional ports not included

² VicRoads – National Highways in Victoria 3 BTRE Information Sheet 17, Freight between Australian Cities

The number of ship calls and cargo volumes continues to rise. Steady increases in transport and storage GDP, total domestic freight and passenger task, and employment levels indicate that the TDL industry will continue as a strong, growing performer. Table 3 indicates growth in non-bulk freight tonnages of 83% over 20 years. Tables 9 & 10 (in Appendix 1) showing shipping freight flows by State for the last 8 years indicate a trend for an upturn in tonnages for Victoria and relative stability in the discharge of cargo for all States.^v



Table 3: Percentage change in non-bulk freight flows, 2000 to 2020

Origin	Destination								Total
	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	
ACT	68%	195%	77%	77%					97%
NSW	89%	80%	76%	96%	80%	93%	55%	102%	81%
Vic	90%	87%	75%	90%	75%	89%	46%	94%	77%
Qld	90%	111%	87%	109%	82%	124%		128%	108%
SA		62%	68%	71%	61%	70%		72%	63%
WA		112%	104%	115%	80%	104%	57%	111%	104%
Tas		53%	41%	48%	35%	48%	40%		40%
NT		105%	99%	146%	82%	115%		95%	95%
Total	82%	83%	74%	106%	66%	100%	41%	94%	83%

Source: Austroads Incorporated, 2003, units = tones, uplifted Forecasting Inter-Regional Freight Transport from Regional Development

The Port of Melbourne is the nation's largest and busiest container port, handling 37% of all container trade. The gross impact of the port on the Victorian economy is estimated at \$5.4 billion, with the direct and indirect value-added contribution per year being approximately \$1.7 billion, generating an estimated 18,000 jobs. An estimated 16,000 businesses operate primarily within the freight and logistics sector in Victoria, providing more than 100,000 jobs. The Bureau of Transport and Regional Economics estimates that a 1% improvement in the efficiency of delivery of national transport services would increase annual Gross Domestic Product (GDP) by approximately \$500 million.

'With the high forecasts of growth for the freight task and the high level of investment required to support Victoria's standing as a national freight hub, the Victoria Ports Strategic Framework, November 2004, provides a significant input to sustained employment growth in the sector and the economy generally.'^{vi}

International airfreight (inbound and outbound) for October 2004 was 65.7 thousand tonnes, an increase of 18.7% on the previous October. Total international airfreight for the year to June 2005 increased by 12% from June 2004. Domestic airfreight statistical reporting is currently under review therefore no reliable figures are available for recent periods. Domestic and regional passenger numbers continue to rise, increasing by 11.3% to 39.5 million for the 2004/5 reporting year. Regional airline passengers of 4.8 million over the same period make up 12.3% of the total, representing a 10.8% increase from 2003-04.^{vii}

Increased competition and globalisation

Like the wider Victorian economy, the TDL industry is undergoing a major competitive transformation. The 'hardware' (trucks, trains, planes etc.) is evolving, as is the 'software'. The industry must be able to meet the challenges of a globalised economy by creating supply chain alliances and becoming more efficient in leveraging capabilities from partners in other sections of the supply chain. The TDL industry is increasingly taking on a larger part of the supply chain to include management of the whole process associated with supply to the manufacturer including packaging, storage and inventory control, and direct delivery to the customer.

Technology

'Freight logistics is increasingly becoming a knowledge industry, and the ability to attract well-trained and flexible staff is vital. The increasing dependence on communications and information technology means the industry must also attract more school leavers and tertiary graduates.'^{viii}

'Organisations continue to grapple with some of the current 'hot issues', including:

- the ongoing reconfiguration of the FIS (Free Into Store¹)/FOB (Free on Board²) mix in Australia,
- the Cost to Serve (CtS³) impact of 'factory gate' supply operations,

¹ Free into Store (FIS) – The seller is responsible for all costs and risks until the goods are delivered to the buyer's warehouse. The buyer does not need to arrange insurance at all.

² Free On Board (FOB) – The seller is responsible for all costs and risks until the goods are on board the vessel, after which the buyer is responsible.

³ Cost to Serve (CtS) - an analytical tool used to organise costs around the key activities of the workflow.



- the efficient management of inventory within extended supply chains (eg Vendor Managed ex South East Asia),
- the application and installation of 'next generation' supply chain management technology, including RFID, TMS (Transport Management Systems) and WMS (Warehouse Management Systems),
- the application of collaborative web-based 'many-to-many' supply chain management technology.^x

The technology offers systems to manage most TDL operations, with on-line processing of most documentation, permits and business reporting at all levels.^x

Operating Costs

The cost of doing business is a major influence on industry development, in all time frames, with the current volatility in oil prices impacting industry margins. The Victorian Transport Association (VTA) estimates that fuel as a percentage of running costs has risen from 30% to 45%, and that the cost of road congestion will continue to rise (currently at 25% of running costs due to fuel and time costs).

Regional and Metropolitan issues including Infrastructure,

The significant increase in international trade during the 1990s is reflected in the volume of trade flowing through Victoria's commercial transport and distribution areas. The predicted continued growth will place roads and port infrastructure under increasing pressure. Current and proposed large scale infrastructure projects aim to develop a more balanced and efficient transport system for Victoria, and include measures to manage operating costs, fuel consumption, transport-generated air pollution and protect the amenity of residential areas.

