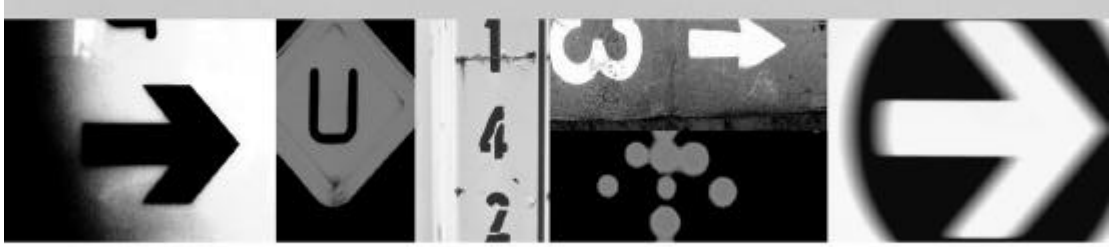
The Transport, Distribution and Logistics Sectors in Victoria

Audit Report

07 July 2001

strategic audit of victorian industry



State Government Victoria

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ACKNOWLEDGMENTS

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First, we wish to thank the many stakeholders in the Victorian Transport, Distribution and Logistics sectors. Without the interest and contributions of a wide range of industry stakeholders this Audit Report would not be possible.

This includes all those who responded to the Issues Paper, those individuals who were interviewed face-to-face, participants in the Public Forum held on the 8th of November 2000 and of regional workshops in Geelong, Ballarat, Bendigo, Shepparton, Traralgon and the Western suburbs of Melbourne.

The Sectoral Reference Group (see Appendix 3), in particular, provided the Audit Team with an essential link to the sector in the compilation of this Audit Report and in the refining of the recommendations.

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Ken Strahan
Project Leader, TDL

Rachel Perkin
Research Officer

EXECUTIVE SUMMARY

The Transport, Distribution and Logistics sector provides its services through an infrastructure of roads, rail, seaports and airports, as well as a network of warehouses. This infrastructure has been established over a significant period of time and has involved substantial financial commitment by government and, to a more limited extent, by the sector.

An audit of the issues for this sector inevitably involves an analysis of the infrastructure that underpins it.

However, this report also considers the broad operation of the sector, beyond infrastructure, to issues central to the competitiveness and best practice provision of transport, distribution and logistics services.

Importance of the Sector

The Victorian Transport, Distribution and Logistics (TDL) sector provides a vital service enabling the movement of freight across the whole state, interstate and overseas.

Victoria is located at the centre of the key economic triangle encompassing Melbourne, Adelaide, Tasmania and southern New south Wales creating a strategic opportunity in for the movement of freight between these areas and for exporting.

The TDL sector is a key contributor to the competitiveness of the whole Victorian economy.

Structure and Performance

The sector is comprised of a large number of small and medium sized businesses but is dominated by a small number of large multi-modal enterprises.

The overwhelming majority of freight movement in Victoria is within urban areas and within the Melbourne metropolitan area in particular.

The sector is experiencing rapid change involving global competition, the demands of new business models that involve smaller more frequent consignments, increasing concentration of dominant firms through merger and acquisition and the increasing pervasive impacts of the use of information and communication technologies.

Future Directions

The Victorian TDL sector is poised for a quantum change.

The core of this change is a new vision of Victoria as the supply chain gateway of Australia.

As part of this vision it seeks Victorian Government commitment to a coherent freight transport plan and to expanding consultative mechanisms with the sector.

This coherence requires the industry and Government to prioritise and pursue the development of key transport infrastructure based on a balance of economic, social and environmental objectives.

It also therefore requires a resolution of the role of Government and industry in providing this strategic transport infrastructure in a manner that the private and public sectors can simultaneously achieve their profit, macro-economic and social/environmental objectives.

Key General Actions

The sector has identified key actions that it sees as vital to its current and future competitiveness, its role in global activities and to the future viability of the Victorian economy. These actions are:

- Developing, consolidating and maintaining a capability for seamless supply chain operation as standard business practice;
- Consolidating cooperative and innovative relationships along the whole supply chain to boost competitiveness and enable continuous improvement;
- Understanding, using and innovatively applying communication and information technologies, software and related business systems to boost the efficiency of the sector that is generally lagging in its effective application of technology;
- Developing the capability of workers and management in the sector to deliver a seamless supply chain through education and training, progressive human relations practices and forward looking employee attraction and retention practices;
- Addressing and mitigating the actual and potential social and environmental impacts of the activities of the sector (including road and rail noise, air pollution etc) by actively engaging and addressing community priorities to achieve a balance between economic and social and environmental objectives;
- Promoting and incorporating innovations across all sectoral operation including vehicle design and operation, the application of

information and communication technologies and the development of sophisticated supply chain management processes.

The involvement and cooperation of all levels of government is also of strategic importance including:

- Local Government in its role as responsible authority for decisions on truck and rail access and for traffic management; and

- The Federal Government through its influence on infrastructure investment through the Tax Act, extensive regulatory oversight of national standards and infrastructure; its customs responsibilities; and in the provision of data through the ABS.

A key to the competitiveness of the TDL sector in Victoria is also the establishment of strategic inter-modal links in urban and regional areas. In particular improved links between road and rail is central to the Government's objective to increase rail freight movements.

Key Modal Actions

Road Freight

The competitiveness of the Victorian road freight sector will be enhanced by actions that address improvement both to the large multi-modal operators and to the multitude of SMEs including owner drivers. Key actions are:

- All road freight operators and customers fully implementing Chain of Responsibility provisions;

- SMEs improving their business focus and business skills;

- Increasing the efficiency of the urban freight task through the application of Intelligent Transport systems, initiatives to increase truck capacity utilisation and the better use of road freight infrastructure; and

- Addressing the impact of increasing access of light commercial vehicles to local neighbourhoods.

Rail Freight

Rail freight offers an important environmentally sustainable alternative to road freight. However the rail infrastructure has run down and many routes were closed. The Victorian rail network and much of its operation has now been privatised.

The enhancement of rail freight is a key objective of the Victorian Government especially in relation to the Port of Melbourne. Given the decline and historic

deterioration of rail capacity in Victoria there is a strong argument for government and the sector to give special attention to rebuilding and revitalising rail.

The consultation has confirmed the well recognised need to address gauge and network quality issues through strategic investment.

It has also identified the key strategic importance of establishing the rules for and pricing of open rail access arrangements that balance the pressing need for private investment in rail with appropriate benefits to customers.

Airfreight

Victoria enjoys a key competitive advantage in having Melbourne Airport operate curfew free. This advantage must be sustained by industry and government action to plan for the future growth of airport operations.

Building airfreight capacity into Melbourne relies primarily on the export of high value goods based on:

- Enhanced Victorian manufacturing capacity including manufacturing in bond; and
- International companies establishing regional distribution centres in Victoria.

Infrastructure including sufficient freight docks and storage and cool room capacity is also strategically important to the competitiveness of Victorian airfreight.

The application of freight forwarding best practice, especially in relation to cool and cold chain process is also strategically important to the competitiveness of the sector.

Sea Freight and Ports

Victorian ports and especially the Port of Melbourne are a vital component in the State's freight transport system. Their unencumbered operation is vital to the State's current and projected economic growth and employment.

The future efficient operation of both the Port of Melbourne and Port of Geelong is dependent on the deepening of the heads and channels to enable fully laden access of larger vessels. The sector has overwhelmingly expressed the desire for an immediate decision from the Victorian Government for this strategically important deepening to be undertaken. Significant work examining the feasibility of channel deepening is being undertaken by the VCA and the Government.

A decision on a third terminal at PoM is seen as of strategic importance by elements of the sector that are both in favour and against its establishment. Those who are in favour cite advantages of competition including price, quality of service and innovation. Those who are against it, including the existing operators, believe that a third operator is not required to meet capacity requirements, will not generate competitive advantages, will increase average costs by reducing scale economies and may produce greater congestion and increased logistical complexity. There is a need to balance the benefits of competition that actually accrue from the establishment of a third operator with the costs to industry and of Government financial support to a third operator, if any.

The Government has approved a process for assessing proposals to develop the Westgate site. The initial expression of interest process has been completed and submissions are being considered.

Port related services are also of strategic importance for the competitive operation of this sector. These services include provision of strategically located container parks and the provision of food grade containers.

SUMMARY OF RECOMMENDATIONS

STRENGTHENING VICTORIA AS A REGIONAL HUB

Vision for the TDL Sector in Victoria

Recommendation 1.1

The Victorian Government:

a) Endorse the vision of Victoria as the *supply chain gateway of Australia*;

b) Develop a marketing strategy to be used by the Premier and Ministers in their discussions with international investors, around the concept of Victoria as the supply chain gateway to Australia; and

c) Build further networks with TDL companies, and key TDL service users in other States to enhance the role of Victoria as the supply chain gateway of Australia.

Logistics Marketplace

Recommendation 1.2

The TDL sector in conjunction with the Victorian Government investigate the feasibility of establishing a web site aimed at marketing the advantages Victoria offers through this sector to potential international investors.

Freight Transport Plan

Recommendation 1.3

Better integrated and coordinated freight transport strategic planning across government be further pursued by the Victorian Government through the inter-departmental Freight and Logistics Committee.

Ministerial Consultative Group

Recommendation 1.4

The Victorian Government:

a) Continue its relationships with and support for existing advisory groups including the Victorian Air Freight and Sea Freight Councils and the Road Freight Advisory Council and the new rail freight Council which is currently being established;

b) Support the establishment of a TDL sector round-table; and

c) Establish a mechanism to provide ministerial advice on issues affecting the TDL sector as a whole, which are not capable of being addressed by a single existing advisory group.

SECTORAL IMAGE

Recommendation 2.1

The TDL sector provide a clearer picture of the industry, how it operates, the types of jobs that are involved and the varied, interesting and sophisticated career opportunities that young people can pursue.

The TDL sector and State Government promote, especially with young people, the TDL sector as a desirable one in which to work.

INFORMATION, COMMUNICATION TECHNOLOGY AND E-COMMERCE

Promoting Technology Uptake

Recommendation 3.1

The TDL sector and the Victorian Government promote the concept of seamless supply chain trade within all elements of the sector, especially small operators by:

a) Supporting awareness raising and promotion of the benefits of the use of information and communication technology, including support for demonstration projects;

b) Providing information on best practise in technology use to identify better ways of operating and implementing logistics systems;

c) Supporting training activities in this area;

d) Providing support to business (especially SMEs) in the development of their information and on-line strategies; and

e) Promoting take up of electronic trading documentation for import and export by all parts of the supply chain and by all modes.

Technology Compatibility

Recommendation 3.2

Industry and government work jointly to support the development of platforms for information and communication technologies that are as far as possible:

- Of a consistent, open international standard and based on agreed industry code lists; and
- Inter-operable between users and transport modes.

SUPPLY CHAIN MANAGEMENT

Recommendation 4.1

The TDL sector and their customers, supported by government, jointly promote a culture of integration and coordination to establish seamless supply chain operation as standard business practice including:

a) Addressing current supply chain; and

b) Establish best practice projects aimed at real business improvement involving a number of companies that comprise a supply chain.

CUSTOMER RELATIONSHIPS

Recommendation 5.1

a) The TDL sector establish mechanisms for a broader dialogue with customers on how to improve provision of supply chain services;

b) The Victorian Government support the establishment of mechanisms for this dialogue; and

c) The Victorian Government continue to actively support the development and enforcement of Chain of Responsibility provisions.

INTERMODAL INTEGRATION

Sea and Ports

Recommendation 6.1

The TDL sector with support of the Victorian Government strengthen the coordination (which includes the CFC and VSFIC) of on going dialogue between port operators, stevedores, road freight sector representatives, rail

operators and customers to further improve PoM modal interfaces and interfaces at other Victorian ports.

Recommendation 6.2

Identification of mechanisms for facilitating and developing strategic intermodal capacity within Melbourne and country Victoria be given high priority by the Victorian Government.

Recommendation 6.3

The Victorian Government ensure the continued ability of the Port of Melbourne to operate on a 24 hour a day, 7 days a week basis by taking actions, including possible legislation, to ensure the conditions for continuous 24/7 operation.

HUMAN RESOURCE MANAGEMENT

Education and Training

Recommendation 7.1

TTV, the TDL sector and the appropriate State Government Departments discuss how existing education and training structures and processes can be improved or extended to better meet the needs of the sector including:

a) Strategic planning for education and training in the TDL sector;

b) Education and training advisory processes on the supply chain;

c) Mechanisms for coordinating government activities around training and education for the TDL sector;

d) Facilitating dialogue between the TDL sector and individual education and training providers to address TDL sector needs within their organisations; and

e) Joint development of initiatives in e-commerce education and training as a high and immediate priority.

Recommendation 7.2

That TTV, in conjunction with other industry bodies, ETTE and RTOs:

a) Promote the economic and organisational benefits of high quality training to TDL employers and employees; and

b) Better inform TDL employers and employees on available training mechanisms and opportunities, current position types and potential career paths within the TDL sector.

Recommendation 7.3

The Victorian Government and TDL sector work with the appropriate education and training providers and Commonwealth agencies responsible for funding education and training placements to significantly increase training opportunities in the area of logistics and supply chain management to reflect the industry's contribution to the economy and to make serious inroads into unmet training needs.

Recommendation 7.4

The Victorian TDL sector and the State Government support the establishment of a Centre of Excellence in Transport, Distribution and Logistics to provide a key focal point for the sector in education, training and research.

Human Resources Issues

Recommendation 7.5

The Victorian Government assist TDL firms to develop and improve appropriate personnel management policies and practices especially in relation to:

- Changing nature of employment arrangements in the sector including part time work, contracting and casualisation;
- The effective recruitment and retention of staff by firms;
- Developing strategies to attract and retain young people into the sector especially in light of the aging of the workforce; and
- Encourage female participation in the sector.

INDUSTRIAL RELATIONS

Recommendation 8.1

The Victorian Government:

a) Facilitate industrial relations arrangements within the TDL sector that achieve a fair balance between the parties; and

b) Establish demonstration projects of effective industrial relations arrangements at various points of the supply chain.

Position of Owner-Drivers

Recommendation 8.2

The TDL sector in conjunction with the Victorian Government encourage the support and take up of the owner-driver code of conduct.

Mismatched Capacity

Recommendation 8.3

In order to move toward more comprehensive 24 hour 7 days a week operation the TDL sector, including employers, peak bodies and unions, establish a working party or some other means of dialogue:

a) Within the sector itself to discuss and agree its approach to 24 hours a day, 7 days a week operation; and

b) With customers and key stakeholders of the sector.

SOCIAL AND ENVIRONMENTAL ISSUES

Recommendation 9.1

In order to reduce the social and environmental impact of road freight movement the Victorian Government:

a) Work to increase the amount and percentage of freight transported by rail and sea;

b) Investigate and facilitate means of improved truck utilisation and back loading out of key transport hubs especially PoM;

c) Establish intelligent transport systems on strategic transport routes to improve traffic flow; and

d) Establish dedicated truck routes and truck lanes on key transport routes.

Recommendation 9.2

The TDL sector in conjunction with the Victorian Government, promote and facilitate community consultation to:

a) Enhance community awareness of the vital economic role played by freight transport infrastructure, including PoM;

b) Identify and discuss within residential communities the social impacts of the growth in freight transport operations proximate to and within those communities; and

c) Consolidate community support for the development of freight transport infrastructure and improvements to freight transport systems and develop mechanisms for addressing issues of community concern such as night traffic, noise, pollution and congestion.

Recommendation 9.3

The TDL sector and Victorian Government:

a) Encourage greater use of more greenhouse friendly freight modes and logistics systems, specifically sea and rail then road and air;

b) Support the development of the Metropolitan Strategy that includes an analysis of needs of the freight sector; and

c) Pursue innovations in fuel technology and the use of alternative fuels and electric engines.

Recommendation 9.4

The TDL sector, in conjunction with the Victorian Government, promote awareness and increased industry uptake of environmentally sustainable logistics practice including minimising packaging, innovative packaging material and responsible disposal of packaging materials.

DISTRIBUTION PATTERNS

Distribution Centres

Recommendation 10.1

The Victorian Government in conjunction with the TDL sector support the establishment of large national Distribution Centres to enhance the efficiency of the TDL sector and to attract international companies to Victoria.

Recommendation 10.2

The Victorian Government protect existing and future TDL distribution infrastructure including land around air and seaports, container parks, distribution centres and rail and road access.

Recommendation 10.3

The TDL sector with the Victorian Government, promote the efficient operation of Distribution Centres through research on operators performance

including turnaround time and benchmarking performance across different types of DCs.

INNOVATION

Recommendation 11.1

The Victorian Government:

a) Establish a mechanism whereby TDL innovations can be reviewed and developed in a timely manner, in order to promote the development and implementation of innovative solutions in the TDL sector;

b) Identify companies and organisations that are pursuing innovative supply chain solutions and establish means of providing support to that work and use them as demonstration projects; and

c) Support TDL sector cooperation with organisations involved in TDL innovation such as the CRC for Railway Technology and Engineering.

LOCAL GOVERNMENT

Recommendation 12.1

The Victorian Government:

a) Reinforce information to Local Government on their rights and responsibilities in relation to truck access;

b) Encourage take up of VicRoads' guidelines for truck access to local areas;

c) Request Local Government prepare forward plans to provide truck and rail access to new industrial areas; and

d) Require Local Government to undertake coordinated land use planning to provide area wide road and rail traffic management across a range of Councils.

Recommendation 12.2

The Victorian Government establish mechanisms for an ongoing, formal dialogue between the TDL sector and Local Government to resolve and prevent conflicts from arising around TDL sector issues and priorities.

CUSTOMS

Recommendation 14.1

The Victorian Government support the TDL sector in its efforts to have ACS make changes to its Cargo Management Re-Engineering (CMR) program to take account of the needs of business.

Recommendation 14.2

The TDL sector in conjunction with the Victorian Government, closely monitor the progress of the Cargo Management Re-Engineering (CMR) program and its impacts on the TDL sector.

DATA

Recommendation 15.1

Discussions with the Commonwealth and other State Governments to address the TDL data deficiencies with a view to reaching timely agreement on new TDL data collection and access, to be initiated by the Victorian Government.

MODAL ISSUES

GENERAL

Recommendation 16.1

The Victorian Government liaise closely with the largest road freight operators and users to ensure their involvement and cooperation in key strategic initiatives such as:

- Active support for the Chain of Responsibility provisions; and
- Support for training initiatives.

Recommendation 17.3

Further expression of Victorian Government support for the position put by the Australian Council for Infrastructure Development to have the Commonwealth amend Section 51AD and Division 16D of the Income Tax Assessment Act, by making continuing representations to the Commonwealth, be provided.

Recommendation 18.6

The Freight Forwarding industry, in conjunction with the Victorian Government, review freight forwarding cool and cold chain process with the objective of establishing and implementing best practice.

ROAD

Cost Focus

Recommendation 16.2

The Victorian Government assist in enhancing the business focus of potential entrants and existing operators in the road freight sector by:

- Providing information to new entrants; and
- Continuing and expanding existing business planning support for operators to improve their business methodologies and systems.

Recommendation 16.3

Non financial support to private sector actions provided from the Victorian Government to establish a bank based financing facility for road freight operators and especially small sub contractors/owner drivers.

Urban Freight

Recommendation 16.4

To increase the efficiency of the urban freight task the Victorian Government:

- Identify and designate specified freight and truck routes;
- Implement recommendations discussed in the “Local Government“ section;
- Increase the application of Intelligent Transport Systems including Real Time Traffic Management, for all modes including road, rail and port;
- Promote initiatives to reduce the number of empty trucks on the road and increase capacity utilisation; and
- Support the development of road freight infrastructure including proximate and dedicated container parks to increase capacity utilisation by reducing distances that must be travelled by trucks carrying empty containers.

