FREIGHT LOGISTICS IN AUSTRALIA
AN AGENDA FOR ACTION

May 2002

Prepared for the freight logistics industry by the Industry Steering Committee of the Freight Transport Logistics Industry Action Agenda

Endorsed by the freight logistics industry and its stakeholders on 26 March 2002

VERSO

LETTER OF TRANSMITTAL

FREIGHT TRANSPORT LOGISTICS INDUSTRY ACTION AGENDA INDUSTRY STEERING COMMITTEE

The Hon. John Anderson MP
Minister for Transport and Regional Services
Parliament House
CANBERRA ACT 2600

Dear Minister

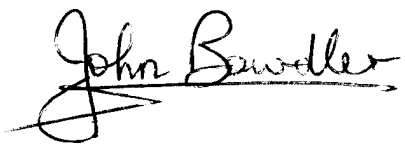
On behalf of the Industry Steering Committee for the Freight Transport Logistics Industry Action Agenda, I have pleasure in presenting you with our final report.

The Action Agenda process provided the freight logistics industry and the users of its services with an invaluable opportunity to examine the factors most critical to the industry's future. It enabled the industry to be pro-active in proposing a comprehensive suite of actions to improve the competitiveness of one of the most influential parts of the economy, and establish a new basis for effective relationships across the industry and with governments.

Developing the Action Agenda involved wide consultation with industry representatives (both providers and users of logistics services), governments at all levels, stakeholders such as education providers and professional experts in the field of logistics. The circulation of a *Consultation Draft* of this report in October 2001, and a further draft for the Industry Leaders Roundtable in March this year, resulted in further inputs which are reflected in this report.

To prepare the Action Agenda, a substantial commitment was required from Steering Committee members, the secretariat provided by your Department and the many other participants from industry, the education and training sector, and governments. As Chair of the Steering Committee, I record my thanks for these significant contributions.

Yours sincerely



John Bowdler
Chair, Industry Steering Committee

30 May 2002

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STATEMENT OF INDUSTRY COMMITMENT

The freight logistics industry is crucial to the efficient operation of the Australian economy. Freight logistics involves the movement, storage and handling of goods and materials across the entire logistics chain, from producer to consumer, from point of origin to final disposal.

Australians rely on the freight logistics industry to facilitate our domestic and international trade, and in doing so, the industry makes an important contribution to Australia's standard of living.

Significant efficiencies and economies can be gained through a more sophisticated approach to the movement of freight between and within the transport modes, and through more integrated interaction of the transport network within the broader logistics system.

This Action Agenda provides a blueprint for improvements to the operation of the freight logistics industry that will have wide-ranging implications. Implementation of the Action Agenda will help accelerate economic growth, reduce waste and transport congestion and emissions, improve transport safety and provide new opportunities for regional development.

Our mission is:

The Australian Freight Logistics Industry:
providing the will and means to trade anywhere, anytime

In this Action Agenda, the freight logistics industry, working in partnership with users of logistics services and governments, commits itself to:

- establish a unified and collaborative approach for the industry, by the industry;
- cooperate closely with governments to develop a strategic framework for freight logistics decision-making;
- promote the industry as a:
  - key economic activity
  - global industry with a local touch
  - smart industry with excellent career opportunities
- invest in our people through formal and informal education and training, and facilitate cross-fertilisation of ideas and knowledge throughout the industry.

The Action Agenda provides the framework for cooperative delivery on this commitment over the next three years.

EXECUTIVE SUMMARY

BACKGROUND

Freight logistics is the sourcing, purchasing, packaging, transporting, storage, and delivery of freight around Australia and the world. Few Australians understand its significance in their daily lives, its economic importance and the complexities involved in coordinating what seem to be relatively simple tasks.

Efficient and effective logistics are accepted as essential to a firm's competitive position. National governments now also recognise the importance of logistics policy in improving national competitive advantage.

On 24 May 2000, the Federal Government announced that the Deputy Prime Minister and Minister for Transport and Regional Services, John Anderson, would be responsible for developing a Freight Transport Logistics Industry Action Agenda during 2000–01. Action Agendas are designed to build a dynamic partnership between industry and government in order to achieve the common goal of sustainable economic growth in a global environment.

This Action Agenda explores the future for logistics and its potential influence on the Australian economy. It focuses on the national freight logistics industry, but recognises also the important role of in-house logistics professionals. The strategies these professionals adopt will continue to influence the future direction of logistics services in Australia.

The Action Agenda aims to:

- improve the relationship between industry and governments
- examine and capitalise on opportunities for growth
- generate the momentum for freight logistics firms, and their customers, to use their initiative to create a dynamic and internationally competitive freight logistics industry.

THE IMPORTANCE OF FREIGHT LOGISTICS

The Bureau of Transport Economics (BTE) conservatively estimates that in 1999–2000, freight logistics activities represented approximately nine per cent of Australia's gross domestic product (GDP)—or $57 billion. This is a broad estimate because it is difficult to determine the scope of increasingly complex freight logistics chains and the lack of industry data makes it difficult to quantify the sector's significance. But it makes the freight logistics sector one of the biggest sectors in the Australian economy.

The Action Agenda estimates that approximately $31 billion worth of freight logistics activities were performed in-house. The remaining $26 billion represented those activities performed by the freight logistics industry, comprising those firms providing freight logistics services to private and government customers. Services provided by freight transport logistics operators accounted for $23 billion while services provided by non-transport logistics operators totalled approximately $3 billion.

An efficient and effective logistics sector is vital to the economy because of its enabling effect. Freight logistics extends market reach by giving manufacturers access to a wider range of raw materials and supplies from different sources. It also provides consumers with access to a wider range of domestic and international goods and services, while reducing waste in production, consumption and capital expenditure.

Improved logistics practices can have a significant effect on a company's bottom line. Compass Logistics, Smorgon Steel and BHP Transport and Logistics are examples of Australian firms that have achieved better outcomes by adopting better logistics practices.

Compass Logistics improved its transport logistics performance by introducing co-delivery practices for three clients. This reduced its costs by 30 per cent while increasing service levels.

Smorgon Steel improved customer service levels from 80 per cent to 90 per cent; improved demand forecast accuracy from 70 per cent to 95 per cent; reduced its inventory by 5000 tonnes—producing a $3 million once off saving; and reduced its transport costs by $2 million per year.

BHP Transport and Logistics reduced several logistics chain costs by 10–30 per cent.

These improvements are consistent with overseas experience. For example, Sainsbury's, in the United Kingdom, achieved a 500 per cent return on investment in the first 24 months, and £7 million in stock savings per annum after adopting a collaborative logistics planning system in 1998. In the United States, Maersk Logistics helped reduce one United States company's inventory from $US10.8 million to $US5.5 million.[1] In the last four years, Harley Davidson overhauled its logistics chain producing a $US40 million reduction in material costs. The same process reduced development time by 30 per cent enabling the company to become more responsive to consumer demands. [2]

CHALLENGES FOR FREIGHT LOGISTICS

Australia must develop a dynamic and sustainable freight logistics industry if it is to remain a globally competitive modern economy. The industry must work smarter—not just in terms of the equipment and technology it uses—but in the knowledge and relationships it develops between individual components of logistics chains. If Australia applies its skills and experience it will become a valuable, sought-after participant in global logistics chains while still delivering local solutions for local needs. To achieve this, the freight logistics industry and governments must resolve several challenges.

Establishing a united industry view

The traditional modal interests must be developed into a multi-modal view and combined with the interests of non-transport operators to address freight logistics issues at a higher level than is currently the case. A united industry approach requires strong leadership to articulate the industry's mutual interests, and a fundamental shift in industry culture to address the new drivers of economic success—knowledge and relationships.

Improving freight logistics infrastructure

Inadequate freight logistics infrastructure is contributing to higher transport costs. It is also resulting in some regional and rural Australian businesses being unable to access the full range of freight logistics opportunities available to their competitors.

Addressing its career image

The industry has an ageing workforce and finds it difficult to attract young people. There is a perception that the freight logistics industry is dirty, old, and male dominated. This is despite good career opportunities and a shortage of suitably qualified freight logistics professionals.

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1 This example, and the four previous examples, come from the *Official proceedings* of the Smart 2001 Conference: *The Challenge of Integration*, May 2001, Sydney

2 *Business Review Weekly*, October 4–10, 2001, pp. 38–9

Influencing community attitudes

Most Australians do not understand the significant contribution the freight logistics industry makes to their lives. Public pressure impedes the development and maintenance of freight logistics infrastructure in urban areas, and in turn leaves the industry vulnerable to inappropriate environmental policies.

Receiving stronger support from governments

Governments at all levels have underestimated the significance of freight logistics and its contribution to the Australian economy. There is a need for coordinated policies that address the hard issues facing the industry and provide a full range of programs to facilitate the development of world competitive logistics chains in Australia.

A FRAMEWORK FOR ACTION

This Action Agenda provides a framework for addressing the challenges facing the Australian freight logistics industry. It recognises the need to:

- Address the lack of suitable data and information available to assess the performance of the freight logistics industry, and improve the dissemination of data and information that can be used to improve understanding of how the industry operates.
- Educate the business community, particularly small and medium enterprises (SMEs), about the commercial benefits of adopting logistics best practice; and facilitate access to the resources required to move to best practice.
- Combine best practice business operations and best practice e-Business technologies with intelligent transport systems to create a dynamic and innovative industry capable of quickly solving customers' logistics requirements.
- Significantly improve the freight logistics industry's occupational health and safety (OH&S) record; and increase the industry's investment in its people—at all levels—to increase the pool of suitably qualified logistics employees.
- Develop flexible operating arrangements that reflect the need for modern logistics chains to be responsive to changing customer demands, while addressing the industry's impact on urban congestion, social amenity and environmental outcomes.
- Work with governments to improve the provision and utilisation of priority freight logistics infrastructure, and to adopt a broader freight logistics chain approach to government regulation and industry accreditation.
- Provide guidance to governments to improve the delivery of policies and programs that strengthen freight logistics chains. This would also improve the freight logistics industry's access to government assistance, particularly in education and training, research and development (R&D) and innovation.

ACHIEVING CHANGE

A competitive, sustainable and dynamic freight logistics industry will not be achieved unless there is a fundamental change in approach by both industry and governments at peak levels. The Action Agenda recommends that industry and governments re-assess as a priority their individual and collective capacities to address freight logistics issues and to set up new frameworks to achieve a freight logistics perspective.

The resources needed to achieve change are most effective when they are clearly focused on priority outcomes. The Action Agenda provides a three-year plan for change which focuses on the freight logistics industry's five key priority areas:

- leadership

- infrastructure
- people
- innovation through technology and knowledge
- sustainability

Table 1 illustrates how the 36 actions support these five priority areas.

NOW IS THE TIME FOR ACTION

Now is the time for the freight logistics industry to work in partnership with all levels of government to provide benefits across the industry and to the whole Australian economy. Recent developments provide a strong foundation for change. They include:

- Changes in the structure of Australia's freight transport industry to provide multi-modal operations and full logistics services.
- The growing shift toward the use of specialist freight logistics services. This provides further growth opportunities for the industry.
- Two decades of economic and regulatory reform.
- Government readiness to assist through Federal, State, Territory and local government initiatives.
- Systems and communications technology developments that support domestic and global logistics chains.
- Increased scope for exporting Australian freight logistics services and related products.
- The potential for Australian freight logistics educators and trainers to take advantage of the domestic and global shortage of qualified freight logistics people.

The consequences for the industry and Australia of not taking these opportunities will be serious. Already:

- Other industries are recognising the need to recruit, develop and retain valuable employees in the context of a diminishing pool of young applicants.
- Other nations are developing logistics policies to take advantage of the economy-wide benefits provided by a world class freight logistics industry.
- Global logistics chain-leaders are seeking out firms with the capacity to join their logistics chains. Failure to act will create future barriers to the integration of Australian logistics chains in the global market place.

Australia's freight logistics industry must act now to take advantage of tomorrow's opportunities.

The Australian Freight Logistics Industry:
providing the will and means to trade anywhere, anytime

Table 1 Priorities and actions

LEADERSHIP			
Priority Action		**Supporting Actions**	
Implementation and Development			
Action 36	Establish the Australian Logistics Council	Action 33	Establish national industry consultative framework
		34	Australian Transport Council support
		35	Coordinate government activities
Regulation			
		Action 28	Review progress in regulatory reform
		29	Broaden approach to regulatory reform
		30	Insurance and liability review
Exporting Services			
		Action 21	Review export performance
		22	Promote global logistics chain capabilities
INFRASTRUCTURE			
Priority Action		**Supporting Actions**	
Infrastructure			
Action 23	Develop strategic framework	Action 24	Secure transport corridors
		25	Assist freight centre planning
		26	Review Federal infrastructure funding
		27	Audit logistics facilities
		31	Assess access regimes
		32	Accelerate rail reform
PEOPLE			
Priority Action		**Supporting Actions**	
Education and training			
Action 13	Develop national education and training framework	Action 12	Promote career and training opportunities
		14	Develop learning networks
		15	Create education and training web portal
		16	Review education and training funding
Workplace Relations			
		Action 10	Promote more flexible work arrangements
		11	Improve occupational health and safety

Table 2: Priorities and actions (cont.)

INNOVATION THROUGH TECHNOLOGY AND KNOWLEDGE			
Priority Action		**Supporting Actions**	
e-Logistics			
Action 9	Address inter-connectivity of systems	Action 7	Demonstrate benefits of e-Logistics
		8	Improve freight distribution through e-Logistics
Strategic Knowledge			
Action 1	Enhance data and analysis	Action 2	Provide best practice information packages
		3	Produce template service level agreements
		4	Review accreditation arrangements
Innovation, Research and Development			
		Action 5	Analyse innovation processes
		6	Improve research and development capabilities
SUSTAINABILITY			
Priority Action		**Supporting Actions**	
Sustainability			
Action 20	Promote environmental accreditation	Action 17	Reduce congestion and emissions
		18	Life-cycle assessments to reduce environmental impacts
		19	Eliminate packaging waste

RECOMMENDED ACTIONS

1. The freight logistics industry, users of logistics services and government agencies to define data requirements and develop improved ongoing data collections. This will enable the analysis of industry characteristics and trends for the purposes of policy formulation, strategic business decision-making and infrastructure and other investments.
2. The freight logistics industry to promote examples of best logistics chain practice, and develop information packages to help users of logistics services to adopt those best practices. The information packages should include:

- a critical assessment of current logistic practices in Australian industry—particularly as they relate to small and medium enterprises (SMEs)—and case studies of successful and unsuccessful examples and relevant overseas experience
- a self-assessment guide to enable firms to benchmark their existing logistics practices
- a tool kit of the types of strategies available to move to best practice logistics and the resources available to support those strategies.

3. The freight logistics industry and users of logistics services to develop and promote templates which can form the basis of service level agreements to improve the overall standard of service delivery, safety and logistics chain performance. These agreements should clearly demonstrate their relevance to achieving best logistics chain practice.
4. The freight logistics industry and users of logistics services, in conjunction with government agencies, to review accreditation arrangements in the freight logistics industry to identify and address inconsistent practices, duplication, cost and domestic and international recognition.
5. The freight logistics industry, in conjunction with Federal Government agencies, to commission an analysis of the industry's innovation process and the industry's ability to access relevant government assistance as part of that process.
6. The freight logistics industry, tertiary institutions and governments to develop a process for establishing appropriate research and development capabilities for freight logistics—for example, by establishing a Cooperative Research Centre (CRC) or other joint arrangements.
7. Government agencies, the freight logistics industry and users of logistics services to increase their efforts to demonstrate the commercial benefits of e-Logistics applications and support their use—particularly by small and medium enterprises (SMEs).
8. The freight logistics industry, with government agencies, to conduct feasibility studies to improve freight distribution through the integrated application of intelligent transport systems (ITS), cargo tracking and e-Business.
9. The freight logistics industry and users of logistics services to work with appropriate technical organisations and government agencies to achieve greater

connectivity of messaging standards and related business technologies, nationally and internationally.

10. The freight logistics industry and users of logistics services to promote the benefits of flexible work arrangements to facilitate 24x7 operations, and analyse the extent to which demarcation, employment practices, regulatory arrangements and industry structure impede the achievement of efficient and effective freight logistics chains.

11. The freight logistics industry and government agencies to undertake a detailed analysis of the industry's occupational health and safety (OH&S) record and identify priority measures to achieve an agreed quantifiable improvement in the industry's performance.

12. The freight logistics industry to work with educational and training institutions to develop strategies to raise the industry's profile and to highlight career and training opportunities to school leavers, career advisers, parents, companies with in-house logistics operations, industry employees and the wider community.

13. Education and training providers and Transport and Distribution Training (TDT) Australia, consulting with industry and regulatory authorities, to develop and implement a national education framework for freight logistics, including appropriate recognition and articulation of skills and knowledge across jurisdictions and between education and training levels, and the alignment of training with licensing and accreditation requirements.

14. The freight logistics industry, working with education and tertiary institutions and users of logistics services, to facilitate collaborative informal learning strategies for logistics chains/networks in business processes and appropriate managerial training programs, with particular focus on small and medium enterprises (SMEs) and regional operators.

15. The freight logistics industry, users of logistics services, the Australian National Training Authority (ANTA) and education and training institutions to develop and implement a self-funding national logistics web portal, that incorporates a database of all education and training courses and other resource material.

16. The freight logistics industry, firms with in-house logistics operations, tertiary institutions, the Australian National Training Authority (ANTA), registered training organisations and Transport and Distribution Training (TDT) Australia to review the provision of funding available for freight logistics education and training and make a case to Federal, State and Territory governments for an appropriate allocation of funds.

17. The freight logistics industry and governments to review solutions—including those identified under the *National Strategy for Intelligent Transport Systems* (*e-transport*)—for increasing efficiency and reducing congestion and greenhouse gas emissions associated with freight movements, and implement strategies to promote awareness and support take-up.

18. The freight logistics industry, users of logistics services and government agencies to undertake a full life-cycle assessment of several representative freight logistics

chains to examine opportunities for applying the principles of reverse logistics to achieve improved environmental outcomes.

19. The freight logistics industry, users of logistics services, and government agencies to establish an awareness program of the technologies available to eliminate packaging waste from freight logistics chains.

20. The freight logistics industry, in conjunction with government agencies, to develop and implement a national freight logistics accreditation scheme that encourages Australian firms to adopt the Australian Standard/New Zealand Standard (AS/NZS) International Standards Organisation (ISO) 14000 series and improve environmental management within the freight logistics industry.

21. The freight logistics industry, with assistance from government agencies, to establish a freight logistics export working group to review current approaches and to address how best to achieve the increased export of freight logistics services and related products.

22. The Federal Government, in cooperation with State and Territory governments, to explore the potential for using export assistance programs to promote the development of the global logistics chain capabilities of Australian exporters in partnership with Australian logistics services providers.

23. Federal, State and Territory governments, working with the freight logistics industry and local government, to develop a long-term strategic framework to guide freight logistics infrastructure planning and investment decisions, which:

- identifies and defines a national logistics network covering the major freight corridors, related modes and intermodal points
- reviews the network's adequacy against future requirements, sustainability and sound asset management principles
- commits to maintaining a high standard of freight infrastructure and to prioritising planning and investment decisions.

24. On the basis of this strategic framework, relevant governments to secure adequate transport corridors and modal interface areas for the efficient development of major seaports and airports and related road, rail and storage and warehousing services.

25. Federal, State and Territory governments to work with the freight logistics industry and local government to:

- identify the role of major metropolitan and regional freight centres in the national strategic framework
- develop an analytical structure which can be used in planning for the development or expansion of these centres and the related infrastructure, including the links with smaller local distribution points.

26. The Federal Government to review its approach to infrastructure funding to provide for improved logistics chain outcomes through flexibility in program design and cooperation across traditional government boundaries and, through the

Australian Transport Council (ATC), encourage State and Territory governments to conduct similar reviews.

27. The freight logistics industry to undertake audits of the operation of logistics facilities where impediments to efficient and effective operation have been identified. As a priority, an audit of on-airport handling facilities should be undertaken.

28. The freight logistics industry to provide to the Australian Transport Council (ATC) an assessment of current progress in regulatory reform affecting freight logistics, against the objectives of achieving greater efficiency and removing impediments and unnecessary regulation, with the ATC to agree to a strategy to address problem areas.

29. Governments to adopt an open and transparent approach to regulatory reform in all modes, that includes industry consultation and is underpinned by a logistics chain perspective and a 'chain of responsibility' philosophy. The approach could build on the decision-making model of the National Road Transport Commission (NRTC), but should also include measures for effective implementation of regulatory reforms.

30. The freight logistics industry, users of freight logistics services and the insurance industry, in consultation with governments, to review arrangements covering loss or damage of goods carried within Australia to determine if alternative arrangements would be in the national interest.

31. The freight logistics industry to provide governments with an assessment of the impact that access regimes for public and private infrastructure have on business, taking into account the need for fair and equitable treatment of infrastructure owners and transport operators, and the impact on the efficiency of freight logistics chains.

32. Australian governments to develop a comprehensive strategy to accelerate rail reform—with particular priority to addressing planning, infrastructure, access and regulatory needs at national, State, Territory and regional levels.

33. Representatives of the freight logistics industry to agree on the benefits of moving to an integrated approach to freight logistics and, after assessing existing structures, establish a national consultative framework to:

- develop effective communication mechanisms throughout the industry and with key bodies representing users of logistics services
- establish what the industry seeks from governments and strategies to convey those views
- achieve a stronger industry profile in the community
- develop outcome indicators.

34. The Federal Government to place the Action Agenda before the Australian Transport Council (ATC), and seek from the Council a collective response which:

- indicates its support for the establishment of a freight logistics industry consultative framework, and the Council's willingness to work with the freight logistics industry to implement the Action Agenda
- reviews the potential role for the freight export council concept to support the industry consultative arrangements and liaison with governments
- includes ongoing support and coordination responsibilities through the Standing Committee on Transport (SCOT), the National Transport Secretariat (NTS) and the Integrated Logistics Network (ILN).

35. The Federal Government to establish arrangements for the ongoing coordination of Federal activities that impact on freight logistics, and for these arrangements to be linked directly with State and Territory government activities.

36. An Australian Logistics Council to be established, comprising representatives of the freight logistics industry, users of logistics services, education and training providers and governments to:

- drive implementation of the Action Agenda
- set implementation priorities and milestones
- develop links to related initiatives at State, Territory, regional and local levels
- hold an annual stakeholders' forum to evaluate progress
- facilitate evaluation of the Action Agenda's impact after three years and again after five years.