Initiatives are in progress for ports, road and rail, with an emphasis on the integration of transport systems and infrastructure and overall improvement of access and amenity. *Victoria: Leading the Way* (Economic Statement April 2004) sets out the Government's priority actions to drive new investment, stimulate the creation of new jobs, lower costs for business and increase exports of goods and services. The transport related actions include deepening the Port Phillip Bay shipping channels, improving land access to the Port of Melbourne, and building better supply chain links.

Linking Melbourne: Metropolitan Transport Plan^{xi}

In 2004, the Victorian Government launched the *Linking Melbourne: Metropolitan Transport Plan* for the integrated management and development of Melbourne's transport system. The Plan outlines strategies and actions for the next 4 - 5 years, covering personal travel (private and public transport) and freight movement via roads, rail and ports. Integrated transport studies will develop 20 year strategies for a number of metropolitan regions and corridors.

Road projects^{xii}

Strategic projects funded by State and Federal governments will address inefficiencies for commercial and domestic users, and environmental concerns through:

- Reduction in road congestion, a major cause of increased freight travel times and costs,
- Provision of reliable and efficient access to major arterial roads,
- Provision of the most direct routes for heavy transport,
- Reduction in the numbers of trucks in residential areas, thus addressing concerns re amenity, noise and pollution.

Road projects in progress or planned to commence in next the 3 years include:

- Albury-Wodonga Hume Freeway upgrade
- Craigieburn Bypass linking the Hume Freeway to the Metropolitan Ring Road at Thomastown,
- Mitcham-Frankston project providing a North-South link in eastern Melbourne,
- Upgrade of the Calder Highway to 4 lanes between Melbourne and Bendigo,
- Tullamarine Calder Freeway Interchange upgrade,
- Pakenham Bypass,
- Geelong Bypass,



- Goulburn Valley highway,

Road transport improvements in the planning stages are for the Goulburn Valley (the 'Food Bowl of Victoria' and a major route from Melbourne to Sydney and Brisbane and for Gippsland, the extension of works on Princes Highway duplication and bypasses.

Rail projects

Updates to metropolitan rail infrastructure continue with improvements to train and tram services. The Regional Fast Rail project aims to revitalise Victoria's regional rail network. New trains, a better timetable and upgraded tracks and signals will deliver more frequent, reliable and comfortable services along the Ballarat, Bendigo, Geelong and Latrobe Valley lines. New railway stations are being developed to extend services, improve travel conditions and cope with population growth, such as the new station at Marshall south of Geelong where passenger numbers are expected to grow to 160, 000 annually by 2020. Rail projects include:

- The Craigieburn Rail Project to provide significantly improved rail services to the Craigieburn urban growth corridor commenced in April 2005, to be completed late 2006.
- Feasibility studies are underway to look at improving rail capacity in Melbourne's North East.
- Knox Transit Link, incorporating the Vermont South Tram Extension, commenced July 2005.
- Investigation into the use of double stack trains to increase efficiency and economic viability.
- Increasing the standard gauge proportion of the Victorian rail network, and related works such as rail overpasses.
- Wodonga Rail Bypass

Intermodal Facilities

Intermodal terminals, where freight is transferred between transport modes, for example between road and rail, are significant in addressing the pressures on transport infrastructure. Terminals are now operating in 16 Melbourne metropolitan regions and rural centres, linked to freight route hubs and to primary production and manufacturing centres. Sites under development include Wodonga (Barnawatha) and the Goulburn Valley; under consideration are sites at Horsham, Dandenong, Mangalore, Allansford, and Ballarat, and the re-opening of the Latrobe Valley centre.

Port of Melbourne

The Port of Melbourne, which is of high economic importance, is the subject of a number of large infrastructure projects.^{xiii}

'Smart Freight' - a Victorian Government initiative

Through the application of information and communications technology (ICT) Smart Freight aims to generate efficiency gains and reduce congestion in the Port of Melbourne supply chain.

Melbourne Port@L Melbourne Port@L is a long-term strategy for improving the efficiency of the Port of Melbourne by integrating the port and adjacent freight facilities including the Dynon rail precinct into a single world-class intermodal hub. It will address challenges such as competition from interstate ports, a growing domestic freight task, land constraints and land use pressures from neighbouring communities.

The Dynon Port Rail Link is a freight project of national importance, receiving \$110 million under the Commonwealth Government's AusLink initiative. The improved link will increase the amount of freight carried directly to the dock via rail, avoiding significant handling costs and reducing traffic congestion. Project planning has commenced with completion of work expected in 2009.

Recent rail link improvements at the Port of Melbourne include:

- new Victorian and interstate rail freight link servicing West Swanson Dock, reducing truck trips by 190 per day,
- upgrade to rail infrastructure at Appleton dock,
- introduction of port rail shuttles from intermodal terminals at Somerton and Altona,
- commencement of trials of long trains (1500 metres) into the Port of Melbourne.



The Victorian Government in April 2004 announced the relocation of Melbourne's Wholesale Markets from Footscray Road to Epping, which will free up strategic land in the Port@L precinct.