Growth of Truck Traffic and Size

Recommendation 16.5

Through the Victorian Freight Advisory Council the Victorian Government:

- Prioritise infrastructure improvement consistent with 2001 Budget commitments especially in relation to bridge capacity and height and local roads; and

- Encourage innovation in vehicle design that will increase road freight efficiency and reduce social and environmental impacts. (cf Section 11 Innovation)

Recommendation 16.6

The Victorian Government review urban traffic management to ensure access of the increasing number of light commercial vehicles that are required on local roads while minimising social impacts.

Infrastructure

Recommendation 16.7

In the context of 2001 Budget commitments, industry and the Victorian Government jointly identify key infrastructure needs and set priorities and standards for the future.

RAIL

Victorian Rail Gauge

Recommendation 17.1

The Victorian Government continue to facilitate the standardisation of important strategic rail track in Victoria reinforcing its 2001 Budget commitments.

Recommendation 17.2

The Victorian Government liaise closely with Freight Australia and other appropriate parties to identify the most appropriate means of supporting continuing investment in strategic rail track in Victoria including ways of promoting the reinstatement or construction of private rail sidings.

Access to the Victorian Rail Network

Recommendation 17.4

The Victorian Government re-examine and re-assess the rules and pricing principles for open rail access arrangements that ensures equity of access for operators, sustains necessary investment in Victorian rail infrastructure to optimise the performance of the services that use it and maximise consumer benefit.

AIR

Advantages to Build On

Recommendation 18.1

The Victorian Government ensure the on-going curfew free status of Melbourne Airport by taking actions, including legislation, to ensure the conditions for continuing curfew-free operation. These actions are likely to include reservation of land bounding the airport and planning and land use legislation to ensure planning initiative remains with Melbourne Airport and to prevent urban development from encroaching on the airport.

Building Airfreight Capacity

Recommendation 18.2

Melbourne Airport and the Victorian Government act in concert to:

a) Encourage airlines currently using Melbourne Airport to develop new services to existing and new destinations;

b) Promote Melbourne Airport to international airlines that do not currently fly here; and

c) Attract tourists to Victoria.

Recommendation 18.3

The Victorian Government jointly with industry promote:

a) Melbourne as a premier location for freight distribution in Australia;

b) The manufacturing and assembly of high value goods in Victoria for export;

c) Melbourne as a location for international distribution and logistics companies to establish Asian/Pacific regional hubs; and

d) The establishment of manufacturing “in-bond” facilities on or in proximity to Melbourne Airport and in strategic regional hubs.

Recommendation 18.4

The State Government actively monitor the issues surrounding the introduction of new generation aircraft.

Recommendation 18.5

Airport Operators in conjunction with the Victorian Government:

a) Encourage the timely improvement of cargo terminal facilities, including increasing the number of freight docks and improving storage and cool room capacity available, at the airport; and

b) Review cool and cold chain process through freight terminals with the objective of establishing and implementing best practice.

Recommendation 18.6

The Freight Forwarding industry, in conjunction with the Victorian Government, review freight forwarding cool and cold chain process with the objective of establishing and implementing best practice.

Access of Aircraft

Recommendation 18.7

A hand over period on “noise pollution” for Boeing 727s to be advocated by the Victorian Government, followed by application of international standards.

SEAFREIGHT AND PORTS

Recommendation 19.1

The Victorian Government, in conjunction with the sea freight and ports sector, undertake an awareness and education program to increase community awareness of the role of the TDL sector and key infrastructure in Victoria’s economic growth and employment.

Recommendation 19.2

Protection of the on going effective operation of Victorian ports by Victorian Government action, including legislation, to ensure the conditions for continuing unencumbered operation. These actions could include reservation of land bounding the ports and planning and land use legislation to prevent urban development from encroaching on the ports.

Recommendation 19.3

In the event that the Victorian Channel Authority's analysis of the costs and benefits, support channel deepening, the Victorian Government, commit to the appropriate deepening of the heads and channels including the Yarra River.

Recommendation 19.4

The Victorian Government review the financing of channel deepening with the objective of promoting freight transport excellence and facilitating trade.

Port of Melbourne Infrastructure

Recommendation 19.5

That the Victorian Government continue to pursue the Cabinet approved process for examining the establishment of a third terminal operator in the Port of Melbourne with the objective of responding to the price, quality, choice, innovation and capacity demands of domestic and international trade.

Recommendation 19.6

The Victorian Government:

a) Facilitate the development of new container parks and port related services in proximity to the PoM and at strategic remote locations; and

b) Examine container park requirements arising out of container movements via rail shuttle to metropolitan locations.

Recommendation 19.7

Key TDL sector parties coordinate with the Victorian Government to review the need for food grade containers in the context of predicted food produce exports and negotiate with shipping lines to increase the provision of these containers through the PoM.

Shipping

Recommendation 19.8

The shipping sector and the Victorian Government consider means of promoting the use of the sector including attracting Australian and international shipping companies to establish head and regional head offices in Melbourne.

AUDIT PROCESS

Background

In its election campaign the State Government committed to a strategic audit of Victorian industry sectors to identify both current business needs and the long term strategies needed to realise the growth potential of Victorian industry. The Victorian Government is committed to playing a constructive role in ensuring that Victoria can develop and be recognised as a centre for excellence in freight Transport, Distribution and Logistics.

In taking a high level strategic approach to industry development, the State Government aims to develop, with industry, a vision for the long-term success of the Victorian TDL sector.

This strategic audit has aimed to identify both opportunities for growth and impediments to growth of the TDL sector.

A primary objective of the TDL audit was to develop strategies, in conjunction with industry, to capture growth opportunities for the sector and ensure its long-term success.

The Department of State and Regional Development is now implementing the Government's commitment in respect to seven key Victorian industries. The Transport, Distribution and Logistics sector is one such key area. For the purpose of this audit the "Transport, Distribution and Logistics sector" includes:

- Road freight transport;
- Rail freight transport;
- Sea freight transport including stevedoring and terminal and port operations;
- Air Transport, both passenger with freight and dedicated freight services;
- Services to Transport including:
  - Freight forwarding
  - Customs Agency
- Freight storage; and
- Logistics including information management systems and technology.

The audit excludes all aspects of passenger transport.

It is important to remember, when reading this report, that it provides a snapshot of the TDL sector and the concerns facing participants in it. As such, it cannot both capture the thoughts of the sector at a particular point in time and also account for the changing activities of Government and the private sector to redress the concerns raised.

For this reason, the report raises issues to which the Government is responding. Likewise, some of the concerns raised are being addressed by the sector on an ongoing basis.

Despite this, the report serves to pull together an enormous diversity of views regarding what can and should be done to maximise the contribution of this important sector to the Victorian economy.

Audit Methodology

Each stage in the strategic audit process was conducted in close consultation with industry stakeholders, including representatives from road, rail, sea and air-freight transporters, distribution and logistics providers, unions, industry bodies, and education and training providers. The major stages of the audit included:

- An initial assessment of the key issues currently facing the TDL sector
- Development of the Issues Paper setting out a range of potential initiatives to improve the industry's future opportunities for growth
- Distribution of Issues Paper to a wide cross section of the TDL sector seeking comment
- Interviews with a wide range of players within the industry
- A major public forum and six regional workshops to gather industry feedback to the Issues Paper
- Establishment of and meetings with a Sectoral Reference Group to assist in:
  - Identifying and refining key issues
  - Identifying future directions
  - Advising on report content throughout its development
- Distribution of Consultation Outcomes Paper to a wide cross section of the TDL sector seeking comment

- Distribution of the final draft of Audit Report for comment from within Government

- Submission of the final Audit Report to the Minister for State and Regional Development

As to the ongoing relevance of the TDL audit, it is worth noting complementarity between the audit output and other initiatives in the TDL sector. These complementarities arise primarily from the consultative methodology adopted and the value of this report as a compendium of industry views.

While not an exhaustive list, the extensive consultation undertaken throughout the audit process has identified a comprehensive list of issues in the TDL sector that are relevant to other government initiatives. For example, the development of a Victorian Freight and Logistics Strategy can benefit from the extensive information base assembled in this audit report.

SECTORAL OVERVIEW

1. Structure of the Freight Task

Melbourne is the dominant transport hub of the State, with key sea, rail, road and air facilities. With 73% of Victoria's population of 4.7 million living in Melbourne, it is also Victoria's major manufacturing, wholesaling and retail centre.[1]

TDL plays a key role in linking regional and rural economic development to that of metropolitan Melbourne.

It is estimated that about 60% of Victoria's freight (in tonnes) is uplifted in the Melbourne metropolitan area, with the remaining 40% in regional Victoria. However, when measured in tonne kilometres, Melbourne's share is less than 30%.[2]

The Geelong, Wodonga, Ballarat, Bendigo, La Trobe Valley, Mildura and Shepparton regions represent most of the remaining state's business enterprises and significance as freight origin and destination areas.

The composition of freight carried reflects the distribution of economic activities and population size in each region.

Victoria produces a range of goods (such as milk and cream, fruit and vegetables, live animals, grain, wool, medical and pharmaceutical products, motor vehicles and machinery and petroleum products) which are distributed to Melbourne and regional centres within Victoria, as well as interstate.

Most intrastate and interstate freight is carried by road and to some extent by railways. Over 75% of all freight moved in Victoria is by road, 96% intrastate. Most freight (82%) moves less than 100 km from its base or pick up point.

Railways carry mostly bulk goods such as grain, steel and containers.

The following table summarises freight carried by rail from interstate origins into Melbourne and Geelong for the year 2000.

1 Source: *Victoria 2000: A profile of a community and economy*, DTF.

2 "*Aspects of the Greater Melbourne Freight Task* ": Report prepared for DoI by FDF Management, a Division of Flagstaff Consulting Group Pty Ltd, November 2000.

Table 1: Freight Carried by Rail from Interstate Origins into Melbourne and Geelong, 2000

Origin (Border Town)	Commodity	Tonnage
Albury	Grain	57 500
Barnes	Rice	355 800
Tocumwal	Grain, Containers	400 800
Wolseley	Containers	44 800
Oaklands	Grain	202 100
Total		**1 061 000**

Source: Freight Australia

Sea freight consists mostly of dry and liquid bulk such as crude petroleum, petroleum products, alumina and containerised freight.

Imports and exports through the Port of Melbourne play an important role not only in the Victorian economy, but also the economy of the adjoining Local Government areas. The western suburbs particularly benefit from the Port of Melbourne as the contribution to these regional economies averages 2 percent.

At a glance, looking at 1998/99, the Port of Melbourne:

- Employs a total of 18 181 people directly and indirectly;
- Supports annual wages/salaries of $1.008 billion;
- Represents a gross benefit of $5.8 billion to Victoria;
- Handles $60 billion worth of trade in annually;
- Handles almost 40 percent of the nation's container trade; and
- Is in the top echelon of container ports and currently ranks in the top 40 of the 37 000 registered ports in the world.

Tables 2 and 3 provide modal and origin/destination information on freight movements for Melbourne. As shown in these tables, road is currently the key mode.

Table 2: Freight transport task – from Melbourne 1995-96 (kilotonnes)

	Mode				Total
Destination	*Road*	*Rail*	*Sea*	*Air*	
Victoria	6 449	253	4		6 706
NSW	2 712	601	2 734	55	6 102
Qld	1 136	287	337	12	1 772
SA	713	773		10	1 496
WA	384	510	1	14	909
Tas			1 400	9	1 409
NT	55	19			74
Overseas			6 490	181	6 671
Total	11 449	2 443	10 966	281	25 139
% of total	45.6	9.7	43.6	1.1	100

Source: "Aspects of the Greater Melbourne Freight Task ": report prepared for DOI by FDF Management, a division of Flagstaff Consulting Group Pty Ltd, November 2000

Table 3: Freight transport task – to Melbourne 1995-96 (kilotonnes)

	Mode				
Origin	*Road*	*Rail*	*Sea*	*Air*	*Total*
Victoria	12 908	2 295	3		15 206
NSW	2 532	1 591	1 251	47	5 421
Qld	612	51	428	9	1 100
SA	910	1 054	830	7	2 801
WA	485	127	1 298	7	1 917
Tas			1 709	10	1 719
NT	8	3			11
Overseas			5 965	79	6 044
Total	17 455	5 121	11 484	159	34 219
% of total	51.0	15.0	33.5	0.5	100

Source: "Aspects of the Greater Melbourne Freight Task ": report prepared for DOI by FDF Management, a Division of Flagstaff Consulting Group Pty Ltd, November 2000

2. Performance of the TDL Sector

2.1 Introduction

While the geographic size of Victoria is small compared with other major States like WA and Queensland, its location at the centre of the key economic triangle encompassing Melbourne, Sydney and Adelaide makes the transport, distribution and logistics (TDL) sector a critical part of Victoria's economy.

Source:

An efficient TDL sector is essential to an efficient and growing domestic economy as well as facilitating international trade.

2.2 Contribution to National and Victorian Economy

2.2.1 Proportion of value added to GSP

The Transport, Distribution and Logistics sector provides enabling services to the rest of the economy. As such its rate of growth reflects that of the rest of the economy. The demand for TDL services moves in tandem with key sectors including manufacturing and retail and wholesale.

Service industries generally over the past decade have increased in relative importance in their contribution to the output of Victoria's Gross State Product (GSP).

The TDL sector is no exception to this. In 1999-2000, the TDL sector contributed over $7.2 billion, or around 5.1% to Victoria's GSP which represents 24% of the national TDL sector[3]. This contribution has been relatively stable over the past 5 years.

Only WA, Queensland and NT have the TDL sector contributing more to the GSP at 6%[4]. This larger contribution can be attributed to their relatively larger size and their dispersed economic activities.

2.2.1 Gross Product Growth and Forecasts

Output of the TDL sector follows the overall economic growth pattern of Victoria.

This is reflected by relatively low compound annual growth of 2.3% between 1990 to1994 including the economic downturn of the early 1990s[5]. During the

[3] Australian Bureau of Statistics: Australian National Accounts State Accounts 1999-00, Table 17.
[4] Ibid., p.5.
[5] ibid., Table 17.

strong growth period of 1995 to 2000 the TDL growth rate increased strongly to 6.7%[6].

According to the BIS Shrapnel *State Industry Prospects 1999-2004*, Victoria's TDL sector is expected to grow at 3.9% in 2000 compared with projected national TDL growth of 3.6% and growth in the NSW sector of 4.1%.

Annual Victorian TDL sector growth of 3.1% is projected by BIS Shrapnel for 1999 to 2004, marginally lower than the corresponding national rate of 3.3%.

According to Victorian Road Transport Association (VRTA) estimates, the Victorian road freight transport alone generates over $10 billion of revenue each year (Victorian Freight Transport Directory 1999).

3. Sector Performance and Competitiveness

3.1 Market Power and Industry Concentration

A small number of national and international freight transport and logistics companies have, over the last five years, significantly increased their market power in Australia through mergers and acquisitions.

While the market is comprised primarily of small business operators it is dominated by a small number of major companies that largely operate across a number of transport modes.

3.2 Small Business Contribution

The TDL sector is dominated by small business. In 1999-00, there were 16 200 businesses in the sector in Victoria, 97.5% of which were small businesses employing 20 employees or less[7].

Among them, 9 100 are single person businesses, ie non-employing businesses. A further 5 400 businesses are employing 1 to 4 employees, which are often classified as micro-businesses.

3.3 Regional Dimension of the Sector

More than 32% of TDL businesses are located in regional Victoria, employing almost a quarter (24%) of the jobs in TDL sector[8].

3.4 Investment

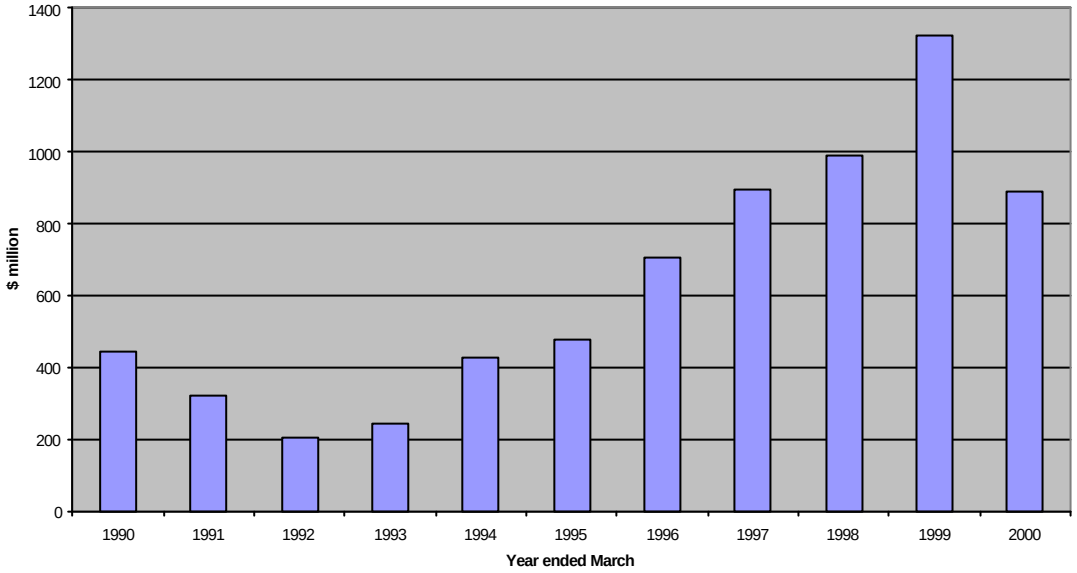
Investment in building or upgrading road and rail links are key elements of TDL investment.

[6] ibid., Table 17.
[7] Australian Bureau of Statistics: Small Business in Australia (Update 1999-2000).
[8] Australian Bureau of Statistics: 2001 Victorian Year Book.

In the early 1990's the TDL sector's capital investment decisions were influenced by the economic downturn. In the year ended March1992 investment fell to $206 million and then trended upwards until 2000.

Between 1995 and 2000, the average annual growth of new capital expenditure in the Victorian TDL sector was 13.1%, the third highest increase after the accommodation, cafes and restaurants sector (46.8%) and property and business services (14.9%)[9].

New Private Capital Expenditure of TDL Sector, Victoria, 1990-2000



Source: ABS

In the year ended March 2000, total private new capital expenditure by the TDL sector in Victoria was $887 million[10]. This spending was approximately equally shared between equipment and buildings.

The steady increase in private capital expenditure in the TDL sector since 1994 is attributed to the privatisation process, which had resulted in a re-allocation of capital expenditure from public to private sector.

A recent analysis by the Victorian Department of Treasury and Finance (Property Market Report August 2000) identified the western suburbs of Melbourne as a significant area for new industrial construction heavily focused on transport and distribution services.

Much of the recent demand for industrial property in the western suburbs has been from warehouse, transport, storage and logistics companies incorporating advances in technology and using improved road transport infrastructure.

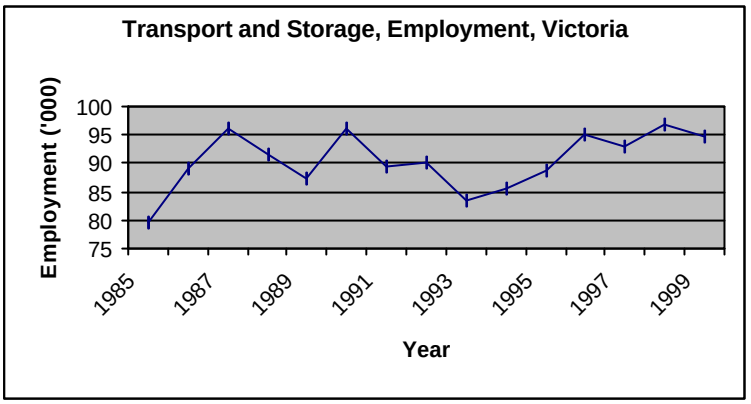
[9] Australian Bureau of Statistics: Private New Capital Expenditure, State Estimates (Cat. 5646.0).
[10] ibid.

3.5 Employment

As at February 2001, the Victorian TDL sector employed 106 500 persons representing 4.6% of total employment in Victoria[11].