1 INTRODUCTION

1.1 THE ACTION AGENDA RATIONALE

In December 1997 the Federal Government released its industry policy statement *Investing for Growth*. Action Agendas were one of the major initiatives announced in that statement. They are a key element of the Government's industry policy and represent a new approach to addressing impediments to growth in specific industry sectors. Action Agendas are designed to achieve sustainable economic growth in a global environment by building a dynamic partnership between industry and government.

Action Agendas aim to:

- improve the relationship between the industry in focus and government
- examine and capitalise on opportunities
- generate the momentum for industry participants to use their initiative to create a dynamic, competitive industry.

Action Agendas are more than consultation, meetings and workshops. The Agenda is underpinned by an analysis of the industry and its ability to cope with, and capture the advantages of, a global economy. It can provide a framework for key decision-makers in the industry to better plan future investments and strategies, and for policy makers to be better informed about the industry's strengths and needs. Action Agendas are useful for assessing the effectiveness and efficiency of particular government interventions, and informing the broader policy development process.

Although an Action Agenda is a partnership between industry and government, the major benefit provided by the process is the opportunity for industry to articulate a vision for the future and identify the actions that need to occur now to address the challenges ahead.

1.2 THE DEVELOPMENT OF THIS ACTION AGENDA

On 24 May 2000, the Federal Government announced that the Deputy Prime Minister and Minister for Transport and Regional Services, John Anderson, would be responsible for the development of a Freight Transport Logistics Industry Action Agenda during 2000–01.

The Minister appointed an Industry Steering Committee in January 2001 to develop the Action Agenda. The Terms of Reference for the Action Agenda are in Appendix 1 and Appendix 2 is a full list of Industry Steering Committee and Working Group members. The Department of Transport and Regional Services (DOTARS) provided secretariat support to the Action Agenda.

The Action Agenda was developed in four overlapping stages.

Stage 1: Data gathering and analysis

In April 2001, the Industry Steering Committee released a Discussion Paper titled *Linking Ahead* which summarised the recent findings of reports, inquiries and submissions about freight logistics. The purpose of this paper was to dispense with re-inventing the wheel by amalgamating the previously recognised issues, impediments and opportunities relevant to freight logistics. *Linking Ahead* also identified what measures were implemented, what has not worked and measures recommended but never implemented.

To support the data gathering stage the Secretariat commissioned two studies:

- The Bureau of Transport Economics (BTE)[3] was engaged to determine the extent to which freight logistics activities could be classified as an industry and the contribution those activities make to the economy.
- The Allen Consulting Group was engaged to undertake a study of comparative public policy on freight logistics. It examined public policy approaches to freight logistics in Australia, Canada, Israel, Japan, New Zealand, The Netherlands, South Africa, the United Kingdom, the United States of America and the European Union.

Stage 2: Stakeholder consultation

Views were sought from—and consultations held with—industry, government and academic stakeholders to determine the current freight logistics environment, and Australia's potential to respond to local, regional and global developments. These consultations sought to include regional and small and medium enterprise (SME) perspectives. Appendix 3 lists the stakeholders consulted.

The Action Agenda and the Secretariat also sought out the progress of current inquiries and studies. This included consultations with organisations such as the Australian Freight Council Network (AFCN), the Integrated Logistics Network (ILN), the National Transport Secretariat (NTS) and State and Territory agencies active in logistics development.

Stage 3: The development of actions

Three working groups were established in March 2001 to analyse issues and explore actions in the key areas of:

- industry directions
- information and communications technology (ICT) and business process re-engineering
- education and training.

Other issues were addressed by the Secretariat, with assistance from key stakeholders.

On 31 July 2001, the Industry Steering Committee, Working Group members and invited experts met in Melbourne to identify and draft actions with direct stakeholder input. Appendix 4 is a report on the workshop and its outcomes.

Stage 4: Testing the draft actions

The Industry Steering Committee endorsed a *Consultation Draft* of the Action Agenda at its meeting on 3 October 2001. To test the development of the actions, the Committee agreed to release the draft for stakeholder comment, with comments sought by 21 December 2001.

The Committee acknowledged it would be a challenge for SMEs to respond to a lengthy report during such a busy time of the year, and a feedback form was developed that summarised the main issues raised in the full draft. The draft report and feedback form were sent to over 2000 potential stakeholders.

Seventy-two responses were received from a broad cross-section of stakeholders—listed in Appendix 5. This process had the added benefit of raising stakeholder awareness of the Action Agenda's development. Although not responding, some stakeholders registered their interest in being kept informed of progress.

In February 2002, the Action Agenda's development entered its final phase—the Secretary of the Department of Transport and Regional Services met with the Chair of the Industry Steering Committee and a small group of key industry leaders to consider priorities and implementation issues. The industry leaders confirmed the Action Agenda was targeting priority areas and made a significant contribution towards the implementation strategy.

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[3] Now the Bureau of Transport and Regional Economics

The Industry Leaders Roundtable held on 26 March 2002 provided a final test of the Action Agenda. Hosted by the Deputy Prime Minister and Minister for Transport and Regional Services, John Anderson, and held in Canberra, the Roundtable was attended by approximately 100 industry leaders and association representatives, Steering Committee members and Federal, State and Territory government officials. Appendix 6 lists the attendees.

The Roundtable's purpose was to:

- inform industry leaders of the Action Agenda's process
- discuss the key priority areas identified by industry
- seek commitment to progressing logistics issues through the establishment of an Australian Logistics Council.

The Roundtable endorsed the Statement of Industry Commitment in the Action Agenda. Industry representatives offered broad support for the Australian Logistics Council's (ALC's) establishment and committed to cooperatively implementing the Action Agenda.

1.3 WHAT THIS ACTION AGENDA SEEKS TO DO

1.3.1 Objectives

The Action Agenda establishes a framework to achieve a freight logistics industry which:

- recognises and accurately measures its importance to the Australian economy
- has a world-wide reputation for reliability, service, innovation and competitiveness
- is respected as a dynamic and sustainable industry with attractive career options
- has the leadership in place to address issues of mutual concern for such a diverse industry.

Implementation of the Action Agenda should be carried forward with these as prominent objectives, with regular evaluation and review to assess progress. While it will take some time for benefits to be obvious throughout the industry, its long-term impact should be seen in:

- more cost-effective freight delivery to Australian and international markets
- an increase in the intellectual property of the Australian freight logistics industry
- environmentally friendly and socially responsive logistics solutions.

1.3.2 Structure of the report

The Action Agenda focuses on key areas that both identify the nature of the industry and indicate where action is necessary to improve its performance.

The material covered in each chapter is summarised below.

Chapter 2: The freight logistics industry

Chapter 2 describes the scope and nature of freight logistics activities in Australia, and differentiates between the freight logistics sector and the freight logistics industry. In doing so, the Action Agenda identifies the critical link between in-house logistics and third and fourth party logistics services providers.

Chapter 3: The freight logistics task

Chapter 3 examines the size of the freight logistics task, the future for freight logistics services and Australian freight logistics performance.

Chapter 4: Boosting industry performance

Chapter 4 discusses the importance of best practice, performance monitoring and benchmarking, and examines what actions can be taken in the areas of innovation, research and development (R&D), e-Logistics and workplace relations to achieve improvements in industry performance.

Chapter 5: Supporting growth

Chapter 5 covers education and training, sustainable freight logistics and exports of freight logistics services, three areas where anticipatory and supportive action is needed to assist the future growth of the industry.

Chapter 6: Planning, infrastructure, and regulation

Chapter 6 examines the critical role governments play in freight logistics efficiency through their planning decisions, provision and operation of infrastructure, operational and safety regulation, and competition policies. It is argued that these functions will be enhanced by a more pro-active involvement by industry.

Chapter 7: Leadership

Chapter 7 argues that the impact of actions proposed will be enhanced greatly by industry and governments reassessing their overall approach, and moving from the more traditional freight transport basis to a freight logistics perspective. Development of a new industry framework is proposed to drive change on the industry side, and on the government side an enhanced role for the Australian Transport Council (ATC) is sought. It is suggested that high-level industry–government consultative arrangements be established on an ongoing basis, through an Australian Logistics Council.

Chapter 8: Implementation and evaluation

Chapter 8 discusses the priorities in implementation and related arrangements. A framework for evaluation and review of implementation of the Action Agenda is proposed over a five-year period, with annual assessment points.

2 THE FREIGHT LOGISTICS INDUSTRY

2.1 DEFINING FREIGHT LOGISTICS

A BTE review of Australian and international literature indicates there is no universal definition of freight logistics.[4] One reason for this could be the speed with which logistics practices have evolved in recent decades, making it difficult to articulate clearly the boundaries of logistics activity. The situation is further complicated by the increasing use of supply chain management practices. To some, supply chain management is a tool for logistics management. For others, logistics is good supply chain practice.[5]

Nevertheless, there is some commonality in the basic concept of logistics—that it involves moving, storing and handling freight, from a start point to an end point. Depending on the supply chain, this may include passing through various production points and assembly to, say, household consumption. Disposal is increasingly being seen as the end point. This reflects the growing importance of environmental considerations in logistics decision-making.

The Action Agenda defines freight logistics as 'everything to do with freight'. This inclusive definition is more useful in considering the future of freight logistics services than relying on current academic definitions. It also captures the complex inter-connectivity of relationships between all parties along supply chains.

Information management is a key element in many logistics and supply chain management definitions. While information management is fundamental to logistics, the Action Agenda believes that logistics' primary objective is the management of the physical product. Information supports people buying, providing, managing and regulating logistics services. But to highlight information in any definition can downplay people's key role in turning information into knowledge.

Regardless of the definition of freight logistics, understanding logistics management and supply chain management is essential for an analysis of the future of freight logistics services. Logistics management and supply chain management will remain the most important techniques for delivering efficient and effective logistics solutions for the foreseeable future. Thus, they represent two key streams of a firm's value chain.

2.1.1 Logistics management

The Action Agenda defines logistics management as:

> *The science of balancing the storage (stocks) and movement (flows) of inputs and outputs to meet demand, and minimise total cost while delivering increased efficiencies.*

Logistics management aims to minimise costs and increase efficiencies while securing reliable supply and delivery of inputs and outputs. It is referred to as a science because many of the available management tools and techniques rely on quantitative analysis providing measurable outcomes.

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4 BTE, *Logistics in Australia: a preliminary analysis*, WP 49, 2001

5 The growing use of the term 'value chain' further complicates matters. The value chain concept is attributed to Michael Porter (1985, *Competitive Advantage*). The Action Agenda believes logistics and supply chains form parts, but not the whole, of a firm's value chain.

Logistics management has well established origins in military planning and execution. However, Christopher argues that the benefits to business were not recognised until 1915.[6] Nevertheless, logistics management is a more mature management practice when compared to supply chain management.

2.1.2 Supply chain management

The Action Agenda defines supply chain management as:

> *The art of coordinating the resources of all those in the supply chain to maximise the benefit to the final customer, and in so doing, maximise the return to all chain participants.*

Supply chain management is regarded as a key determinant of a firm's ability to participate successfully in the trading sector, and global supply chain management has become a significant driver in shaping the structure of global trading patterns. Therefore, the Action Agenda believes that best practice supply chain management is fundamental for the long-term sustainability of Australian industry, and the capability of Australian companies to participate in global logistics chains is critical to national economic performance.

A key element of best practice supply chain management is the concept of participants in the supply chain working together to meet the long-term needs of the final customer. For example, the highest quality perishable products displayed at market attract the highest price. In best practice logistics chains, higher prices are returned back through the chain as higher returns that provide an incentive to maintain high quality produce.

In chains that do not use best practice, the farmer may choose to reduce costs by using non-refrigerated transport; or the transport operator may choose to reduce costs by not maintaining the perishable produce at the required temperature—both actions that will result in poor quality produce at the market. While both the farmer and the transport operator may save in the short-term, in the long-term they lose by not receiving the higher returns that their best practice competitors attract.

Supply chain cooperation does not preclude competition. Individual firms can, and will, continue to compete with rival suppliers. Suppliers and customers will also continue to strive to achieve the best deal from their particular perspectives. However, through cooperation and strong relationship building, the best supply chains demonstrate the benefits that can be achieved by pursuing mutual interests over self-interests.

2.1.3 Logistics chain management

Applying logistics management—minimising costs—and supply chain management—maximising returns—produces maximum profits. The Action Agenda believes the successful combination of both disciplines—logistics chain management—is the key to delivering efficient and effective logistics outcomes in Australia, as illustrated in Figure 1.

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[6] Christopher, Martin 1998, *Logistics and Supply Chain Management: strategies for reducing cost and improving service*

Figure 1 Management skills in logistics

Logistics chain management emphasises the ability to balance internal systems and external relationship management. A firm will not be competitive if it manages these competing objectives in isolation.

A large firm that vertically integrates all of its activities is an example that distinguishes logistics and supply chain management practices more clearly. The firm controls everything from buying raw materials to delivering the final product to the customer and has little need for supply chain management skills. Instead, its competitive advantage relies heavily on its ability to control and manage its internal logistics.

But most firms do not own or control their supply chains. The typical firm relies on other firms for inputs and/or a connection to the final customer. Their business success depends on the performance of others along the chain. This is particularly so for small and medium enterprises (SMEs). Consequently, these firms' ability to manage their logistics activities depends on their ability to manage all the relationships they have with suppliers and customers. This requires a broader skill set to that of the logistics manager.

Logistics chain management also emphasises the need for government policy to adequately reflect the new needs of industry. Government policy must attempt to support the internal efficiency of firms and encourage them to improve their capacity to participate in logistics chains. Logistics chain capability depends on access to adequate information and lack of information is a common source of market failure. Governments that target development of strategic logistics chain data actively encourage improved logistics chain decision-making.

Throughout this report, the term 'logistics' will be used in its common sense—that is, everything to do with freight and its movement, storage and handling. The terms 'logistics chains' or 'chain management' are used to describe the interconnectivity, or interdependence, characteristic of logistics activities.

2.2 LOGISTICS ACTIVITIES

A typical list of freight logistics activities that the Action Agenda used to define the logistics sector is shown in Figure 2. The BTE conservatively estimates that these activities represented approximately nine per cent of Australia's GDP—or $57 billion—in 1999–2000. It says this estimate is at the lower end of overseas studies that estimate GDP shares for freight logistics range from seven per cent to over 21 per cent. For example, a Michigan State University study estimated expenditure on logistics activities for major economic regions at approximately 12 per cent—see Table 2.

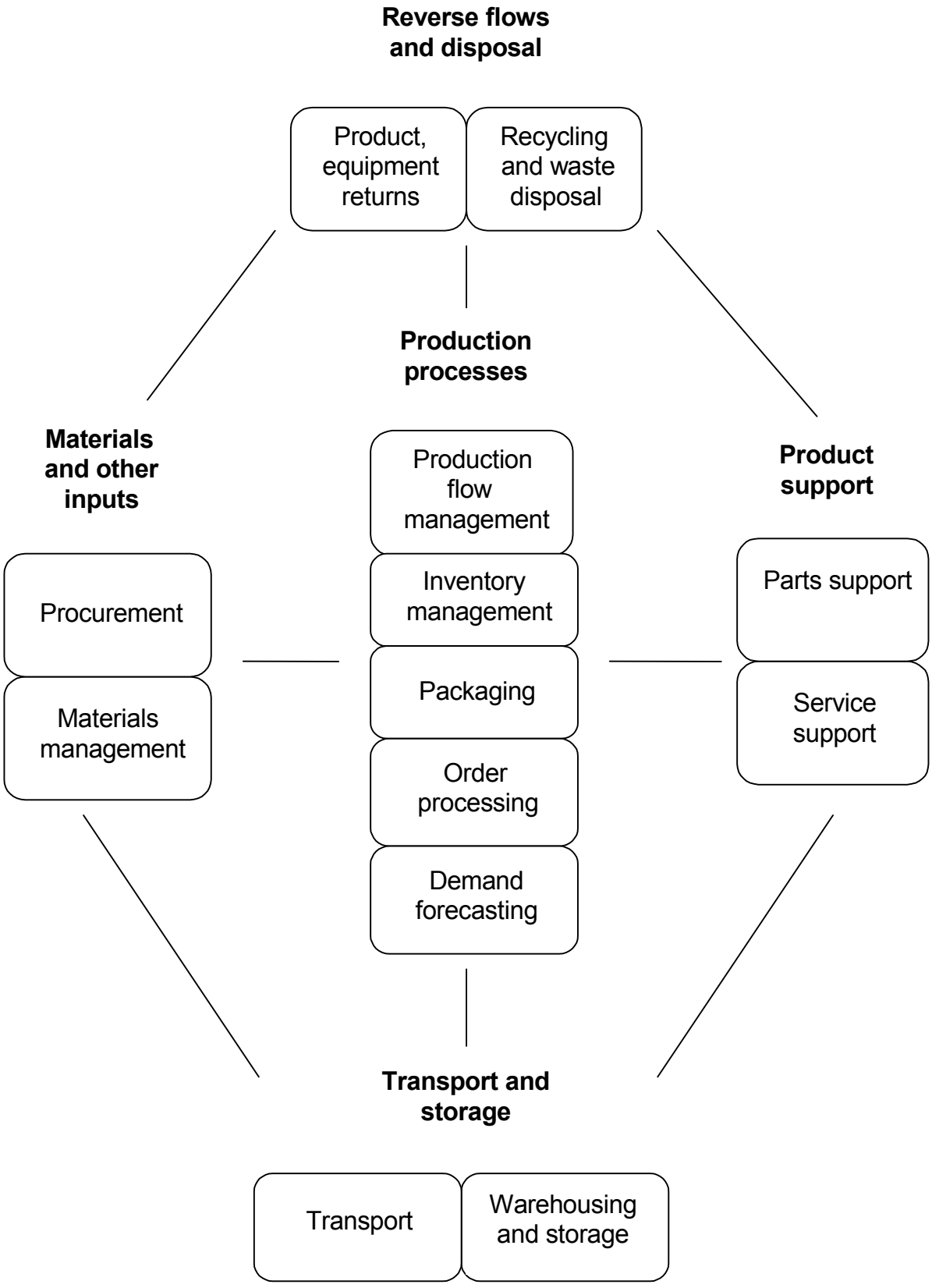
At nine per cent, the significance of logistics as an economic activity is obvious when compared with estimates of the economic contributions of other Australian sectors such as:

- construction—5.9 per cent
- retail—5.2 per cent
- education—4.4 per cent

- tourism—4.5 per cent.[7]

[7] ABS Catalogue No.5204.0, *Australian System of National Accounts*, 2000, and ABS Special Data Service

Figure 2 Logistics activities that define the logistics sector[8]



[8] BTE, op. cit. 2001

Table 2 Expenditure on logistics activities for major economic regions

Region	*Percentage of GDP*
North America	11
Europe	12
Selected Asia	12

Source : Financial Times, December 1998[9]

The logistics activities presented in Figure 2 are either performed in-house or are performed as services to a given firm by a logistics service provider. In Australia, most freight transport activity is performed by transport service providers; while most non-transport activities are performed or managed internally by the firm. Table 3 provides estimates from two overseas studies on the relative significance of logistics activities. This demonstrates transport's economic significance as the dominant logistics activity.

Table 3 Estimates of the relative significance of logistics activities

	USA	*Europe*	*Australia*[10]	
Logistics Activity	*per cent*	*per cent*	*Value added ($m)*	*Proportion of GDP (per cent)*
Transport	46	41	22 834	3.6
Storage and warehousing	22	23	34 166	5.4
Inventory	22	21		
Administration	10	15		
Total	**100**	**100**	**57 000**	**9.0**

Source : Rushton, Oxley & Croucher 2000, and BTE 2001[11]

Table 3 also suggests that storage and warehousing are significant economic activities. If a percentage share of 20 per cent was applied to the Australian context, this would result in a value added contribution of $11.4 billion. This is almost ten times larger than the Australian Bureau of Statistics (ABS) estimate of $1.2 billion for the storage sector in 1999–2000.

2.3 FREIGHT LOGISTICS AS AN INDUSTRY

2.3.1 The outsourcing trend

A feature of the modern economy is the scale of outsourcing that firms are prepared to undertake. For example, several overseas studies suggested the outsourcing market is growing at more than 20 per cent per year.[12] Christopher suggests that:

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9 *The Financial Times*, December 1998, p.11, based on a Michigan State University study

10 In its estimate of the significance of logistics activities to the Australian economy, the BTE used a ratio of transport to other logistics activities of 4:6.

11 Rushton, Oxley & Croucher 2000, pp.10–12, and BTE, op. cit. 2001

12 Browne and Allen in Brewer et al, 2001, p.256

...for most companies today, 'out-sourcing' has grown to represent 50 per cent or more of their costs...[13]

Logistics activities are targets for those firms choosing to outsource. Table 4 lists the type of logistics activities being offered by logistics service providers, as described by the Holland International Distribution Council.

Table 4 Outsourced logistics services

Classic outsourcing	***Advanced services***
Warehousing	Pick and pack
Transport	Assembly/packaging
Goods dispatch	Returns
Delivery documentation	Labelling
Customs documentation	Stock count
Full services	
Order processing	Order planning
Systems/IT	Invoicing
Payments collection	Consulting
Shipment tracking	Materials planning
Inventory financing	Inventory management

Source : Browne and Allen

Europe is perceived as having one of the most mature third party logistics markets, with 76 per cent of European companies using third party logistics providers for at least some of their logistics needs, compared with 58 per cent of United States' companies.[14]

A survey conducted in 1996 estimated that the third-party logistics market in the European Union was worth approximately $32 billion, which represented just less than a quarter of total logistics expenditure. This study found that out-sourcing varied significantly between countries.[15]

As third party logistics markets have matured, a new type of logistics service provider has emerged, 4PL™[16] —see Figure 3. A fourth party logistics service provider is defined as:

...an integrator that assembles the resources, capabilities, and technology of its own organisation and other organisations to design, build and run comprehensive supply chain solutions.[17]

The emergence of fourth party logistics providers reflects the growing demand for complete logistics solutions by users of freight logistics services.