Road changes around the Port precinct will remove impediments to rail access and reduce the cost of moving freight in and out of the port, making rail a more attractive option.

Port Phillip Bay Channel Deepening Project

The increase in ship size over the past decade has implications for access to the Port of Melbourne which is governed by shipping channel depth in Port Phillip Bay. Already, some 30% of ships servicing the port can not load to full capacity. The Government commenced studies for channel deepening in 2005, with completion due in 2007. Without channel deepening a reduction in the number of ships servicing Victorian ports is projected, with a corresponding effect on the economy:

- 70 % of Victorian agricultural product is exported overseas with a value of around \$7.6 billion.
- Channel deepening has the potential to add \$14.8 billion to GDP by 2030.
- Each container ship loses \$400,000 when it is unable to enter the port of Melbourne fully laden.

Regional Ports

Victoria's regional ports continue to play specialised roles in the overall freight system. Trade growth in the Port of Geelong has grown 10% since 2000, handling 25% of Victoria's exports primarily as bulk product. A study has commenced for the Port of Hastings to become a model port with integrated with road, rail and shipping systems. The Portland trawler wharf is to receive a \$5 million upgrade.

The requirement for all ports to develop safety and environmental management plans aims to benefit employees, business and the surrounding communities and environments.

Demographic and Social

Population aging will limit the pool of skilled personnel. Australia's Ageing Profile – 2003-2042 (in Table 12) illustrates trends; estimates are that in 5 years time, population aging will result in a national shortfall of 195,000 workers.^{xiv}

Employment and training policies must consider the increasing pressure caused by demographic shifts. For example due to a downturn in training efforts over recent years, and the age of existing drivers, Connex (Melbourne metropolitan rail passenger operator) has increased its Train Driver education program by 300% to ensure medium term sustainability.

A recent report by the Transport and Logistics Industry Skills Council found that women represented 27% of the TDL workforce compared with the all industries average of 44%. More women are undertaking TDL courses, but there are still relatively few in roles other than traditional office jobs.

Public perceptions of the TDL industry are dated, largely the result of negative industry images in the media. The industry struggles to attract new, younger entrants. Through normal operations and accidents freight transport is a major contributor to adverse environmental conditions. Changes to regulatory frameworks and systems management aim to reduce the impact of these factors.

Government Intervention and Policy Change Drivers

Through the provision of infrastructure, legislation and regulation, all levels of government have a significant impact on the TDL industry. The knowledge base constantly changes due to initiatives aimed at risk management, improved efficiency, and some level of national consistency.

Legal/Regulatory

'The TDL industry is subject to a broad range of national and state regulations and policies which impact on the training and business requirements of the industry. The nature of the industry means that the regulatory arrangements of other jurisdictions can impact on Victorian based operators. Regulatory changes and the industry's desire to improve standards mean that the need for skilled and qualified staff is increasing.'^{xv}



Chain of Responsibility (COR)

Amendments to the chain of responsibility legislation which took effect from September 2005 have implications for training, both in the content of training material being delivered and the knowledge requirements of industry operators.^{xvi}

Roads and Traffic

26 metre B-Doubles

Greater carrying capacity will result from the decision to allow larger vehicles to use the existing designated B-double road network in Victoria. Conditions apply to the phased implementation of the new rules from November 2005.^{xvii}

Mass Management

The NTC and VicRoads start date for the national implementation of 'measurement allowances' to replace NAASRA tolerances during on-road enforcement of mass limits in Australia is March 2006.^{xviii}

Heavy Vehicle Charges

A 2005 NTC determination to model the allocation of costs of road construction and maintenance across heavy vehicle classes will be put to the ATC Ministers for implementation from July 2006.

Occupational Health and Safety

The Victorian *Occupational Health and Safety Act 2004A* contains a number of changes which affect industry operations.

'Health is seen to be a critical challenge for the transport industry, with statistics showing a far greater number of at risk health cases than in almost any other industry category in Australia.'^{xix}

Reform of the Victorian Rail Access Regime

The Rail Network Pricing Order sets out the pricing principles for use of Victoria's rail network under the reformed rail access regime and legislative changes to the Rail Corporations Act.

Environmental

Proposed changes to regulatory frameworks and systems management aim to reduce the environmental and amenity impacts of freight and commercial transport. The industry and governments are seeking ways to move freight with less resources and more safely.^{xx}

Emissions Management

In 2002, the Federal Government introduced new Australian Design Rules (ADRs) with emission standards for new vehicles and new fuel-quality standards. The ADR 80/01 (Euro 4 / US EPA 2004) emission standard has been mandated for implementation in Australia in 2006/07. The industry is preparing to introduce other Euro 4 and Euro 5 heavy vehicle emission standards.

Managing Traffic Noise

Noise is a significant concern to communities living near high traffic roads, rail lines and freight terminals. The Victorian Government is undertaking programs to reduce the impact of noise through a range of measures including a number that will have a direct impact on the TDL industry.