3.5.1 Growth Over 5 Years

Between 1996 and 2001, 5 824 new jobs were created in the TDL sector, an aggregate 6% increase over the five-year period or a compound annual growth rate of 1.1%[12].



(Source: ABS Cat.6202 and other customised data)

3.5.2 Sub-sectors Employment

More than 80% of employment within the Victorian TDL sector is represented by three sub-sectors - road transport, services to transport and storage[13].

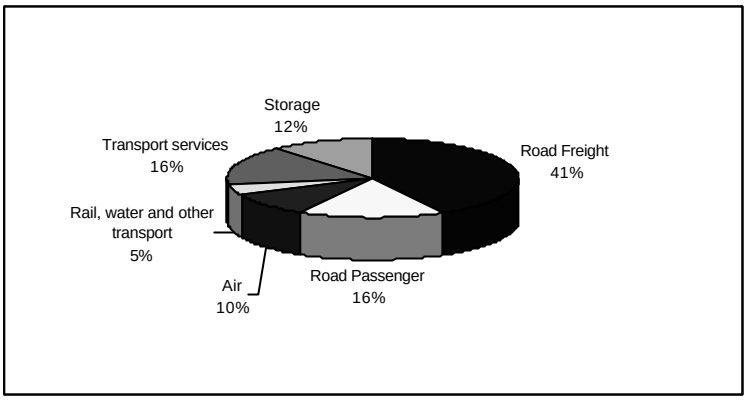
38 517 jobs, representing 40% of total TDL employment in Victoria are in road freight transport[14].

Services to transport, a large part of which is freight forwarding, and storage are also major employers, employing 15% and 8% of the total TDL labour force respectively[15]. Between 1994 and 2000 employment in the road freight grew from approximately 26 000 to almost 40 000 and in the storage sector grew from just below 5 000 to more than 10 000 workers[16].

Employment in the transport services sector grew significantly to 1996 but has settled at around 15 000 workers in 2000 (up from approximately 12 000 in 1994)[17].

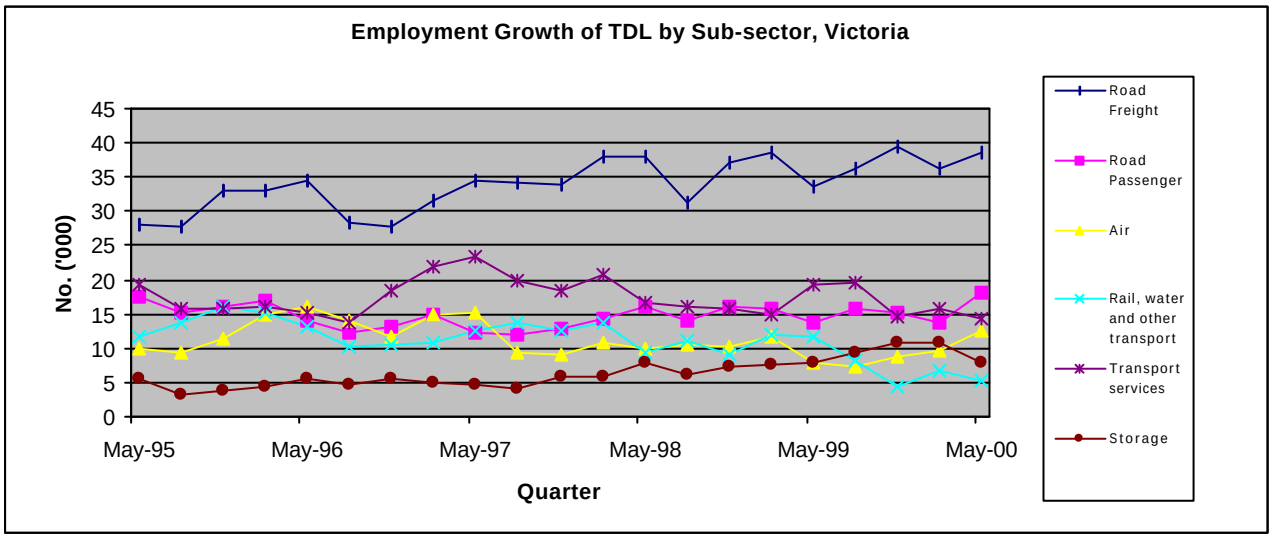
[11] Australian Bureau of Statistics: Labour Force, Feb 2001 (Cat. 6202.2).
[12] Australian Bureau of Statistics: Labour Force (customised data).
[13] ibid.
[14] ibid.
[15] ibid.
[16] ibid.
[17] ibid.

Employment by Sub Sector



Source: Australian Bureau of Statistics: Labour Force customised data

Employment Growth by Sub-Sector



Source: Australian Bureau of Statistics: Labour Force customised data

The Transport, Distribution and Logistics (TDL) sector in Victoria is diverse and competitive and provides a strong foundation on which to build an excellent, internationally competitive TDL sector in the future.

Over the next ten to fifteen years the sector will face major changes and competitive pressures and it will need to address these, build on its strengths and address new challenges.

If the sector is able to successfully confront the challenges that face it over the next decade, Victoria will strengthen its position as the premier TDL hub in Australia.

This Audit Report attempts to identify the key issues for the Victorian TDL sector that will influence its competitiveness and strength in the next ten years.

The Report also identifies the strategic responses to these issues that are required to strengthen the TDL sector and make Victoria a centre of excellence in Transport, Distribution and Logistics.

This Report discusses key issues in two parts:

- Those that apply generally across all or most of the transport modes; and

- Those specific to each freight transport mode or activity.

GENERIC SECTORAL ISSUES

1. STRENGTHENING VICTORIA AS A REGIONAL FREIGHT HUB

The Transport, Distribution and Logistics sector provides a key business service, enabling economic activity and enhancing corporate competitiveness in the market place.

The sector provides a range of complex and interlinking services enabling the urban, inter-state, intra-state and international transport tasks to be completed.

Within the next ten years the Victorian economy is forecast to grow substantially.

1.1. Exports and Imports

Volumes of imports into and exports from south eastern Australia are conservatively forecast to grow by around 50% over the next 15 years[18] and if industry objectives for significantly increased exports in high value manufactures and in produce are realised it will be much greater than this.

There is also an important opportunity to draw more export products from proximate areas including SA, southern NSW and Tasmania.

1.2. Internet and E-Fulfilment

The transformation of retail transactions that is occurring through the impact of Internet purchase requires a radical shift in the urban freight transport task as goods are delivered directly to households.

1.3. Globalisation

The globalisation of manufacturing, assembly and distribution offers efficient, strategically located economies in Australia new opportunities to provide a basis for international distribution centres into the south east Asian region.

[18] Analysis of Victorian Ports Strategic Study January 2000.

1.4. TDL Directions

The opportunities created by these trends can be pursued to the benefit of the Victorian economy and the community by transforming the State's freight transport, distribution and logistics capability.
This transformation requires strategic actions by the sector and by government in the following areas:

1.5. Vision for the TDL Sector in Victoria

The opportunities for growth and transformation of the Victorian TDL sector can be crystallised around a vision of Victoria as the *supply chain gateway of Australia* for:

- Australian exporters and importers involving inter-state and international freight transport movements, originating nationally but especially in South Australia, Tasmania and southern New South Wales;
- International manufacturing and retailing companies that wish to establish regional operations in Australia; and
- International TDL service providers that wish to establish regional centres in south east Asia.

The sector sees the Victorian Government's role as crucial in championing this vision and advocating the strengths of the Victorian TDL sector both:

- Internationally; and
- Through improved liaison and cooperation with industry in other States.

Recommendation 1.1

The Victorian Government:

a) Endorse the vision of Victoria as the *supply chain gateway of Australia*;

b) Develop a marketing strategy to be used by the Premier and Ministers in their discussions with international investors, around the concept of Victoria as the supply chain gateway to Australia; and

c) Build further networks with TDL companies, and key TDL service users in other States to enhance the role of Victoria as the supply chain gateway of Australia.

1.6. Logistics Marketplace

Many sectoral representatives believe that the Internet should be used as a key marketing tool to demonstrate the strength of all elements of Victoria's supply chain capability to potential international investors.

They see the Victorian Government web site as an appropriate base for the development of a Victorian TDL sector site.
There is however a need to further clarify the purpose of and likely benefits that a site such as this would deliver.

Recommendation 1.2

The TDL sector in conjunction with the Victorian Government investigate the feasibility of establishing a web site aimed at marketing the advantages Victoria offers through this sector to potential international investors.

1.7. Freight Transport Plan

The development of a comprehensive and integrated Freight Transport Plan for Victoria is a first vital step in making Victoria the pre-eminent transport hub for the region.

A plan such as this would:

- Provide a vision for the future;
- Provide a framework to shape the directions of the sector;
- Clarify what the industry and the government see as the short and long-term priorities for development; and
- Assist in establishing a stable and more certain environment for investment and long term planning by TDL operators and government.

Such a plan would increase the efficiency and competitiveness of the TDL sector overall

Industry stakeholders felt that an integrated approach to transport planning and development may be aided by a rationalisation of Victorian Ministers responsible for the area. It was felt that a single or fewer Ministers would have greater authority to pursue strategic change and to effectively coordinate relations between and negotiations with industry and the Federal Government.

An integrated State Government approach would also improve coordination of research work and policy development being undertaken by a range of Government Departments and agencies.

Recommendation 1.3

Better integrated and coordinated freight transport strategic planning across government be further pursued by the Victorian Government through the inter-departmental Freight and Logistics Committee.

1.8. Ministerial Consultative Group

The Air Freight and Sea Freight Councils and the Road Freight Advisory Council currently provide important independent modal related advice to government. These bodies represent the stakeholders within their modes and variously operate at arms length from government.

In consultation, members of the TDL sector (especially small business operators) expressed concerns that existing advisory groups are more narrowly focused than they believe is necessary to promote broader development of the sector.

Many in the TDL sector believe that it needs to build on existing advisory mechanisms to significantly improve its own efforts in identifying sector wide issues and priorities, and in advocating its position to government.

To improve their effectiveness in representing itself to government the TDL sector sees a pressing need for the establishment of:

- An ongoing sectoral round-table that regularly brings together all representative bodies in the TDL sector, providing a focus for all parts of the sector to identify and resolve issues and develop shared views; and

- An expert ongoing Ministerial advisory group for the whole TDL sector that would provide advice to the State Government directly through the responsible Minister.

Recommendation 1.4

The Victorian Government:

a) Continue its relationships with and support for existing advisory groups including the Victorian Air Freight and Sea Freight Councils and the Road Freight Advisory Council and the new rail freight Council which is currently being established;

b) Support the establishment of a TDL sector round-table; and

c) Establish a mechanism to provide ministerial advice on issues affecting the TDL sector as a whole, which are not capable of being addressed by a single existing advisory group.

2. SECTORAL IMAGE

Much of the TDL sector is widely perceived within the community as:

- Comprising undesirable occupations that are “dirty and unsophisticated”;
- An industry for individuals with limited education and prospects; and
- Not providing a career path with prospects for the future.

Research by the Transport Workers Union and Transport Training Victoria indicate that young people are generally avoiding jobs and careers in the TDL sector.

Around two thirds of those young people who enter and train in the sector leave it completely after working in it only for a short period.

Community perceptions of the sector are not generally consistent with the nature of much of the work and certainly do not reflect the sector’s emergence as increasingly sophisticated and offering desirable career opportunities.

Recent successful marketing efforts to communicate the real conditions and opportunities in various industries and professions could be used as models for a possible marketing campaign for the TDL sector. These recent efforts include campaigns for the Australian Defence Force, Victoria Police and the Agricultural Industry in Western Australia.

Recommendation 2.1

a) The TDL sector provide a clearer picture of the industry, how it operates, the types of jobs that are involved and the varied, interesting and sophisticated career opportunities that young people can pursue; and

b) The TDL sector and State Government promote, especially with young people, the TDL sector as a desirable one in which to work.

3. INFORMATION, COMMUNICATION TECHNOLOGY AND E-COMMERCE

3.1. Information and Communication Technology

The use of information and communication technologies including, Electronic Data Interchange (EDI), e-mail, mobile telephone technology including WAP systems, bar-coding, supply chain software, Global Positioning System tracking and live monitoring, inventory control, virtual warehousing, and point-of-sale warehousing are significantly changing the way supply chains work and the manner in which TDL services are provided.

These technologies enable greater reliability of service, speed of delivery and management of the freight task, offering a seamless service with real time information to service providers and customers.

Many larger TDL operators are experiencing a degree of convergence and the erosion of boundaries between suppliers, distributors and transporters.

They are able to respond to the needs of manufacturers who are using technologies to mass-customise their production process to meet individual customer requirements. Supplies and components ordered electronically as needed and reducing excessive inventory require TDL operators to provide immediate and efficient delivery.

These TDL operators are offering new automated warehousing and distribution solutions by integrating and computerising their supply chain functions and redefining their relationships with their customers, adding value to the production and distribution process.

In this way many of the large national and international TDL operators are actively pursuing opportunities created by the application of these new technologies.

But most of the numerous small operators are not incorporating these new technologies into their operations because they:

- Lack awareness of the availability, application and impact of technologies on their business;
- See the cost of incorporating technologies as too high or not justified by the benefit that they expect to derive; and
- Lack the skills to use the technologies and require training.

3.2. E-Commerce

The increasing use of the Internet to do business (B2B and B2C) is a global trend that will fundamentally change the way the TDL sector operates.

3.2.1. B2B

Adoption of e-commerce technology can significantly improve customer service, businesses cost control and profitability of business in the TDL sectors.

The use of existing Internet based technologies combined with new business operating systems software allows freight operators to more efficiently manage their supply chain transactions. However there are two major problems in the uptake of this technology:

- While some small operators have been required to incorporate e-commerce capability through their relationships with larger operators, many are not incorporating e-commerce into their business systems or are acting on it very slowly resulting in a reduction in overall competitiveness of the sector; and

- The use of different e-commerce systems by TDL operators has led to different standards and incompatibility between systems and equipment resulting in considerable inefficiency in communications and coordination of the transport task between different elements of the supply chain.

3.2.2. B2C

The purchase of goods via the Internet requires a specialist means of delivery of these goods known as e-fulfilment. The proliferation of on-line retailers (e-tailers) is an indication of the likely growth in the on-line sale of goods by business to consumers' (B2C).

The likely shape of changes to the delivery task resulting from e-tailing is unclear. Different delivery strategies may include:

- Customer pick up from large centralised distribution centres

- Delivery direct from supplier to final customer

- Delivery to customers at their workplaces

- Delivery to third parties including service stations

E-tailers will increasingly seek creative solutions to e-fulfilment and have the potential to change the role of existing and traditional distributors within the supply chain.

Internet based purchase is likely to change the structure of the transport task in urban areas bringing it into neighbourhoods and onto local roads.

But local roads and traffic management generally have not been designed for facilitating this new e-fulfilment task.

3.3. Promoting Technology Uptake

Larger TDL operators will and should play an important role in informing and training small operators who sub contract to them, about these new technologies. The TWU supports such a role and is promoting computer and Internet packages to members and incorporating computer training in delegates' updates to increase awareness and uptake of this technology in the sector.

However many small operators will not increase their technological capacity in this way, or will do so at a rate that may undermine the competitiveness of the sector.

Recommendation 3.1

The TDL sector and the Victorian Government promote the concept of seamless supply chain trade within all elements of the TDL sector, especially small operators by:

a) Supporting awareness raising and promotion of the benefits of the use of information and communication technology, including support for demonstration projects;

b) Providing information on best practise in technology use to identify better ways of operating and implementing logistics systems;

c) Supporting training activities in this area;

d) Providing support to business (especially SMEs) in the development of their information and on-line strategies; and

e) Promoting take up of electronic trading documentation for import and export by all parts of the supply chain and by all modes.

3.4. Technology Compatibility

There is a lack of compatibility of IT and e-commerce systems and of integration of those systems between TDL companies operating in the same or different transport modes and between customers.

That incompatibility reduces the effectiveness and increases the costs of transactions between organisations in Victoria, nationally and internationally.

Recommendation 3.2

Industry and government work jointly to support the development of platforms for information and communication technologies that are as far as possible:

- Of a consistent, open international standard and based on agreed industry code lists; and
- Inter-operable between users and transport modes.

4. SUPPLY CHAIN MANAGEMENT

Supply Chain Management is the integration of key business processes from end user through to original suppliers that provide products, services and information that add value for customers and other stakeholders.

TDL and SCM are key elements of the total business process. They form part of the business value chain that is increasingly a central competitive base for businesses. Information and communication technologies are enabling the development of increasingly effective value chains.

Consequently the emerging direction of transport, distribution and integrated logistics involves the provision of an integrated, seamless service along the whole demand-supply chain from point of origin to point of consumption with a clear focus on the customer.

James E Morehouse observed, "For companies to survive and prosper, they will need to operate their supply chains as extended enterprises with relationships which embrace business processes, from materials extraction to consumption"[19].

Increasingly the TDL sector is taking on a larger part of the supply chain to include the management of the whole process associated with supply into the manufacturer, packaging, storage and inventory control, transport and delivery direct to customer. This involvement includes the physical movement and management of goods, the management of information and relationship management based on a collaborative approach.

SCM objectives include improved customer service, elimination of process duplication and waste (necessitating trade offs between the partners), lower costs and increased value. SCM must deliver greater value than the partners could generate by working individually.

The Victorian TDL sector believes that world class logistics and SCM can strengthen its international competitiveness if it can demonstrate best practice and continuous improvement in relation to:

- Use and continuous upgrading of sophisticated technology including ITS, GPS and warehousing softwares;
- Use of electronic commerce for information flows, especially via the Internet;
- Highly skilled workers including drivers, warehousing workers and supply chain management who can respond flexibly to unique requirements and are capable of decision making;

[19] James E Morehouse. *Extending the enterprise: Integrating the supply chain for Breakthrough Results. A Paper to the 1999 TLI Fall Forum and logistics colloquim. Nov 16-17 1999. University of Arkansas.*

- A well developed and integrated infrastructure base:
  - comprising freight hubs to service air and sea ports; and
  - able to respond to the demands of just in time manufacture with smaller more frequent consignments and to e-tailing and e-fulfilment.
- Formation of partnerships and alliances in order to closely integrate the supply chain at a national and international level.

One of the most visible and widely discussed dimensions of world class logistics is the growing use and commitment to supply chain alliances.

In the modern alliance, cooperation and information sharing (between supply chain members) is substituted for ownership, as a means to achieve desired competitive advantage.

There are three primary drivers for successful alliances:

1. Strategic intent - the partners' strategic intent must be compatible and complimentary.
2. Inter-organisational extension - involving a commitment by all alliance members to extend internal process integration through alliance partners.
3. Leveraging - the proper vantage point to differentiate between a supply chain alliance and a typical buyer-seller relationship is the number of participants involved. Unless three or more firms are cooperating it is highly unlikely that the supply chain will rise in prominence above a traditional buyer-seller relations.

If it is to be internationally competitive, the Victorian TDL sector must continually strive to provide customer service, reliability, service integration and freight monitoring and tracking to a level of international best practice.

It should also ensure that appropriate holding facilities including cool and cold chain management (especially within the export chain) is best practice and minimises duplication and waste.

Recommendation 4.1

The TDL sector and their customers, supported by government, jointly promote a culture of integration and coordination to establish seamless supply chain operation as standard business practice including:

a) Addressing current supply chain shortcomings; and

b) Establish best practice projects aimed at real business improvement involving a number of companies that comprise a supply chain.

5. CUSTOMER RELATIONSHIPS

Developing a closer relationship between TDL operators and customers and consumers is a key to the improvement of the sector.

Some TDL firms that are on the cutting edge are developing their customers as partners in the supply chain process. These TDL firms are an integral part of their customers' supply chain planning. They provide a value adding service to their customers.

However many customers and many TDL operators themselves, see TDL services as separate from and external to the customers' main business. The TDL service provider is an "outsider" and in many cases is treated as such – as a *convenience* or a mobile warehouse and certainly not as a value adding service.