While no data exist to determine the extent of logistics outsourcing in Australia, it is clear that many Australian firms have already taken advantage of the benefits offered by this strategy. Despite this, concerns are being expressed about the benefits of using the freight logistics industry

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13 Martin, Christopher, 1998, p.116

14 Browne and Allen, op. cit. pp. 258–59

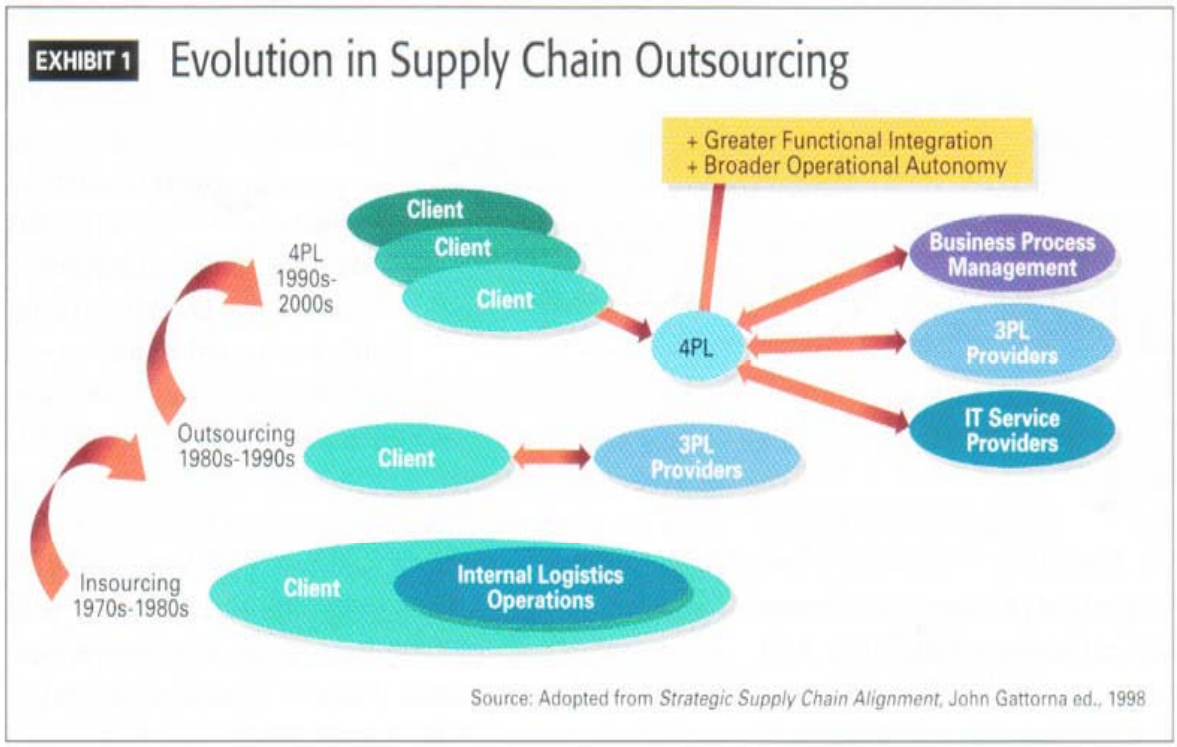
15 Browne and Allen, ibid. p.259

16 An Accenture registered trademark now adopted as a generic term for the outsourcing of a company's entire logistics chain requirements.

17 Rushton, et. al., 2000, p. 549

instead of in-house logistics operations. This indicates that the current trend to outsource freight logistics activities should not be taken for granted. The business community will only use third and fourth party logistics service providers while there are clear commercial benefits over in-house operations.

Figure 3 Evolution in supply chain outsourcing



Source : Supply Chain Management Review, Global Supplement, Winter 1999[18]

2.3.2 The development of the industry

While the trend to outsource logistics activities may not affect the size of the logistics sector, it is significant in terms of the structural change it is causing in the supply of logistics services.

As discussed in Section 2.2, the freight transport task has been the dominant logistics activity, and transport services have traditionally been provided by third parties, usually on a uni-modal basis. Other traditional logistics functions provided by third parties include customs brokerage, freight forwarding, and freight consolidation. Typically, third party firms saw themselves as offering a particular type of service to their customers, and were often represented by their own industry associations—for example, for long-haul trucking or freight forwarding.[19]

Coinciding with the increase in logistics outsourcing, the type of service demanded by customers began to change. Some customers changed from wanting a transport solution to wanting a transport and storage solution. Other customers changed more and demanded a one-stop shop for all their freight logistics needs.

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[18] *Supply Chain Management Review*, Global Supplement, Winter 1999. Diagram adopted from *Strategic Supply Chain Alignment*, John Gattorna ed., 1998.

[19] There have been exceptions to this. For example, some road transport companies and customs brokers also provide freight forwarding services.

Some transport firms responded to the change in demand by diversifying into other logistics services. A typical approach is to offer warehousing and storage services as these tend to fit comfortably with transport services. Another approach is for transport operators to expand their business to include more than one form of transport mode. This multi-modal strategy seeks to offer customers a complete transport package, and has been facilitated in Australia by micro-economic reform in transport activity.

The new logistics service providers in Australia typically come from the transport industry. However, some logistics service providers have come from non-transport backgrounds. For example, in-house logistics managers who have found themselves outsourced, customs brokers and freight forwarders, have all used their skills and expertise to develop their own logistics companies.

Freight service providers have also found that their customers have changed. A road transport operator who may have dealt only with a freight forwarder in the past, might now offer a complete logistics package and deal directly with the supplier or producer. In other cases, a freight service provider who might have dealt directly with the supplier or producer, might now provide their services to a fourth party logistics service provider operating on behalf of the whole logistics chain.

The changes in the freight services market can be summarised by:

- the development of logistics as a complete service
- changes in the relationships between customers and service providers.

This evolution has led to the recognition of a new industry grouping—the freight logistics industry. The growth of this industry is driven by the supply of logistics solutions—rather than singular logistics activities—to the business community.

Fitting the components together

The freight logistics industry contributes approximately $26 billion—over four per cent of GDP—to the Australian economy, a contribution that will continue to grow as more firms outsource their logistics requirements.[20] Figures 4, 5 and 6 summarise the concepts outlined in this chapter. They illustrate the:

- popular definition of logistics
- activities involved in moving, storing and handling freight
- estimates of the economic size of each activity.

Figure 4 represents the logistics sector, worth approximately $57 billion—or nine per cent of Australia's GDP in 1999–2000—represented by A + B.

Of the $57 billion logistics sector, the Action Agenda estimates that approximately $31 billion worth of logistics activities are performed in-house—represented by A.

The freight logistics industry is defined as those firms providing freight logistics services to purchasers of these services and this industry is worth approximately $26 billion and growing—represented by B.

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[20] Freight transport's contribution plus a conservative estimate of 13 per cent of the value of storage, warehousing and administration activities. Because inventory costs are typically measured in terms of opportunity costs of the inputs and goods in storage or transit, the value of this logistics activity is regarded as in-house to the customers of the logistics industry.

Figure 4 The freight logistics sector

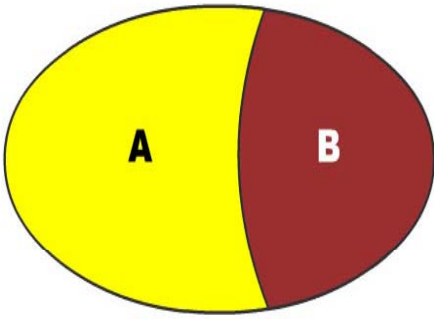


Figure 5 represents all freight transport activities. Of these activities, some are conducted as in-house activities—represented by C in Figure 5. It was not possible to obtain an estimate of the size of this segment.

The market for freight transport services is the largest component of the freight logistics market and is estimated to total $23 billion—approximately 88 per cent—represented by D + E in Figure 5.

However, some freight transport service providers also provide passenger transport services (for example, air traffic control and some pilotage and towage services). At best these transport-related services could be described as indirect logistics services—represented by E in Figure 5.

Figure 5 Freight transport activities

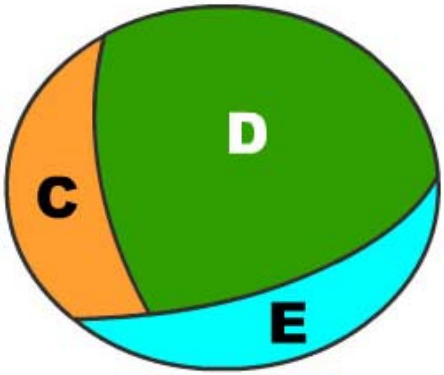
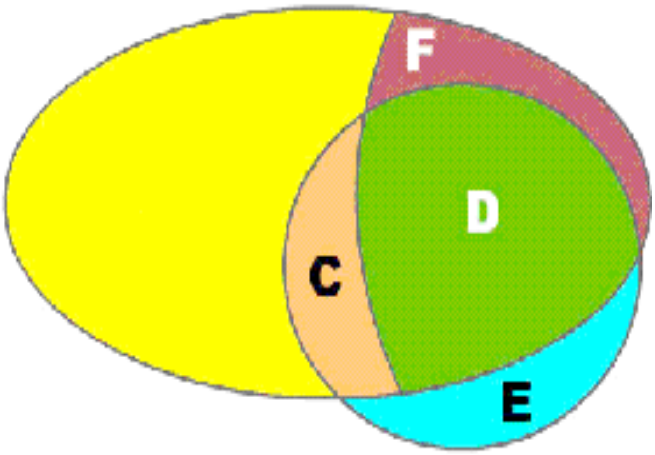


Figure 6 combines Figures 4 and 5 to show the composition of the whole freight logistics sector.

The non-transport segment of the industry is estimated at $3 billion—represented by F. Its size is likely to increase relative to the freight transport segment of the industry as more logistics activities are outsourced.

While the indirect services to transport segment—represented by E—is shown as being outside the technical definition of freight logistics activities, in practice the Action Agenda includes these services due to data limitations—see Table 5. Whether services to transport and non-transport logistics service providers are in or out does not affect the Action Agenda's objectives and conclusions.

Figure 6 The freight logistics sector and industry



The enabling effect of logistics

Freight logistics' economic significance should not only be measured in terms of its proportion of national output. An efficient and effective logistics sector is vital to the economy because of its enabling effect. In the United Kingdom policy document, *Sustainable Distribution: a strategy*, this enabling effect is described in two ways:

> *...efficient logistics extends market reach, by giving manufacturers access to a wider range of raw materials and supplies from different sources, and consumers access to a wider range of manufactured goods or services, both domestic and international...; and*
>
> *...efficient logistics reduces waste, both in production and in the deployment of capital.... [through the ability to] exploit economies of scope and scale and to spread the advantages of "just in time" (JIT) practices widely throughout the manufacturing and retailing sectors.*[21]

It is difficult to measure this enabling effect. However, an efficient and effective logistics industry delivers:

- greater market reach
- a wider choice of inputs and products
- less waste within the economy.

Less obvious is the role the logistics industry can play in facilitating the gathering of information, knowledge and expertise on behalf of fellow logistics chain participants. In this role, the freight logistics industry can stimulate economic activity through the diffusion of innovative ideas across many production sectors. Such a role is of substantial value in the knowledge economy.

The true value and economic performance of the freight logistics industry needs to be determined using performance indicators that evaluate its economic, social and environmental characteristics. However, descriptive data about the logistics sector and the logistics industry are lacking in Australia. The lack of data—and the undue reliance on broad estimates and judgements—are common themes throughout this report and are discussed in more detail in Section 3.6.

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[21] UK Department of the Environment, Transport and the Regions, 1999—http://www.detr.gov.uk/itwp/susdist/index.htm

Identifying the industry participants

Table 5 describes the types of freight service firms the Action Agenda includes in its definition of the freight logistics industry. As well as being part of the broader industry grouping, these firms also have a particular competitive interest in the size and nature of their own industry segment. This needs to be borne in mind in future development of industry data and analysis.

Table 5 Freight logistics industry service providers

Transport service providers	
Uni-modal operators—for example, road, rail, air and sea transport operators	
Multi-modal operators	
Terminal operators	
Transport brokers	
Providers of services to transport operators—for example, port and airport authority services	
Distribution service providers	**Specialist logistics services**
Warehouse operators	Information technology providers
Operators of storage facilities	Communication service providers
Distribution services	Consultants
Freight service providers	Financial service providers
Customs brokers	Insurance service providers
Freight forwarders	Equipment/materials handling suppliers
Freight consolidators	Labour hire services
Specialist forwarding agencies	Education and training service providers
Hazardous commodity experts	
Freight brokers	
Packaging services	

2.3.3 The industry and the profession

This Action Agenda provides the basis for creating a dynamic and competitive freight logistics industry—but it cannot be pursued in isolation from broader logistics developments. In-house logistics will continue to play a significant role in the logistics sector for a long time to come. This means that professional logistics managers—operating in other industries—will continue to be important contributors to the development of efficient and effective logistics solutions for the Australian business community.

One important influence in-house logistics managers have on the freight logistics industry is the capacity to eliminate the artificial divide that is often established between international and domestic logistics.

> *Australian logistics managers and directors have developed great expertise in moving their own organisation's goods from national distribution centres to retail outlets—but ask about how they control movement of import containers to their*

loading dock and the most common response is: 'We leave that to our customs broker'.[22]

This approach is inconsistent with best practice logistics chain management. Instead, in-house logistics managers must build relationships and information flows throughout their logistics chains to achieve improved efficiencies from the complete chain. There is an opportunity for the Australian freight logistics industry to help in-house logistics managers develop these relationships with the overseas links in the chain.

Many of the recommendations in this report—particularly those about education and training—also aim to improve:

- professional logistics managers' knowledge and expertise
- ability in-house to develop efficient and effective logistics solutions.

This approach is consistent with, and an important contributor to, the logistics chain philosophy.

2.4 CHALLENGES FOR THE FREIGHT LOGISTICS INDUSTRY

2.4.1 Industry culture

The Action Agenda considers that the biggest challenge facing the freight logistics industry is the need to establish a united industry view on issues of mutual interest. Freight logistics issues must be considered at a higher level than they are now. The traditional modal interests must be developed into a multi-modal view and combined with the interests of non-transport logistics.

A united industry approach to freight logistics issues requires leadership. This will only eventuate if there is a cultural change across the whole freight logistics sector. Everyone engaged in freight logistics activities must come to understand that only by working together can the broader issues affecting the sector be clearly articulated and addressed.

This culture change is also necessary to address the new drivers of economic success—knowledge and relationships. The freight logistics sector must do more to raise the skills and knowledge of its workforce and adopt practices and technologies that transform information and experience into knowledge. There must be a greater understanding of the importance of developing the right skills and attitudes to foster better relationships with all those participating in freight logistics chains. This need reflects the view that busin ess connections are becoming less transactional in character and more based on relationships.

The lowest price or best service will not guarantee future economic success. Increasingly, economic success will come from pursuing long-term partnerships with suppliers and customers that are based on achieving mutual goals and sharing risks and rewards.

2.4.2 Freight logistics infrastructure

Section 3.2 examines some of the future issues facing the provision of freight logistics services in Australia. Many of these issues relate to the impact that inadequate infrastructure has on service cost and quality, including:

- increased road congestion and associated road transport costs
- impediments to the competitive position of rail and a less than optimal choice in available freight logistics services

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[22] Spiers, John, 'Freight Transport Logistics Industry Action Agenda' in *Shipping Australia,* February 2002, p.17

- restrictions on Australian ports' ability to service shipping needs, and impediments to integrating the shipping and land transport networks
- impediments to many regional and rural Australian businesses accessing the full range of freight logistics services available to their metropolitan and overseas competitors.

The Action Agenda is aware of the difficulties involved in financing freight infrastructure projects. However, the above issues are raised to highlight that weak infrastructure links exist in the logistics chains. Since logistics chains are only as strong as the weakest link, efforts are best spent on fixing those weakest links rather than improving already capable areas. The challenge is determining the areas in greatest need of attention. This is discussed in more detail in Section 6.1.

2.4.3 Recruiting and developing people

The freight logistics industry finds it difficult to attract young employees. As freight logistics is increasingly becoming a knowledge industry, the ability to attract well-trained and flexible staff is vital. Similarly, the increasing dependence on communications and information technology means the industry must also attract more school leavers and tertiary graduates. This reflects younger people's tendency to be more comfortable with the latest technological advances.

The freight logistics industry's inability to attract young employees is not helped by the its image. When asked, few young people would nominate freight logistics as their desired career path—regardless of the financial rewards to do so. The image of freight transport as a dirty, nuts and bolts—or old economy—industry contributes to this perception. It is an impediment to attracting female employees in particular and significantly reduces the potential employee pool.

While attracting young employees is crucial to the industry's long-term performance, relying on youth will not be enough. The industry must also look to its current workforce. It must do more to invest in its people to make sure its employees develop the skills and knowledge that the industry needs. At the same time, the industry must also make sure it adopts best practice in occupational health and safety. This investment in its people needs to occur at all levels of the industry and needs to be increased significantly.

These people issues apply equally across the entire freight logistics sector and it is in the logistics industry's best interests to work with in-house logistics managers to address them.

2.4.4 Demonstrating environmental awareness

On environmental issues the freight logistics industry finds itself in a very difficult position. Freight transport is a major contributor to adverse environmental outcomes—through accidents and through normal operations. But even when the industry is operating in an accident-free manner, its environmental impact reflects economic and consumer demands. Therefore it is important for the industry to demonstrate its ability to become more environmentally friendly by moving more freight with less resources, and more safely.

The freight logistics industry must proactively address environmental concerns. Otherwise, governments may impose regulations on the industry that value environmental concerns over the direct consumer benefits of a more efficient and effective freight logistics industry. A positive environmental strategy will also enhance the industry's attractiveness to future employees.

2.4.5 Freight security and integrity

Government and consumer responses to recent world crises such as terrorism and food contamination issues are affecting freight logistics operations. In particular, governments around the world are demanding tighter controls over freight movement, storage and distribution. This affects both the efficiency and effectiveness of freight logisitics chains.

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

A strong and dynamic Australian freight logistics industry can help the business community to continue trading, and to take advantage of these global developments.

3 THE FREIGHT LOGISTICS TASK

3.1 CURRENT AND PROSPECTIVE DEMAND

Freight is vital to the operation of Australia's economy and moving, storing and handling freight are massive tasks. Tables 6 and 7 provide estimates of the current freight task for domestic and international trade respectively.

Table 6 Australian domestic freight task, 1998–2000

	Tonnes (millions)			*Tonne-kms (millions)*		
Mode	**1998-99**	**1999-2000**	**%**	**1998-99**	**1999-2000**	**%**
Road	1421	1399	71.5	127311	128702	34.7
Rail	492	508	26.0	127400	134200	36.1
Air	0.159	0.148	0.0	197	195	0.0
Sea	48	50	2.6	108850	108278	29.2
Total	1961	1957	100	363758	371375	100

Source : BTRE Australian Transport Statistics, various issues.

In Australia most domestic freight is moved by road transport. However, when distances are also considered, there is very little difference in the freight task for road, rail and sea. This indicates the importance of sea transport and rail in moving bulk commodities around Australia. It also indicates the importance of understanding the key roles of each transport mode in creating the network of transport services vital to a sophisticated logistics sector. For example, air transport's role in the overall domestic freight task is very small. But air transport has an important role in moving time-sensitive freight, and general freight to, and from, remote localities.[23]

Table 7 Australian international freight task, 2000–01

	Air			*Sea*		
Trade	**Loaded**	**Discharged**	**Total**	**Loaded**	**Discharged**	**Total**
Value ($b)	24.8	40.9	65.7	99.4	83.0	182.3
Tonnes ('000s)	350	294	644	495714	54408	550122
Tonne-kms (millions)	2456	3083	5539	4665039	522711	5186750

Source : BTRE Australian Transport Statistics, February 2002

Australia's international freight task can be summarised as:

- exports from Australia in 2000–01 were 496 million tonnes—valued at $124.2 billion
- imports to Australia in 2000–01 were 55 million tonnes—valued at $123.9 billion.

International airfreight transport is much more significant in terms of value—26.5 per cent of the total—than in terms of tonnes—less than one per cent of the total. Sea freight's contribution to the international freight task is demonstrated by its transport of Australia's minerals and grains exports.

[23] Interpretation of tables 7, 8 and 10, ABS Cat. No. 9220.0, *Freight Movements, Australia Summary*

While the data above are important in understanding the important role each mode plays for a given freight task, there are no data to demonstrate the freight logistics industry's performance in managing freight. For example, data on the reliability of the transport system—and its interconnectivity with the distribution and storage elements of the freight logistics infrastructure network—are rare and ad hoc. Also, although projections of future transport activities exist, the lack of data connecting the logistics sector to the freight task means estimates of future freight transport activities are often made in isolation from the changes occurring in logistics chain management. Instead, most future freight transport activity projections are based on historical trends with adjustments based on the forecaster's interpretation of the effect of future logistics developments.

The following estimates by the BTE of future freight transport activities provide an illustration of the logistics challenges ahead.[24]

Inter-capital non-bulk road freight activity will more than double between 1995 and 2010, with more than 75 per cent growth between 1999 and 2010.

Inter-state non-bulk rail activity will grow by just over 25 per cent between 1999 and 2010, and by almost 50 per cent by 2020. The greater growth in road activity means that road's freight share is projected to represent over 70 per cent of the inter-state non-bulk market by 2010—up from 64 per cent in 1995.

Although truck movements represent a small proportion of urban traffic flows, by 2015 urban truck activity is projected to grow by between 60 and 80 per cent. Combined with increased private passenger vehicle activity, the BTE notes:

> *...it is fairly clear that without a concerted effort and measures targeted to address the natural growth in road-based transport demand in metropolitan areas, there is likely to be continuation of the increasing congestion on the roads in our major cities.*[25]

There will be continued growth in international air passenger movements, resulting in additional belly-hold capacity for freight. The BTE does not say whether this will be enough to satisfy demand.

The bulk shipping trades are expected to grow by between two and three per cent per annum, while coastal shipping is also expected to grow.

3.1.1 An example of a logistics challenge—the sea container task

A challenge facing the transport network, and therefore the logistics sector, is the expected growth in container traffic. Table 8 indicates that container throughput is expected to increase by 45 per cent at Australia's mainland capital city ports by 2010.[26] Using current road market shares and assuming two twenty foot equivalent units (teus) per truck visit, this would mean an additional 2.2 million truck movements at the five ports.[27] The additional throughput will increase tensions between the port operations and local community amenity.

However, this problem can be alleviated through more efficient and effective logistics. For example, if the road task was better coordinated, each truck could carry an additional teu per port visit and the number of additional truck movements would be reduced to 1.4 million. Obviously,

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24 As cited in DOTARS, 2000

25 ibid. p. 24

26 These projections were prepared in 2000 and, given recent economic adjustments, are unlikely to reflect short-term trends. Hence the validity of the longer-term figures is now questionable.

27 Assumes there are two truck movements per truck visit to the port. This is a minimum as some visits will involve an additional movement between stevedoring terminals.

an increase in rail's market share of container port throughput would further reduce road congestion, and this is a current objective of major container port authorities.