Security

Recent world events have focused attention on the need to better secure the community and transport systems from the significant economic and social damage that could occur following a terrorist attack or other forms of unlawful interference. The Office of Transport Security is overseeing the implementation of the National Transport Security Strategy across all T&D sectors. Security regimes are in place for land, air and maritime sectors. Businesses in various parts of the supply chain are required to have transport security programs in place. In certain instances, individuals will need to undergo security clearances and hold the required identification documents.^{xxi}



‘A key feature of these developments is the need for freight logistics chains to maintain adequate audit trails on freight origins and intermediary handling points along logistics chains. This places enormous pressure on the storage, distribution, transport and packaging tasks, and creates a need for more effective documentation. But it is also an opportunity for logistics chains with well developed e-Logistics systems to gain a competitive advantage.’^{xxii}

Industry Response

To keep abreast of developments in technology, logistics practices and the demands of the supply chain the skills and knowledge requirements for supervisors and managers will continue to increase. Low driver numbers, skills enhancement, lowering the median age of the workforce, and attracting and retaining younger staff are major challenges now and into the future. Facilitating greater public awareness of the industry, its place in the economy and the opportunities for valuable and rewarding careers is seen as fundamental to changing public perception of the industry.

Improving links with secondary schools, including enhancing information on TDL careers and vocational training opportunities is essential. A strategy is needed to increase the number of women in operational roles at all levels. Ancillary initiatives, including skill specific qualifications are also options that are being explored.

Skills Shortages Strategies

Initiatives to promote the industry and enhance the training options for the TDL industry include:

- Since late 1999, the Australian Government together with 11 industry sectors has investigated current and future industry skills needs including a road freight project to commence shortly. Under the National Skills Shortage Strategy a Task Force coordinated by TDT Australia will oversee the implementation of the National Industry Skills Initiative (NISI) TDL Action Plan.
- The TDL Specialist Centre located at Victoria University is an initiative that supports the training efforts of the industry while the Certificate IV Innovation project targets school leavers.
- A DVD to promote TDL careers produced in partnership between TDT Victoria and the Latrobe Valley Group as part of the Careers in Transport initiative; the DVD is to be distributed through the Learning and Employment Network (LENS) and Jobs Network.
- Dialogue between TDT Victoria and the Australian Trucking Association (ATA) to lobby for TDL to be included on the new ‘Technical School Agenda’.
- The Australian Network of Practice Firms (ANPF) program ^{xxiii} aims to engage female secondary school students in real-world business practices within a virtual economy. The TDL Practice firm (a TDT Australia project, managed for Victoria and Tasmania by TDT Victoria) will form partnerships between training providers (secondary schools), a real business (Toll Holdings) to mentor the students, and the ANPF central office. The emphasis is on developing a wide range of vocational competencies within the Australian Training Frameworks and T&D qualifications.
- TDT Australia access & equity strategy ‘All Aboard’, to target groups which could be better utilised by the industry to address skills shortages and provide enhanced information regarding training options for new entrants. The 5 groups that have been identified are young women, the ageing workforce, people in rural and remote areas, indigenous people, and people with a disability.
- A major driver recruitment campaign by Linfox (see Appendix 5); the campaign components include schemes to attract more women drivers, younger drivers and unemployed people into the industry, and rewarding good drivers for their safety and driving record.

Skills Needs

The emerging direction of TDL involves the provision of an integrated, seamless service along the whole supply chain, from point of origin to point of consumption, with a clear focus on the customer. The involvement of TDL expertise in the planning of the total movement of products is seen as the way to improve the performance of the whole chain.^{xxiv}



‘This new way of doing business requires the freight logistics sector to do more than raise the skills and knowledge of its workforce and adopt practices and technologies that transform information and experience into knowledge. There must be a greater understanding of the importance of developing the right skills and attitudes to foster better relationships with all those participating in freight logistics chains. This need reflects the view that business connections are becoming less transactional in character and more based on relationships.’^{xxv}

The skills shortage highlighted by recent Dawson Consulting Supply Chain Salary Surveys^{xxvi} is well and truly entrenched. Whilst it is apparent that the investment in training supply chain managers and operatives has increased, there is a significant gap between the competencies and capabilities in the workplace and the realisation of that training investment. The trends are:

- the increasing recruitment of overseas skills to address longer supply chain perspectives (mainly senior management positions),
 - the growing demand for supply chain and logistics analytical skills,
 - a need to fill knowledge gaps with specialist supply chain consultants on an as required basis,
- ‘Employers are developing a preference for training in specific competencies or groups of competencies to meet specific workplace needs rather than full qualifications.’^{xxvii}

Skills Development

National Training Packages

T&D training packages cover operational occupations at AQF 1-3 for road transport, distribution, administration, stevedoring, maritime deck operations and engineering, aviation ground and flight operations and rail operations and infrastructure. Supervisory and management levels are addressed by the Certificates IV and the Diploma and Advanced Diploma in Logistics Management, which build on industry skills and introduce competencies such as information management and marketing.

Until recently, the level of investment by the TDL industry in training was poor, with training delivery driven mainly by regulatory requirements. The training culture of the industry has improved markedly with the implementation of the training package and New Apprenticeships. Current training efforts are weighted towards existing employees who, at operator level represent 60-70% of the workforce.