TDL customers would benefit enormously by understanding that TDL services can contribute significantly to the quality of their product and to the satisfaction of their customers.

The TDL sector would benefit greatly if customers better understood that their actions influence the efficiency and ease with which the transport task is completed.

As part of a more formal recognition of the importance of the attitudes and behaviour of all parts of the supply chain, Chain of Responsibility provisions are being developed for the road freight sector. Both the National Road Transport Commission and VicRoads are pursuing this initiative.

Within the Chain of Responsibility provisions all those who are responsible for conduct that affects compliance with road transport laws are to be made accountable for failure to properly discharge their responsibility.

Recommendation 5.1

a) The TDL sector establish mechanisms for a broader dialogue with customers on how to improve provision of supply chain services;

b) The Victorian Government support the establishment of mechanisms for this dialogue; and

c) The Victorian Government continue to actively support the development and enforcement of Chain of Responsibility provisions.

6. INTERMODAL INTEGRATION

Efficient integration of different modes of transport is vital to Victoria's ability to increase freight throughput, reduce delivery times and control and minimise transport costs.

The increasing use of different transport modes to deliver goods to their final destination requires significantly improved intermodal integration including the coordination of road and rail systems, and the use of sophisticated information and management systems that closely link all elements of the supply chain and terminal and depot facilities.

Effective intermodal integration is central to efficient freight movement, especially in meeting the demands of a highly competitive and globalised export environment and of e-commerce with its mass customisation of products and 24 hour a day delivery.

Decisions on the type and location of intermodal integration rest primarily on how best to maximise the transport of freight using the most efficient combination of modes.

6.1. Rail

Rail is central to improved intermodal integration of the freight task in Victoria. While there are a number of important hubs in Victoria there is a pressing need to continue to develop and improve them.

This improved integration through rail can be achieved at two levels through the establishment of:

- Regional intermodal freight hubs fed by road transport and providing processing, packaging, customs clearance and quarantine services in order that goods can be transferred directly through the Port of Melbourne and other Victorian ports to the point of sale in export markets; and

- Container rail shuttle services between the Port of Melbourne and strategically located suburban freight terminals similar to those operating between Port Botany and the inner Western Suburbs of Sydney.

The establishment of criteria for the location of regional intermodal freight hubs is seen as vital by the rail sector.

6.2. Air and Melbourne Airport

Airfreight services from Melbourne Airport currently rely on efficient road access by heavy vehicles. Planning for continued efficient airport access is vital as airport activity grows, with increased residential and industrial land-use development around the airport and with significantly increased freight movements from regional Victoria.

Rail freight access to Melbourne airport is capable of significantly contributing to the efficiency of airfreight movement from metropolitan Melbourne and regional Victoria. The construction of freight and passenger rail infrastructure must be designed to avoid compromising the efficient operation of the airport.

6.3. Sea and Ports

Effective intermodal integration between the PoM and road and rail freight systems is central to managing the rapid growth in freight movements through the PoM over the next thirty years.

As discussed earlier, the increased use of rail both into PoM and other regional ports is vital for improved intermodal integration. The integration of the PoM with the Dynon Rail precinct to establish a Dynon Hub is essential to enabling significantly greater involvement of rail in freight movement from PoM.

Road access into PoM also needs significant upgrade to deal with the rapid growth in container movements.

Improvement of both rail and road interfaces with the PoM will involve considerable infrastructure development as previously discussed.

Access into Victorian ports requires considerable forward planning including reservation of land for extended port operations and for transport corridors and satellite handling areas.

In recent years there have been significant improvements in the intermodal interface at the PoM although there are still conflicts between the interests of the stevedores and the road freight operators and a pressing need to improve rail logistics.

While road freight operators see the interface with international container terminals and the vehicle booking system in particular as inflexible and based on penalties rather than incentives, the industry participants including the stevedores refer to recent improvements in vehicle turnaround times as a result of the booking system and see the fragmented nature of the road freight sector involved in wharf operations contributing to congestion and complexity of management of the interface.

Recommendation 6.1

The TDL sector with support of the Victorian Government strengthen the coordination (which includes the CFC and VSFIC) of on going dialogue between port operators, stevedores, road freight sector representatives, rail operators and customers to further improve PoM modal interfaces and interfaces at other Victorian ports.

Recommendation 6.2

Identification of mechanisms for facilitating and developing strategic intermodal capacity within Melbourne and country Victoria be given high priority by the Victorian Government.

Recommendation 6.3

The Victorian Government ensure the continued ability of the Port of Melbourne to operate on a 24 hour a day, 7 days a week basis by taking actions, including possible legislation, to ensure the conditions for continuous 24/7 operation.

7. PERSONNEL MANAGEMENT

Personnel management has not in the past been a high priority for many TDL sector operators.

Many companies have neglected central personnel management issues including training and development, career planning, performance assessment, issue and conflict resolution and health and safety.

The continuous development of a skilled workforce is just as important to the future of the TDL sector as the maintenance and expansion of physical infrastructure. A major investment in the workforce is therefore a vital element in the improvement and growth of the sector. Unlike infrastructure development, investment in an enterprise's workforce is less one-off or "lumpy" and reflects a continuous need for individual businesses to invest in upgrading workforce skills and capacity.

The penetration and efficacy of education and training is highly dependent on attracting and keeping employees who are able to engage in on-going learning. Good human resource management is also central to this.

7.1. Education and Training

7.1.1. Training Needs

Much of the TDL sector, especially road freight and warehousing, has traditionally employed workers with lower education and training qualifications. Major economic, social and technological changes will require considerably higher skills in a wider range of areas. These include skills in the area of information and communication technology, e-commerce customer service, quality assurance, occupational health and safety, planning and management.

There are major weaknesses in the current skill set within the TDL sector as shown by:

- Lack of people with top end qualifications, especially at graduate level in Logistics. The TDL sector employs relatively few people at graduate level and above in comparison with Australian industry as a whole – 7.38% and 14.08% of total employees in the TDL sector and in all industries respectively.

- Insufficient training as well as inappropriate composition of training at the vocational level.

- While official statistics show the level of training at undergraduate diploma level and below is roughly comparable with the all industry

average, it appears that a significant proportion of the training was acquired by industry participants when employed elsewhere and is therefore not particularly well suited to current occupational needs.

- Over representation of low or inadequately educated workers upon entry into the industry. About 58% of the transport and storage industry workforce have no post school qualifications and about 38% of the workforce did not complete high school[20].

- No training course is currently registered by the Office of Employment Training and Tertiary Education (ETTE) at AQF Levels 5 and 6 (Diploma and Advanced Diploma) for the T&D package. This means that Victorian-based training providers are not yet delivering the whole training package to support complete career paths in the industry. This matter is currently being pursued as a priority by Transport Training Victoria (TTV).

7.1.2. Commitment to Training

To improve the skills of workers in the TDL sector and those entering, new training programs are required to reflect the changing competencies that are required in the industry. These programs need to address current and emerging needs including planning, technology and customer service.

This training provides a basis for accreditation of existing and new workers within the sector based on key competencies including regulations, Chain of Responsibility, quality assurance and occupational health and safety.

A stronger and more comprehensive commitment to training can increase the relevant skills of the workforce in this sector and provide a basis to address major problems and shortcomings currently being experienced.

The TDL sector's involvement in training has in recent years been growing strongly from a relatively low base.

For instance, total enrolments in publicly funded training grew by over 13% from 10,979 to 12,426 between 1998 and 1999. In the same period student contact hours grew by about 41% to 1.268 million hours. Preliminary data suggests however that the total student contact hours in publicly funded courses in 2000 has diminished to an estimated 1 085 million.

As part of the total publicly funded training throughput, traineeships (which now comprise approximately 20% of publicly funded training) have been growing particularly strongly. The attractiveness of traineeships is enhanced by the Commonwealth funded subsidy that is available to employers who participate in the program.

[20] ABS, Transition from Education to Work, cat. 6227.0, May 2000 and Industry Training Monograph: Transport and Storage (NCVER, 1998) with data sourced from ABS, Transition from Education to Work, cat. 6227.0, May 1997.

Table 1 below sets out traineeship commencements, primarily at AQF Levels 2 & 3 (effectively the lowest levels), with a few at AQF 4 Level, in Transport and Distribution in Victoria over the last three years.

Table 1: Traineeship Commencements in Transport and Distribution (Victoria), 1998-2000

Year	Number of Existing Employees	Number excl. Existing Employees	Total Traineeships
1998	Nil	327	327
1999	1 743	1 224	2 967
2000	4 936	2 306	7 242

Source: ETTE

Of the estimated 12 434 persons enrolled in publicly funded courses in 1999, 2 967 enrolled in traineeships. Preliminary data suggests that the number of traineeships has steadily increased while enrolments in other types of training have probably declined somewhat, due to the fact that publicly funded training as a whole tailed off.[21]

The total number of trainees in 2000 was 7 242, which is substantially greater than the figure of 327 in 1998[22]. Both State and Federal funding is involved in the provision of traineeships with the former funding training and the latter providing employment subsidies.

Although these data on publicly funded training are indicative of the trends that are emerging, much of the training undertaken in the TDL sector is undertaken on a fee-for-service basis. Some of this training is not aligned with the AQF framework and it is estimated that a significant amount of training is provided by organisations that are not registered training organisations, including industry operators themselves.

As is the case in all industries better performing companies within the Transport, Distribution and Logistics sector place a very high priority on significantly improving sectoral skills by investing in the education and training of their workforce.

[21] Based on analysis by Transport Training Victoria from data provided by the Office of Post Compulsory Education, Training and Employment.
[22] Ibid.

7.1.2.1. Industry Training Issues Identified by the Sector

At the TDL sector Forum held in November 2000, some members of the sector expressed the need for the following initiatives to achieve this desired improvement:

- Developing a strategic plan for education and training in the TDL sector developed jointly by industry and government;
- Establishing a continuing education and training advisory committee on the supply chain;
- Coordinating government activities involving training and education for the TDL sector;
- Establishing dialogue between the TDL sector and education and training institutions to address TDL sector needs; and
- Initiatives in e-commerce education and training as a high and immediate priority.

These desired improvements reflect a perception held by some companies in the sector that the quality and accessibility of training in the sector needs to be improved. Some expressed a need for raising the priority of TDL training both within the sector and with the State Government.

7.1.2.2. The National Training Package

A national vocational training system which provides for national recognition of skills and flexibility in content and delivery was introduced in the Transport and Distribution sector in 1998. It replaced a system which was primarily state based. The system is comprised of a training package of courses that are being progressively extended to cover the needs of the entire sector and are reviewed regularly to meet the changing needs of the sector.

When the package was introduced relatively few firms undertook regular training but since then there has been a significant increase in enrolments in transport and warehousing, although, as discussed above, from a very low base.

Transport Training Victoria (TTV), the state industry training board which provides the primary consultative mechanism for pursuing vocational training issues in the TDL sector considers the national training package to be an effective vehicle for the on-going development of skills for the industry. However there is an on-going need for the package to be regularly reviewed and adapted to ensure it retains its relevance to industry needs.

TTV also believes that the role of an advisory committee is already accommodated within existing on going procedures in relation to:

- The identification of new training needs;
- The development and accreditation of courses;
- Representing industry views on the performance of the training delivery system; and
- Promotion of effective use of training by industry participants.

7.1.3. Centre of Excellence in Transport, Distribution and Logistics at Victoria University

Victoria University and the Western Region Economic Development Organisation, with the support of the Department of State and Regional Development, has undertaken a feasibility study for a Centre of Excellence at Victoria University.

The feasibility study cites a range of training and research related issues that face the sector and makes a compelling case for establishing a Centre of Excellence to address these issues in a coordinated, comprehensive and efficient manner.

The issues that are raised by the study echo those that are identified and discussed in this Audit Report and therefore its conclusions that action is needed to establish a Centre of Excellence are supported by the findings of the Audit.

While the role, structure and location of the Centre is not a matter for this Audit, the findings of the Audit strongly support action to establish such a Centre of Excellence to enhance the competitiveness of the industry.

7.2. Personnel Management Issues

7.2.1. Changing Employment Practices

Rapid changes to and the increased complexity and demands of work through globalisation and 24/7 operation have placed increasing pressures on workers in the TDL sector.

These changes require companies to place greater emphasis on personnel management issues including means for workers to be able to appropriately balance work and family life and to work safely in a fast moving, often physically demanding and sometimes stressful work environment.

There is a pressing need for TDL firms to recognise and review the key factors that affect the performance of their workforce to identify impediments

to establishing appropriate personnel management, target areas that require improvement and develop a strategic plan for improvement in personnel policies and practices.

In the immediate term there is scope for many TDL operators to improve retention of existing staff through improved staff employment policies and practises, career planning and flexibility in work arrangements that reflect a need to balance work and family life in the context of increasing 24/7 operations.

Employment practices and arrangements are also in a state of flux as companies weigh the advantages and disadvantages of the use of part time, casual and contracted staff.

7.2.2. Employment of Young People

The sector has considerable problems in attracting and retaining young people into employment. Young people are disinclined to enter the sector because:

- The image of the sector is not attractive. Young people see the jobs as dirty and unsophisticated and the culture as old fashioned and conservative.

- The education system is primarily focused on VCE and does not generally represent entry into the industry as a desirable career or learning pathway for school leavers.

- People less than 25 years old are unable to get appropriate drivers licences and insurance costs significantly exceed that of older drivers.

If young people are to be attracted to the sector employers will need to take action to improve and highlight the positive aspects of work in the sector; the education system needs to promote multiple pathways in addition to VCE; and licence requirements reflecting driver skill rather than age should be considered.

7.2.3. Female Employment

Whilst some parts of the transport industry have greater female representation, they are mainly in back office functions which have traditionally been more significant employers of women. Most of the major occupational groups in the sector continue to be male dominated with males comprising about 92% of the total industry workforce.

To increase female participation in the sector, many firms are likely to need to address employment policy and practice in relation to staff selection, rostering and hours of duty and job design including materials handling practices. Firms' organisational culture, which in many cases have ignored the potential

strengths of and benefits brought to an organisation by women employees, would need to be addressed to facilitate the increased employment of women.

The proportion of trainees who are female and who are undergoing training at this level is low (19% in 2000 for the category excluding existing employees[23]). However, it is seemingly growing and is significantly higher than the proportion of females in the T&D workforce as a whole (7.2%)[24]. The proportion of females amongst "existing employees" who are undergoing training is somewhat lower which probably reflects the fact that the masculinity ratio of the population of older workers is higher.

7.3. Personnel Management – Modes

7.3.1. Road

Much of the road freight sector is experiencing significant shortages of qualified drivers, especially of B-doubles and other more sophisticated large trucks, and of mechanics. The shortage of drivers is exacerbated by the lack of young people entering the sector partly because of the extremely high insurance premiums that have to be paid for younger truck drivers.

Road freight operators admit that in many cases they fill driver vacancies by "pinching" experienced drivers from their competitors.

An industry survey by the Transport Workers Union confirms the shortage of drivers and indicates that the average age of truck drivers is 46 years. In comparison, the average age of the Victorian workforce is 38 years, significantly less than that reported for truck drivers. This suggests that in the near future the recycling of drivers will not be a viable solution to the shortage.

In general, successful recruitment and retention of drivers and other staff varies considerably between firms and is influenced by staff employment policies and practices.

Many TDL operators see training as too costly, especially in relation to staff time away from the job, replacement staff costs and on the job coaching and mentoring costs. It is seen as a hindrance to completing day to day work in an industry that is particularly cost conscious.

On the other hand, a number of leading TDL companies provide high quality training to their employees and to contractors because they know there are measurable benefits to be gained from the activity. Many of these utilise the advice and resources available through the State Training System.

In general the average cost is a major disincentive to many small operators to undertake any training of staff at all and for the larger operators to limit their training to immediate job requirements and specific company needs. On the

[23] Data provided by the Office of Post Compulsory Education, Training and Employment.
[24] ABS Labour Force Survey, November 2000.

other hand, a significant number of operators recognise that training generates operational and financial benefits for their business.

The perceived costs of training have been exacerbated by the capping of government funding available to companies and private sector RTOs that provide training to the TDL sector. This capping presents a major constraint given the low base of training experience in the TDL sector.

7.3.2. Rail

The rail freight sector reports shortages of trained personnel across all areas of rail operation including shunters, drivers, maintenance workers and engineers. There is a recognised need in the sector to increase vocational training of their workforce following privatisation, especially in rail operations.

Similar to the road sector, rail is experiencing a rapid aging of its workforce and significant employee departures over the next few years as a result of retirement. Young people need to be attracted into, trained and retained in the sector. However the capacity to train new staff has been constrained by the run-down of the training infrastructure that has occurred with privatisation of the rail system.

The sector is also concerned that transport training in tertiary institutions needs to be broadened so it is more inclusive of:

- The full range of transport modes, in addition to road, which is currently emphasised;
- A broad range of disciplines including architecture, planning economics and geography, in addition to engineering which is currently emphasised; and
- Social, environmental, land use and general sustainability issues within the curricula.

7.3.3. Air

As is the case throughout the TDL sector and especially in airfreight there is a lack of expertise in logistics management, especially as the demands for supply chain management become more intellectually demanding and rigorous in the future.

At the same time there is inadequate provision of training for airfreight logistics in Victoria that is likely to meet future needs.

Training that is available through industry associations and tertiary institutions appears limited and not generally known within the sub sector.

Although a new training package is currently under development for the aviation industry this is unlikely to be available until 2003-04.

7.3.4. Sea and Ports

The sea freight sector sees pressing needs for the training of small operators and owner-drivers in the road freight sector that provide key services to the ports, in:

- Application and use of information and communication technologies;
- Quality management; and
- Customer service and managing customer relationships.

The sector also places high priority on developing significantly greater supply chain competencies, at all levels of education and training provision, by improving workers' understanding of logistics and their role in the supply chain.

7.3.5. Distribution and Logistics

This sector sees a pressing need for a quantum improvement in the knowledge and skills in all TDL sectors, consistent with the significant future demands of globalisation, just in time manufacturing and e-commerce based transactions.

However sector stakeholders report a dramatic and increasing under supply of workers trained in logistics and logistics management. There is also a major under provision of university and vocational courses in logistics and logistics management.

It is of concern that only 17% of TDL employees have qualifications at associate diploma level and above compared with 28% of employees for all industries[25].

As a consequence key stakeholders see an emerging crisis of logistical capability and expertise which has the potential of undermining the competitiveness of the Victorian TDL sector.

As discussed earlier, the sector supports the development of a Centre for Supply Chain Excellence in Victoria in which education and training and research can be carried out and demonstration projects can be pursued.

[25] ABS, Transition from Education to Work, cat. 6227.0, May 2000 and Industry Training Monograph: Transport and Storage (NCVER, 1998) with data sourced from ABS, Transition from Education to Work, cat. 6227.0, May 1997.

Recommendation 7.1

TTV, the TDL sector and the appropriate State Government Departments discuss how existing education and training structures and processes can be improved or extended to better meet the needs of the sector including:

a) Strategic planning for education and training in the TDL sector;

b) Education and training advisory processes on the supply chain;

c) Mechanisms for coordinating government activities around training and education for the TDL sector;

d) Facilitating dialogue between the TDL sector and individual education and training providers to address TDL sector needs within their organisations; and

e) Joint development of initiatives in e-commerce education and training as a high and immediate priority.

Recommendation 7.2

That TTV, in conjunction with other industry bodies, ETTE and RTOs:

a) Promote the economic and organisational benefits of high quality training to TDL employers and employees; and

b) Better inform TDL employers and employees on available training mechanisms and opportunities, current position types and potential career paths within the TDL sector.

Recommendation 7.3

The Victorian Government and TDL sector work with the appropriate education and training providers and Commonwealth agencies responsible for funding education and training placements to significantly increase training opportunities in the area of logistics and supply chain management to reflect the industry's contribution to the economy and to make serious inroads into unmet training needs.