In addition to reducing congestion around the port precinct, better truck use would also reduce additional logistics costs by approximately $200 million per year.[28] This is slightly less than one per cent of the estimated current value added contribution of freight transport services in 1999–2000.

Table 8 Forecasts of the container task for selected ports (teus)

Port	2000	2005	2010
Brisbane	449 966	639 000	797 000
Sydney	1 026 821	1 606 000	2 252 000
Melbourne	1 327 789	1 580 000	2 165 000
Adelaide	127 182	170 000	206 000
Fremantle	342 040	345 000	427 000
Total	**3 273 798**	**4 340 000**	**5 847 000**

Source : Based on figures supplied by the appropriate port authorities. Forecasts for Fremantle are based on 2007 and 2012 estimates.

3.2 THE FUTURE FOR FREIGHT LOGISTICS SERVICES

3.2.1 Air freight services

Between 1996 and 1999 the Australian international freight market experienced solid growth with an annual increase in airfreight imports of approximately 10 per cent; airfreight exports increased by six per cent over the same period. By contrast, domestic airfreight declined during the 1990s. In 1999–2000 the domestic airfreight task was 148 thousand tonnes, down from 159 thousand tonnes in 1998–99.[29]

As discussed in Section 3.1, the significance of the airfreight market is measured by the value of the market rather than the size of the task. Airfreight is typically characterised by low volume/high value products such as express parcels, medical supplies, live seafood and high technology parts. However, there is also an airfreight market for the movement of larger, specialised equipment and products.

The supply of airfreight capacity is provided in two forms: as belly-hold capacity on passenger aircraft, and through space on dedicated freighters. In Australia, belly-hold capacity is the most significant source of airfreight capacity in the international and domestic airfreight markets. Consequently, the main driver influencing the supply of airfreight capacity is the demand for passenger services rather than the demand from freight. Therefore, developments in the passenger airline industry have a direct effect on this significant segment of freight logistics services.

Domestic airfreight capacity was affected by the collapse of Ansett. However, the Action Agenda is not aware of any analyses of the effect that Ansett's collapse—and the subsequent responses by the remaining domestic carriers—may have had on current and future airfreight capacity.

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[28] Assuming $250 per twenty foot equivalent unit (teu) for road transport charges. This estimate is based on the BTE's Port Interface Cost Index, *Waterline*, Issue No.26, March 2000.

[29] BTRE, *Australian Transport Statistics*, various issues

The outlook for international airfreight is mixed. The Federal Government has adopted an open skies policy for airfreight, but international belly-hold capacity is constrained through bilateral agreements that limit passenger services. However, there is unused capacity for passenger flights on most of Australia's international aviation sectors, as prescribed under the individual bilateral agreements. Consequently, international airfreight capacity is limited more by the commercial realities of the passenger market, rather than by any regulatory restrictions.

Future airfreight capacity will also be influenced by changes in the size and deployment of the jet aircraft fleet. For example, it is possible that with the introduction of new super jets, the freight capacity available relative to the number of passengers moved will decrease. Also, the introduction of smaller jets for Asia-Pacific services can constrain the availability of belly-hold space, particularly through Australia's smaller international airports. Combined with the very thin market for dedicated freight services, there is likely to be increasing tension between the demand for freight services and available capacity.

The Action Agenda considers one of the more important issues for airfreight services is the need to avoid being overlooked. Because of the size of the airfreight market, and its position in the shadow of the air passenger market, it is easy to overlook the important role of airfreight services in the overall freight logistics market. The availability of a well developed airfreight services network provides sophistication to a nation's freight logistics services and greater choice for users of those services.

For example, the Holland International Distribution Council (HIDC)—recognised as a leader in freight logistics policy—argues that significant economies of scale and scope can be captured by locating airports and seaports adjacent to each other. Supporting these logistics hubs with adequate land transport infrastructure to nearby distribution centres enhances economies of scale and scope. The HIDC calls this 'The Gateway Logistics Clusters Concept'.

If Australia is to develop a world-class logistics network, it is vital that airfreight logistics issues are addressed within the broader context of freight logistics, rather than in isolation.

3.2.2 Rail freight services

Improvements in rail freight services offer the greatest source of improvement to the Australian freight logistics industry. However, complete reform of the rail system depends on full support by governments and the availability of infrastructure funding—from both the private and public sectors.

Most of the rail freight task remains bulk commodity movements—for example, minerals, coal, crude oil, petroleum, natural gas, fertilisers, grains and forest products—which are carried intrastate over relatively short distances between regions of resource extraction, processing locations or seaports.

The interstate rail network consists of 8270 kilometres of standard gauge rail which links all five mainland State capital cities and the major inter-modal ports. On this network, rail freight services currently dominate the non-bulk freight market on the east-west corridor—Sydney to Perth—with 77 per cent of market share. However, this trend is reversed on the eastern seaboard where rail has only 29 per cent of non-bulk freight market share. In this market, rail services are unable to compete with road transport in time and price.

In the past, rail freight services suffered from a reputation for poor quality and this affected rail's ability to provide competitive services. With the privatisation of many rail operations, this reputation has improved. This improvement, coinciding with improved price competitiveness, will be reinforced as more freight transport service providers offer multi-modal transport services. These developments will improve the integration of rail and road freight services, and the integration of rail into the logistics network, thus improving the sophistication of Australia's freight logistics industry.

The National Rail Consortium's $1.2 billion purchase of National Rail and FreightCorp demonstrates optimism for the future prospects of rail as part of a total freight transport solution. However, infrastructure quality, lack of harmonised regulations and inconsistent regimes for track access remain significant issues for rail operators—as discussed in Section 6.4.[30]

3.2.3 Road freight services

Road transport is the predominant mode for moving non-bulk freight within Australia. In 1999–2000, 1.4 billion tonnes of freight moved along Australia's road network. Road freight services are also the fastest growing segment of the Australian freight logistics industry with the BTE estimating that in the 13 years to 2015, tonnages moved by road, Australia-wide, will increase by 80 per cent. Although this estimate is based on historical trends, and does not consider possible new developments—for example, increases in rail freight competitiveness—an increase in the road freight task will lead to pressure for increased spending on constructing and maintaining highways, and arterial and local roads.

The substantial progress in harmonising vehicle standards and road rules is a positive achievement in the delivery of road freight services, and improved use of the road network. However, continued deterioration of the urban segment of the road network due to congestion will impede the industry's ability to provide efficient and effective road freight services. Reducing urban congestion through the improved use of the urban road network will ease the requirement for increased spending on road infrastructure.

Although small owner-driver firms still dominate the road transport industry, it is becoming more concentrated. This is primarily due to the acquisition strategy adopted by several key industry players. Greater industry concentration is being facilitated by the increasing competitive disadvantages facing owner-operators—the primary disadvantage is the difficulty of maximising truck use through 24 hour, 7 days-a-week—24x7—operations.

Because many truck owner-operators are regionally based, their plight poses an economic threat to regional communities. The demise of local operators may also affect local businesses through the loss of the local connection to the larger logistics network. Road transport provides the only freight connection for many rural and regional communities in Australia where rail, air and sea services are not economically viable. The Action Agenda acknowledges the importance of road transport to the economic well-being of those communities. However, the Action Agenda believes that with greater concentration in the supply of road freight services, communities are likely to benefit from improved services. These improved road services will provide additional expertise and knowledge about best practice logistics, and better links between national and global freight networks.

The increased concentration in road transport operations may also produce a net benefit to Australia's economy. This is because the remaining road transport operators will be able to achieve higher returns that can be used to increase investment in value added services. These investments would have been difficult to justify in a purely price competitive environment. Improved coordination technologies will contribute to better use of the road network, thus reducing the need for increased road infrastructure expenditure.

3.2.4 Shipping freight services

Efficient and effective shipping freight services are vital to the freight logistics task because shipping is the mode of choice for long haul bulk movements. As Table 7 demonstrates, shipping

[30] The National Rail Consortium is now known as Pacific National Pty Ltd and was a joint Toll-Lang Corporation bid for National Rail and Freightcorp.

dominates Australia's international freight activity. The maritime sector is involved in the majority of Australian trade—more than 99 per cent of all imports and exports by weight.

Bulk commodities carried in bulk ships represent the largest segment of Australia's international shipping task. Bulk exports by sea account for nearly 84 per cent of the volume of Australia's export trade and 30 per cent of its value. They include coal, iron ore, mineral concentrates and grains. Bulk imports include crude oil, petroleum products, chemicals, mineral concentrates and fertilisers.

A significant segment of the Australian international shipping market is the container trade. By value, approximately 70 per cent of imports and 45 per cent of exports are containerised. The introduction of the container to transport freight was a significant development. It expanded world trade and facilitated the integration of rail, road and shipping services. However, the container system's effectiveness relies on the efficient redistribution of empty containers to where they are next required.

The imbalance of container flows around Australia complicates the industry's ability to deliver efficient logistics outcomes. The size, type, ownership and purpose of containers—whether they are for import or export—are all important in this context. How the system resolves the resulting redistribution puzzle is not well understood by many within the logistics industry, and even less well understood by its customers. There is also a need to understand how government regulations affect the efficient redistribution of containers.

Australian coastal shipping services are critical in facilitating Tasmania's national and international trade. Australian shipowners also provide services for several bulk commodity movements around Australia's coast. Table 6 shows that—in terms of Australia's total domestic trade—coastal shipping accounts for only a small proportion of the market volume, but grows in significance when the distances involved are taken into account.

The relatively small volume of coastal shipping movements also reflects the pattern of Australia's economic base—there is little need to move bulk commodities around Australia's coast because there is little value added processing of raw minerals in Australia.

Australia's coastal trade also reflects the competitiveness of Australian shipping. In addition to competing with road and rail services, Australian shipping services must compete with very competitive foreign shipping services.

The use of international shipping for Australian coastal trades is a very sensitive issue for Australian shipowners. There is a raft of policy issues—for example, immigration, customs, taxation, industrial relations, employment and competition—that complicate the competitive position of Australian shipowners.

In answer to those who support the increased use of foreign shipping, Australian shipowners argue that using Australian shipping has produced a net economic benefit to Australia—$20 million in 1999–2000. Australian shipowners compare this with the net deficit from foreign shipping services—$3 billion or 8.9 per cent of the current account deficit—in 1999–2000.[31]

The Action Agenda believes the Australian–foreign shipping debate would benefit from an improved understanding and presentation of the costs and benefits of alternative commercial and policy options. Successfully implementing the Action Agenda will assist in providing a stronger foundation for understanding these options.

Ports

The capacity of Australia's ports directly affects the integration of shipping services into logistics networks. Significant reforms were achieved in the past decade in port authority management and

[31] Australian Shipowners Association, submission, December 2001

the provision of port services such as towage and stevedoring. Indeed, Australian stevedoring for both bulk and container cargoes now represents world's best practice for its type.

However, the availability of adequate port infrastructure is a potential impediment to the industry's ability to deliver logistics services.[32] For example, future liner ships entering the Australian international trades will be too big for the current channel depth in Melbourne—Australia's largest container port. At other ports, conflicting land use demands could restrict the provision of future port infrastructure requirements—as addressed in Section 6.1.

Historically, Australian ports developed in isolation from one another. Poor land transport connections meant they served specific commodities and hinterlands with little competition from other ports due to poor land transport connections. Improved rail services are now contributing to greater port competition, providing alternatives to ports hampered by worsening urban congestion and inadequate port infrastructure. Nevertheless, there remain significant areas within Australia that are isolated because they do not have access to adequate port facilities. For example, much of Australia's horticultural exports are sourced from the tropical and sub-tropical regions of north Australia. Yet Brisbane and Perth are the nearest ports with adequate shipping services to provide the necessary service frequency.

Access to adequate container shipping services remains one of the real impediments to regional growth. As container ships continue to increase in size, the economics of liner shipping dictate that operators of these ships will seek to call at fewer and fewer ports. This has implications for Australia's imports and exports. Larger ships mean it is unlikely that new regional container port facilities will attract the level of shipping services required to provide the frequency of visits they seek. Consequently, regional businesses will continue to be burdened by substantial additional land transport costs to access capital city container ports. For example, it is estimated that to deliver an empty container to Albany and return it full to Fremantle costs the exporter $1600.[33] This is more than three times the average cost of moving an export container through the port of Fremantle.[34]

Improving the logistics solutions available to regional importers and exporters will remain a challenge for the freight logistics industry and governments. Resolving this challenge will be made easier if industry clearly articulates its needs, and governments become more strategic in logistics planning and decisions.

3.2.5 Non-transport logistics services

The lack of data on freight logistics services is most noticeable when it comes to understanding the structure, conduct and performance of non-transport logistics services. Nevertheless, the Action Agenda has identified several factors affecting this segment of the industry.

Urban land use pressures are resulting in the relocation of warehousing and storage infrastructure. This provides an opportunity for industry and governments to strategically influence the relocation of this infrastructure. However, this strategic direction can only be provided when combined with a strategic approach to the transport network, as proposed in Section 6.1.

The development of firms providing the full range of logistics services is a positive driving force for integrating warehousing and storage services. Two factors are accelerating this development:

- some transport operators providing a complete transport service, where warehousing and storage infrastructure provide a vital link between modes

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[32] A related issue is the financial burden placed on some Australian port authorities to provide inappropriate dividends to State treasuries. This can reduce the port authority's ability to fund future infrastructure investments.

[33] Albany Port Authority submission, November 2001

[34] *Waterline*, Issue 28, September 2001

- firms offering global logistics services.

For global logistics firms to be competitive in the local market place they need to address the issue of 'the last mile'. This term describes the difficulties in the final stages of delivering products to the market relative to moving the products around the world. Consequently, while global firms may be able to dominate the delivery of freight logistics services—for example, track and trace, and fourth party logistics—they still require 'local touch'. It is here that domestic firms—particularly local transport, warehouse and storage service providers—can be actively engaged in global logistics chains.

The Action Agenda has identified unreliable telecommunications services as a significant impediment to the delivery of efficient and effective logistics chains in regional and rural Australia (Section 6.1.3). This impediment means that logistics customers in these areas are unable to access the full range of logistics services that may be available to their competitors.

3.3 FREIGHT LOGISTICS PERFORMANCE IN AUSTRALIA

The Action Agenda was unable to identify any benchmarking studies of the whole logistics industry—internationally or locally. Perhaps it is not surprising that there are no industry performance data, as logistics service providers are only now being recognised as an industry grouping. This also means there is no information comparing how logistics service providers perform compared with in-house logistics operations.

While there are no data on the logistics industry in general, there have been numerous performance studies of elements of the freight transport industry over the last decade. However, the only ongoing monitoring program is conducted by the BTRE and relates to container stevedoring. It is generally agreed that previous studies of freight transport performance are redundant due to past and on-going reform initiatives.

The National Transport Secretariat (NTS), in cooperation with Austroads, recently completed a project aimed at establishing a benchmarking scorecard and performance indicators for intermodal terminals. The study has developed a set of indicators that has been accepted by the Austroads Council. The Action Agenda supports the need to acquire more information about the logistics industry. However, it believes that such a study should not be done in isolation. Instead, the study should be considered in terms of the industry's priority data requirements.

3.3.1 Benefits of improved performance

As discussed in Chapter 2, freight logistics is vital to the economy because of its enabling effect. It extends market reach by giving manufacturers access to a wider range of raw materials and supplies from different sources. It also provides consumers with access to a wider range of domestic and international goods and services while reducing waste in production, consumption and capital expenditure. Improved logistics practices can have a significant impact on a firm's bottom line.

To encourage firms to adopt better freight logistics practices, detailed and transparent examples of the benefits of doing so are required. Firms are unlikely to adopt improved freight logistics practices if they do not understand how they will benefit ('What is in it for me?'). However, as noted previously, there is a lack of independent analyses about the benefits of adopting improved freight logistics practices.

Compass Logistics, Smorgon Steel and BHP Transport and Logistics are examples of Australian firms that have achieved better outcomes by adopting better logistics practices.

Compass Logistics improved its transport logistics performance by introducing co-delivery practices for three clients. This reduced its costs by 30 per cent while increasing service levels.

Smorgon Steel improved customer service levels from 80 per cent to 90 per cent; improved demand forecast accuracy from 70 per cent to 95 per cent; reduced its inventory by 5000 tonnes—producing a $3 million once off saving—and reduced its transport costs by $3 million per year.

BHP Transport and Logistics reduced several logistics chain costs by 10–30 per cent.

These improvements are consistent with overseas experience. For example, Sainsbury's, in the United Kingdom, achieved a 500 per cent return on investment in the first 24 months, and £7 million in stock savings per annum after adopting a collaborative logistics planning system in 1998. In the United States, Maersk Logistics helped reduce one United States company's inventory from $US10.8 million to $US5.5 million.[35] In the last four years, Harley Davidson overhauled its logistics chain producing a $US40 million reduction in material. The same process reduced development time by 30 per cent enabling the company to become more responsive to consumer demands.[36]

3.4 THE PERFORMANCE OF IN-HOUSE LOGISTICS SERVICES

The Action Agenda has identified only one study benchmarking Australian in-house logistics practices. Mollenkopf and Dapiran argue that their:

> *research constitutes the first extensive survey of Australian and New Zealand (ANZ) logistics managers to assess their logistics practices.*[37]

Using six competencies Mollenkopf and Dapiran compared the logistics performance of 50 Australian and 144 New Zealand firms with the top 15 per cent of United States firms.[38] The results are shown in Table 9.

Table 9 Comparison of logistics performance

Competency	ANZ firms mean score*	USA high achiever benchmark	per cent ANZ firms ≥ USA benchmark
Internal integration	68.9	76.6	20
Customer integration	52.1	59.7	10
Supplier integration	47.6	57.0	13
Relationship integration	52.2	60.6	16
Technology & planning	53.4	62.4	16
Measurement integration	53.2	60.2	28

Source : Mollenkopf and Dapiran

**Maximum score for internal integration = 100; maximum score for all other competencies = 80*

Some of Mollenkopf's and Dapiran's conclusions follow.

Internal integration

The higher ANZ scores:

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35 This example, and the four previous examples, come from the *Official proceedings* of the Smart 2001 Conference: *The Challenge of Integration*, May 2001, Sydney

36 *Business Review Weekly*, October 4-10, 2001, pp. 38–9

37 Mollenkopf and Dapiran, 1999

38 Although there was no statistical difference between the Australian and New Zealand responses, the low number of Australian responses may indicate that Australian firms did not see much benefit in completing the survey. The challenge for future surveys is to demonstrate the net benefit derived from better understanding the logistics sector and the industry.

…seems to be reflective of the adoption of practices inherent in the implementation of Total Quality Management (TQM) and International Standards Organisation (ISO) standards. However, ANZ firms tend to be weaker in the implementation-related capabilities of compliance, structural adaptation, and cross-functional unification.

Customer integration

The Australian and New Zealand scores might reflect niche market characteristics and the historic bulk commodity focus of both countries. Australian and New Zealand firms scored best in terms of flexibility.

Supplier integration

ANZ firms seem to be strong on the relational side of supplier integration…but weaker on the capabilities relating to true physical integration, breaking down the barriers between organisations…

Relationship integration

ANZ firms performed quite strongly against the USA benchmarks in the 'rule making' categories of role specificity and guidelines, but less strongly in the 'cake-sharing' capabilities of information sharing and gain/risk sharing.

Technology and planning

The authors note that this competency may apply more to big firms than small firms. The Australian and New Zealand firms scored well for internal indicators but less well for external indicators.

Measurement integration

ANZ firms are quite capable in the areas of functional assessment and financial impact [but as] the focus shifts to external measurement…the ANZ firms fall behind…

The Action Agenda concluded from Mollenkopf's and Dapiran's study that the Australian and New Zealand firms surveyed tend to be stronger on internal logistics characteristics than on the linkages between themselves and their suppliers and/or customers. This is supported by a study of agriculture logistics chains by the Bureau of Rural Science—described in Section 4.2—and anecdotal evidence gathered from the Action Agenda's industry consultations.

This weakness in the Australian business community's management of its external logistics activities provides an opportunity for the logistics industry to clearly demonstrate its ability to add value to other industries. By developing services that improve the customer's ability to manage their external logistics activities, the logistics industry can demonstrate clearly its ability to add value. In so doing, the freight logistics industry would then be well-placed to contest for a firm's internal logistics functions. This will accelerate outsourcing and provide growth opportunities for the whole freight logistics industry.

Before the business community can be persuaded to replace in-house logistics services with third and fourth party logistics service providers, it must understand what logistics services cost. Sinclair Knight Merz (SKM), using a database of 350 companies, provided data to the Logistics Association of Australia which show that Australian industry does not have a good understanding of logistics costs.[39] For example, 50 per cent of firms surveyed by SKM did not know:

- how much it costs to supply an order to a customer

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[39] *Logistics News NSW*, Logistics Association of Australia, February 2001

- the cost per order—total supply cost divided by order lines dispatched or issued to customers.

Also, 21 per cent of companies did not know their transport costs as a percentage of total sales. Table 10 indicates that this lack of understanding varies in its degree across industries.

Table 10 Logistics costs as a proportion of sales

Industry	Firms unaware of their logistics costs (percentage)
Pharmaceutical	35
Supply & procurement	35
Electronic equipment	32.5
Automotive	26
Fast moving consumer goods	19
Chemical	12.5
Food & beverage	12.5
Utilities	11
Metals	11
Building	9

Source : http://www.skm.com.au/log/logistics_benchmarking.htm (Sinclair Knight Merz)

The above table demonstrates the importance of industry generating common performance indicators and applying them internally and externally. This will enable benchmarking to assess the benefits of, for example, retaining or establishing either in-house or third party logistics—as proposed in Section 4.1.

3.5 THE LACK OF INDUSTRY DATA

Good quality and well-targeted data are essential to good decision-making in any industry. Industries and governments need current, reliable data to:

- assess the economic significance and performance of sectors
- monitor changes in industries
- identify priorities for infrastructure development
- guide investment decisions.

As noted earlier, there are few studies available about the performance of the Australian freight logistics sector.

One of the few sources of logistics performance data in Australia is the SKM database. SKM publishes the Logistics Costs Monitor (LCM), an indicator of movements in freight logistics cost variables that affect:

- capital operating and maintenance costs
- customer service levels
- transport costs
- inventory holdings
- order processing

- storage facilities.[40]

However, the LCM is a relatively new development. Further work is needed to ensure that it, and other data sources, use consistent definitional frameworks to lay a solid foundation for improved understanding.