The ANTA National Strategic Industry Audit conducted in 2004 examined delivery of the Certificates III for the Warehousing and Road Transport sectors of TD03 Transport & Distribution training package. The key findings from the audit were that:

- the majority of employers (98.7% for Victoria, 77.7% overall) *were satisfied* with the quality of training provided by the training organisation to their trainee;
- nine in ten employers (94.4% for Victoria, 87.3% overall) *were satisfied* that when trainees were assessed as competent, they could actually do the job;
- the majority of employers (97.2% for Victoria, 90.6% overall) believed the *traineeship program gives trainees the necessary skills to do the job*;
- eight in ten employers (84.9% for Victoria, 91.6% overall) *saw benefits in encouraging existing employees to learn skills from the Transport and Distribution Training Package*, for example, in administration, stock management or other topics;
- nine in ten employers (95.9% for Victoria, 81.4% overall) *were satisfied* with the skills and capabilities of the trainers and assessors used by the registered training organisation.^{xxviii}

TD03 is currently undergoing a review, with radical changes proposed for content and structure at AQF 4 – 6, aimed at improving the training options at those levels, corresponding to industry practices and developments. The other T&D packages will undergo similar cyclical review, and development. Rationalisation across training packages will enhance flexibility in training for the industry.



Emerging Skills Sets

Technology and supply chain management techniques are impacting strongly on the industry and the skills required of employees. This means an increase in demand for a workforce that can be quickly trained in defined skills sets, which include ICT and business administration, to meet the multi-disciplinary nature of the industry. Content for training in specific skill sets can be drawn from the TDL package, or from a number of industry packages, as appropriate.

Logistics

The change drivers discussed in this report indicate an increased need for supervisory and management skills. The first generation of logistics training provided by the TDL training package is acknowledged by industry as a stable basis upon which to build VET and tertiary sector articulation. It is envisaged that high increase in logistics training will occur because logistics activities are a potential source of competitive advantage for many firms.

E-business

Technology now governs systems in TDL, as in most industries, with large businesses embracing the technology. The challenges of adopting the technology present survival risks for small operators.

Training in specific skill sets targeted for SMEs in the areas of customer service and ICT is an emerging need. Initiatives such as the Small Business Enterprise Culture Program and the Financing Innovation Growth (FIG) Program could be used in conjunction with the training effort.

To inform forward planning for training development and delivery, OTTE has funded a number of 'new and emerging skills' research projects including one for TDL. TDT Victoria is investigating the current and projected uptake of ICT by small TDL businesses and identifying skill development needs.^{xxix}

Conclusion

In charting the future skill needs for the TDL industry we can only make broad predications about what will be required in the future. We do know that 'soft' skills such as problem solving and customer service are becoming a core component of most jobs, and of the attributes sought of new recruits. In addition to the breadth of technologic skills required, the impact of globalisation is significant. There is an increasing need to develop more sophisticated management skills and new ways of thinking, particularly with respect to supply chain management. The constantly changing nature of the industry requires skills to be maintained and re-shaped accordingly. Therefore training providers will need to consider the need for employees with many years of industry experience to upgrade skills for new and emerging roles and tasks.

Most skill requirements can be met through the T&D training package, but training providers will need to take a broader view of the potential of the package to reflect the industry's skill needs. Training at AQF 2 & 3 continues to be a fundamental need, delivered on an ongoing basis for both new entrants and existing employees. However, delivery will need to embrace the growing importance of soft skills and information technology, including some shift in focus from product movement to customer service. Short term one-off training will be required to address aspects such as new regulations. Often only a small number of units or a specific skill set is required, highlighting the issue of non-completion of qualifications.

In order to meet the ongoing need for skills improvement/acquisition at management and supervisory level, there is a need for AQF 4-6 level training to be delivered to a growing audience. The existing workforce is one target for supervisory training. Given the emerging importance of the skills attached at higher occupational levels, the industry needs to develop a strategy to attract new employees using Certificate IV and the Diploma as entry points.



Appendix 1

Tables

Tables 4 to 8 are reproduced from the Bureau of Transport and Regional Economics (BTRE), *Australian Transport Statistics*, June 2005. Updates of the booklet can be found at the following link: <http://www.btre.gov.au/statistics/general/trmstats05/trmstats.aspx>

Tables 9 to 12 are reproduced from Bureau of Transport and Regional Economics (BTRE), *Australian Sea Freight*, 2002-2003, Information Paper 53 available at: <http://www.btre.gov.au/publications.aspx>

Table 4 Transport & Storage GDP — 1999/2000-2003/04

(\$ million, 2002-03 constant prices)

Indicator	99-00	00-01	01-02	02-03	03-04
T&S GDP ⁽¹⁾	32 230	33 889	35 269	37 017	38 731
-Road	10 349	10 823	11 600	12 423	13 368
-Rail, pipelines and other transport	3 909	3 963	4 221	4 489	4 655
-Air	5 225	5 662	5 352	5 549	6 013
-Services and storage ⁽²⁾	12 810	13 507	14 121	14 561	14 692
T&S GDP per capita	1 669	1 732	1 765	1 821	1 892
T&S % of national GDP	4.8%	4.8%	4.9%	4.9%	4.9%

Notes: 1. T&S GDP relates to transport-specific businesses, excluding other transport activity performed by other businesses, and the value of non-commercial transport activities.