Recommendation 7.4

The Victorian TDL sector and the State Government support the establishment of a Centre of Excellence in Transport, Distribution and Logistics to provide a key focal point for the sector in education, training and research.

Recommendation 7.5

The Victorian Government assist TDL firms to develop and improve appropriate personnel management policies and practices especially in relation to:

- Changing nature of employment arrangements in the sector including part time work, contracting and casualisation;
- The effective recruitment and retention of staff by firms;
- Developing strategies to attract and retain young people into the sector especially in light of the aging of the workforce; and
- Encourage female participation in the sector.

8. INDUSTRIAL RELATIONS

A stable and effective structure of employment and industrial relations is vital to the competitiveness of the TDL sector.

The globalisation of manufacturing and services is placing growing competitive pressures both on TDL operators and their customers.

The speed, complexity and intensity of global change require both unions and employers to respond in a flexible manner if the sector is to remain competitive.

Many employers believe that unions within the TDL sector understand the changes that are occurring within the sector and the resulting need for change within employment and industrial relations arrangements.

However, many of these employers express concern about the general stability of the industrial relations environment in Victoria. They want to be reassured that the Victorian Government will work with both sides of the sector in an even-handed manner.

Unions within the TDL sector are pursuing both fair employment and economic growth. They have indicated their willingness to cooperate in achieving change within the sector, to secure the jobs of their members and increase the number and quality of employment opportunities.

Recommendation 8.1

The Victorian Government:

a) Facilitate industrial relations arrangements within the TDL sector that achieve a fair balance between the parties; and

b) Establish demonstration projects of effective industrial relations arrangements at various points of the supply chain.

In addition there are two key issues that require short and long term solution.

8.1. Position of Owner-Drivers

The large number of small business operators and self-employed, especially in road transport, are largely outside industrial arrangements and have limited bargaining power.

In some cases where this lack of power is exploited undesirable outcomes, including unsafe and illegal behaviour by operators, impacts on local communities and families and reduces service quality.
While prices paid for TDL services provided by owner-drivers will be set by the competitive market place, there is a pressing need to:

- Enhance owner-driver capability for succeeding in business (cf Section 16); and

- Have larger operators, to which many subcontract, recognise owner- drivers as an integral part of their service.

Recommendation 8.2

The TDL sector in conjunction with the Victorian Government encourage the support and take up of the owner-driver code of practice.

8.2. Mismatched Capacity

Much of the TDL sector increasingly needs to work on a 24 hours a day - seven days a week basis if it is to be competitive and to meet the growing demands of an expanding and increasingly sophisticated and complex economy.

However, many of the key elements of the supply chain do not operate in such a way as to allow the sector to operate 24/7.

Manufacturers and retailers operate more restricted hours and currently will not supply or receive goods at times that would provide a more efficient interface with TDL suppliers.

Many TDL operators including warehousing, air, port and rail terminals, container parks and road freight operators also do not operate on the basis of 24/7.

In many cases current industrial arrangements prevent or make uneconomic, 24 hour a day, 7 days a week operation.

There is considerable common ground between TDL employers and unions in accommodating the rapid changes in the sector and increasing its competitiveness through improved industrial arrangements.

However, users of TDL services will need to increase their responsiveness to changes in the sector and increase the flexibility of their interface with the sector.

Recommendation 8.3

In order to move toward more comprehensive 24 hour 7 days a week operation the TDL sector, including employers, peak bodies and unions, establish a working party or some other means of dialogue:

a) Within the sector itself to discuss and agree its approach to 24 hours a day, 7 days a week operation; and

b) With customers and key stakeholders of the sector.

9. SOCIAL AND ENVIRONMENTAL ISSUES

The amenity of local communities, especially in areas of concentrated transport activity including the Port of Melbourne, along major truck routes in Melbourne and provincial cities, is being affected by the rapid and considerable growth in road freight transport.

At the same time vital transport infrastructure needs to be protected from urban encroachment and the demands of recently established communities whose priorities are not the efficiency of the operation of freight transport.

This is of particular importance for the Port of Melbourne which is experiencing emerging problems with residents of:

- The inner western suburbs in relation to truck movements to and from the port; and
- Docklands and Beacon Cove in relation to their encroachment on the PoM infrastructure and concerns about noise and pollution.

The Government's Metropolitan Strategy is currently developing strategies to ensure the efficiency of freight movements at local, regional, national and international levels while enhancing social and environmental qualities.

However, timely action for key pressure points such as around the PoM and the western suburbs of Melbourne is vital.

Recommendation 9.1

In order to reduce the social and environmental impact of road freight movement the Victorian Government:

a) Work to increase the amount and percentage of freight transported by rail and sea;

b) Investigate and facilitate means of improved truck utilisation and back loading out of key transport hubs especially PoM;

c) Establish intelligent transport systems on strategic transport routes to improve traffic flow; and

d) Establish dedicated truck routes and truck lanes on key transport routes.

9.1. Rail Freight Solutions

The rail freight sector sees increasing use of rail as an important part of the solution to congestion and traffic accidents arguing that rail freight transport is over 30 times safer, per tonne hauled, than road.
According to the rail sector, transport accidents in Australia cost $15.5 billion a year, 97% of which is attributable to road accidents and 1% to rail accidents[26]. Articulated trucks are involved in 10% of road fatalities costing almost $300 million a year[27].

A freight train can replace 100 to 150 semi trailers and reduce the costs of congestion and traffic accidents.

Recommendation 9.2

The TDL sector, in conjunction with the Victorian Government, promote and facilitate community consultation to:

a) Enhance community awareness of the vital economic role played by freight transport infrastructure, including PoM;

b) Identify and discuss within residential communities the social impacts of the growth in freight transport operations proximate to and within those communities; and

c) Consolidate community support for the development of freight transport infrastructure and improvements to freight transport systems and develop mechanisms for addressing issues of community concern such as night traffic, noise, pollution and congestion.

There is increasing community awareness of environmental issues and the need for conservation. The community increasingly demands reduction in greenhouse gases and other air pollution and the reduction of transport impacts on local communities.

The TDL sector, especially the road freight sector, will need to increasingly operate in an environmentally sustainable manner if it is to respond to these community concerns.

A modal shift to rail freight can contribute to a reduction in carbon dioxide gas emissions and to savings in consumption of liquid fuels for transport services.

[26] Submission from the Australasian Railways Association.
[27] Ibid.

Beyond this however, vehicle use is likely to continue to grow requiring strategies to promote better behaviour and the use of the cleanest and most technologically advanced transport systems.

Improved environmental outcomes including reduction in greenhouse gas emissions can be achieved through:

- A comprehensive strategic planning approach;
- Reducing urban traffic congestion; and
- Using cleaner fuels.

Recommendation 9.3

The TDL sector and Victorian Government:

a) Encourage greater use of more greenhouse friendly freight modes and logistics systems, specifically sea and rail then road and air;

b) Support the development of the Metropolitan Strategy that includes an analysis of needs of the freight sector; and

c) Pursue innovations in fuel technology and the use of alternative fuels and electric engines.

9.2. Reverse Logistics and Supply Chain Management

Business is beginning to place greater emphasis on reverse logistics and waste reduction and management (including reverse distribution). Logistics management skills are in high demand by companies incorporating practises such as recycling, reuse and source reduction.

To meet contemporary environmental and regulatory expectations, companies need to develop their reverse logistics management skills including:

- Programs to recycle and reuse in-house wastes;
- Modification of inbound supply chains and delivery systems to prioritise purchasing of secondary materials as manufacturing materials;
- Development of reverse distribution channels and capabilities so that products and packaging can be collected from customers for recycling or reuse; and

- Reduction of the quantity and/or toxicity of materials used and/or generated as wastes.

The Logistics Association of Australia see logistics management skills as crucial to successful waste management and to effective reverse logistics practise because recycling and reuse are logistics intensive.

The LAA also stress the need to consider customer needs and the economic and social benefits of incorporating reverse logistics into their business practice.

Information on reverse logistics and waste management needs to be available and visible at all levels of the supply chain.

Responsible waste management and reverse logistics practice by businesses has additional benefits including:

- Minimisation of costs associated with current and potential regulation compliance;
- Improved staff morale; and
- Improved public image.

Recommendation 9.4

The TDL sector, in conjunction with the Victorian Government, promote awareness and increased industry uptake of environmentally sustainable logistics practice including minimising packaging, innovative packaging material and responsible disposal of packaging materials

10. DISTRIBUTION PATTERNS

10.1. Modal Shift

In the next ten years the freight task will be completed using existing modes but the balance is likely to shift. Rail is likely to play a bigger part in regional freight and possibly for intra-metropolitan container movements.

More internationally traded produce and lower value goods that are currently sent by air will be able to be sent by sea freight.

More high value and time critical goods are likely to be freighted by air. Coastal shipping is likely to increase in competition with long haul rail.

The development of a comprehensive and integrated freight transport plan for Victoria, that is discussed earlier in this paper, is central to determining the mix and balance of freight transport modes that will efficiently undertake the transport task in the future.

10.2. Distribution Centres

There is an accelerating trend away from geographically diffuse warehousing and storage capacity toward the establishment of large distribution centres in which rapid flows of goods and cross docking of inventory reduces delivery load sizes and increases delivery frequency.

This new distribution and logistics structure is applicable as part of the export or import of goods to point of sale, for e-fulfilment or for the assembly of components into finished goods for the domestic or export markets.

Specialist distribution centres located close to appropriate transport infrastructure offer highly efficient handling and delivery of materials, intermediate and finished products to manufacturers and retailers and directly to consumers. The strategic location of DCs can be hampered by lack of appropriate land to build them, inadequate road access to them and inappropriate planning and zoning arrangements.

Establishing an effective interface between distribution centres and road freight operators is central to the efficiency of the logistics operation. Currently many road freight operators are critical of the management of some distribution centres where they experience long delays in queues and turning around their loads.

Establishment of efficient centres can reinforce the competitiveness of Victoria's transport modes, increase capacity for handling outward bound freight and attract more freight business from Tasmania, SA and southern NSW.

Establishing Victoria as a place where highly efficient distribution centres locate can also encourage international companies to establish Asia-Pacific distribution centres and/or manufacturing in bond for regional export.

As part of Victoria's freight transport plan, decisions about the most appropriate and efficient arrangements for completing the freight transport task, will determine the location and nature of many of the distribution centres that are established.

In the future distribution patterns will increasingly be based on:

- Intermodal distribution centres around Melbourne Airport;
- Regional intermodal interchanges in locations reflecting the level of economic activity, especially around the manufacture of high value exports and rural produce exports;
- Strengthening existing strategic intermodal hubs, especially the PoM; and
- Possibly establishing metropolitan distribution centres linked by rail shuttle to the PoM.

Recommendation 10.1

The Victorian Government in conjunction with the TDL sector support the establishment of large national Distribution Centres to enhance the efficiency of the TDL sector and to attract international companies to Victoria.

Recommendation 10.2

The Victorian Government protect existing and future TDL distribution infrastructure including land around air and seaports, container parks, Distribution Centres and rail and road access.

Recommendation 10.3

The TDL sector with the Victorian Government, promote the efficient operation of Distribution Centres through research on operators performance including turnaround time and benchmarking performance across different types of DCs.

11. INNOVATION

Innovation in systems and equipment, used by companies, operators and other elements of the supply chain, is capable of producing significant improvement in efficiency, productivity and sustainability of the TDL sector.

Innovation in the design of trains and freight wagons has the potential for addressing problems with rail access to the Port of Melbourne.

Innovation in articulated truck design has the potential to increase truck carrying capacity and address social impacts on communities within metropolitan Melbourne through their ability to break their load.

Innovation in fuel systems and vehicle technologies can begin to address air pollution and green house gas issues.

A number of organisations in Victoria are developing innovative computer software and electronic systems for the TDL sector. However, the TDL sector lacks a focus for research, development and commercialisation to improve systems and equipment in this way.

A CRC for Railway Technology and Engineering has been established in Queensland which is hoped to provide a nucleus for technology in this part of the sector.

This capability can provide an important resource for the Victorian TDL sector.

Recommendation 11.1

The Victorian Government:

a) Establish a mechanism whereby TDL innovations can be reviewed and developed in a timely manner, in order to promote the development and implementation of innovative solutions in the TDL sector;

b) Identify companies and organisations that are pursuing innovative supply chain solutions and establish means of providing support to that work and use them as demonstration projects; and

c) Support TDL sector cooperation with organisations involved in TDL innovation, such as the CRC for Railway Technology and Engineering.

12. LOCAL GOVERNMENT

Local Government plays a key role in facilitating the movement of freight throughout metropolitan Melbourne and regional Victoria.

It controls right of access to local roads and planning and traffic management that affect truck access. It also controls rail track access.

The importance of Local Government's role in access and in traffic management will increase as Internet purchase and e-fulfilment results in considerably more of the freight task being carried out on local roads. The priority placed on shifting freight to rail also requires Local Government attention and cooperation in creating rail corridors.

Local Government therefore must play a central part in developing transport access solutions and be a co-partner with the TDL industry in promoting the sector nationally and internationally. Local Government needs to become a partner in the development of an efficient and competitive TDL sector in Victoria.

Recommendation 12.1

The Victorian Government:

a) Reinforce information to Local Government on their rights and responsibilities in relation to truck access;

b) Encourage take up of VicRoads' guidelines for truck access to local areas;

c) Request Local Government prepare forward plans to provide truck and rail access to new industrial areas; and

d) Require Local Government to undertake coordinated land use planning to provide area wide road and rail traffic management across a range of Councils.

Recommendation 12.2

The Victorian Government establish mechanisms for an ongoing, formal dialogue between the TDL sector and Local Government to resolve and prevent conflicts from arising around TDL sector issues and priorities.

13. REGULATION

A detailed discussion of regulatory issues has been prepared by the Office of Regulation Reform.

Consequently regulatory issues have not been addressed by this Report.

14. CUSTOMS

Efficient air and sea transport of imports and exports requires efficient and timely reporting and clearance of goods through customs (Australian Customs Service [ACS]) and quarantine (Australian Quarantine Inspection Service [AQIS]). The regulatory role of the ACS and AQIS is central to the efficiency and productivity of the supply chain.

Importers and exporters need to be able to deal with Government agencies such as ACS, AQIS, ATO and other permit issuing authorities in an integrated manner in which regulatory processes are predictable and transparent. While government agencies strive for this, they also must also prevent illegal trade.

ACS is undertaking its Cargo Management Re-engineering Program (CMR) to facilitate international cargo and intercept prohibited trade.

ACS intends that CMR will enhance its cargo related business processes by establishing "an open and flexible communications network including on-line services on the Internet"[28]. It is intended that CMR will provide:

- Flexible reporting of import and export transactions using the Internet, value added networks and telephone;
- Streamlined and minimal cargo reporting requirements with a single window to government agencies involved in clearance;
- Electronic access to cargo information by ACS and AQIS to remove their intervention in legitimate cargo flow;
- Tailored reporting for accredited industry partners including periodic declarations and payment;
- Electronic reporting of all cargo movements, increasing efficiency of clearance, including the option for early reporting of cargo and early clearance;
- Changes to export cargo reporting including post-departure manifest reporting; and
- Simplified domestic movements of cargo underbond.

While the TDL sector supports the aims and intentions of the CMR program it has raised a number of pressing issues including the necessity for all customs brokers and forwarders (including small business) to:

- Operate on a 24 hour a day, seven days a week basis in order to meet the ACS cargo reporting requirements; and

[28] Submission from the Australian Customs Service.

- Retain large volumes of import declarations in paper or electronic form for a period of 12 months rather than the 90 days preferred by the sector.

Recommendation 14.1

The Victorian Government support the TDL sector in its efforts to have ACS make changes to its Cargo Management Re-Engineering (CMR) program to take account of the needs of business.

Recommendation 14.2

The TDL sector, in conjunction with the Victorian Government, closely monitor the progress of the Cargo Management Re-Engineering (CMR) program and its impacts on the TDL sector.

15. DATA

There is a major lack of data specifically on the Transport, Distribution and Logistics sector.

There are considerable gaps in industry data at an aggregate or sub-sectoral level on a national and state basis.

This lack of data inhibits analysis of past and current trends in the sector and makes planning and policy development much more difficult.

Although there are currently on going discussions between the Federal Government and State Governments on means of improving provision of data on the sector, this is progressing slowly.

Recommendation 15.1

Discussions with the Commonwealth and other State Governments to address the TDL data deficiencies with a view to reaching timely agreement on new TDL data collection and access, to be initiated by the Victorian Government.

MODAL ISSUES

16. ROAD

Road freight transport accounts for approximately 86% of all freight movements in Victoria[29].

Approximately 80% of the road freight task is completed by small operators and owner-drivers a large proportion of who work as sub contractors to large road freight operators[30].

Approximately 50% of the transport task is completed within the greater Melbourne area[31].

Victoria has a generally high quality road infrastructure both within the Melbourne metropolitan area and in regional areas. Planning for maintenance and improvements to this infrastructure is well developed through VicRoads and other agencies.

16.1 Industry Concentration

The road freight industry has become increasingly concentrated through mergers and acquisitions of a number of large and medium sized road freight operators.

This trend is likely to continue in the future with the ultimate result likely to be a small number of very large players dominating road freight in Australia.

Recommendation 16.1

The Victorian Government liaise closely with the largest road freight operators and users to ensure their involvement and cooperation in key strategic initiatives such as:

- Active support for the Chain of Responsibility provisions; and
- Support for training initiatives

[29] Derived from *Aspects of the Greater Melbourne Freight Task*": Report prepared for DoI by FDF Management, a Division of Flagstaff Consulting Group Pty Ltd, November 2000.
[30] Ibis 2000.
[31] Estimate based on discussions with the Victorian Road Freight Transport Association.

16.2 Cost Focus

Much of the road freight sector is intensively competitive and increasingly split into a large number of small operators and a few large operators that dominate the market.
Within many firms this produces an emphasis on cost minimisation either to secure higher margins or in the case of smaller and less efficient operators to simply survive in a highly competitive market.

This strong cost competition has a range of important impacts:

- Pressure on service quality, reliability and care to the point that value added service tends to be a victim of cost pressures; and

- Pressure on drivers to ignore regulations on work hours, speed, safe work practices, the use of compliant vehicles and mass limits.

Active cost competition is likely to continue in the future and owner-drivers and many road freight operators will continue to experience tight margins and competitive pressure. These operators need to improve their competitive capacity and their ability to make better business decisions.

Tight margins and slow payment to small operators by customers, including large road freight operators, puts considerable pressure on their cash flow. Industry actions to pay within a shorter period for jobs completed and the establishment of a financing facility for operators based on monies that are owed them should be considered.

Recommendation 16.2

The Victorian Government assist in enhancing the business focus of potential entrants and existing operators in the road freight sector by:

- Providing information to new entrants; and

- Continue and expand existing business planning support for operators to improve their business methodologies and systems.

Recommendation 16.3

Non financial support to private sector actions provided from the Victorian Government to establish a bank based financing facility for road freight operators and especially small sub contractors/owner-drivers.

16.3 Urban Freight

An increasingly large volume of road freight is transported through the Melbourne metropolitan area. The transport task is being transformed into one that is conducted 24 hours a day, 7 days a week. Efficiency and reliability of the urban freight task is influenced by a large number of factors that are likely to become more pressing in the future:

- Increasing vehicle numbers on roads used by trucks resulting in increased traffic congestion and reduced truck efficiency;
- Pressures from local communities to remove heavy vehicles from local and main roads in order to increase residential amenity;
- Increasing moves by Local Government to restrict truck access; and
- Large numbers of empty trucks on the road.

Recommendation 16.4

To increase the efficiency of the urban freight task the Victorian Government:

- Identify and designate specified freight and truck routes;
- Implement recommendations discussed in the “Local Government“ section;
- Increase the application of Intelligent Transport Systems including Real Time Traffic Management, for all modes including road, rail and port;
- Promote initiatives to reduce the number of empty trucks on the road and increase capacity utilisation; and
- Support the development of road freight infrastructure including proximate and dedicated container parks to increase capacity utilisation by reducing distances that must be travelled by trucks carrying empty containers.