3.5.1 Australian Bureau of Statistics data

The primary source of data for freight logistics is the Australian Bureau of Statistics (ABS). However, ABS data on freight logistics are inadequate—they are either piecemeal, included in broader categories or not collected at all. For example, under present practice, the freight component of rail, sea and air transport data is not published separately from the passenger component. The ABS is seeking to address these issues through domestic and international forums. However, changes will take time to implement because of the need to maintain international consistency and statistical rigour.

The Australian and New Zealand Standard Industrial Classification (ANZSIC) defines what data the ABS collects on transport and related activities. ANZSIC is now being revised but currently, the following elements of freight logistics activities are separately identified:

- transport and storage—covering road freight transport, rail transport, international sea transport, domestic and international air transport, stevedoring, port operators, freight forwarding, customs agency services, storage or warehousing services
- postal services
- courier services
- waste disposal services.

It should be noted that the ABS categorises its data on the predominant activity of the firm. Consequently, other activities undertaken by the firm are included within that category. For example, the logistics activities of a manufacturing firm that has its own transport fleet may not be recognised by the ABS. This is also true for other components of logistics activities, particularly warehousing.

Given the limitations of the ABS data, the Action Agenda also used information provided by industry associations, individual operators and academia, as well as its own collective experience.

3.5.2 The need for better data

Improved, detailed data on logistics activities will enable:

- confirmation of the sector's importance to the Australian economy
- trends to be monitored
- firms to make better decisions about investing in capital equipment
- governments to make better decisions about the planning and provision of public infrastructure.

The Action Agenda is very concerned that such a significant part of the Australian economy is so poorly served by data—from the ABS and other government and industry sources—that it is difficult to analyse its structure, growth and performance. The Action Agenda considered commissioning further studies. However, it did it not have the resources to underwrite data collection and analysis; as well, the time required would have held back actions that do not

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[40] As well, the most recent LCM results indicate logistics costs fell significantly in the December 2001 quarter. This drop was attributed to reduced diesel fuel prices, while higher foreign exchange rates and falling interest rates have reduced logistics financing costs.

require extensive quantitative analysis. This would have delayed many of the changes necessary to respond to the challenges and opportunities facing freight logistics in Australia.

The Action Agenda considers that improving the information gap is a priority action area. It suggests particular attention be given to examining:

- the sector's size and components in economic terms
- the trend to outsource logistics functions
- the sector's structure, conduct and performance
- workforce characteristics, and education and training expenditures
- expenditure on infrastructure, equipment, and research and development.

In addressing this gap, it will be necessary to assess overseas practice and experience in statistical collection and presentation. It is also important that the industry take a lead role in defining data requirements and the nature of ongoing collections, from both the perspective of commercial planning needs and the cost implications of collection. Decisions by all relevant parties on data priorities should follow cost-benefit guidelines.

1. The freight logistics industry, users of logistics services and government agencies to define data requirements and develop improved ongoing data collections. This will enable the analysis of industry characteristics and trends for the purposes of policy formulation, strategic business decision-making and infrastructure and other investments.

4 BOOSTING INDUSTRY PERFORMANCE

4.1 BEST PRACTICE AND BENCHMARKING

4.1.1 What is best practice in freight logistics?

Often the answer to this question is a description of practices used by global firms. Examples are provided where adopting this software package or that distribution network has led to firms reducing logistics costs by such and such an amount. However, are these examples really appropriate for Australian firms, particularly for small and medium enterprises (SMEs)? The Action Agenda considers it is fundamental that the context of best logistics practice be clearly articulated to ensure firms adopt the best logistics practices *appropriate to their needs*.

The Action Agenda believes that while there are many sources of best practice expertise—for example, consultants and publications—critical examination of best logistics practices in Australia is lacking. This situation of information without context leads to scepticism in the business community about what logistics can deliver and restricts growth in Australia's freight logistics industry.

Where case studies have been undertaken, their results have often not been disseminated effectively to ensure everyone benefits from the results. This dissemination failure is partially attributable to the lack of a recognisable, independent and knowledgeable logistics institution in Australia. This could be a key role for existing centres of excellence and/or new bodies such as a Cooperative Research Centre (CRC) on Freight Logistics, or a freight logistics communications hub—this issue is discussed in more detail in Section 4.4.

4.1.2 The importance of best logistics practice

Achieving best logistics practice is important for the Australian freight logistics sector for three very important reasons:

- It ensures that Australia's freight logistics sector is vibrant and dynamic—a sector willing to be innovative, strategic and far-sighted in developing logistics solutions. Such a sector would be well-placed to export its logistics expertise.
- Best logistics practice also ensures that Australian firms are able to participate comfortably in global logistics chains—where the best 'chain participants' will be chosen, not necessarily the cheapest suppliers of goods and services.
- A freight logistics sector that strives for best practice will benefit Australian suppliers and customers by implementing effective logistics solutions. These will add value to products through extended market reach and provide a greater variety of goods and services to customers at a lower cost and/or higher quality.

To achieve best logistics practice however, it is important to have an effective monitoring system for evaluating and adjusting the performance of freight logistics services. This means:

- identifying best logistics practices
- setting benchmarks
- developing voluntary and mandatory industry codes of practice and accreditation schemes.

4.2 ACHIEVING BEST PRACTICE LOGISTICS

Section 2.2 argues that best logistics chain practice is the combination of both logistics management and supply chain management techniques.

The essence of best practice logistics chain management is the constant assessment of business practices to ensure firms have adequate information and communication systems, and strong and supportive relationships with suppliers and customers. It is not surprising that firms achieving best practice have the right people with the right skills capable of managing—and constantly improving—these systems and relationships.

Technology is an essential element in managing the firm's logistics capabilities. It is also one of the key reasons that many firms have outsourced their logistics activities—preferring to use the skills of the freight logistics industry. The industry has the critical mass to develop the vast range of experience, knowledge and hardware and software systems appropriate for a broad range of business requirements. This gives it the capacity to quickly transfer best practices across logistics chains.

Managing chain relationships is more difficult and cannot simply be outsourced without trust and experience being developed within the firm first. However, as with managing the logistics capabilities, best practice chain management can be taught and learned.

A recent Bureau of Rural Sciences (BRS) study provides an excellent analysis of the attributes of best practice chains in an Australian context. The BRS defined the chain concept as the:

> *...series of interlinking steps which collectively define the nature, character and value of the product at the time of receipt by the end consumer.*[41]

The BRS also identified 11 success factors that contribute to efficient and effective chains. They are:

Awareness	Planning	Leadership
Transparency	Optimisation Strategies	Business Integration
Trust	Customer Focus	Efficiency
Relationships	Rewards	

The BRS concluded that successful chains are most likely when there is a knowledgeable and clearly identifiable chain leader. That leader provides valuable information to all chain participants and develops appropriate practices and systems for all to adopt. In the Australian context, the chain leader role provides a marketing opportunity for the freight logistics industry. It can promote its expertise and develop logistics solutions for a whole chain, rather than focusing on developing individual solutions for individual links in the chain.

4.2.1 Moving towards best practice

The Action Agenda explored options to help firms develop their logistics chain expertise and move towards best practice. The focus here is on all logistics activities and includes the important connection between third party logistics providers and their customers, and the customer's customers and suppliers.

The BRS chain study demonstrates the evolutionary nature of business relationships through small iterative changes. The following activities describe some of the iterative stages a firm might implement and experience on its way to best practice. Not all firms will experience each stage, and some firms may go backwards before moving forward again.

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[41] As part of its contribution to the Food and Fibre Chains Programs of Agriculture, Fisheries and Forestry—Australia, BRS 2000, *Chain Stocktake of Some Australian Agricultural and Fishing Industries*, Peterson, J., Cornwell, F. and Pearson, C.J., Bureau of Rural Sciences, Canberra, p. 5

Internal efficiency

This step assumes that before a firm can start along the path towards best logistics practice, it must have its own house in order. That is, it is doing all it can to reduce its costs, and operate somewhere near best practice for the services and/or goods it provides. At this stage, the firm's competitive advantage is based on price leadership, and good logistics management discipline will contribute significantly to lower costs.

Immediate customer focus

An alternative—and often subsequent—strategy to competing on price is competing on service quality. Here, firms develop better relationships with their immediate customers, seeking to add value. The firm's competitive advantage is based on the product's service quality attributes as well as its physical attributes.

An important aspect of this process is that the firm develops a sense that its future is linked to the success of others—in this example, the success of its immediate customers.

The incompatibility of each firm's logistics systems can cause problems here. These can be resolved by contracting a third party logistics service provider to help develop common logistics systems and, by so doing, help strengthen the logistics chain relationship.

Chain awareness

Chain awareness is that point where the firm recognises that its suppliers and/or its customers are part of a bigger picture. This picture includes the ultimate customers, and the chain's success will be determined by its ability to service the needs of those customers.

Chain awareness leads to a concerted effort by the firm to develop relationships with others in the chain. At first these efforts may be ad hoc meetings with suppliers and customers. But as more firms along the chain develop chain awareness, the meetings become regular and a clear network of contacts is established along the chain.

These relationships may be strengthened through formalised agreements such as 'preferred supplier status'. An important element of this stage is developing trust by developing a common sense of purpose.

It is important in terms of the long-term development of best logistics chain management practices to involve third party logistics suppliers at this stage. These firms can provide valuable input into the decision-making processes of all parties.

A chain leader should emerge during this stage. The chain leader's authority will be greatly enhanced if the chain develops formal consultative mechanisms to develop chain priorities and resolve any disputes that may arise.

Agreed strategies to share risks and rewards

As trust among the chain participants grows, a plan for the chain's future emerges. This plan includes strategies to maximise the chain's ability to respond to the needs of its customers. That is, this stage represents a much more formal way of doing business with chain partners. Consequently, an important element of this stage is the development of chain or system-wide key performance indicators. This stage may also include the use of alliancing.

It is important to agree to a common plan. But such plans can only become binding when everyone in the chain shares in the risks and the rewards associated with servicing the ultimate customers' needs. Consequently, this stage is typified by a high degree of information sharing. This reduces the chain participants' ability to hide their shortcomings and blame others for any problems. An indicator that firms have reached this stage is that they share their assets to maximise their use.

Business integration

At this stage the chain has a very strong sense of trust and mutual respect and is operating at close to, if not at, best practice. Firms share physical assets, develop information technology protocols that facilitate automatic data exchange, and have well-developed, systemic key performance indicators. Also, communication is open to all levels to provide the right information required to do the task at hand, planning timeframes are extended, and there is much less ad hoc responding to glitches in the system.

An important element of this stage is that the traditional boundaries between producers and service providers have blurred. For example, freight forwarders are responsible for quality control and/or in-transit production.

It is at this stage that the chain leader, or a leading third party logistics service provider, may develop into a fourth party logistics service provider, so making a significant step towards leading edge logistics chain management.

4.2.2 Adopting the right strategy

As in any business decision, firms need to adopt the right strategy for the right circumstances. The Action Agenda has identified two alternative strategies to help firms make the right choice. These strategies are:

- Identify one stakeholder and adjust all business practices. This option works best where a firm has one major supplier or customer. When the new business practices are developed, they are introduced to other stakeholders.
- Identify one business practice and develop an improved system with all stakeholders. This option works best where a firm has many suppliers and/or customers. The easiest business practice to reform should be chosen first. Then, with improved confidence and trust, the more difficult business practices should be tackled.

Irrespective of where a firm is in the above stages, the most important factor overriding all other concerns is that there must be a business case. At any stage firms should be willing to break ties and re-start their relationship building. This does not diminish the ability for firms to build relationships; but these relationships are strengthened when all parties recognise that the relationships are built on self-interest first and mutual interest second.[42]

4.2.3 Performance monitoring and benchmarking

It important that Australian firms adopt the most appropriate practices, not necessarily the most leading edge practices. For example, it would be inappropriate for firms to spend large amounts on the latest information technology systems without understanding the implications for their business processes and the re-engineering those processes might require if new systems were installed.

Performance indicators and benchmarking are tools that can help managers understand how their business operates and help industry, government and the community understand how particular industry sectors perform.

At the firm level, using financial indicators to assess performance is an established business practice. However, fewer firms, particularly SMEs, extend this practice to assess their operational applications.

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[42] This is business reality. However, the benefit of best logistics chain practice is that it clearly identifies the relative importance of mutual interest to an individual firm.

Performance monitoring requires managers to consciously think about what indicators are important in developing an efficient and effective business; and then to collect and analyse the data. There are many consultants with the expertise to help managers develop performance indicators. However, the Action Agenda was unable to identify if SMEs are accessing these services. And, if not, whether the affordability of these services or other factors are barriers to SME take-up.

From a logistics chain perspective, it is crucial for Australian firms to understand their operational performance to facilitate their acceptance by global logistics chains. Competing on cost will not suffice; Australian firms will need to demonstrate that they understand their own operations and can identify how they will fit into the logistics chain.

When a firm identifies its performance indicators, there are five ways it can benchmark its processes:

- By comparing internal operations—this option is only available to firms with many of the same operations performed throughout its business.
- By comparing itself with its competitors—this requires a great deal of trust, a strong sense of common purpose and a clear understanding of trade practice laws.
- By comparing itself with non-competitor firms—these have similar characteristics, but do not compete in the same market and can often bring different perspectives on how to achieve specific priorities.
- By seeking third party help—there are consulting firms in Australia that have databases on certain firm characteristics. This option removes the need for direct contact between firms thus allowing a more wide-ranging comparison.
- By comparing itself with publicly available data—this option requires cooperation between the parties involved and their willingness to make the information publicly available. Several firms supply data which is analysed and consolidated by another company.

Publicly available performance information is rare which makes it difficult to compare performance indicators among firms, regions or nations. This provides an opportunity for the freight logistics industry to develop and provide performance monitoring and benchmarking services to the business community.

The Action Agenda understands that competitive considerations will continue to restrict the availability of industry-wide case-study analyses. However, it believes there is scope to provide comparative information without reducing competitive advantage. The Agenda's general objective is to lift performance standards and to help underachievers move to higher standards. Information sharing—through case studies and industry analyses—is essential to meeting these objectives. In some cases, relevant case studies from overseas will be available, so avoiding commercial confidentiality issues.

2. The freight logistics industry to promote examples of best logistics chain practice, and develop information packages to help users of logistics services to adopt those best practices. The information packages should include:

- **a critical assessment of current logistics practices in Australian industry—particularly as they relate to small and medium enterprises (SMEs)—and case studies of successful and unsuccessful examples and relevant overseas experience**
- **a self-assessment guide to enable firms to benchmark their existing logistics practices**

- **a tool kit of the types of strategies available to move to best practice logistics and the resources available to support those strategies.**

Service level agreements

It is recognised, in Australia and internationally, that the performance of our freight logistics services is variable. Case studies on the quality assurance systems and service delivery standards applied to exporting perishables and the associated cold chain management, indicate that service variability affects Australia's capacity to secure market share in the global trading environment. A key conclusion of these studies was that implementation of basic service level agreements would assist Australian exporters in reliable and consistent delivery.

Improvements in service delivery, particularly a greater customer focus, should be a key result area for all companies in the freight logistics industry—not just those dealing in perishables. The advantage of service level agreements between the members of a logistics chain is that minimum service standards are agreed and each member has a vested interest in ensuring that key performance objectives—quality, timeliness and reliability—are met. In a highly competitive market, producers and manufacturers who are sensitive to their customers' requirements will demand logistics solutions that guarantee minimum service delivery standards and add value to their product.

To assist the adoption of service level agreements, the freight logistics industry and its customers should develop service delivery models appropriate to a variety of logistics chains. These models could then be turned into practical templates for firms to use in their quest for best logistics practice.

3. The freight logistics industry and users of logistics services to develop and promote templates which can form the basis of service level agreements to improve the overall standard of service delivery, safety and logistics chain performance. These agreements should clearly demonstrate their relevance to achieving best logistics chain practice.

4.3 QUALITY ASSURANCE STANDARDS (QAS)

The label 'QAS' was chosen to describe several existing systems that ensure product quality and/or safety. They include quality assurance systems, non-government regulated standards, codes of practice, accreditation and self-regulation schemes—both industry generated and government mandated.

Quality Assurance Standards (QAS) take many approaches, including:

- governments promoting accreditation as a form of self-regulation
- freight customers using accreditation to set industry standards and raise performance
- suppliers using various schemes as management tools.

The various QAS used in Australia have different:

- information requirements
- performance outcomes
- training requirements
- administrative and auditing arrangements
- cost and benefit distribution.

Little work has been done in examining the scope and type of common QAS in Australia. In 1999 the Integrated Logistics Network (ILN) undertook an examination of Australian codes of practice,

guidelines and quality assurance systems applicable to export logistics.[43] The study reviewed 81 resources against an assessment framework that encompassed key logistical issues. The major concern raised in this review was the lack of a coordinated, holistic export logistics chain approach. This meant that critical logistics elements—for example, cold chain integrity, the materials handling system, documentation and communication—were poorly managed with little through-chain control.[44]

These concerns are equally valid for the non-perishable, non-export elements of the freight logistics industry and many companies have established their own systems in an attempt to overcome this problem. This has led to several chain- or firm-specific standards and systems, sometimes loosely based on international standards or practices, often with no formal validation/audit mechanism. Ideally, all QAS should be focused, effective, consistent across jurisdictions and industry sectors, dynamic in response to changing technology and kept to a minimum.

The ILN followed up the study on codes of practice with the development of the National Export Logistics Framework (NELF) which provides a management framework for the elements that impact on industry's export ability. The NELF proposes an industry-based accreditation system that will:

- have clearly defined key performance indicators
- define the logistics responsibilities and requirements of all parties within export logistics chains
- be formalised through accreditation
- highlight the value of service through logistics as a foundation for improving Australia's perishable export performance
- help maintain the quality and safety attributes of the product.

The NELF was trialled as the Australian Quality Logistics System (AQLS) in a demonstration project that looked at three supply chains to Singapore: citrus from South Australia by sea; dairy from Victoria by sea; and pork from New South Wales by air. The demonstration project concluded that significant benefits of competitive advantage could be gained by exporters who implement a quality logistics system. It also recommended that such a system be established promptly. Accordingly the Australian Quality Logistics demonstration project is now being followed up with a broader pilot project involving several export logistics chain participants across Australia.

The objectives of the AQLS and NELF are equally valid throughout the freight logistics sector. A national accreditation scheme would produce significant benefits in:

- common or standardised training and auditing arrangements
- greater involvement and uptake by SMEs and regional businesses.

Another example of the application of QAS is in road transport. The proliferation of road transport standards and accreditation has arguably hindered rather than encouraged the uptake of certification. There are 10 different standards applying to heavy vehicle operators and yet only a minority of operators hold a valid form of certification. The development of national accreditation and verification standards could help reverse this situation by reducing the number of different standards and simplifying the procedures for take-up.[45]

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43 Victorian Perishables Taskforce, 2000

44 Ibid.

45 Hassall, Kim, submission to the Freight Transport Logistics Industry Action Agenda, 29 January 2002, *Beginning the process of developing a national certification scheme and standard*.

The development of a mechanism for evaluating and incorporating relevant international standards and protocols into the Australian context where appropriate would also be useful.

Additionally, QAS should incorporate environmental sustainability objectives as proposed in Section 5.2.4. The freight logistics industry does not have a good track record for environmental awareness. As a minimum, when developing QAS, it should consider the environmental impact of any proposed operating arrangements. The benefits of being a green company are well publicised, particularly in attracting capital investment.

4. The freight logistics industry and users of logistics services, in conjunction with government agencies, to review accreditation arrangements in the freight logistics industry to identify and address inconsistent practices, duplication, cost and domestic and international recognition.

4.4 INNOVATION, RESEARCH AND DEVELOPMENT

4.4.1 Industry practice

Innovation is critical to industry's ability to increase productivity and improve competitiveness. The Organisation for Economic Cooperation and Development (OECD) report: *Innovation and Productivity in Services: State of the Art,* identifies several drivers for innovation which apply to manufacturing and services industries, including:

- research and development (R&D)
- fixed capital investment and the role of information and communication technology (ICT)
- organisational change
- human capital development
- competition and regulations.[46]

Basic R&D directed at technical development is not widespread in the Australian logistics sector. Further, much of the R&D that is undertaken is heavily dependent upon government assistance. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the CRC for International Food Manufacturing and Packaging Science undertake research directed at developing packaging materials that improve the condition of perishable goods during transport. The CRC for Railway Engineering and Technologies is also carrying out freight logistics-related R&D.

Evidence suggests that freight logistics professionals tend to rely more on applying and adapting existing technology—such as using capital investment to upgrade ICT—to meet their requirements. Innovation also involves non-technical developments and often evolves through small and incremental changes in processes and procedures. The sector and its professionals could thus be described as incremental adaptors.[47] The move to outsource logistics activities is a good example of external factors triggering innovative responses, including changes to organisational structures and human and physical capital requirements. Innovative responses are also triggered by increased domestic and international competition, competition policy changes and deregulation.

Because freight logistics professionals are not heavy users of R&D, they do not have a close relationship with universities and research laboratories to acquire and develop knowledge.

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[46] Pilat, Dirk, November 2000, *Innovation and Productivity in Services: State of the Art*, Paper prepared for the OECD/Australia Workshop on Innovation and Productivity in Services

[47] Patent registration, a classic standard yardstick for innovation, is not a useful measure to assess the level of innovation in the freight logistics sector. Copyrights and trademarks would provide a better measure, but are usually not recorded in innovation statistics.

Although universities and research laboratories could help address problems and opportunities through informed and focused research, they are not preferred sources for disseminating information about innovative approaches and techniques.

Instead, freight logistics professionals and the industry use their own resources, customers and suppliers, including hardware and software ICT providers to guide their R&D. Also, inter-firm collaboration resulting from participation in logistics chains is likely to facilitate greater use of 'knowledge through experience' rather than 'knowledge through research'.

Despite Australian firms not being involved in the development of cutting edge global logistics technology, Australia has generally kept pace with innovative developments. For example, the sector has responded to the demands of new production concepts including total quality management (TQM) and just-in-time (JIT); and to the more recent concepts of business-to-business (B2B) and business-to-customer (B2C) commerce; and developments such as third party and fourth party logistics (3PL and 4PL™).

Individually and collectively, Australian firms are also adapting new and existing technologies and processes to meet their needs. Some of these technologies and processes have been sourced from overseas, while others have been developed solely in Australia. Examples of successful Australian initiatives include:

- the development of high-speed and high capacity rail wagons
- integrated mine planning and logistics software
- straddle carriers
- multi-user freight tracking systems.

The emergence of integrated logistics providers—seizing the opportunities provided by reforms in rail and ports—is an example of an innovative response to change.