2. Services and Storage includes water transport.

Sources: ABS, Australian national accounts, National income and expenditure (5206.14). Time series data (quarterly) 1959-2004

Table 5 Employment in Transport & Storage — 2000-2004

('000 employees at 31 August)

Mode	2000	2001	2002	2003	2004
Road	210	219	210	221	223
Rail	38	36	35	41	36
Air & space	58	55	47	51	55
Water (sea)	12	14	11	12	14
Other transport	1	1	0	1	1
Services to transport	68	71	69	72	71
Storage	31	28	29	28	27
Total employment—T&S	419	423	401	425	427
Total employment—all industries	9 048	9 124	9 310	9 472	9 456

Note: Transport-specific businesses, excluding other transport activity. Data collected from April 2001 onwards is not strictly comparable. Components may not sum to totals due to rounding.

Source: ABS, Labour force employed by industry, Australia, August 2004 ABS

Transport, Distribution & Logistics Change Driver Report 2006

Table 6 Total domestic freight & passenger task (2002-2003)

	Road	Rail	Air ^a	Sea ^b	Total ^c
Tonnes carried ('000)	1 553 000	544 600	na	52 825	2 150 425
Tkm (million)	152 777	158 100	na	114 800	425 677
Av. distance (km)	98	na	na	2 174	na
Passengers ('000)	na	507 705	28 551	18 638	na

a. Domestic air freight not available.

b. Includes urban public transport ferry services.

c. Total does not include air freight.

Note: Most recent available data at publication for complete domestic series. Domestic data usually is available about one year after international data. Similar data lags also effect Tables 8, 9, 11, 15, 17 and 19.

Sources: ABS, Survey of motor vehicle use, Australia, 2003 (9208.0); BTRE, Aviation statistics database, unpublished; BTRE, Coastal freight database, unpublished, Australian Railway Association, ATSB.

Table 7 Summary Rail Statistics

	('000)			
	2000	2001	2002	2003
Australia's rail network				
Train Kilometres	na ^b	156 122	170 667	175 682
Passenger train km	na ^b	99 162	106 159	113 119
Passenger journeys	na ^b	514 776	510 126	507 705
Tram kilometres	na ^b	23 471	24 046	23 914
	2000 ^a	2001 ^a	2002 ^a	2003 ^a
Freight carried				
Million tonnes	492.0	508.0	535.1	544.6
Billion net tonne-km	127.4	134.2	137.7	158.1

a. Financial years.

b. 2000 data not available.

Source: Australian Rail Industry Report 2003. ATSB, personal communications.

Table 8 Summary Aviation Statistics

Activity	International		Domestic ^a		Regional (est)	
	93-94	03-04	93-94	03-04	93-94	03-04
Aircraft movements	87 042	117 932	453 342	499 062	615 400	479 308
Hours flown ('000)	na	na	374	481	235	244
Km flown (mil)	na	na	223	293	78	82
Rev. pass-km (mil)	na	na	21 115	37 404	983	1 807
Revenue pass (mil)	10.6	18.1	20.0	31.1	3.3	4.4
Pass load factors (%)	67.6	71.5	77.2	79.9	57.4	62.7
Freight ('000 tonnes)	476.3	627.0	na ^a	na ^a	na ^a	na ^a

a. Domestic air freight not available.

Source: BTRE, AVSTATS, unpublished. <http://www.btre.gov.au/statistics/statsindex.aspx>

Table 9 International Sea Freight by Australian State of Origin/Final Destination, 2002- 2003

State	Value (\$'000s)		Tonnes	
	Imports	Exports	Imports	Exports
New South Wales	33 322 527	16 718 322	15 651 859	90 582 869
Victoria	32 320 077	15 354 543	14 806 809	12 066 596
Queensland	13 983 059	20 461 431	15 882 794	150 128 996
South Australia	5 098 814	7 529 248	3 914 205	8 597 275
Western Australia	8 730 282	25 440 225	9 857 577	250 228 159
Tasmania	492 811	2 080 889	861 687	7 700 928
Northern Territory	999 237	2 441 098	1 443 221	8 079 125
ACT	670	1 243	37	64
State Confidential	0	429 409	- 8 404	1 581 671
Foreign Origin		2 972 222		390 013
Total	94 947 476	93 428 630	62 209 786	529 355 694

Source: ABS, International Cargo Statistics, unpublished

Table 10 International Sea Freight 1994-1995 to 2002-2003

Year	Weight (tonnes)			Value (\$billion)		
	Exports	Imports	Total	Exports	Imports	Total
1994-1995	362.4	45.9	408.3	53.0	54.5	107.6
1995-1996	372.9	47.1	420.0	60.0	55.8	115.8
1996-1997	404.0	49.8	453.8	63.4	56.9	120.4
1997-1998	427.1	51.9	479.0	69.6	64.1	133.7
1998-1999	431.8	56.3	488.1	68.2	68.5	136.7
1999-2000	462.0	56.7	518.7	78.2	76.5	154.6
2000-2001	495.0	55.0	550.0	99.4	83.0	182.3
2001-2002	501.0	57.8	558.7	99.5	85.2	184.7
2002-2003	529.4	62.2	591.6	93.4	94.9	188.4

Note: Weight figures have been revised from those appearing in BTRE 2004, IP50.