16.4 Growth of Truck Traffic and Size

Even with a very significant increase in rail’s share of the freight task over the next ten years there will need to be a large growth in truck numbers and in their average size and mass.

There has also been a dramatic increase in the use of light commercial vehicles for the urban freight task. They are delivering parcels and small packages, creating significant impacts on traffic flows while they meet demands for immediate delivery.

Recommendation 16.5

Through the Victorian Freight Advisory Council the Victorian Government:

- Prioritise infrastructure improvement consistent with 2001 Budget commitments especially in relation to bridge capacity and height and local roads; and
- Encourage innovation in vehicle design that will increase road freight efficiency and reduce social and environmental impacts. (cf Section 11 Innovation)

Recommendation 16.6

The Victorian Government review urban traffic management to ensure access of the increasing number of light commercial vehicles that are required on local roads while minimising social impacts.

16.5 Infrastructure

In addition to the provision and upgrade of major roads and freeways the road freight sector faces a number of key infrastructural issues:

- Access roads to manufacturing establishments and distribution centres are in many cases unable to meet increased mass requirements;
- Bridges in regional areas require strengthening to carry heavier vehicles;
- The quality of regional mobile telecommunications requires improvement through more extensive coverage and improved quality of reception; and
- The need to establish design and capacity standards for infrastructure development to meet future needs.

Recommendation 16.7

In the context of 2001 Budget commitments, industry and the Victorian Government jointly identify key infrastructure needs and set priorities and standards for the future.

17 RAIL

In Victoria over 10 million tonnes of intra and interstate freight is carried annually by rail.

Rail freight transport offers considerable advantages in an integrated freight network, increasing social and environmental sustainability through reduced pollution and increased safety.

The Victorian Government has foreshadowed a significantly increased role for rail in intra and inter-state freight over the next ten years and particularly in relation to the Port of Melbourne. The Minister's Ports 2000 statement sets a 30% target for rail's share of port freight within 20 years.

Although it has experienced considerable reform over the last five years the Victorian rail system has previously (over many years) been run down. Rail tracks are in relatively poor condition and old signalling systems have been modified and retrofitted over many years without a substantive upgrade using contemporary technologies.

With the increased importance placed on the use of rail for freight, especially into the Port Melbourne, improved rail access to dockside including the crossing of Footscray Road, is also extremely important. The MPC, in conjunction with other agencies, has undertaken considerable analysis of the Footscray Road grade separation and the reintroduction of rail to Webb Dock and the Westgate site. Programs are in place to progress this work further to achieve their implementation.

The condition of Victorian rail infrastructure has lead to restrictions on train speeds, lengths and weights that have limited the productivity and efficiency of rail operators. Lower axle loadings in Victoria compared to other states reduces the efficiency of inter-state operations.

Rail freight operators compete directly with the low cost road freight sector in a number of areas across the state. This competition combined with the restrictions imposed by the condition of rail infrastructure places pressure on rail operators' margins.

Following the sale of V/Line Freight and its lease of 4 000 km of Victorian track in May 1999, Freight Australia now provides non-urban intrastate rail freight services within Victoria. The Victorian Government is considering making the rail network available to other companies wishing to haul rail freight in Victoria.

17.1 Victorian Rail Gauge

Currently the efficiency of rail freight transport in Victoria is adversely affected by the mixture of broad and standard gauge lines. Access to the Port of

Portland is only possible on standard gauge while access to the Port of Geelong is only possible on broad gauge. Broad gauge consignments destined for Portland and conversely, standard gauge consignments destined for Geelong, must either be transhipped to wagons of the correct gauge or have the wagon bogies changed from one gauge to the other. Either process is time consuming and costly.

In particular the lack of standard gauge access to the Port of Geelong inhibits the movement of consignments from the standard gauge region of southern NSW, other than Moulamein, Deniliquin and Oaklands that are on broad gauge. The Victorian Government has made a commitment to improve standard gauge access to Geelong.

The mix of rail gauges also restricts trade between Victoria, southern NSW and South Australia, as port access is not always available for this trade. The Port of Geelong for example does not cater for standard gauge lines, therefore restricting movement of freight from southern NSW.

Portland cannot receive freight from northwest Victoria, due to the different rail widths.

17.1.1 Dual Gauge Access

Generally the benefit of standardising or installing dual rail gauge throughout the Victorian network is not seen as offsetting the cost. There are however locations where gauge standardisation would have economic benefits including the North East Corridor, taking in the Tocumwal-Shepparton-Mangalore line, the Mildura to Dunolly line, the Mt Gambier to Portland lines and Melbourne to Westernport.

17.2 Other Infrastructure Requirements

17.2.1 Network Maintenance and Upgrade

Considerable investment in the maintenance and upgrade of Victorian rail infrastructure, including tracks and signalling, is required to sustain and improve the productivity of Victorian rail freight.

Specifically the introduction of double stacking of containers on rail, in order for the freight system to deal with significant increases in movements, will require major network improvements.

17.2.2 Infrastructure

There are four key areas of infrastructure need for the Victorian rail system:

- The provision of dual gauge rail access into Victorian ports including Portland, Geelong and Westernport;

- The provision of rail access into Webb, Westgate, Victoria and Swanson docks and enhancement of existing capacity at the Port of Melbourne;

- Improvement of the rail, signalling and siding infrastructure in the State rail network; and

- The provision of key access roads to rail terminals and facilities including grade separation between rail and road.

17.2.3 Private Sidings

In the past major manufacturing and distribution centres were serviced with their own private rail sidings. The contractual arrangements for these varied including sidings:

- Owned and maintained by the customer;

- Owned by the customer and maintained by the service provider, (the rail authority); and

- Leased to the customer and maintained by the service provider.

Many of these private sidings are now disused as road transport has increasingly replaced rail.

A move to greater reliance on rail to satisfy freight transport needs would be reinforced by increased use of private sidings.

With the cost of new rail installation at approximately $1,000 per metre, plus the cost of signalling arrangements where the siding connects with the main line, private siding construction can be expensive.

The Victorian Government can therefore encourage the reopening of disused sidings and the development of private sidings for new production and distribution facilities, that are proximate to an existing rail line, by assisting facility owners in private siding construction.

Recommendation 17.1

The Victorian Government continue to facilitate the standardisation of important strategic rail track in Victoria reinforcing its 2001 Budget commitments.

Recommendation 17.2

The Victorian Government liaise closely with Freight Australia and other appropriate parties to identify the most appropriate means of supporting continuing investment in strategic rail track in Victoria including ways of promoting the reinstatement or construction of private rail sidings.

17.3 Investment in Rail Infrastructure

The rail freight sector sees Section 51AD and Division 16D of the Tax Act as significant impediments to private sector investment in rail and other major infrastructure.

Section 51AD of the Income Tax Assessment Act imposes "use" and "control" tests on leases and non-recourse financing associated with private sector development of public infrastructure. The application of the section denies private investors otherwise legitimate depreciation and deduction rights over capital investments, often making projects unviable.

The determination of "use" and "control" is subjective and determined by the ATO on a case by case basis. This approach is opaque and time consuming. Private proponents and State Governments expend considerable effort and resources in order to determine potential outcomes including significant costs to obtain legal opinions which are not always correct.

The details considered by the ATO to determine "use" and "control" are often esoteric, such as the impact of government controlled traffic lights on the usage of a private toll road.

Division 16D of the Act applies in a similar manner but without the loss of all entitlements by the investor. It too is unclear and applied inconsistently and adds to the costs of providing infrastructure services.

The Ralph Review of Business Taxation considered this issue and recommended the abolition of S51AD and the modification of Div 16D from a "control" test to a "risk" test. This would ensure that State infrastructure development proceeds without expense to Federal taxpayers and without the current impediments. The application of the risk test will have to be streamlined to avoid the same obstructions and costs which currently exist.

The Commonwealth and the ATO are considering ways to resolve these tax issues with representatives of State Treasuries and AusCID, representing the private sector.

Discussion has been constructive however progress to a resolution has been slow.

The private sector seeks a repeal of S51AD and amendment of Division 16D by:

- Restricting the "control of use test' to a *substantial* control of use test; and

- Targeting Qualifying Arrangements at ordinary finance leases by governments and tax-exempt government authorities.

The rail sector supports public/private sector partnerships and the *Growing Victoria* fund for the development of Victorian infrastructure projects.

The sector believes that rail and road should be treated equally and that road infrastructure should be financed in the same manner as rail by either providing both as free public good or having both road and rail operators meet the costs of the infrastructure that they use.

The sector wants an equitable and integrated approach to transport planning in which rail is a cost-effective partner for road freight transport. It believes that a modal shift to rail would reduce road construction and maintenance costs, reduce road accidents and reduce greenhouse gas emissions.

Recommendation 17.3

Further expression of Victorian Government support for the position put by the Australian Council for Infrastructure Development to have the Commonwealth amend Section 51AD and Division 16D of the Income Tax Assessment Act, by making continuing representations to the Commonwealth, be provided.

17.4 Access to Victorian Rail Network

Australian Rail Track Corporation (ARTC) has recently entered into a lease with the Victorian Government for the interstate main line in Victoria from Wodonga to Melbourne and Melbourne to Serviceton on the Victorian /South Australian border.

It has commercially based access agreements with rail operators and has drafted a rail access undertaking. This has been put to the ACCC.

The Victorian Government has decided that the Victorian rail network will be made available to companies, in addition to Freight Australia, that wish to meet the growing freight task on the Victorian network. Terms of access to the network are being negotiated with Freight Australia and will be arbitrated by the Office of the Regulator General (ORG).

Freight Australia believes that proposed access pricing guidelines do not promote an economically efficient allocation of resources, do not promote investment or cost reduction and do not reflect international best practice.

It believes that the introduction of additional rail freight operators into the Victorian market, on profitable main line traffic will reduce its ability to service remaining marginal routes as competitors "cherry pick" profitable routes. This could lead to the closure of marginally profitable branch lines with a subsequent reduction in service to customers.

The benefits of rail freight competition, which access to the network by a number of companies will provide, are strongly supported in the TDL industry. Notwithstanding this there is a balance to be struck that would recognise the growing importance of the Victorian rail network in the State's freight task, the crucial need for immediate and ongoing investment in its upgrading and the importance of a commercial rate of return on that investment if the private sector is to commit to long run rail infrastructure rebuilding.

Following the Victorian Government's decision to introduce an open access regime from 1 July 2001, the establishment of appropriate rules and pricing principles is essential.

Recommendation 17.4

The Victorian Government re-examine and re-assess the rules and pricing principles for open rail access arrangements that ensures equity of access for operators, sustains necessary investment in Victorian rail infrastructure to optimise the performance of the services that use it and maximise consumer benefit.

18 AIR

Airfreight is a vital component of the transport sector especially for high value and time sensitive goods.

Melbourne Airport is central to the provision of airfreight services in Victoria while Essendon and Moorabbin airports facilitate small volumes of intrastate freight and Avalon airport has ventured into dedicated airfreight services.

18.1 Advantages to Build On

18.1.1 Melbourne Airport

Airfreight into Victoria enjoys the significant advantages of Melbourne Airport being able to operate 24 hours a day and being relatively uncongested. The competitive advantage of 24 hour a day operation can be retained through enforcement of careful land use planning on and around Melbourne Airport, including the emerging industrial areas bordering the Western ring road. The Federal Government is the responsible authority for decisions on the 24 hour a day operation of Melbourne Airport.

The available land on and around Melbourne Airport is also an important advantage allowing:

- The expansion of airport based distribution and logistical infrastructure and capacity; and
- The development of manufacturing and assembly, packaging and warehousing capacity for high value products (including in bond), in close proximity to the airport.

High quality and efficient road access to Melbourne Airport for the use of road freight operators is also an important strength in ensuring efficient transhipment.

Recommendation 18.1

The Victorian Government ensure the on-going curfew free status of Melbourne Airport by taking actions, including legislation, to ensure the conditions for continuing curfew-free operation. These actions are likely to include reservation of land bounding the airport and planning and land use legislation to ensure planning initiative remains with Melbourne Airport and to prevent urban development from encroaching on the airport.

18.1.2 Avalon Airport

The operators of Avalon Airport plan to develop the facility as a key aerospace centre providing maintenance facilities, aircraft training and airfreight services.

Avalon Linfox is currently servicing a range of air freight charter. It intends to pursue and increase of airfreight activity out of the facility with the objective of establishing scheduled airfreight activities in the future.

Avalon Linfox see future opportunities in the airfreight of high value perishable products such as seafood, pharmaceutical and high technology parts and equipment.

18.2 Building Airfreight Capacity

18.2.1 Increasing Passenger Flights

While airfreight into Melbourne is primarily on passenger flights the volume of freight through dedicated air freighters has been slowly growing. Continued growth of airfreight capacity through Melbourne will rely on:

- The Victorian Government and Melbourne Airport continuing to actively develop services to key strategic markets; and
- Attracting dedicated freight operations through Melbourne (especially as the design of new generation passenger aircraft reduces their freight carrying capacity).

18.2.2 Increasing Dedicated Air-freighters

Companies operating dedicated air-freighters will be attracted to Melbourne Airport primarily on the basis of the volume of profitable freight to be transported in and out of Victoria.

However this required profitability is undercut by outward airfreight rates that are currently one quarter that of inward rates. Many companies providing dedicated airfreight services generally do not see Victoria as a viable market and avoid it because of the absence of opportunities for back-loading freight.

Certain dedicated airfreight operators that bring inward freight leave Melbourne empty because of a combination of factors. The higher rates that can be earned by loading from elsewhere within the Asian region rather than in Australia also reduces the availability of outward capacity. Bilateral agreements that prevent the landing of freight in certain markets are also a factor.

The willingness of air-freighters to operate out of Melbourne will increase if a greater volume of high value exports capable of sustaining high yielding airfreight rates is available through Melbourne Airport.

Recommendation 18.2

Melbourne Airport and the Victorian Government act in concert to:

a) Encourage airlines currently using Melbourne Airport to develop new services to existing and new destinations;

b) Promote Melbourne Airport to international airlines that do not currently fly here; and

c) Attract tourists to Victoria.

Recommendation 18.3

The Victorian Government jointly with industry promote:

a) Melbourne as a premier location for freight distribution in Australia;

b) The manufacturing and assembly of high value goods in Victoria for export;

c) Melbourne as a location for international distribution and logistics companies to establish Asian/Pacific regional hubs; and

d) The establishment of manufacturing “in-bond” facilities on or in proximity to Melbourne Airport and in strategic regional hubs.

In addition to the existence of sustainable demand for their services, dedicated airfreight operators will also be attracted to Melbourne Airport by improved cargo facilities including:

18.2.3 Airport Infrastructure

There is considerable uncertainty about the impact of the introduction of much larger new generation aircraft.

It is not clear whether they will be used to provide either passenger/freight or dedicated freight services into Melbourne. Carriers may prefer to operate smaller aircraft more frequently allowing better spread of capacity.

Whether an improvement and enlargement of passenger and freight terminal capacity to cater for larger aircraft will depend on future operational and market decisions by the major carriers.

However if new generation aircraft do operate out of Melbourne in the future they are likely to have an increasing impact on the provision of Victoria's airfreight services.

Recognising the primary role of the privately owned Melbourne Airport in responding to these developments if they are realised, the Government preferred timing of the provision of the necessary infrastructure, based on public policy priorities, may not coincide with the commercial interests of the airport or airlines.

Recommendation 18.4

The State Government actively monitor the issues surrounding the introduction of new generation aircraft.

18.2.4 Cargo Terminal Operation

Air cargo terminal operations are a vital part of the provision of an efficient airfreight service.

Recently there has been a significant increase in service capacity with the establishment of Menzies and DHL freight operations at the airport. Further capacity improvements are planned by Qantas. This additional capacity is likely to be adequate only in the short term if medium term forecasts of exports from Victoria are realised.

Recent construction of the domestic express terminal has increased utilisation of the southern freight apron resulting in pressures on existing freighter bay capacity and concerns as to its adequacy.

The amount of storage capacity at ambient temperature, in cool-rooms and in chillers is currently inadequate to provide world standard food and perishable handling.

This capacity, especially cool-room storage, requires immediate and significant upgrade if current and future needs for quality supply and cool chain are to be met.

The improvement in supply chain management to reduce the time goods spend on the tarmac is also a key improvement which is required. While improved cool room facilities provide a degree of redundancy, best practice

supply chain management would reduce the need for enhancing cool room capacity.

Best practice is also vital for freight forwarders' perishable cargo, in having goods arrive at the airport in top quality condition.

From a perishable exports perspective, breaks in the "cold chain" are to a large extent symptomatic of a lack of focus on quality assurance across the entire supply chain (as opposed to the individual functions within the chain). The Federal and State Governments, in conjunction with the national network of air and sea freight councils, have identified a series of gaps in the logistics components of existing standards applicable to perishable commodities. This has promoted action to develop a National Export Logistics Framework (NELF) which will promote the adoption of performance-based standards for the logistics activities associated with perishable exports.

The introduction of NELF will need to be industry led and driven, with governments providing an important facilitation role, particularly in relation to strengthening the perceptions held by overseas customers that the "framework" of standards is supported by Australian governments.

Recommendation 18.5

Airport operators in conjunction with the Victorian Government:

a) Encourage the timely improvement of cargo terminal facilities, including increasing the number of freight docks and improving storage and cool room capacity available, at the airport; and

b) Review cool and cold chain process through freight terminals with the objective of establishing and implementing best practice.

Recommendation 18.6

The Freight Forwarding industry, in conjunction with the Victorian Government, review freight forwarding cool and cold chain process with the objective of establishing and implementing best practice.

18.3 Access of Aircraft

The free access of all types of aircraft to Melbourne Airport without restriction is an important competitive strength.

However aircraft should meet noise, pollution and other reasonable standards.

Federal Government moves to exclude Boeing 727 aircraft on the basis of noise attributes may have an impact on the operations of freight operators. Therefore this action needs to be implemented in a manner that allows freight operators to plan for the change.

Recommendation 18.7

A hand over period on “noise pollution” for Boeing 727s to be advocated by the Victorian Government, followed by application of international standards.

19 SEA FREIGHT AND PORTS

The Victorian Government must establish greater certainty in port development by articulating short and long term policies on the roles and directions of Victorian ports. The TDL sector believes that there is a pressing need for the Government to incorporate the ports interface into an integrated freight strategy rather than taking a piecemeal approach to strategic planning of the sector or failing to place decisions that affect port operations into a strategic context.

The sector is also convinced that the community does not understand the importance of ports and the Port of Melbourne in particular in the vitality and competitiveness of the Victorian economy.

They see a pressing need for the sea freight and ports sector and government to:

- Educate the community about the importance of PoM and regional ports; and
- To promote PoM's role in the Victorian economy.

The sector also believes that all industry stakeholders in the PoM need to establish a forum in which issues of joint concern can be aired and resolved.

Recommendation 19.1

The Victorian Government, in conjunction with the sea freight and ports sector, undertake an awareness and education program to increase community awareness of the role of the TDL sector and key infrastructure in Victoria's economic growth and employment.

Recommendation 19.2

Protection of the on going effective operation of Victorian ports by Victorian Government action, including legislation, to ensure the conditions for continuing unencumbered operation. These actions could include reservation of land bounding the ports and planning and land use legislation to prevent urban development from encroaching on the ports.

19.1 Heads and Channel Depth

Several studies (the Victorian Port Strategic Study (VPSS) and port authority forecasts) have anticipated an increase in vessel size servicing Victoria's trades to the Ports of Melbourne and Geelong, both in terms of bulk and containerised cargoes. At present however, the Port Phillip sea channels restrict the draught of vessels (the depth to which a ship is immersed in water) to 11.6m at any time, or 12.1m with the tide.