4.4.2 Dissemination of innovation

There is some research and dissemination of innovative applications by Federal, State and Territory agencies, the Australian Freight Council Network (AFCN) and various education institutions. Information about new products and logistics methods and approaches is also disseminated through industry magazines and bulletins, publications of industry associations including the Logistics Association of Australia and the Supply Chain Council of Australia, and industry conferences.

Work practices, organisational structure and other organisational changes are likely to be addressed as firms adopt new concepts and systems. However, as with information about human resource development, information about how organisational change is managed seems less readily and publicly available than information about the systems and concepts adopted. More research in this field is appropriate to inform the wider sector about what is happening and how change is being managed. This could also provide direction to filling gaps in the current and projected provision and delivery of relevant education and training. For example, this research could address the 3ps concept—people, process and programs—that is prominent in supply chain management theory. The gap is particularly evident for middle and executive management levels. This issue is discussed in more detail under *Education and Training* in Section 5.1.

4.4.3 Financing innovation

Little is known about how innovation is financed. This may be because the cost associated with innovation is part of investments required to meet contractual obligations under logistics chain arrangements between logistics providers and their clients. If the investment and the knowledge it generates would remain the property of the firms involved, it is likely to be considered crucial to

their competitive advantage. In turn, this would reduce the initial scope for dissemination to the wider industry.

Comparisons of the freight logistics industry with other industries, such as manufacturing, indicate a much lower uptake of Federal programs to support R&D and to facilitate innovation and its dissemination.[48] Preliminary statistics suggest that under the R&D Tax Concession the Transport and Storage sector received 1.2 per cent of the total funding in 1996–97 and about half of that in the following two years. In 1997–98, the bulk of these funds were used for ICT-related R&D. In addition, only a few companies accessed the former Supply Chain Program or are involved in activities with CRCs.

While the lesser focus on R&D would be an obvious reason for this disproportionately low uptake, there are likely to be other reasons including:

- some activities being ineligible for funding due to a definition or concept of R&D that is incompatible with the industry's structure and needs
- a lack of, or low, awareness among firms of Federal funding programs, the funding approval process and requirements
- a lack of critical mass among firms to engage in larger projects.

4.4.4 Stimulating innovation

This overview of Australia's experience establishes that innovation is happening in the freight logistics industry and that both industry and government are involved. However, there are still gaps in our understanding. Consequently, the Action Agenda remains unclear about the pervasiveness, nature and possibly the appreciation and acknowledgment, of innovation occurring in the industry, as well as its contribution to increasing productivity and improving competitiveness. This lack of full understanding may result in a flawed self-image of the industry as an old industry rather than a new industry forming part of the new economy.

Analysing the industry's innovation process and the environment in which it occurs would contribute to a better understanding of the sources of innovation, the players involved and their relationships. It would clarify what is in the private and in the public domains, how it is financed and how this information is, and can be better, disseminated to the wider industry. Furthermore, it would help to clarify who and what drives innovation and whether there are significant differences between firms operating in urban or regional areas or which serve different logistics chains. Finally, it would help assess whether regulations, inconsistent standards, and public and private financing arrangements are impediments to increasing innovation. The analysis of Federal R&D and innovation programs, and their ability to cater for the industry's needs, would be fundamental to improving the industry's approach to innovation.

Existing and planned Centres for Excellence could provide a focal point for studying organisational and behavioural change supporting technology uptake, while building relationships between industry and the tertiary institutions involved. The Institute for Transport Studies—with offices at Sydney and Monash Universities—was declared a Centre for Excellence in Transport and Logistics in the mid-1990s. A Centre for Excellence in ICT was announced in July 2001 as part of the Federal Government's Innovation Action Plan, *Backing Australia's Ability*. A discussion paper on the initiative refers to ICT as enabling industry through the 're-engineering of operations and supply chains'. The Victoria University of Technology (VUT) will also establish a Centre for Excellence in Transport and Distribution. These Centres could assist R&D and innovation in logistics management, particularly if they adopt a national and collaborative research focus.

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[48] Federal Government support programs for innovation and commercialisation include the R&D Tax concession, R&D Start, Innovation Investment Fund (IIF), Pre-Seed Fund and COMET.

The establishment of a CRC dedicated to developing, testing and commercialising logistics technologies—including ICT-based hardware and software technologies and transport support equipment—is desirable. The CRC industry-education–government joint funding model is consistent with the cooperative leadership approach proposed in Chapter 7 of this report. Just as effective logistics chains require an alliance of parties focussed on improving the chain rather than the individual parts, effective research requires similar alliances between industry, governments and universities. A CRC would facilitate these alliances and best fit the requirements of an industry that has limited experience of collaborating with universities. Based on the freight logistics industry's priorities, a CRC would provide a forum for focusing the industry's research efforts. It would have the additional benefits of economies of size and scale, stronger networks and a central point for collecting and disseminating related research.[49]

As an alternative, or complement to a CRC, the establishment of a logistics communication hub could also be considered. The hub would provide for a virtual central point for communication between firms and between industry and government agencies. One service the hub could provide would be one-to-one assistance to firms, especially SMEs, on innovation and best practice matters. The cost of this assistance could be recouped on a part fee for success premium basis, with fees returned to the funding pool. The hub could also provide a focal point for disseminating international and domestic information on innovation and best practice.

These strategies should aim to:

- Improve the mechanisms that create and stimulate industry awareness and adoption of the latest developments in freight logistics.
- Further encourage market-driven innovation through a strong commitment to the cost competitive delivery of value-added logistics services.
- Fill the knowledge gap between expertise developed in research bodies and current industry practice in relation to innovation.
- Improve the link between industry, universities and research.

5. The freight logistics industry, in conjunction with Federal Government agencies, to commission an analysis of the industry's innovation process and the industry's ability to access relevant government assistance as part of that process.

6. The freight logistics industry, tertiary institutions and governments to develop a process for establishing appropriate research and development capabilities for freight logistics—for example, by establishing a Cooperative Research Centre (CRC) or other joint arrangements.

4.5 e-LOGISTICS

4.5.1 Taking the opportunities

The freight logistics sector is highly dependent on technology at every stage of its operations. This includes the delivery of services—for example, moving, packing and monitoring goods—as well as business management and commercial transactions.

Since the freight logistics process is very document intensive it will benefit from the application of e-Business and e-Commerce systems. Moreover, these technologies can be combined with

[49] Universities and State transport agencies have expressed strong interest in the potential for a CRC. The Queensland University of Technology is coordinating a proposal. The potential CRC's success depends on industry interest and commitment.

intelligent transport systems (ITS) to further improve efficiency. The Action Agenda uses the term e-Logistics to cover the full range of possible applications.

All leading edge technologies to assist freight logistics are available in Australia as they are in other countries. However, as argued in this section, the rate of adoption, and to a lesser extent the cost, are issues for consideration by industry and governments. e-Logistics is a major part of the innovation challenge facing the industry, and requires its own particular discussion.

The 1999 National Office for the Information Economy (NOIE) study, *Trucks Online*, identified the major e-Logistics issues facing the road freight industry.[50] These issues seem equally applicable to the rest of the freight logistics industry and include:

- lack of understanding of the benefits offered by modern technologies
- perceived lack of demand from customers
- use of proprietary systems
- cost.

e-Logistics is not a one size fits all solution for freight logistics firms and their customers. Thus, investments in new technologies must be carefully considered to fully optimise results by matching them with core business requirements. Businesses that invest heavily in e-Logistics often fail to consider the effect on customers through, for example:

- compatibility issues
- the full ongoing costs of maintenance and software upgrades
- the total relevance to their business model.

The result can be disillusionment with e-Logistics when it fails to deliver measurable improvements to bottom line performance. This is a common problem experienced by SMEs. They become preoccupied with investing in e-Logistics and becoming technologically enabled, without first identifying if the technology can be appropriately adapted to suit their specific business requirements and create a total business solution.

The effective uptake of e-Logistics depends on a thorough analysis of the requirements for effective implementation and the risks and opportunities. The Tasmanian Electronic Commerce Centre Pty Ltd (TECC) has been involved in advising SMEs on the uptake of technologies. It has developed a framework of the steps required to achieve success, known as Trading Community Development, which includes:

- Awareness—understanding electronic commerce concepts and being aware of available technology solutions.
- Demonstration—seeking a demonstration on how technologies will apply to the business and how they will deliver benefits.
- Planning and analysis—planning all aspects of the investment in technology and adaptation of the business to ensure effective implementation.
- Support—organising effective ongoing support in advance to ensure successful implementation.
- Enablement—ensuring the business operations and the new e-Commerce technologies are effective in terms of culture change management and transaction processing between business and customers.

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[50] National Office for the Information Economy, 1999, *Trucks Online: the National Road Transport Scoping Study*

The TECC has used this framework in the development of the Tasmania Logistics Online project—an electronic commerce project that focused on key Tasmanian transport providers and their customers. The project was a TECC initiative supported by NOIE.[51]

Establishing adequate consultation between business partners is an essential element for success in developing e-Logistics solutions. It ensures that business outcomes are complementary to the needs of other members of the logistics chain and customers. Although this seems obvious, communication problems along logistics chains are often reported as a result of too many managers' systems. Each has its own protocols and languages that find it hard, if not impossible, to talk to each other without an intermediary system. This is not always intentional but can be avoided if e-Logistics implementation is undertaken as part of a total business solution rather than simply to overcome a specific operational problem.

Customer practices can sometimes act as a disincentive to investment in e-Logistics. For example, when e-Logistics investment costs are passed on to customers they may turn to a cheaper provider. This will also depend on the relationship with the trading partner and the transparency of the benefits of e-Logistics.

Another disincentive to investment in e-Logistics is that businesses are focussed on achieving lower fixed costs or overheads. Using modern technologies increases fixed costs through investments in hardware and software as well as maintenance. However, in most cases this is offset by decreased production costs and economies of scale. To identify these benefits a business case has to be prepared and the long-term return on investment considered. Consequently there is a need for action or strategic plans at firm level to promote an e-Logistics-capable culture and to support e-Logistics best practice. NOIE has recently prepared several firm-level case studies that will help businesses in their planning.[52]

SMEs face particular challenges in adopting modern technologies. Due to limited resources they find it difficult to do the research necessary to make informed decisions about investments in e-Logistics. In addition they often do not have the resources to prepare a detailed business case. They are confused when they are presented with seemingly contradictory advice by different vendors. Thus, there is a need for governments and industry associations to continue raising SME awareness of e-Logistics opportunities.

Because SMEs often depend on large trading partners—and have to comply with their requirements for e-Logistics capability—further issues arise from the interaction between large companies and SMEs. When a large organisation adopts a new e-Logistics system, its smaller trading partners frequently have no choice but to follow suit. This can help boost SMEs into the electronic world, but where the imposed electronic system is not a good match for their own business needs, it can be detrimental. Systems duplication and higher costs can result if larger trading partners impose their proprietary systems on an SME—which then has to run a proprietary system for dealing with each partner—in parallel to their own system. This is particularly important in Australia. Many Australian businesses are small globally and need to communicate electronically with large multinationals—either as business partners or as parent companies—to participate in the global market.[53]

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51 This demonstration project is now being commercialised by Tasmania Business Online (www.tbo.com.au).

52 NOIE, October 2001

53 Large organisations have their own difficulties investing in technology. They often have considerable investments in proprietary systems, such as electronic data interchange (EDI) messages transmitted over value added networks (VANs). The reluctance to write off these investments can hold them back when new systems become available that would better suit their business needs.

4.5.2 Intelligent transport systems (ITS)

The *National Strategy for Intelligent Transport Systems*, *e-transport*, was developed by ITS Australia. It is a cooperative effort by Federal, State and Territory Transport Ministers—in consultation with users and industry—to harness the enormous potential of advanced technologies to improve Australia's public and private transport systems. Austroads, the national association of Australian road authorities, is implementing the National Strategy on behalf of the Australian Transport Council (ATC).[54]

Federal, State and Territory governments have invested substantially in ITS to date. They continue to support the industry and ITS Australia to ensure Australia's successful participation in the global ITS marketplace.

The ATC agreed in 1998 that all Electronic Toll Collection (ETC) installations in Australia should comply with the European Committee for Standardisation (CEN) standard, now the dominant worldwide standard. This would achieve system interoperability so that vehicles using various toll roads could do so with any type of e-toll device in the vehicle.

The $1.8 billion Melbourne CityLink project is Australia's largest urban road development and probably the largest and most sophisticated ETC free-flow toll road in the world. Over 640 000 transactions have been recorded in one day alone—all of these without the vehicle having to stop or reduce speed. CityLink has had significant positive impacts for freight. It has improved the efficiency of access for trucks—especially B-doubles to and from the intermodal transport hub of Melbourne. Indeed, 63 per cent of all heavy vehicle movements on CityLink are completed by trucks that are greater than 15 tonne gross vehicle mass. The growing reliance on CityLink as a major freight corridor has also helped reduce pressure of freight movements on other roads in the Melbourne metropolitan area.

In NSW, a dual protocol approach has been developed where e-tags from any supplier can be read by the equipment on all of Sydney's State Government and privately operated motorways. In addition, e-tags from Melbourne's CityLink can also be read. Australia is the first country in the world where interoperability in ETC has been achieved.

Industry is employing ITS specialists and establishing business units whose sole focus is developing ITS to improve competitive performance. For example, taxi fleets in Australia's capital cities have become the most advanced in the world through applying ITS to their core business requirements. One ITS development uses call line identification to automatically assign a taxi to a caller based on the caller's address. The vehicles are fitted with Global Positioning Systems (GPS) to identify the location of available cabs, and in-car cameras for driver and passenger safety. Vehicles are also fitted with Electronic Funds Transfer at Point of Sale (EFTPOS) terminals, that enable payment by credit card, or by direct debit cards of banks.

These developments in ITS applications show Australia's capacity to adopt high technology. However the Action Agenda considers that an increased priority needs to be given to the specific needs of freight logistics in the development and implementation of ITS. Examples of ITS technologies with great potential for freight logistics include:

- vehicle routing and scheduling systems that optimise vehicle use
- track and trace systems
- freight matching
- vehicle booking systems.

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[54] *e-transport – The National Strategy for Intelligent Transport Systems*, a strategy commissioned by Austroads and developed by ITS Australia, Sydney, November 1999

The take-up of these technologies is likely to be exponential once systems issues of data standards and cost are resolved for providers, and more customers require the capacity to access data on the movement of their goods.

Track and trace

Customers want to be informed if their freight is off track—even when this happens overseas.

There are several different technologies available that can provide a business with necessary track and trace information. The technology options range from sophisticated satellite (GPS) tracking, to more affordable mobile phone-based technologies, to simple bar coding and scanning at key points of the freight's journey. As noted above, GPS has been successfully applied in Sydney taxi-cabs for incident management and scheduling services. While the uptake of such technologies in the road freight industry—particularly among smaller regional operators—has been limited by perceived establishment costs, these costs are likely to fall as the range of options increases.

An alternative technology to GPS tracking is the recent development of Wireless Application Protocol (WAP). This potentially enables the use of mobile phones to send electronic messages on the status and position of trucks, and advertise the availability of freight to drivers. Mobile phone technology is not as accurate for freight tracking purposes but for most situations it is sufficient to know where, for example, a truck is within a 125 metre range rather than within a two metre range.

Another technology is bar coding and scanning. This enables operators to monitor when freight has been loaded on or off the truck rather than it being necessary to know precisely where the truck is at any time. There is a variety of bar coding systems used in Australia, many of them proprietary to a particular company or retail chain. Australia will achieve the full benefits of bar coding—for example, worldwide track and trace—when it adopts a numbering and bar coding system that conforms with international standards for item identification and automatic data capture.

Proposed tracking requirements by governments for enforcement purposes—for example, to track over-dimensional vehicles and higher mass vehicles—will accelerate the uptake of ITS technologies in Australia's freight logistics industry but will require supportive infrastructure. This is discussed in more detail in Section 6.1.3 on *Communications*. Government initiatives need to be coordinated with business needs for freight tracking to allow the use of cheaper, standardised technology wherever possible.

Freight matching

Several freight matching services have been established over recent years to assist in the utilisation of transport assets by providing the opportunity to carry freight on 'backloads'. However, many have struggled to achieve sufficient use to ensure their success.

The main reason seems to be that freight matching services have targeted the spot market. About 90 per cent of business is predictable and planned. The remaining 10 per cent—the spot market—might not provide enough volume to support freight matching services in Australia. It is also one of the challenges to freight logistics that freight movements are rarely evenly balanced, so even where freight matching services are in place, there is never enough backload freight to match available backload capacity.

If freight matching is to be successful, it needs to target the whole of the relevant freight logistics market. To do this freight matching must cut across industries at a strategic level. This requires high level partnerships of different logistics providers to ensure that a provider that regularly moves freight from A to B will be given priority to move freight from B to A.

Vehicle booking systems

Vehicle booking systems (VBS) are used extensively at the sea/land interface in Australia.

The Australian stevedoring companies, Patrick and P&O Ports, have introduced VBS at most of their container terminals. The introduction of these systems has significantly reduced truck congestion and delays at the terminal gate. It has also enabled the stevedores to increase operational effectiveness. Trucking companies have benefited through more efficient use of their fleets. However, some trucking companies have voiced concerns about system inflexibility, costs and lack of adequate consultation.

Patrick and P&O Ports have also been progressive in introducing ICT systems and are considered to be at the international forefront of such developments within the stevedoring industry. The most recent initiative was the cooperative development and introduction of the electronic export receipt advice. However, Patrick and P&O Ports have adopted a commercial strategy to develop their own proprietary ICT systems, with no integration between systems. When multiple ICT systems exist in freight logistics chains it is mainly the trucking companies that assume the cost of investing in multiple systems to communicate with their various customers and service providers.

The application of VBS is not limited to the sea/land interface. It could also benefit the air/land interface and other logistics facilities such as warehouses and distribution centres by improving reliability and vehicle turn-around times. For example, the Action Agenda considers that Australian warehouse operators have readily adopted leading edge technologies, but remains concerned about the ability of some operators to manage time slotting and receipt issues. This may be related not just to warehouse practices but also to the technological applications being used. Developments in VBS, combined with freight matching technologies, have the potential to greatly enhance the utilisation of Australia's trucking fleet and contribute overall to more efficient and effective logistics operations.

4.5.3 Connectivity of systems

Beyond the potential applications discussed above, there is an increasing demand for new solutions to overcome incompatibility of proprietary systems and to improve users' compliance to standard platforms. One reaction is the development of 'middleware', a software solution that acts as an interface between the operating system and the applications. Middleware helps businesses caught between differing technology systems to overcome interconnectivity problems.

Governments can have a key role to play in this area. For example, the Australian Customs Service (ACS) is a world leader in dealing with its customers electronically. The Cargo Management Re-engineering (CMR) project aims to secure this position. The CMR project will have a significant impact on the freight logistics sector.

A major advantage of electronic reporting for imports is that the ACS will be able to provide reports on the status of freight much earlier than at present. The CMR import process will provide progressive status of freight—released or otherwise—to stevedore, terminal and depot operators prior to arrival. This information is currently only available upon vessel or aircraft arrival. This change in functionality—at the request of various industry sectors—will help improve freight logistics.

Cargo release status will be available after all statutory requirements have been satisfied and when the reconciliation of key data fields from the dual reporting systems is achieved. That is, when a Cargo Report is received from the shipping line, airline or forwarder and an Import Declaration is received from the importer or broker.

Accredited Importers will be allowed to obtain release with minimal information—referred to as a Request for Cargo Release—and supported by a subsequent Periodic Declaration at which time all deferred customs duty is to be paid.

Movement status of freight under bond to inland terminals or depots will be subject to Customs and Australian Quarantine and Inspection Service (AQIS) risk assessment. This assessment relies primarily on the timeliness, quality and completeness of data provided in the Cargo Report.

Part of the Federal Government's initiative to create a seamless export process is the development of the single window to government. The AQIS system, EXDOC, is linked to the ACS electronic export reporting system, EXIT. Once fully functional, a roll-out of all AQIS-related commodities will be reported through EXDOC. It will interact electronically with EXIT and a response will be sent to the exporter through EXDOC. This process removes the duplication of reporting to two different government bodies covering similar information. This process will continue after the implementation of the CMR.

Technical organisations, such as Tradegate, EAN and Standards Australia, are working to achieve greater connectivity of messaging standards nationally and internationally. This work is of high importance for the seamless functioning of electronic commerce systems between different organisations and countries. It is not limited to the customs and quarantine area and needs to be continued. A concerted effort by the freight logistics industry, its customers, technical organisations and government agencies to achieve greater connectivity of systems would produce significant paybacks within logistics chains by reducing costs and promoting take-up.

7. Government agencies, the freight logistics industry and users of logistics services to increase their efforts to demonstrate the commercial benefits of e-Logistics applications and support their use—particularly by small and medium enterprises (SMEs).

8. The freight logistics industry, with government agencies, to conduct feasibility studies to improve freight distribution through the integrated application of Intelligent Transport Systems (ITS), cargo tracking and e-Business.

9. The freight logistics industry and users of logistics services to work with appropriate technical organisations and government agencies to achieve greater connectivity of messaging standards and related business technologies, nationally and internationally.

4.6 WORKPLACE RELATIONS

A productive workplace relations climate can make a critical contribution to seamless freight logistics chain management. There is a general commitment in the freight logistics industry—which includes representative employer and employee organisations—to build cooperative workplaces around the common objectives of improved efficiency, productivity and employment security.

4.6.1 The logistics workforce

There are no comprehensive studies on the number of employees engaged in logistics activities in Australia. The BTE suggests that approximately 695 000 employed persons—full-time equivalent—were engaged in logistics activities in 1999–2000. However, the BTE warns that the method for deriving this figure is not robust and that the result should be treated cautiously.[55]

The inability to determine more precisely the size of the logistics workforce is an impediment to clearly articulating the importance of logistics to the economy. Little is known about the industry's skills base, employment conditions, age and gender distributions. This diminishes the opportunity to make informed commercial and policy decisions. The Action Agenda recommends

[55] A United Kingdom study suggests that approximately 30 per cent of the UK working population is engaged in logistics related activities. If a similar proportion was applied to Australia, this would equate to a logistics workforce of approximately 2.75 million—an unrealistic estimate given that it is approximately one and a half times the number of workers engaged in all non-service industries.

the implementation of Action 1 should include, as a priority, a comprehensive study of the size and characteristics of the logistics workforce.