Source: ABS, International Cargo Statistics, unpublished

Transport, Distribution & Logistics Change Driver Report 2006

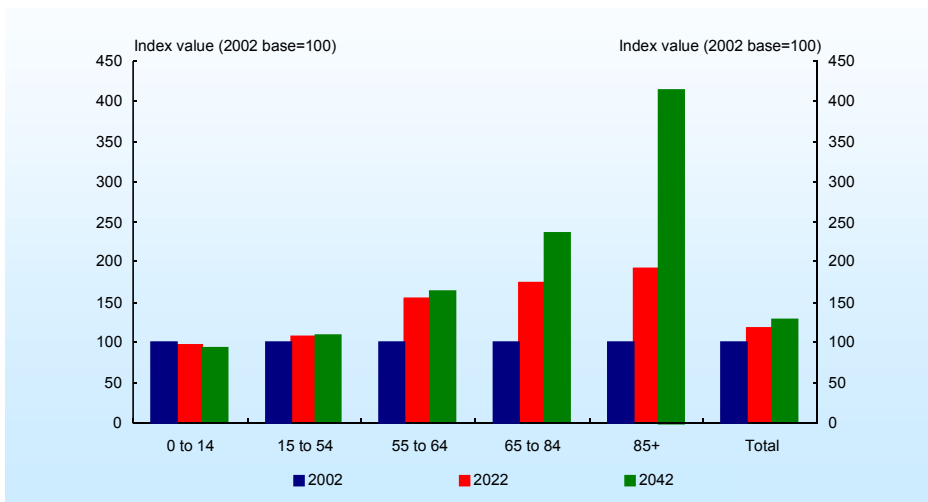
Table 11 Australian Coastal Freight Summary, 1994-95 To 2002-2003

Year	Loaded (kilotonnes)			Discharged (kilotonnes)		
	Interstate	Intrastate	Total	Interstate	Intrastate	Total
1994-1995	33 892	15 498	49 190	34 180	16 286	50 466
1995-1996	31 982	15 815	47 797	31 808	16 229	48 037
1996-1997	32 581	16 562	49 143	32 505	17 530	50 035
1997-1998	34 322	18 200	52 522	34 741	18 968	53 709
1998-1999	31 934	16 454	48 388	31 047	17 053	48 100
1999-2000	32 743	18 582	51 325	32 359	18 369	50 728
2000-2001	33 218	18 786	52 003	32 783	18 692	51 475
2001-2002	32 484	19 949	52 432	33 183	19 652	52 835
2002-2003	34 274	18 551	52 825	34 993	18 507	53 501

Note: Reasons for discrepancies between loaded and discharged tonnages in this and other tables are listed in the section 'Statistical Issues'.

Source: Australian port authorities—personal communications

Table 12 Australia's Ageing profile – 2002-2042



Source: Australian Government, The Treasury, National Skills Forum, 16 September, 2005, "Ageing Australia and the education and training sectors" Available: http://www.getatrade.gov.au/documents/National%20Skills%20Forum%20Presentations/DTaylor_Implications_%20Ageing_Society.ppt

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Appendix 2

Job Vacancies

The DEWR (Commonwealth Department of Employment and Workplace Relations) Skilled Vacancy Survey is based on the count of skilled vacancies in the major metropolitan newspaper of each state and the Northern Territory, usually on the first Saturday of each month.

The following two tables are derived from data collected by the DEWR online employment site (Australian JobSearch [AJS] (mid November 2005) and form part of the DEWR November 2005 Vacancy Report, available at:

<http://www.workplace.gov.au/workplace/Category/Publications/LabourMarketAnalysis/VacancyReports>