Ship operators (through the Australian Chamber of Shipping (ACOS)) have reinforced the views expressed in the VPSS that there will be an increasing demand for vessels drawing more than 12.1m draught. ACOS supports the forecast that loaded container vessels capable of utilising a draught of more than 12.1m will increase significantly within the next two decades. This will be caused by ship operators:

- Employing new, larger vessels designed specifically for the Australasian trades (already ship operators such as P&O Nedlloyd, are acquiring larger vessels that will utilise increased depth); and

- The "cascading" effect of the employment of existing vessels (around Panamax size of 3,500 TEU capacity) made available for deployment in the Australasian trades following re-tonnaging activities in the world's East-West shipping markets (where vessels over 4,700 TEU are now regularly employed).

The MPC has indicated that up to 20% of container vessels currently accessing the Port of Melbourne could utilise an increased draught, thereby allowing full rather than partial loading/unloading operations.

Industry members believe that Melbourne is foregoing revenue as a result of lack of adequate channel depth, in the case of Adelaide-bound containerised cargoes from Europe being discharged in Fremantle (instead of Melbourne) because of constraints caused by Melbourne's shallower draught.

In relation to bulk cargoes, AWB Limited (formerly the Australian Wheat Board) has indicated that it would prefer to load Panamax (50,000-70,000 deadweight tonne (dwt)) dry bulk carriers out of Victoria to provide more options for multi-port load and discharge. Ideally, an increase in draught to 13m would be necessary.

In addition the crude oil sector would benefit from being able to utilise larger vessels into the Ports of Melbourne and Geelong. The greater economies of scale offered by larger ships in this sector are becoming increasingly important, with both Shell and Mobil indicating that they would anticipate using larger crude oil lifts per voyage on a regular basis if the channels were made deeper.

Industry believes that lack of clear decision-making on channel deepening will have a detrimental impact on Victorian sea trade as shippers and ship

operators reorganise their operations and re-route cargoes on the assumption of continuing channel depth constraints. This could result in a reduction of the competitive strength of the Port of Melbourne in particular.

In line with the Minister for Ports' Agenda 2001 statements, the Victorian Channels Authority (VCA) is progressing an assessment of the feasibility of channel deepening in Port Phillip Bay and at the Heads. The initial stage of preliminary project feasibility studies includes evaluating the economic, technical and environmental impacts of channel deepening. These projects are well under-way and it is anticipated that the outcomes of these studies will be available to the Government in 2001.

The VCA is also progressing the development of a real-time dynamic under-keel clearance system. This computer-generated model approach to calculating maximum channel depths for individual vessels has the potential to reduce existing draught restrictions by 0.4m. This interim development has been welcomed by industry, and the VCA has been urged to introduce the system as soon as possible.

Industry fully supports the actions being taken by the Victorian Channels Authority (VCA), in conjunction with the Department of Infrastructure, to conduct the preliminary studies necessary to evaluate options for channel deepening. The industry has also welcomed statements by the Minister for Ports that the "analysis of Port Phillip's channels … will be crucial to the long term viability of the ports"[32].

How and by whom the capital expenditure on channel deepening will be borne (immediately and/or over time) is a critical issue. Some sector members believe that this major capital expenditure (crude estimates range from $100m to $200m) will increase freight costs and reduce the competitiveness of Victorian exporters if it is funded through an increase in user charges.

ACOS argues that the cost should be borne by the State Government as a return of dividends derived over time by the Government from the Melbourne Port Corporation (and its predecessor). The TDL sector considers that Port of Melbourne user charges should now be used to promote excellence in the provision of freight services and to facilitate trade.

Recommendation 19.3

In the event that the Victorian Channel Authority's analysis of the costs and benefits support channel deepening, the Victorian Government commit to the appropriate deepening of the heads and channels including the Yarra River.

[32] Ports Agenda 2001.

Recommendation 19.4

The Victorian Government review the financing of channel deepening with the objective of promoting freight transport excellence and facilitating trade.

19.2 Port of Melbourne

The Port of Melbourne (PoM) is Australia's primary container and general cargo port with $55 billion worth of trade annually including 40% of all Australian container traffic[33]. As Australia's premier multi-purpose port it also handles large volumes of bulk cargo including grains and minerals.

The PoM is a key element of Victoria's competitive advantage in Transport, Distribution and Logistics and in enabling the projected growth in Victorian import and export trade over the next ten years and beyond.

19.2.1 Requirement for a Third Terminal

The VPSS forecasts growth of international trade through Victorian ports will increase from 37 million tonnes per annum to between 80 and 120 million tonnes by 2030. Container movements are forecast to grow to between 3.7 and 5.7 million per year by 2030.

A range of growth and productivity forecasts are canvassed by the VPSS. A low productivity growth forecast suggests that if by 2010 overseas container traffic is 2 million TEUs per year, additional capacity based on additional terminals/berths at Webb and Victoria Docks and Westgate would be required. A high productivity growth scenario on the other hand suggests that between 2015 and 2020 capacity is forecast to be reached "under current operating efficiency and using existing terminal areas".

The VPSS forecasts for container traffic growth may be conservative if the government's target of tripling food and fibre exports from Victoria to $12 billion by 2010 including the growth in dairy exports, is achieved. Even higher growth from food and fibre exports would create capacity constraints sooner than forecast.

Some sections of the road freight sector, especially smaller operators with little or no market power, advocate the establishment of a third operator in the expectation that this will place increased competitive pressure on the existing operators.

The Melbourne Port Corporation believes that an additional terminal at Westgate provides additional choice for users. The added competition in terminal operations is expected to put downward pressures on price, improve

[33] Data from the Port of Melbourne Corporation.

service and increase innovation. The MPC, following Cabinet approval, has commenced the process to seek a developer/operator for the Westgate site. The initial expression of interest process has been completed and submissions are being considered.

It is argued by some industry participants that new port facilities, extension of common user berths and the establishment of a third major port operator are necessary to improve the capacity of PoM to meet customer needs.

On the other hand a number of TDL operators including some larger road freight operators, some VRTA members and significant TDL customers believe that a third terminal operator is not required and that a third operator would create greater congestion and increase logistical complexity at the PoM.

The existing stevedoring companies argue that the PoM has sufficient capacity to handle the forecast increase in trade which could be enhanced through:

- Increased capacity utilisation of both Patricks and P&O Ports terminals (currently at low levels as a result of on going improvements in both the crane and vessel handling rate[34]);
- Productivity improvements based on sophisticated use of information and communications technologies by terminal operators and transport operators; and
- Rationalisation of the management of cargo receiving and delivery at the PoM by promoting the use of 24 hours a day, 7 days a week by importers and exporters.

P&O Ports believe that additional container capacity can be provided, when required, through incremental expansion of existing facilities. They see this as a more economically efficient method of creating new capacity than a large additional investment in new terminal infrastructure.

The TDL sector requires the Victorian Government to balance the benefits of competition that actually accrue from the establishment of a third operator with the opportunity cost of its support to a third operator. P&O Ports believe that a detailed systematic review is required of the benefits and costs (including increased costs due to a reduction in scale economies) of the establishment of a third terminal

[34] Submissions from P&O Ports indicate that “berth utilisation at the Swanson dock terminals is nowhere near 50%”.

Recommendation 19.5

That the Victorian Government continue to pursue the current Cabinet approved process for examining the establishment of a third terminal operator in the Port of Melbourne with the objective of responding to the price, quality, choice, innovation and capacity demands of domestic and international trade.

19.2.2 Intermodal Interchange

Whatever the decision on the need for a third terminal operator at the PoM, the volume of trade through the PoM will increase substantially over the next ten years and beyond, requiring strategic actions to reduce the impact of this trade on communities around the port and on metropolitan Melbourne in general.

It is suggested that improvements in the efficiency of the handling of the large and growing number of containers through the port can be achieved through improved intermodal interchange.

However the significant cost of handling containers between modes, especially between rail and road, requires that careful research and analysis of possible intermodal arrangements must be undertaken.

Actions discussed in other sections of this paper and of high priority for the PoM include:

a) The use of rail as an alternative to road movements including:

   i) Improving and increasing the capacity of existing rail facilities;

   ii) Establishing direct rail access as a priority to West Swanson Dock ,Victoria Dock, Webb Dock and to the Westgate site; and

   iii) Examining the viability of container shuttle services to suburban intermodal terminals and to regional intermodal hubs in order to review impacts on local communities and avoid shifting the problem elsewhere.

b) Improved utilisation of trucks (reduction of empty running) and management of truck movements to and from the port including improvements in the time slotting of trucks and reducing queues;

c) The establishment of regional intermodal hubs; and

d) Infrastructure improvements including:

i) Completion of the Docklink Road extension;

ii) Grade separation of Footscray Road and rail crossing into the PoM; and

iii) Yarra River rail crossing to Webb Dock.

19.2.2.1 Container Parks and Freight Services

Road transport operators report considerable difficulties and delays accessing container parks and getting the correct containers.

The location of container parks are in some cases far removed from the PoM requiring considerable time delivering and picking up containers and increasing the volume of trucks on the road running empty.

The MPC also believes that efficiency of the PoM can be enhanced by improved proximity of port related services including freight forwarding and warehousing and logistics providers.

Recommendation 19.6

The Victorian Government:

a) Facilitate the development of new container parks and port related services in proximity to the PoM and at strategic remote locations; and

b) Examine container park requirements arising out of container movements via rail shuttle to metropolitan locations.

19.2.2.2 Food Grade Containers

The Victorian TDL sector has inadequate access to food grade containers for export of regional food produce.

Shipping lines currently do not see the provision of food grade containers to Victoria as a priority, citing greater demand and need elsewhere in the world.

If the Victorian Government's objective of increasing the export of produce is to be achieved there will need to be a significant increase in the availability of these containers.

Recommendation 19.7

Key TDL sector parties coordinate with the Victorian Government to review the need for food grade containers in the context of predicted food produce exports and negotiate with shipping lines to increase the provision of these containers through the PoM.

19.3 Port of Geelong

The Port of Geelong is located on Corio Bay, seventy five kilometres south west of Melbourne. It is the largest regional Victorian port with approximately a quarter of the state's annual port throughput[35].

Toll manages Geelong Port and handles a wide range of imports and exports including crude oil and petroleum products, bulk and bagged grain, woodchips and fertiliser raw materials.

The Port of Geelong requires improved road access in the North Shore/Lascelles Wharf area.

In order to expand rail freight from a greater proportion of the Victorian rail network into the Port of Geelong, extension of the standard gauge rail network into Lascelles Wharf, Corio Quay and VicGrain is required.

19.4 Port of Hastings

The Port of Hastings currently operates two marine tanker terminals, two berths handling steel cargoes and provides other anchorages.

The Port has ready access to shipping lanes and channel depths that are greater than other Victorian ports.

It is located sixty kilometres south east of Melbourne and is served by large areas of undeveloped land.

The Port of Hastings is mooted as a new container port to meet the excess demand at the PoM envisaged by 2020. The ACOS and a wide range of TDL operators believe that this should only be considered if all development possibilities within the environs of PoM are exhausted.

ACOS cites additional rail or road freight costs as mitigating against the viability of Hastings as a new container port.

[35] Victorian Port Strategic Study (VPSS), January 2001, p. B67.

The MPC believes that any decision on the future role of the Port of Hastings should be based on an assessment of the economic, environmental and social implications of post Westgate development at Melbourne or Hastings.

The sector has identified the need for immediate land reservation for transport infrastructure if the Port of Hastings is to be seriously considered.

19.5 Port of Portland

The Port of Portland is primarily a bulk port moving a range of commodities that include grain, aluminium ingots, fertiliser, timber products and livestock. Port of Portland will remain a bulk-handling port although there may be an opportunity for establishing a small niche market for containers.

Volume of trade through the Port of Portland is expected to double over the next thirty years. With the most significant growth to occur around 2009 when harvesting of blue gum woodchips is expected to commence.

There is a need to improve roads to the North West of Portland that provide important connections to the South Australian sector of the Green Triangle Region.

Road access to the hinterland north of Portland is a significant issue including the need to identify the most appropriate strategic linkage to the area around Edenhope and upgrading of the Condah-Coleraine Road.

Rail gauge standardisation and the viability of re-opening the Heywood-Mount Gambier line are significant rail issues in relation to the Port of Portland.

Standardisation of the North West Victorian broad gauge rail network would improve access to the Port of Portland thereby improving the Port's ability to compete for future trade opportunities such as mineral sands.

Re-opening the Heywood-Mount Gambier line could help extend the Port's rail catchment into the Green Triangle Region.

Local access is a significant issue, with seasonal peaks causing congestion at the entrance to the Port. Long term planning and development of the Port is an important aspect of this issue, including improving local road access and port management.

19.6 Shipping

The shipping industry comprises shipowners and operators, ship managers, ship brokers and charterers and tug operators.

Melbourne has emerged in recent years as a major shipping market with the international shipping industry regarding it as one of the major bulk shipping

markets. Recently coastal shipping between domestic Australian ports has been increasingly recognised as a cost-effective environmentally sustainable alternative to road.

The shipping industry in Victoria is a major and significant part of this State's trading community. A vast majority of the approximately 40 bulk ship operators in Australia have established their headquarters in Melbourne.

Australia is becoming increasingly important as a chartering market with Melbourne being in the top five of the global chartering centres, behind London, Piraeus, Oslo and New York.

Melbourne also has a major marine insurance presence and leading law firms competing for a slice of the maritime law market.

The expansion of shipping activity in Victoria indicates that there is a competitive advantage for Victoria in this area of commercial activity.

Flow-on benefits to other parts of the TDL sector are likely to accrue from further consolidation and strengthening of the operational focus of the shipping sub sector in Melbourne.

Recommendation 19.8

The shipping sector and the Victorian Government consider means of promoting the use of the sector including attracting Australian and international shipping companies to establish head and regional head offices in Melbourne.

20 CONCLUSION

The role of the Transport, Distribution and Logistics sector, in enabling economic activity cannot be overstated.

The functioning of the Transport, Distribution and Logistics sector is substantially influenced by the infrastructure available to it. Decisions made relating to that infrastructure will continue to have a marked influence on the quality of service it can provide.

However, there remain many significant areas of activity that are not dependent upon decisions about the infrastructure, which go instead to the heart of how the sector does business.

The Victorian sector sees a unique opportunity for Victoria to be the supply chain gateway of Australia because of its strategic location and because of Victoria's high quality infrastructural assets.

The sector's vision of Victoria as the Australian focus for TDL best practice is primarily about the effectiveness of the whole supply chain involved in the freight task.

Victorian TDL companies and their industry associations believe they already offer an excellent integrated service which sets the Victorian sector apart from other states.

This competitive advantage should be built upon.

Building on this competitive strength involves a clear focus on training in total logistics; the development of career paths within the industry; the building of supply chain partnerships through the creative application of all forms of communication but especially electronic flows of data; and growth of new ways of doing business that involve the establishment of best practice distribution centres and the most appropriate use of all modes of transport.

It is in this context therefore that this report addresses on infrastructural issues as well as the many business factors that influence the growth and development of this service sector.

The Victorian Government has a key role to play in establishing the conditions for effective competition and providing strategic support to the sector.

APPENDICES

APPENDIX 1

List of TDL Sectoral Reference Group Members

Name	Position	Company
Len Elliss	Victorian President	Australian Federation of International Forwarders
Caroline Ingvarson	Manager, Transport & Distribution	Department of State and Regional Development
Steve Maloney	Gateway Manager, Victoria	DHL International (Aust) Pty Ltd
Mike Houston	General Manager, Access	Freight Australia
Marinus van Onselen	Chief Executive	Freight Australia
David Doherty	National President	Logistics Association Australia
Jim McGrath	Victorian Secretary	Logistics Association Australia
Mick Cottrell	Victorian Branch Secretary	Maritime Union of Australia
Chris Barlow	Chief Executive Officer	Melbourne Airport
Warren Mundy	Manager, Strategy	Melbourne Airport
Nick Easy		Melbourne Port Corporation
John Riley	Manager, Port & Planning	Melbourne Port Corporation
Steven Thacker	Group Manager, Logistics	Simplot Australia Pty Ltd
Barry Keogh	Melbourne Manager	Tradegate ECA
Cathy Thawley	e-commerce Business Adviser	Tradegate ECA
Ian Hundley	Research Officer	Transport Training Victoria
Ian McMillan	Executive Officer	Transport Training Victoria
Maria Abate	Research Assistant	Transport Workers Union
Graeme Burgess		Transport Workers Union
Bill Noonan	State Secretary	Transport Workers Union

Name	Position	Company
Neil Chambers	Chief Executive	Victorian Seafreight Industry Council
Peter Knowles	Director	VRTA
Philip Lovel	Executive Director	VRTA

APPENDIX 2

List of TDL Public Forum Attendees

Name	Position	Company
Bruce Holmes	Managing Director	A.R.N. Logistics Pty Ltd
Bill Cain	Managing Director	Air Cargo Australia
Brad Voss	Government & International Specialist	Ansett Australia
Frank Filia	Manager, Cargo Terminal Operations	Ansett International Ground Services
Barry Harvey	Managing Director	Austco Enterprises
David Hill	Research Officer	Australasian Railway Association Inc
Allen Buckley	Chief Executive Officer	Australian Air Express
Phillip Edgley	Chairman, Victorian Section	Australian Chamber of Shipping
Len Elliss	Victorian President	Australian Federation of International Forwarders
Frank Beaufort	Chairman	Australian Institute of Export
Julian Barson	Managing Director	Australian Personnel Solutions
Harry Goodon	Secretary	Australian Road Transport Suppliers Association
Lachlan Payne	Chief Executive	Australian Shipowners Association
John Bolton	Director, Sales & Marketing	Australiawide Loading
John Williams	Managing Director	Australiawide Loading
John Crosbie	General Manager, Supply Chain Management	AWB Limited
Roger O'Donnell	Manager, Land Transport	AWB Limited
Shane Moloney	Manager, Victorian Logistics	BHP Transport Pty Ltd

Name	Position	Company
Kim Sweeny		Centre for Strategic Economic Studies, Victoria University
Tom Ingledew	Manager, Transport & Logistics	Chalmers Industries Pty Ltd
Bill Harris	General Secretary	Chartered Institute of Transport
Margaret Starrs	General Committee Member	Chartered Institute of Transport
Wilson Turnbull	Economic Development Coordinator	City of Wyndham
Greg Lucas	Transport Manager	Clelands Cold Stores
Frank Salvatore	State Manager	CRT Group
Michael Bragg	Logistics Manager	CSL Limited
Jo Prior	Regional Manager, Victoria	Customs Brokers & Forwarders Council of Australia Inc.
Drazen Basar	Member	Customs Brokers & Forwarders Council of Australia Inc.
Gary Dennis	Airfreight Manager, Exports	Danzas Pty Ltd
Leo Hammett	Senior Consultant	Dawson Consulting
Anya Richards	Economist, Ports & Marine	Department of Infrastructure
Douglas Shirrefs	Senior Economist, Ports & Marine	Department of Infrastructure
John Naughtin		Department of Natural Resources & Environment
Steve Maloney	Gateway Manager, Victoria	DHL International (Aust) Pty Ltd
Rob Turner	Sales Manager, Victoria & Tasmania	DHL International (Aust) Pty Ltd

Name	Position	Company
Ron Finemore	Executive Chairman	Finemore Holdings Ltd
Richard Pierse	Managing Director	Free Rain Concepts Pty Ltd
Mike Houston	General Manager, Access	Freight Australia
Marinus van Onselen	Chief Executive	Freight Australia
David Vendy	Business Manager, Bulk & Interstate	Freight Australia
Hermoine Parsons	Fresh Chain Project Manager	Fresh Chain
Ewan Waller	Chief Executive Officer	Gippsland Ports
Alan Marazita	Director, Victoria & South Australia	Hellman Worldwide Logistics
Nigel d'Souza	Chairman	Institute of Chartered Shipbrokers
Steve Rendall	Committee Member	Institute of Chartered Shipbrokers
Michael Griffiths	National Operations Manager	K & S Freighters
Ken Newton	State Manager, Victoria	K & S Freighters
David Doherty	National President	Logistics Association Australia
Jim McGrath	Victorian Secretary	Logistics Association Australia
David Stevens	Managing Director	McColls Transport Pty Ltd
Rosie Watts	Cargo Manager, Victoria & Tasmania	Malaysia Airlines
David Cushion	Assistant Secretary	Maritime Union of Australia
John Higgins	Deputy Secretary	Maritime Union of Australia
Chris Barlow	Chief Executive Officer	Melbourne Airport