4.6.2 Trends in employment

Assessing future employment trends within the freight logistics industry is restricted also by the lack of available data. However, Table 11 illustrates Monash Centre of Policy Studies projections that show employment in the Transport and Storage sector will increase by an average of 1.8 per cent per annum during the period 2000–01 to 2007–08. Over the same time period, All Industries employment is projected to increase by 1.6 per cent per annum.

Table 11 Changes to employment in the Transport and Storage sector, 2000–2008

	Persons ('000)	Annual Change %								Total	Ave
Industry Segment	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Change %	Change %
Road transport	207	0.7	1.0	1.7	1.7	1.1	0.6	1.4	1.3	10.0	1.2
Rail transport	35	2.2	-1.9	-3.1	-2.6	-1.3	-2.2	-1.2	-1.2	-10.7	-1.4
Water transport	12	10.1	4.6	1.7	3.3	5.5	4.4	5.5	5.7	48.6	5.1
Air transport	49	11.6	0.9	2.7	4.3	5.0	2.3	3.0	2.8	37.2	4.0
Other transport	3	2.2	-1.9	-3.1	-2.6	-1.3	-2.2	-1.2	-1.2	-10.7	-1.4
Services to transport	70	5.6	1.4	1.8	3.1	2.7	1.4	2.2	2.1	22.1	2.5
Storage	32	5.6	1.4	1.8	3.1	2.7	1.4	2.2	2.1	22.1	2.5
Transport/ storage	407	3.7	1.0	1.4	2.1	2.0	1.0	1.8	1.7	15.5	1.8
All industries	8886	1.9	1.0	1.7	2.0	1.8	1.0	1.7	1.7	13.4	1.6

Source : Monash Centre of Policy Studies, 2001

At the disaggregated level, Air Transport and Water Transport growth is very strong. Services to Transport and Storage employment increase significantly above the average for All Industries, while Road Transport employment increases at slower than the average rate and Rail Transport employment decreases[56]. The projections for Road Transport are supported by the then Department of Employment, Workplace Relations and Small Business (DEWRSB) *Jobs Outlook*. It stated freight drivers have average job prospects given expected moderate employment growth and above average job turnover.[57]

Age distribution

Over the last 10 years, the age distribution in the Transport and Storage workforce decreased by three percentage points in the 15 to 19 age group, while increasing by five percentage points in the 45 to 54 age group. Chart 1 shows that the age distribution of the Transport and Storage workforce is skewed to older age groups compared with All Industries.

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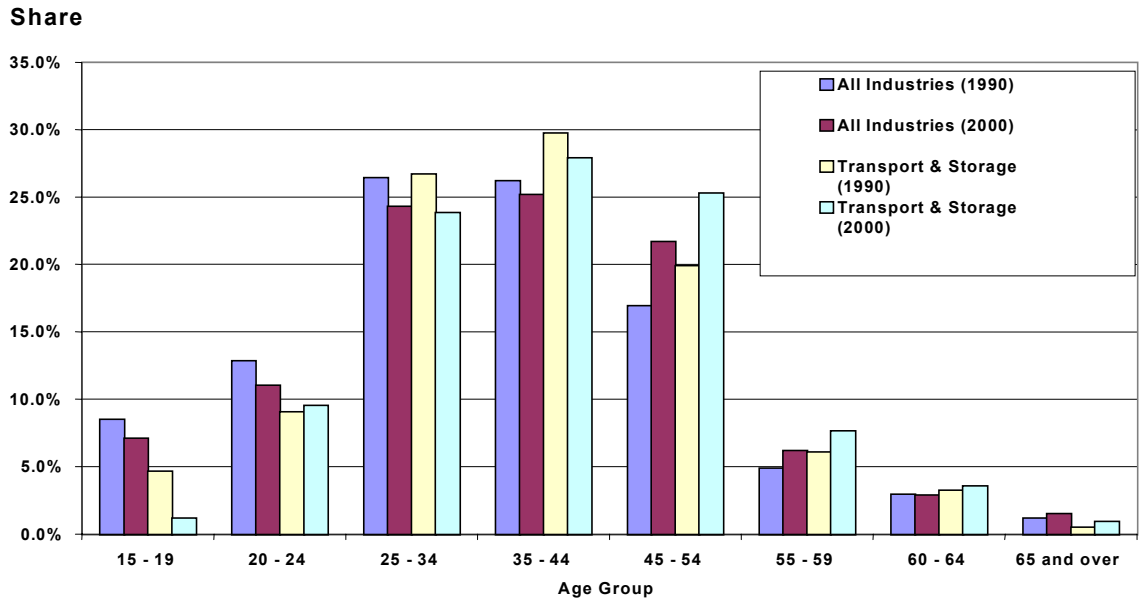
[56] It should be noted that these estimates were made prior to the impact on the aviation sector of 11 September 2001, as well as the substantial restructuring in Australian aviation following the collapse of Ansett. Occupational statistics also need qualifying as they can include workers in passenger transport operations.

[57] DEWRSB, March 2001. Refer: http://www.jobsearch.gov.au/joboutlook

The 15 to 34 age groups decreased as a component of the workforce from 40.8 per cent in August 1990 to 35 per cent in August 2000. This demonstrates that the industry is attracting fewer younger people and that the workforce is ageing.

Chart 1 Age groups as percentages of All Industries and Transport & Storage



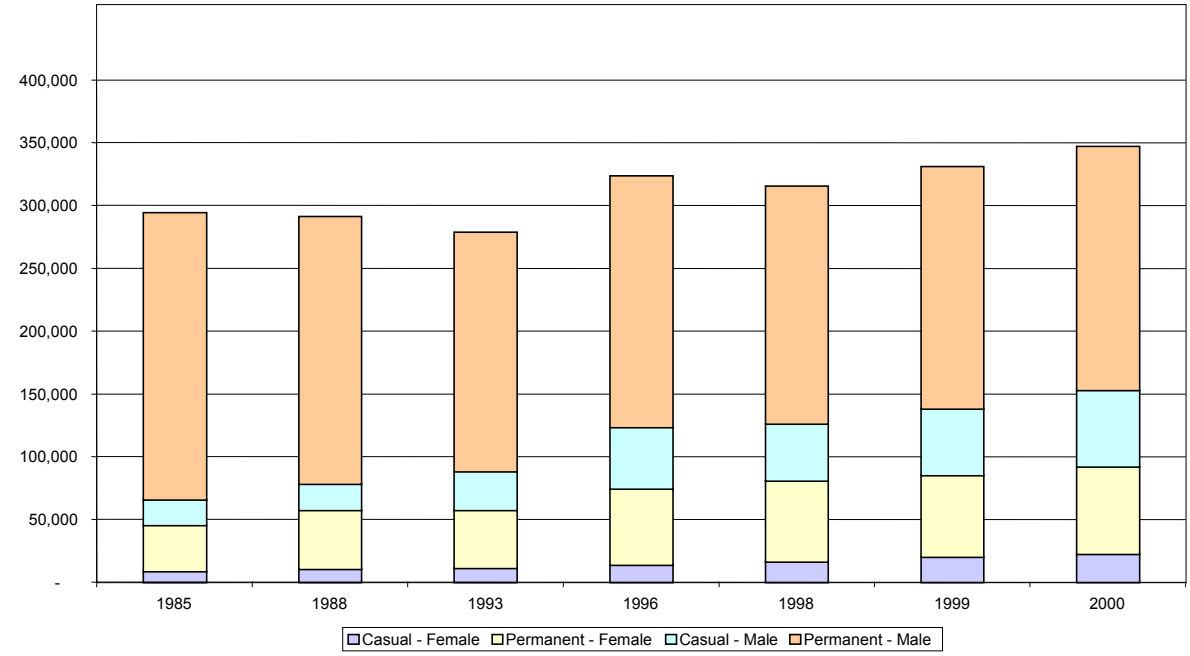
Source : ABS Cat. No. 6291.0.40.001

Self-employment is a feature of the Transport and Storage sector, especially the proportion of freight drivers. The self-employed component is also ageing with 45 per cent of workers in the road transport sub-sector estimated to be aged over 45 years. It is reasonable to assume that a high proportion of this group will retire in the next 10 years. This existing, ageing workforce has developed its skills base informally over time. Unless new entrants embrace New Apprenticeships and other training initiatives more strongly than they have to date there will be no ready replacement for retiring workers. This is discussed in more detail in Section 5.1. The flexible delivery of training to educate and skill sole proprietor businesses is therefore a major issue confronting road transport—particularly for trucking and light commercial operators.

ABS figures show a growing trend towards the casualisation of the Australian labour market, with 27 per cent—or 2.09 million—of the workforce casually employed.[58] Chart 2 shows that within the Transport and Storage sector, casual employment of full- and part-time employees increased from 10 per cent in 1985 to 24 per cent in 2000 with 83 142 casual and 264 062 permanent employees.

[58] This trend may be affected by the Australian Industrial Relations Commission February 2001 decision relating to casuals covered by the *Metal, Engineering and Associated Industries Award, 1998—Part 1*. Under this award, a casual employee has ongoing rights to elect for permanent employment after they have served six months of regular casual employment. The decision would have a significant impact on the level of casualisation in the freight logistics industry if translated into transport awards.

Chart 2 Transport and Storage permanent and casual employment by gender



Source : DEWRSB, Employee earnings benefits and trade union membership, August 2001

There has been a shift of 10 percentage points from part-time to full-time employment in the Transport and Storage sector between 1985 and 2000. During this period female full-time employment increased from 9 per cent to 20 per cent, while female part-time employment increased from 5 per cent to 7 per cent.

Several transport unions remain opposed to the 'de-employment' of permanent employees by contracting out and the permanent use of casuals.[59] These practices reflect the trend towards outsourcing but, more specifically for the Transport and Storage sector, the primacy of SMEs. Small businesses employing less than 20 people represented 98 per cent of all private sector businesses in the Transport and Storage sector in 1998–99.[60] This proportion was higher than the All Industry average of 96 per cent. Furthermore, people employed in small business in Transport and Storage (private sector) accounted for 55 per cent of total private sector employment—compared with the All Industry average of 47 per cent.

The shift toward casualisation within the Transport and Storage sector does not appear to correlate to the level of industrial disputes. This is similar to trends in the overall economy, which reflect a decline in industrial disputation—see Chart 3.

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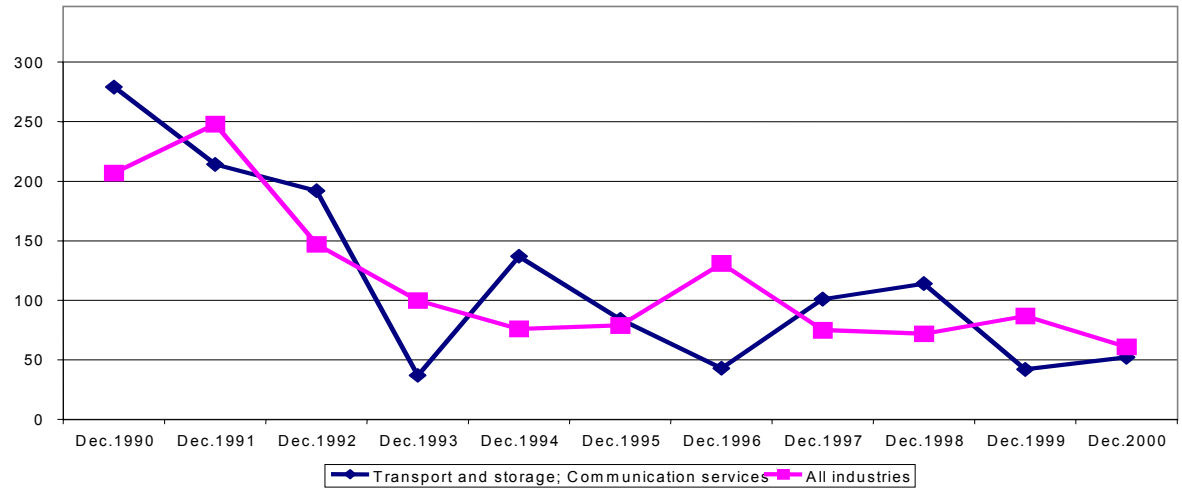
59 This has been demonstrated recently by the Transport Workers Union (TWU) using the principles of the Greater Dandenong City Council decision to oppose the retrenchment of permanent contract drivers, replacing them with contractors. Similarly, the recent Maritime Union of Australia (MUA)—Patrick agreement sought to develop additional flexibility to account for shipping schedules by introducing a greater number of permanent part-time workers. The agreement also combines general cargo and container operations employees to seek greater efficiencies in their deployment.

60 ABS Catalogue No. 1321.0, *Small Business in Australia*, 1999

Chart 3 Total days lost per 1000 employees



Source : DEWRSB, Working days lost per thousand employees by Industry, August 2001

Other than the issue of casualisation, the Action Agenda did not identify any major concerns in wage bargaining processes in the transport elements of the freight logistics industry. In recent wage outcomes from Federal Certified Agreements in Transport and Storage, average annual wage increases per employee were consistent with broader wage outcomes.

However, the trend towards more complex logistics chains—as reflected by the horizontal and vertical integration of firms—highlights the potential for the blurring of existing demarcations of traditional occupational boundaries. The Action Agenda received little evidence that this is a major industrial issue to date, apart from anecdotal evidence in airfreight handling. More analysis on demarcation may therefore be required, in particular as it affects more flexible operating hours—including 24x7.

4.6.3 Operating hours

The growing trend towards 24x7 operations highlights the need for coordinated work arrangements between firms—both service providers and users—to achieve flexibility across logistics chains.[61] For example, manufacturing, transport, warehousing, and retailers' operating hours could be better aligned to maximise efficiencies.

The flexibility of warehousing operations during the Sydney Olympic Games in 2000 clearly demonstrated the benefits of 24x7 operations, including the maximisation of existing infrastructure capacity.[62] The practicalities of introducing flexible working hours are limited by factors, such as additional wage costs, which can make extended hours unprofitable. It is also essential to recognise that flexible working hours must not be seen as extended working hours that compromise safety aspects—for example, by contributing to driver and/or operator fatigue.[63] Notwithstanding such factors that provide practical limitations to more flexible working arrangements, the freight logistics industry is working towards achieving more flexible hours.[64]

The Victorian Audit Report recognises 24x7 as a prerequisite to achieving greater efficiencies. The Report notes that it is mutually beneficial for employers and their employees to adapt their

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61 The Integrated Logistics Network has placed 24x7 issues on its work program.

62 NSW Department of Transport submission, 24 December 2001

63 Victorian Government submission, 9 January 2002

64 An example of provisions that allow for greater operating flexibility is the use of facilitative provisions in the *Transport Workers Award 1998* whereby employers and individual employees or a majority of employees at an enterprise may provide for extended workforce hours without increasing wage costs.

industrial arrangements to accommodate the need for flexibility. However, users of freight logistics services will also need to increase their responsiveness and flexibility.[65]

The industry has criticised the ACS and AQIS either for their operating hours which limit firms' ability to receive or dispatch cargo; or for the prohibitive costs of their providing extended operating hours. These issues are being addressed by:

- CMR allowing (pre)clearance and dispatch/receipt of cargo—see Section 4.5, *e-Logistics*
- inland terminals enabling Customs and AQIS pre-clearance—see Section 6.1.1, *Transport infrastructure*
- Customs and AQIS coordinated services[66]
- reduced AQIS costs.[67]

Many of the above measures are at the initial stages of implementation. So it is necessary for the respective agencies and industry to monitor their progress and develop specific actions, where necessary, to ensure their success in contributing towards extended operating hours.

10. The freight logistics industry and users of logistics services to promote the benefits of flexible work arrangements to facilitate 24x7 operations, and analyse the extent to which demarcation, employment practices, regulatory arrangements and industry structure impede the achievement of efficient and effective freight logistics chains.

4.6.4 Occupational health and safety

The August 2001 Workplace Relations Ministers' Council (WRMC) *Comparative Performance Monitoring* report showed that in 1999–2000 the maritime sector, at 35 injuries per 1000 employees, followed by the Transport and Storage sector at 28.9, recorded the highest injury figures against All Industries. The Transport and Storage sector also had 36 fatalities, the highest number for any industry.[68]

The report outlined continued improvement in Australia's workplace safety. In 1999–2000, injuries resulting in five or more days off work fell to a new low of 16.0 compensated injuries per thousand employees—a reduction of 20 per cent over the rate in 1995–96. The report shows, however, that the improvement in injury rates is not reflected in the average insurance premium rates paid by employers. These increased by 1.3 per cent over the previous year in 1999–2000 and by six per cent since 1997–98. To help identify contributing factors, Ministers asked for a report on why average insurance premium rates paid by employers are increasing while injury rates are falling. A report to Ministers will be made in 2002.

The increasing emphasis on occupational health and safety (OH&S), particularly in relation to drug abuse and fatigue management for drivers, is a key issue for the freight logistics industry. A feature of road transport services is that 72 per cent of the heavy vehicle fleet consists of operators with a single vehicle—based on National Road Transport Commission (NRTC) estimates. Many of these sub-contract to several third party logistics services for their interstate line haul freight. This is a highly competitive industry segment and owner-drivers have reported difficulty in

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65 Victorian Government Audit Report of the Transport, Distribution and Logistics sector, 2001, p. 61

66 Both ACS and AQIS are involved in clearing import and export cargo and are continually implementing services that streamline the movement and clearance of cargo—to provide a one-stop shop—for example EXDOC. ACS, in delivering these services, undertakes several activities and regulatory functions on behalf of other Government agencies with an interest at the border—see Section 4.5.

67 In August 2001, AQIS announced a 40 per cent reduction in its inspection and associated fees for meat, grain, dairy, live animals, fish, horticulture and organic foods.

68 The maritime sector statistics include only interstate and overseas voyages collated by the Seacare Authority. Intra-state maritime data are included under Transport and Storage.

obtaining profitable freight rates from some contractors. Driving hours, fatigue and speed issues are being addressed by governments and industry working with the NRTC. The aim is to develop nationally consistent regulations that will be adopted by the States and Territories.[69] There are also fatigue management issues in rail and light commercial vehicle transport which—while not attracting as much attention as long-distance road transport—may lead to significant and expensive accidents, injuries and service dislocations.

The House of Representatives Standing Committee on Communications, Transport and the Arts report on managing fatigue in the transport sector, *Beyond the Midnight Oil*, focused on the main forms of transport—air, sea, road and rail. The report:

- identifies the main causes and impacts of human fatigue in the Australian transport industry
- discusses how fatigue in transport is currently being addressed
- considers new strategies to ensure that fatigue is managed effectively.

The report notes that fatigue is a core safety issue in the road transport industry and also makes recommendations about other sectors of the transport industry including rail and air. Implementing many of the recommendations will require co-operation between Federal, State and Territory governments—see also Section 6.2, *Regulation*, on the chain of responsibility initiative.

A key recommendation of the report—Recommendation 24—was that the NRTC develop amendments to the Road Transport Reform (Driving Hours) Regulations 1999 (DHR) to incorporate time-of-day considerations and rest periods. These would aim to increase minimum allowable rest periods for drivers and ensure participation by industry operators in the two managed fatigue schemes provided for in the DHR.[70]

Appropriate OH&S training in both operative staff skills and management systems for operators was also identified as a significant factor in improving safety. Aligning training in competencies with licensing and accreditation was also seen as central to addressing OH&S standards.[71] This is addressed in Section 5.1.

To address these issues the Federal Government response to Recommendation 24 of the report emphasised the Small Business Enterprise Culture program for training in business skills for owner drivers.[72] This would need to incorporate fatigue management systems. The National Industry Skills Initiative (NISI) has also been introduced for the road freight sector through the Australian Trucking Association (ATA). In response to Recommendations 39 and 41—that emphasise the need for fatigue management training—Transport and Distribution Training (TDT) Australia's review of its fatigue module was recommended to take into account regulatory frameworks and codes of practice being developed through the NRTC Fatigue Reforms.[73]

This overview of recent analysis points to the critical need for industry and governments to accelerate the pace of regulatory reform, and the level of education and training, in OH&S standards for all modes. This is especially so given the unacceptable levels of injuries and fatalities in the freight logistics industry.

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69 One of the projects in the NRTC's Third Heavy Vehicle Reform Package is for the Australian Trucking Association to prepare and distribute an operational Best Practice Industry Code of Conduct for heavy vehicle operators and drivers. This includes general on-road performance and behaviour, drugs and alcohol policy and environmental performance—in-service noise and diesel emissions.

70 The Driving Hours Regulations, through the NRTC, were drafted for inclusion at State, Territory and Federal level. The regulations, developed under the *Road Transport Reform (Vehicle and Traffic) Act 1993*, have only been partially implemented.

71 Transport Training Victoria submission, 21 December 2001

72 Response of the Federal Government to the Report of the House of Representatives Standing Committee on Communications, Transport and the Arts, *Beyond the Midnight Oil: An Inquiry into Managing Fatigue in Transport*, June 2001.

73 TDT Australia is in the National Industry Training Advisory Board (ITAB) for transport and distribution.

11. The freight logistics industry and government agencies to undertake a detailed analysis of the industry's occupational health and safety (OH&S) record and identify priority measures to achieve an agreed quantifiable improvement in the industry's performance.

5 SUPPORTING GROWTH

5.1 EDUCATION AND TRAINING

5.1.1 Background

Education and training is the foundation that underpins freight logistics performance. The education and training task extends from basic logistics competencies at secondary, vocational education and training (VET) levels to advanced logistics chain management postgraduate degrees. The extent of national coverage, and the method and quality of delivery—and how education and training serve industry needs—are essential issues.

This section focuses on the broader logistics sector. This is because many of the skills required in the freight logistics industry are needed for in-house logistics work—for example, scheduling, electronic applications, quality control and cool chain management. Unfortunately, the available industry data are much more limited than the policy focus requires. The following analysis must rely on Transport and Storage sector statistics from the Australian Bureau of Statistics (ABS); and Transport and Distribution statistics from the Australian National Training Authority (ANTA). The Transport and Storage sector would, at best, approximate to no more than one half of the freight logistics sector—or about five per cent of GDP. Occupational statistics also need qualifying as they can include workers in passenger transport operations.

Table 12 Educational attainment by industry as a percentage of industry group

	Higher degree	Post-graduate diploma	Bachelor degree	Under-graduate diploma	Associate diploma	Skilled vocational qualification	Basic vocational qualification	Total with post-school qualifications	Total without post-school qualifications
Transport and Storage	0.8	0.8	7.4	5.2	3.0	16.2	8.7	42.1	57.9
All Industries	2.6	2.7	14.5	5.9	3.6	14.2	9.0	52.4	47.6

Source : ABS Cat. No. 6227.0, December 2001

Table 12 shows that in the Transport and Storage sector, 57.9 per cent of employees in 2001 did not have post-school qualifications—over 10 percentage points higher than the average for All Industries. The sector also had a higher proportion of employees with a skilled vocational qualification—two percentage points above All Industries. While many workers enter the sector with low skill levels, their skills and competencies increase as a result of the changing roles of the job and new technology.