Table 13 AJS – Top Ten Vacancies by Occupation Australia, November 05

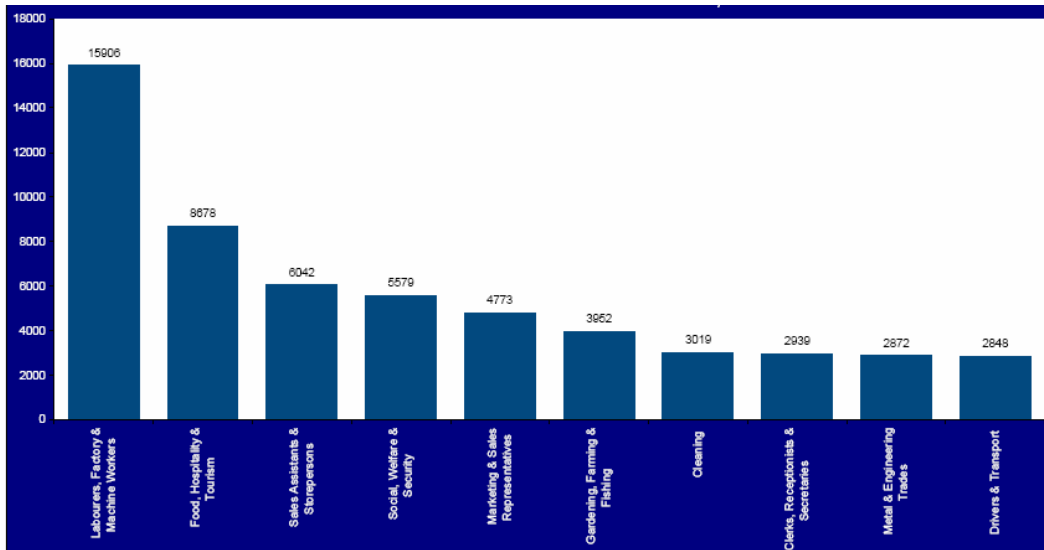


Table 14 Australian JobSearch Vacancies – November 2005

Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Accounting, Finance & Management	2,368	1,161	346	500	95	199	26	19	22
Building & Construction	2,672	593	507	1,031	176	273	40	33	19
Cleaning	3,019	738	486	1,127	188	329	16	107	28
Clerks, Receptionists & Secretaries	2,939	1,117	652	712	145	196	22	46	49
Computing & IT	291	109	43	85	14	12	7	1	20
Drivers & Transport	2,848	749	564	891	149	322	66	50	57

Appendix 3

Acronyms

TDT Victoria	Transport and Distribution Training Victoria
BTRE	Bureau of Transport and Regional Services
DEWR	Commonwealth Department of Employment and Workplace Relations
AJS	Australian JobSearch
GDP	Gross Domestic Product
POMC	Port of Melbourne Corporation
VTA	Victorian Transport Association
IEA	International Energy Agency
EIA	Energy Information Agency (US Dept of Energy)
EC	European Commission
OPEC	Organisation of Production Exporting Countries
IEEJ	Institute of Energy Economics (Japan)
CGES	Centre for Global Energy Studies
TDL	Transport, Distribution & Logistics
FIS	Free Into Store
FOB	Free on Board
CtS	Cost to Serve
TMS	Transport Management Systems
WMS	Warehouse Management Systems
OHS	Occupational Health & Safety
COR	Chain of Responsibility
VET	Vocational Education and Training
ATC	Australian Transport Council
ADR	Australian Design Rules
MSIC	Maritime Security Identification Card
ICT	Information and Communications Technology

Employment Campaign

Major campaign planned to attract new drivers

Linfox will undertake a major recruitment campaign to attract more drivers to the profession to help alleviate the current industry-wide shortage.

The program will include advertising on the tailgate of selected Linfox vehicles under the slogan "If you've got the drive, we've got the job." The "You are passing another Fox" line will also be changed to say "You too can drive another Fox."

Linfox drivers will be "the faces" of the program with the first three to be used being Lisa Wales from the Notting Hill site, Joe Basille, from Coles Altona, and John Saggars, from Costas at Derrimut.

The campaign is made up of six components:

- A program to attract women drivers
- A program to attract more drivers from areas such as the defence forces
- Setting up an apprenticeship scheme to attract younger drivers
- A staff referral scheme where Linfox staff will be paid up to \$500 for attracting drivers
- Rewarding good drivers for their safety and driving record
- A program to attract unemployed people to the industry

As a further inducement, Linfox will offer to pay for the upgrading of licences with the proviso that the driver stays with the company for a certain period of time.

The driver shortage has been brought about by a combination of an ageing workforce, the lack of new drivers entering the workforce and an industry that has grown 23% in the past decade.

Linfox Chief Executive Chris Munro said Department of Employment and Workplace Relations figures showed that the number of truck drivers required to service the industry



The new decal that will be placed on the tailgate of selected Linfox trucks as part of the recruitment of new drivers campaign.

in Australia was growing faster than the workforce generally.

"Truck driving is now the single largest full-time occupation for Australian males according to the Transport and Logistics Industry Skills Council.

"With the amount of goods carried by road expected to double in the next 15 years the industry can see that recruitment is vital to its future health and ability to deliver," he said.

Chris said the problem was not confined to Australia, but also affected many other parts of the western world.

"With Australia's ageing workforce and projected growth, the industry and companies need to act. Poaching drivers from an ever-decreasing pool is not the answer and we hope these initiatives will help solve our problem in both the long and short term."

He said part of the problem was that young people were not attracted to the industry because it was perceived as dirty, noisy and work that is required mainly out of regular 9 to 5 hours.

Linfox has about 4500 drivers and although the driver turnover is less than the industry average, it is still a concern which the company is taking seriously. Exit interviews now include a detailed section about why a driver is leaving so that Linfox can gather more data about why drivers leave and then to come up with strategies to retain them.

The initial findings indicate the main reasons drivers leave the industry are:

- Retirement
- Working hours – many don't like the shift work involved and more and more dislike weekend work
- Relocation
- Some just want to try something different and had not intended to make a career out of driving

"Truck driving is now the single largest full-time occupation for Australian males. With the amount of goods carried by road expected to double in the next 15 years the industry can see that recruitment is vital to its future health and ability to deliver."

Chris said he believed that it was not lack of financial rewards that were driving drivers out of the profession.

"A top driver can earn in excess of \$80,000 while base salaries begin at \$35,000 plus super," he said

End Notes

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