Name	Position	Company
Warren Mundy	Economics Manager	Melbourne Airport
Neil McPherson	Business Development Manager, Bulk & General	Melbourne Port Corporation
John Riley	Manager, Port & Planning	Melbourne Port Corporation
James Francis	President	Metropolitan Express Delivery Industry Association
Alison Buxton	eCommerce Project Team Marketing Group	MPG Logistics Pty Ltd
Graeme Walker	Manager, Corporate Business Development	MSAS Cargo International
Paul White	Director, Operations	National Road Transport Commission
Ross Ellis	Manager, Member Services	NatRoad Ltd
Graham Rogerson	General Manager	P & O Cold Logistics
Tim Blood	General Manager, Container Handling, Australia & New Zealand	P & O Ports
Doug Schultz	Manager, Container Handling, Victoria	P & O Ports
John Beggs	National Logistics Manager	Pacific Network Cargo
Geoff Hartley	Business Development Manager	Phillips Transport Pty Ltd
Keith Ross	General Manager, Business	Prixcar Service Pty Ltd
Robert Lugton	Manager, Melbourne Freight Terminal	Qantas Airways
Trevor Newnes	Freight Sales & Service Manager, Victoria & Tasmania	Qantas Airways
Ray Brooks	General Manager	Ray Brooks Pty Ltd
Peter Lo	Logistics Manager	Robert Bosch Australia

Name	Position	Company
Robert Hobbs	Managing Director	Robert Hobbs Research & Technology Pty Ltd
Maurie Considine	Director	Secon Carriers
Steven Thacker	Group Manager, Logistics	Simplot Australia Pty Ltd
Lindsay Johnson	District Sales Manager, Cargo	Singapore Airlines
Peter Pisalidis	National Manager, Strategic Alliances	Skilled Engineering Limited
Jim McCormack	Executive Officer	Tasmania Export Council
Philip Peterson	Chairman	Tasmania Export Council
Howard Critchley	Logistics Director	TNT Australia
David Kenwood	Property Manager	Toll Geelong Port & Toll Westernport
Cathy Thawley	e-commerce Business Adviser	Tradegate ECA
Ian Hundley	Research Officer	Transport Training Victoria
Ian McMillan	Executive Officer	Transport Training Victoria
Di Williams	Associate Director, Engineering	Victoria University
Roger Mould	Executive Director, Grains Group	Victorian Farmers Federation
Neil Chambers	Chief Executive	Victorian Sea Freight Industry Council
Peter Knowles	Director	VRTA
Philip Lovel	Executive Director	VRTA
Ken Wakefield	General Manager	Wakefield Transport
Don Gibson	Chairman	West Coast Railway
David Ralph	Director of Logistics	WishList.com.au
Justine Linley	bizEwest Project Manager	WREDO
Barbara McLure	Executive Director	WREDO

APPENDIX 3

STRUCTURE OF THE TDL SECTOR

An efficient TDL sector is essential to the functioning of all other sectors of the economy by linking raw materials and intermediate and final goods from point of origin through production or further processing to point of sale or consumption.

It is therefore a strategically important service sector for the growth of Victorian business and jobs.

Road Freight Transport

Road freight transport is segmented into long distance interstate (21%), long distance intrastate (23%) and short distance road freight (56%)[36]. It also includes a growing contract distribution and logistics sector.

It contains a large number of small and medium sized businesses, including small transport operators and owner-drivers that account for over 80% of the market turnover[37].

It also contain a small number of large companies namely Brambles, Mayne Nickless, Finemores and Toll that have a pivotal road in the provision of road freight services.

Fierce competition in general freight (based on service and reliability) keeps prices down and margins small. Small operators are able to establish themselves relatively easily producing strong competition.

Operators are focused on cost control, especially in relation to wages and fuel costs. This cost focus has in some quarters been to the detriment of the use of technologies and systems that would promote competitiveness through greater efficiency.

Road Freight Forwarding

Freight forwarders act as prime contractors to shippers to provide a total transport service including pick-up, consolidation, transport over line-haul, deconsolidation and delivery.

Shippers use freight forwarders to provide a total transport service instead of establishing an in house transport capability or contracting the line haul task to a trucking operator.

[36] Ibis.
[37] Ibid.

Freight forwarding tends to be competitive when the transport service is provided over a long distance, where loads are less than 100kg and where loads are able to consolidated.

It is common for freight forwarders to sub contract the pick up, delivery and line haul tasks to fleet operators and owner-drivers.

Two distinct markets exist in the road freight forwarding segment:

- General freight forwarding – where demand is primarily from manufacturing and trade sectors (mainly imports); and
- Express freight forwarding – where demand is primarily from the finance, property and business services sectors.

The major road freight-forwarding operators account for approximately 30% of industry turnover and are Toll Holdings, Mayne Nickless, Linfox, Finemores and K&S Corporation[38]. These large operators provide national freight forwarding involving extensive management and logistics systems and delivery fleets.

They tend to be more competitive than smaller operators because they are able to reap economies due to better vehicle associated with:

- Greater volumes for consolidation.
- Better directional balance between capital cities.
- Better mix of high and low density freight.

70% of interstate freight forwarding is controlled by the 3 largest companies with approximately 50% by road and 50% by rail[39].

Services to Road Transport

Services to road transport facilitate the throughput of container traffic in Australian ports including:

- Provision, handling and transporting containers.
- Parking excess containers.
- Refurbishing containers.

The main operators are Conaust (P&O), EA Rocke (Mayne Nickless), Owens and Chalmers.

[38] ibid.
[39] ibid.

Rail Freight Transport

This is comprised of the State Rail Authorities and private companies such as Freight Australia and Australian Rail Road Group operating on the intra-state networks and the National Rail Corporation and a number of private companies competing with the National Rail Corporation in limited segments. These private companies include Specialised Container Transport (SCP), Toll, Patricks and Austrac.

The main segments are:

- Bulk rail freight including the transport of coal, grains, minerals, petroleum (mostly for export) and cement and steel (mostly for domestic usage).
- General rail freight.
- Containerised rail freight running mainly interstate.

The main competition in this area of non-urgent freight provided by rail is from road and coastal shipping.

Rail Freight Forwarding

Similar to road, rail freight forwarders provide a total transportation service to shippers.

The main rail freight forwarders are TNT, Mayne Nickless, Brambles Freight, Toll Express and K&S Freight.

50% of interstate freight forwarding is by rail and the four largest rail freight forwarders control 70% of this business[40].

There is currently and in the future there is likely to be insufficient rail freight forwarding to support more than a few large, more efficient operators.

Domestic Air Freight

The vast majority of domestic airfreight is carried by scheduled passenger flights in wide bodied aircraft providing air cargo space as a by-product of the passenger service.

Although domestic airfreight carries only 2% of total non-bulk domestic freight[41] it carries a considerably greater proportion of the total value off freight carried.

[40] ibid.
[41] ibid.

Airfreight is segmented into:

- Next day delivery – lower priority freight to be delivered sometime in the following day and carried largely on scheduled flights.

- Overnight freight– urgent delivery freight frequently carried on a dedicated aircraft.

Qantas and Ansett Airlines account for over 80% of domestic airfreight turnover[42].

Both of these airlines have freight forwarding operations.

- Qantas and Australia Post operate Australian Air Express with Qantas providing line haul services on scheduled daily domestic flights and Australia Post courier providing door to door pick up and delivery services.

- Ansett operations are managed by TNT and offer line haul and integrated air and road express door to door services.

BOC Distribution Services have established an independent air cargo-handling terminal at Melbourne airport competing with Ansett and Qantas.

International Air Freight

As is the case with domestic airfreight, international airfreight is a by-product of passenger air transport with 20% of international airline turnover being produced by international airfreight.

The use of airfreight has been vital in the successful export of high value, low density products and time sensitive and perishable good where exporters trade off air freight costs against inventory cost.

The main international airfreight companies operating out of Australia are Qantas (38% market share), Air New Zealand (10%), Singapore Airlines, United, and Cathay Pacific together accounting for 63% of market share.

Services to Air Transport

The relevant elements of this segment are the operation of civil airports and the provision of air navigation services.

The major companies providing these services are Airservices Australia, the Federal Airports Corporation (FAC) and the Civil Aviation Safety Authority (CASA).

[42] ibid.

International Sea Transport

This sector is comprised of:

- Liner (container) shipping with approximately 60% of total sea freight and predominantly imports.

- Bulk shipping (32%) – mostly commodities exports of cereals and minerals – dry bulk and tankers.

The main Australian operators are BHP Transport, P&O Shipping, Australian River Co and Blue Star representing 61% of sector turnover[43].

Australian flagged shipping share of international sea transport by value is small with approximately 7% of exports and 9% of imports[44]. Australian ships experience strong competition from flag of convenience ships because of their generally higher cost structure.

There is very little competition between Australian flagged ships because the owners tend also to be owners of the cargo (ie BHP Transport).

Coastal Sea Transport

Coastal shipping is used for long haul tasks. It represents 30% of net tonne kilometres transported.

The main operators, accounting for 60% of turnover are BHP Transport (feeding steel mills in Westernport Bay) with most cargo being of own account; Brambles Shipping (primarily between Melbourne and Burnie), Coastal Express Line (primarily between Melbourne and Tasmania) and TT Line (Bass Strait Ferry).

Bulk sea cargo transport (88% of total volume) is primarily of materials for the iron and steel, aluminium and petroleum industries.

Non bulk (containerised) sea transport is mainly cargoes to and from Tasmania.

[43] ibid.
[44] ibid.

Main areas of coastal shipping activity in Victoria are:

Dry Bulk	- alumina from Portland
Liquid bulk	- crude oil from Westernport - petroleum products from Melbourne and Geelong
Non Bulk containerised	- Tasmania to Melbourne (27%) - Melbourne to Tasmania (18%)
Other	- iron/steel Pt Kembla to Westernport - manufactures Melbourne/Tasmania

Australian coastal trade is reserved for Australian controlled and crewed ships under the system of cabotage.

Port Operators

In Victoria the major operator is Melbourne Port Corporation with other Port Authorities in regional areas.

Services provided by port authorities include:

- Providing and allocating port infrastructure services such as channels, breakwaters navigation aids and berths
- Safety regulation
- Port promotion
- Cargo handling
- Pilotage and towage

Water Transport Terminals

The major public terminals operating in Victorian ports are multi purpose, handling general cargo, container traffic, and breakbulk cargo and bulk commodities.

Private terminals are owned by shipping companies including P&O Australia, Overseas Containers Australia (OCAL) and Associated Container Transportation Australia (ACTA).

Portland and Geelong terminals handle bulk grain.

Stevedoring

Conventional stevedoring involves the loading and unloading of vessels and the storage of cargoes. They operate from common user facilities owned by the port authority and provide labour and equipment to load or unload vessels.

Terminal stevedoring for containers incorporates the conventional role but also includes the management of rail and road interfaces – ship to shore, shore to stack and from stack to land transport.

Terminal stevedoring is highly capital intensive requiring specialised berths, portainer cranes and specialised ramps.

Stevedores handle bulk cargo (25% of stevedore revenue) and containers (75%).

The major operators are P&O (Conaust), Patrick Stevedoring, FG Strang and Producers and Consumers Stevedores.

Storage

Warehousing and Cold Storage

The industry is segmented into general warehousing (71%) and cold storage (29%), providing services primarily to manufacturing and wholesale trade (60% of the market.

The largest five firms (Linfox, P&O, Finemores, Mayne Nickless and Clelands) hold around 40% market share[45].

The general warehousing segment is comprised of a large number of smaller enterprises providing more domestically oriented services and is highly competitive.

Around 18% of industry turnover are derived from exports.

Grain Storage

The industry is segmented into grain storage (50%), grain silo operations (25%) and grain elevator operations (25%). In Victoria, wheat is the highest produced grain, followed by barley and oats.

Industry concentration is high, with four firms servicing 80% of all grain handling with the possibility of further mergers in the future.

GrainCorp competes to service businesses within South Australia and New South Wales.

[45] ibid.

In 1996, the Victorian Government deregulated the storage of export grain. Previously, export grain was moved entirely by rail transport. The move resulted in the formation of larger, centrally located silos and reduced reliance on rural silos.

Transport issues influence the profitability of producers, as speed of delivery determines grain quality and repeat purchase. Access to efficient road and rail transport is vital, allowing delivery to ports and storage facilities, particularly as 20% of Victoria's storage capacity is at its ports.

Intermodal integration is vital to prevent double handling of loads. Double handling can also affect grain quality, as insect infestation can occur.

APPENDIX 4

LIST OF ABBREVIATIONS

24/7	Twenty Four Hours, Seven Days a Week
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACOS	Australian Chamber of Shipping
ACS	Australian Customs Service
AQF	Australian Qualification Framework
AQIS	Australian Quarantine Inspection Service
ARTC	Australian Rail Track Corporation
ATO	Australian Taxation Office
B2B	Business to Business
B2C	Business to Consumer
CFC	Cargo Facilitation Committee
CMR	Cargo Management Re-Engineering
CRC	Cooperative Research Centre
DC	Distribution Centre
DoI	Department of Infrastructure
DSRD	Department of State and Regional Development
EDI	Electronic Data Interchange
GPS	Global Positioning System
GSP	Gross State Product
HR	Human Resources
IT	Information Technology
ITS	Intelligent Transport System
LAA	Logistics Association of Australia

MPC	Melbourne Port Corporation
NELF	National Export Logistics Framework
NRTC	National Road Transport Commission
OH&S	Occupational Health and Safety
ORG	Office of the Regulator General
ETTE	Office of Employment, Training and Tertiary Education
PoM	Port of Melbourne
RTO	Registered Training Organisation
SAVI	Strategic Audit of Victorian Industry
SCM	Supply Chain Management
SME	Small and Medium Sized Enterprises
SRG	Sectoral Reference Group
STB	State Training Board
STS	State Training System
T&D	Transport and Distribution
TDL	Transport, Distribution and Logistics
TEU	Twenty Foot Equivalent Unit
TTV	Transport Training Victoria
TWU	Transport Workers' Union
VCA	Victorian Channels Authority
VPSS	Victorian Port Strategic Study
VRTA	Victorian Road Transport Association
VSFIC	Victorian Sea Freight Industry Council
WAP	Wireless Application Protocol

APPENDIX 5

GLOSSARY OF TERMS

B2B

Business to Business (on-line commerce).

B2C

Business to Customer (on-line commerce).

B-DOUBLE

Articulated trucks pulling two trailers.

BENCHMARKING

The practice whereby companies compare their performance in a variety of different management and manufacturing fields with that of other companies.

BEST PRACTICE

The set of operations achieving world-class results in quality and customer service, flexibility, timeliness, innovations, cost, and competitiveness, especially from the cooperation of management and employees in all key processes of the business.

CHAIN OF RESPONSIBILITY

Chain of Responsibility provisions are being developed for the road freight sector by the National Road Transport Commission and VicRoads as part of a more formal recognition of the importance of the attitudes and behaviour of all parts of the supply chain.

Within the Chain of Responsibility provisions all those who are responsible for conduct that affects compliance with road transport laws are to be made accountable for failure to properly discharge their responsibility.

CONTAINER PARKS

Locations where empty containers are held for cleaning, maintenance and later use.

COOL AND COLD CHAIN PROCESS

All elements of the freight task involving the movement of goods that require cooling and/or refrigeration.

DEDICATED AIRFREIGHT OPERATORS

Air freight operators who carry only freight and not passengers.

DEMONSTRATION PROJECTS

Activities undertaken by a company or organisation, supported by industry and government, to provide real working examples of Best Practice operation.

E-COMMERCE

The conducting of business communication and transactions over networks and through computers. As most restrictively defined, electronic commerce is the buying and selling of goods and services, and the transfer of funds, through digital communications.

E-FULFILLMENT

The specialist means of delivering goods purchased via the Internet.

E-TAILING

On-line retailing.

ELECTRONIC DATA INTERCHANGE

The exchange of standardised document forms between computer systems for business use.

GLOBAL POSITIONING SYSTEM TRACKING

A navigational system which relies on information received from a network of satellites to provide the latitude and longitude of an object.

GREENHOUSE GAS EMISSIONS

Nitrogen Dioxide, Sulphur Dioxide, Carbon Monoxide.

IN-BOND FACILITIES

Place where goods normally subject to tariffs or other import restrictions are processed or transformed in a secure environment for export.

INDUSTRY CODES LIST

Agreed codes for use in electronic transactions to represent popular actions or outcomes.

INTELLIGENT TRANSPORT SYSTEMS

Computerised traffic control systems that communicate information back and forth between the road and traffic control with the aim of enabling users to make more informed choices and better use of roads.

INTERMODAL

The integration of different modes of transport including the coordination of road and rail systems, and the use of sophisticated information and management systems that closely link all elements of the supply chain and terminal and depot facilities.

JUST IN TIME MANUFACTURING

Just in Time manufacturing is a systems approach based on the total elimination of waste. Only the required amount of equipment, resources and labour are made available for the time required to complete the job. Just in Time manufacturing is based on producing only the necessary quantities of necessary units at the necessary time by bringing production rates exactly in line with market demand.

LIVE MONITORING

Monitoring activity as it occurs.

LOGISTICS

That part of the Supply Chain process that plans, implements and controls the effective flow and storage of goods, services and related information between the point of origin and the point of consumption, in order to meet customers' requirements.

MASS REQUIREMENTS

Vehicle weight and size regulations.

METRO STRATEGY

A Department of Infrastructure project which is currently developing strategies to ensure the efficiency of freight movements at local, regional, national and international levels while enhancing social and environmental qualities.

MICROBUSINESS

A single person business.

OPEN RAIL ACCESS

The ability to use the rail network by a range of rail freight providers.

OWNER-DRIVER

A driver of a transport vehicle as a truck, taxi, etc., who also owns the vehicle.

POINT-OF-SALE WAREHOUSING

Selling goods at the warehousing facility.

PUBLIC FORUM

Open meeting of businesses and individuals interested in the TDL sector.

RAIL SHUTTLE

The transportation of goods by rail from metropolitan depots for transport onto other modes.

REAL TIME TRAFFIC MANAGEMENT

Management of traffic flows based on the use of live information.

REGIONAL HUB

A centre of intermodal transport activity in a regional area.

REGISTERED TRAINING ORGANISATION

A private sector organisation accredited by government to provide training services.

ROUNDTABLE

A number of persons assembled for conference or discussion of some subject, and considered as meeting on equal terms.

SECTORAL REFERENCE GROUP

Group of industry stakeholders providing information and advice on a day to day bases to the SAVI Team.

SUPPLY CHAIN

A supply chain is the network of facilities and activities that performs the functions of product development, procurement of materials from vendors, the movement of materials between facilities, the manufacturing of products, the distribution of finished goods to customers and after market support for sustainment. Since each link in the chain adds some value for the next link, the supply chain is sometimes referred to as a ‘value chain’. The links in the supply chain share data, have visibility of other parts of the network and have a common motive to serve the end customer. They can coordinate plans and

decisions so the supply chain operates as an integrated network and services the end customer effectively and efficiently. An objective of good SCM is to plan and coordinate all the activities in the supply chain so that it achieves high levels of customer service while keeping cost low.

SUPPLY CHAIN MANAGEMENT

Supply Chain Management is the integration of key business processes from end user through original suppliers that provide products, services and information that add value for customers and other stakeholders.

VALUE ADDING

Actions that increase the value to the client of a product or service.

VEHICLE BOOKING SYSTEM

System used at the PoM to coordinate the setting down and picking up of goods by road transporters.

VIRTUAL WAREHOUSING

The transport of goods in a timely manner through effective use of information and communication technologies, so no physical warehousing is required.