Replacing this existing workforce is problematic. The available pool of potential entrants will decrease over the next few years as the population ages—at the same time the industry employment profile also ages. A further difficulty is the high proportion of small and medium enterprises (SMEs) within the industry—which was discussed in Section 4.6, *Workplace Relations*. As the Victorian Audit Report established, the SME component of the industry is approximately 98 per cent of which 60 per cent are sole proprietor businesses.

To address these workforce needs, the industry must focus on alerting employers and employees to the range of training courses available. Providers must be able to deliver training flexibly

without compromising standards.[74] The sector must also increase its ability to meet skills needs. Strategies to achieve this include developing the skill base of existing employees.

A national road freight skills initiative commenced in July 2001 under the National Industry Skills Initiative. The Australian Trucking Association (ATA) is managing the project which will be completed by August 2002. Under the initiative the Federal Government, through the Department of Education, Science and Training (DEST), is working with industry to address skill shortages. The road skills study will incorporate a final report and an Action Plan for further activity under the initiative. This report's findings—although focussing specifically on road freight—should have a wider impact on the delivery of education and training to the freight logistics industry. It may also provide a model for the flexible delivery of skills and training.

5.1.2 Supporting industry's profile

Anecdotal evidence indicates that demand for managerial personnel with tertiary logistics qualifications outstrips current supply. Strong international demand for qualified personnel is increasing remuneration levels in Australia and contributing to the shortfall.[75] It is estimated that less than 10 per cent of applicants for logistics management positions possess a relevant logistics Masters degree.[76]

In a recent Australian Personnel Solutions survey of 16 000 students in Western Sydney, no student identified logistics as a preferred career option.[77] This perception amongst students that logistics is not a viable career path is ironic given the tight market for logistics professionals in Australia caused by limited supply and domestic and overseas demand.

There is also little recognition amongst employers that logistics training can provide leverage to improve their business's profitability. The ABS *Training Expenditure Survey for 1996* provides the most recent data on industry investment in training. Spending per employee in the Transport and Storage sector was 35 per cent above the All Industry average. However, this above average result was caused by high expenditure per employee in the Air and Space Transport components which spent almost three times the national average per employee. Average expenditure in the other Transport and Storage sectors combined—rail, water, and road—was consistent with the national average. It is important to note that average expenditure per employee for public sector enterprises was well above that for private sector enterprises; and that small business tended to spend significantly less per employee than larger enterprises. Hence, it can be assumed that rail transport—until recently concentrated in the public sector and large business—would probably have spent more per employee than road transport—concentrated in the private sector and with a high representation of small businesses.

As part of its research to develop a framework of articulation in logistics education and training between current short course, VET and tertiary courses, the Action Agenda surveyed over 60 employers that use logistics services to assess their demand for personnel with logistics qualifications.[78] The survey findings include:

- over 70 per cent of firms employ a full-time logistics manager
- over 90 per cent of firms expect an increased demand for personnel with logistics qualifications in the next five years

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74 Transport Training Victoria submission, 21 December 2001

75 *Supply Chain Review*, May 2001

76 *Supply Chain Review*, June 2001

77 *Australasian Transport News*, February 2001

78 Articulation here means the linkages between qualifications allowing for their progression at the various educational and training institutional levels.

- over 60 per cent of training and education is conducted through a combination of on- and off-site delivery
- less than 30 per cent of firms received a subsidy from governments for their education and training requirements
- over 30 per cent of firms see tertiary qualifications as the most desirable for personnel. Short course and TDT Australia units were each rated around 15 per cent; eight per cent of firms preferred other qualifications, while the remaining responses emphasised a combination of the four categories
- over 75 per cent of firms require their logistics managers to hold formal tertiary qualifications or equivalent while approximately 17 per cent emphasise industry experience
- only 41 per cent of firms are satisfied with the delivery of logistics training and education.[79]

The education and industry survey results, supported by anecdotal evidence, highlight the freight logistics industry's challenge in attracting young and qualified new entrants.

As also discussed in Section 2.4, *Challenges for the freight logistics industry*, freight logistics is not seen as a desirable career path, either because the opportunities are not well known, or adverse perceptions are held about the transport component. Lifting the profile of freight logistics generally, and highlighting more specifically the available career opportunities, must be a major priority. In this, emphasis should be placed upon:

- training and development opportunities
- earnings potential
- overcoming young women's reluctance to join the industry.

These issues, as reflected in the above survey results, should inform the ANTA, State and Territory Training Authorities and the Australian Vice-Chancellors' Committee funding decisions for freight logistics education and training.

12. The freight logistics industry to work with educational and training institutions to develop strategies to raise the industry's profile and to highlight career and training opportunities to school leavers, career advisers, parents, companies with in-house logistics operations, industry employees and the wider community.

5.1.3 Vocational education and training (VET)

Core units in vocational training competencies currently exist that are designed to extend from secondary school level to advanced logistics chain management diplomas and advanced diplomas. The latter can then qualify graduates for enrolment in postgraduate degrees at tertiary level. The following outlines the current process of articulation within the VET framework.

Secondary school articulation

The process to allow for articulation has been facilitated through the Department of Education, Science and Training's *VET in Schools* program. This aims to combine general and vocational education in secondary schools to provide school leavers with more pathways from school to work and further learning.

The board of the Enterprise & Career Education Foundation (ECEF) in NSW recently approved the creation of a structured training program for senior school students in supply chain management. The structured training program is part of the Higher Education Certificate and

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[79] Education and Training Working Group, 2001 *Contribution to the Development of a National Logistics and Supply Chain Education Framework*, unpublished paper, Melbourne

incorporates classroom training and one day a week on-the-job training within the industry. Upon completion of the program students receive a formal qualification.[80]

TDT Australia

The process of articulation and ability to 'career path' in logistics and supply chain management has been facilitated by the range of units incorporated into the Transport and Distribution Training (TDT) Australia Training Package. TDT Australia, a National Industry Training Advisory Board (ITAB) established in 1997, is the conduit between industry and government on vocational training for the transport and distribution sector. The Training Package was developed by TDT Australia, designated industry-based bodies and designated enterprises to meet the identified training needs of the transport and distribution sector. Funding for the Training Package's development was provided by the ANTA under the Training Package National Program.

TDT Australia's Training Package is within the Australian Qualification Framework (AQF) and covers transport, distribution, freight forwarding and purchasing within AQF levels 1–4. Supervisory levels are incorporated into AQF levels 5–6 (Diploma and Advanced Diploma in Logistics respectively), which introduce other ranges of competencies and skills such as information management and marketing. The logistics core competencies featured in the AQF can be used by other related ITABs, such as retail.

This framework is the first generation of logistics training and is acknowledged by industry as a stable basis upon which to build VET and tertiary sector articulation. The TDT Australia Training Package was reviewed in 2001 as part of ANTA's continuous improvement process for Training Packages. The review examined the effectiveness and uptake of the Training Package, and redevelopment to address identified shortcomings. The Review's focus on logistics led to the decision to incorporate more business management units and detailed descriptors for the competencies within those units. The TDT Training Package Review did not however address the lack of articulation between VET and tertiary education to develop career paths.

Quality and audit

Registered Training Organisations (RTOs) deliver approximately 95 per cent of TDT Australia's Training Package within the AQF. There are over 880 RTOs nationally, with many providers operating across the State or Territory in which they are each registered. The role and capacity of State and Territory Training Authorities is central to the issue of quality assurance of training providers. However, education and training delivered through short courses is often separate to the AQF.

The National Training Framework comprises the Australian Quality Training Framework — formerly known as the Australian Recognition Framework—and Training Packages.[81] The Quality Training Framework is a set of nationally agreed standards used by RTOs to deliver and assess recognised training, and issue qualifications. The Framework comprises two clear, measurable and auditable sets of standards. These are called the Standards for RTOs and the Standards for State and Territory Registering/Course Accrediting Bodies.[82] The ANTA, in conjunction with the States and Territories, has also commenced a project to develop a national

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80 *Australian Trucking News*, 30 January 2002

81 The National Training Framework is an agreement between the Federal, State and Territory governments, and guides the regulation of the VET system. Its aim is to ensure that the system provides quality, industry-relevant training and that its products and services are mutually recognised by all RTOs.

82 Under revised Australian Quality Training Framework arrangements, an RTO will be scheduled for audit within twelve months of initial registration and prior to renewal of registration, to ensure continuing compliance with the Standards for RTOs. An RTO may also be audited at the discretion of the State or Territory registering body, as part of a program of strategic industry audits or in response to identified risk factors or complaints.

training program for auditors who assess RTOs for compliance with the new Australian Quality Training Framework.

New Apprenticeships

New Apprenticeships involve a formal agreement between employer and employee. This sets out the training and supervision an employer must provide for the employee, as well as the employee's obligations as a New Apprentice. This is the major distinction between apprenticeships and traineeships, and other forms of VET. New Apprenticeships training usually involves a combination of on- and off-the-job training with the qualification issued by an RTO. The Federal Government supports New Apprenticeships through the provision of employer incentives and the operation of New Apprenticeships Centres.

The New Apprenticeships initiative has already delivered positive results for logistics training. In 1998 the National Centre for Vocational Education Research (NCVER) reported that the Transport and Storage sector did not have a good history in training uptake. In 1999, NCVER reported that Intermediate Production and Transport occupations represented 2.9 per cent of New Apprenticeships. This contrasted to Transport and Storage representing 4.9 per cent of employment as a proportion of All Industry employment.

Recently, however, there has been strong growth in New Apprenticeships in the Transport and Storage sector and related occupations. At the end of December 2000, there were 17 115 New Apprentices reported to be in training in the Transport and Storage sector—out of a total of 246 897—accounting for 6.9 per cent of the total. This points to the success of the Transport and Distribution Training Package as well as the flexibilities offered under the New Apprenticeships.

Other industry trainers

Examples are given below of training bodies and industry associations active in providing logistics courses. Many of these seek to provide for articulation between secondary, vocational and tertiary levels.

The Institute of Applied Logistics (IAL)

The Institute of Applied Logistics (IAL) is a non-profit organisation designed to provide specialty logistics training including transport, handling, warehousing and distribution management. It is aimed at industry specialists seeking accredited skill development and secondary school leavers. The IAL has now operated for over a year and increased its student enrolments to 2000 nationally by the end of 2001.

The Customs Brokers and Forwarders Council of Australian Inc (CBFCA)

The Customs Brokers and Forwarders Council of Australia Inc (CBFCA) sponsors the Advanced Diploma of Australian and International Trade Facilitation, a qualification for middle to senior management in the barrier clearance and international freight forwarding industry. The Advanced Diploma is designed to articulate to postgraduate areas of international trade as well as generic areas of business, IT and finance.[83]

The Australasia Production and Inventory Control Society (APICS)

The Australasia Production and Inventory Control Society (APICS) fosters professionalism in manufacturing, wholesaling, distribution and service industries to members. APICS courses are

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[83] The Certificate IV contains both a customs broking and a freight forwarding stream and delivers competencies at the operational level. It is the pre-requisite course for candidates wishing to sit the National Examination and be licensed as customs brokers with the Australian Customs Service (ACS). It is also a pre-requisite for those wishing to obtain, from the ACS, an operational customs brokers licence which provides for the interface between importers/exporters and regulatory authorities such as the ACS and AQIS.

based upon internationally recognised certification for employees in manufacturing distribution and service industries. Program courses include *Basics of Supply Chain Management*, *Fundamentals of Materials and Operations Management*, *Certification in Production and Inventory Management*, and *Certification in Integrated Resource Management*. APICS has approximately 500 students per annum across Australia. In-house short courses are also provided to firms.

The Australian Federation of International Forwarders (AFIF)

The Australian Federation of International Forwarders (AFIF) was created in July 1996 and offers regulatory and non-regulatory programs in air and sea freight. AFIF has 'approved school' accreditation status from the International Air Transport Association (IATA) and is authorised to conduct training in Dangerous Goods by Air procedures. IATA has mandated that *Training in Load Distribution and Restraint Procedures* is required for appropriate personnel in Australia. AFIF Certificates for *Dangerous Goods Acceptance and Re-Certification* are recognised internationally. In addition, AFIF is accredited by the Civil Aviation Safety Authority (CASA) for its *Dangerous Goods by Air* courses; and by the Department of Transport and Regional Services (DOTARS) for its *Aviation Security* courses. During 2001 AFIF, together with its partner in the project, 'my freight career', announced details of a traineeship for the freight forwarding industry which will offer a government-recognised and accredited career opportunity for school leavers and other industry entrants. The Traineeship for International Freight Forwarders is accredited by the ANTA to Certificate IV in the national accreditation framework.

The Australian Institute of Export (AIEX)

The Australian Institute of Export (AIEX) offers training and development programs for exporters. Established in 1956, the Institute fosters, promotes and develops export awareness with representative offices in all States. The AIEX also cooperates actively with State and Federal departments and agencies to promote international trade. The AIEX offers an ANTA-accredited Certificate IV in *International Trade Operations* designed for export clerks, bank officers, small business owners and service providers including freight forwarder and shipping staff. It is a pre-requisite for the *Diploma in International Trade Management*. The AIEX also offers a range of non-accredited short courses.

The Australian Institute of Purchasing and Materials Management (AIPMM)

The Australian Institute of Purchasing and Materials Management (AIPMM) is the lead body progressing the development and implementation of training for purchasing and supply professionals. Selected programs are offered directly by the Institute while others are supported through strategic relationships with universities, Technical and Further Education (TAFE) colleges and selected private providers.

One of AIPMM's priorities has been to provide a sufficiently developed training structure to support purchasing and supply professionals as their career progresses. As part of its strategy to ensure the completeness of training in purchasing and materials management at all levels, AIPMM has commenced discussions with selected universities to develop AIPMM-sponsored postgraduate programs. In the VET sector, AIPMM has started developing Certificate levels II and III for purchasing and supply professionals for inclusion in the *Asset Maintenance Training Package* of the Business Services ITAB. AIPMM is also developing synergies with the ECEF program for secondary school students. A key objective of AIPMM is to ensure that articulation is possible between the training provided at different levels.

5.1.4 Tertiary education

At the tertiary level several universities have courses specialising in transport logistics and supply chain management. They include the Royal Melbourne Institute of Technology (RMIT); the Institute of Transport Studies (Sydney and Monash Universities); Macquarie University;

Queensland University of Technology; the University of Southern Queensland; Victoria University; the University of Technology Sydney; and the University of South Australia. These universities currently form the basis for a logistics education network. However, there are problems caused by low academic salaries compared with industry and an ageing skills base amongst logistics professionals.[84]

A key challenge for tertiary education is to develop a core curriculum in logistics to enable articulation between VET and tertiary institutions nationally. The articulation that currently exists between VET and tertiary education occurs on an institution by institution basis. For example, VET qualifications lead to undergraduate qualifications at RMIT but to postgraduate courses at the University of South Australia. The current TDT Australia Training Package Framework supports articulation to the extent that the tertiary education sector supports it.

Industry proponents have argued that the diploma and advanced diploma courses in logistics — based on TDT Australia's levels 5 and 6—offer a career path between the vocational and tertiary sectors. These diplomas could form the basis for entry into postgraduate courses in logistics—as in the University of South Australia example—rather than an undergraduate degree. This could help address the shortfall in qualified logistics practitioners in middle and senior management and assist the development of new entrants in the industry. The diploma and advanced diploma could also include additional modules to cater for firm-specific requirements.

However, universities are yet to endorse a national articulation model with VET for undergraduate and postgraduate logistics course work. A forum for this issue is the existing ANTA and Australian Vice-Chancellors' Committee (AVCC) credit transfer and articulation project. It is promoting a framework for greater collaboration between the VET and tertiary sectors. Similarly, the National Training Quality Council (NTQC) is considering developments on this issue, with a view to having improved national guidelines on cross-sectoral qualification linkages.

5.1.5 Linkages with licensing and accreditation

Each State and Territory has developed its own driver licence testing and driver training standards. Currently, there is no connection between the processes for issuing licences and the completion of Training Package competencies. Training and licence issue are conducted by separate bodies—training is performed by private training suppliers whereas licences are issued by road authorities.

In transport and storage the lack of alignment between competencies and licensing regimes is seen as impeding the delivery of VET to secondary students or younger adults. License issue is also complicated by insurance requirements, especially for road transport operators. Insurance policies often require a high minimum entry age for drivers of larger vehicle types.

TDT Australia has liaised with the NRTC about fatigue management training. However, further research into licensing regimes, VET and insurance is necessary to determine whether:

- there is a lack of mutual recognition principles between jurisdictions
- competency training requires licensing as a prerequisite
- the various licensing regimes affect competency
- insurance practices are providing additional barriers to driver training.

Following the ANTA Ministerial Council in June 2000, the National Consistency Advisory Committee (NCAC) was established to progress the ANTA Ministerial Council resolutions to:

- identify the implications of the relationship between industry licences and the labour market for VET

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[84] Colbatch, John, 2001, TMP Worldwide, *Presentation to the Supply Chain Educators' Forum*

- conduct a desk survey of selected industry Training Packages to ascertain the extent to which the issue of industry licensing is addressed in their endorsed components.

The NCAC's review of training and licensing regimes needs to include freight logistics. This will enable scoping and the development of recommendations for synergies between the TDT Australia Training Package and licensing requirements of regulatory agencies—from an RTO and industry perspective.

Licensing and training are only one aspect of training that is required for employees and employers to achieve accreditation for various schemes. Such schemes include Hazard and Critical Control Point (HACCP), Trucksafe, and the Plastic and Chemicals Industry Association (PACIA) codes. A review of accreditation arrangements is proposed in Section 4.3, *Quality Assurance Standards*. That review (Action 4) will need to address licensing and training overlap.

With the trend towards global logistics chains, 'through chain' accreditation of service providers and their sub-contractors is becoming a key area of competitive advantage. Although the extent to which accreditation training is incorporated into the VET Training Package system will vary, there is a role for industry and regulatory agencies to work with TDT Australia to cater for their accreditation requirements, where applicable, through training.

Licensing and certification are critical to VET's relevance. Employers and employees are often interdependent in their being awarded either licenses or certification. It is therefore important that a coordinated national approach be adopted by all agencies to explore and develop synergies between licensing, certification and training.

13. Education and training providers and Transport and Distribution Training (TDT) Australia, consulting with industry and regulatory authorities, to develop and implement a national education framework for freight logistics, including appropriate recognition and articulation of skills and knowledge across jurisdictions and between education and training levels, and the alignment of training with licensing and accreditation requirements.

5.1.6 Collaborative learning networks

The pace of change in freight logistics means that formal training systems are not always able, or suited, to meet the demand for the necessary knowledge, expertise and innovation required to develop a sustainable competitive advantage—see Section 4.4, *Innovation, research and development*. For example, firms may require specific training in a software package and/or management systems that may not be readily provided through the existing VET or tertiary systems. Short courses, or informal exchanges at a business-to-business level, might be more efficient means of specific training delivery.

Agriculture, Fisheries and Forestry Australia (AFFA) has examined ways of developing a collaborative learning model for rural and regional primary producers, specifically through supply chain learning networks. The Primary Business Solutions consultancy *Profiting from experience: Achieving competitive advantage through learning network*s defined a learning network as:

> *Any boundary-spanning group working together to achieve a shared goal, supported by experiential / inspirational learning* processes.[85]

The consultancy found:

- tacit knowledge is the most valuable for business collaboration across supply chains

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[85] Primary Business Solutions (2001) *Profiting from experience: Achieving competitive advantage through learning networks*, Agriculture, Fisheries and Forestry Australia, Building Chains that Win Workshop, Sydney, 28 June

- collaborative business models are based on the shared learning implicit in supply chain networks (SCN)
- learning networks can occur within supply chains or networks across sectors
- a facilitated/structured knowledge-based infrastructure can support SCN initiatives
- a learning network requires a supply chain champion—defined as a chain participant that is indispensable
- an SCN requires the resources and emphasis of a core business to be successful
- a genuine need is required to develop a learning network.

A collaborative learning approach would help develop tacit business skills in logistics and supply chain management. Collaboration can also be complemented by education and training initiatives designed to develop competencies, benchmarks and levels of expertise.[86] This type of collaboration is especially important as a source of information for SMEs and, as indicated in the Primary Business Solutions consultancy, can be useful to improve logistics chains in regional and rural Australia.

14. The freight logistics industry, working with education and tertiary institutions and users of logistics services, to facilitate collaborative informal learning strategies for logistics chains/networks in business processes and appropriate managerial training programs, with particular focus on small and medium enterprises (SMEs) and regional operators.

Web portal

Industry—both service providers and customers—must be prepared to commit to the delivery of education and training. A central and comprehensive mechanism to provide user choice and ensure service quality is an essential part of this commitment. Moreover, there needs to be an awareness of government and industry initiatives in education and training to ensure there is no duplication of activities and resources.

A National Training Information Service (NTIS) has already established a national web portal for vocational training services. At its June 2001 meeting, the ANTA Ministerial Council agreed in principle—subject to agreement on funding requirements and identification of funding sources—to the implementation of a VET portal as a single point of entry for clients. The ANTA will do further work on planning and costing with all stakeholders, including TDT Australia. The ANTA initiative should then provide the basis for an education and training portal for the freight logistics industry.

15. The freight logistics industry, users of logistics services, the Australian National Training Authority (ANTA) and education and training institutions to develop and implement a self-funding national logistics web portal, that incorporates a database of all education and training courses and other resource material.

5.1.7 Funding

Government funding for education and training is allocated to various national and sub-national decision-making entities that are not directly aligned with the demands of the freight logistics

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[86] The Cardiff University Lean Enterprise Centre has been cited as a model for collaborative learning between the manufacturing and tertiary sectors. The SmartLink program at the National Institute for Manufacturing Management, housed at the University of South Australia, has also adopted this model. This may be applicable for firms involved in freight logistics services.

sector. These include State Training Authorities for the VET sector, and tertiary institutions that have individual criteria for determining undergraduate places.

VET funding

VET in Australia is a shared responsibility between Federal, State and Territory governments, and industry. This partnership is fostered in the ANTA Agreement, in which States and Territories retain primary responsibility for their own training systems. It includes:

- State-level planning
- regulation of training providers and the apprenticeship and traineeship system
- allocation of funds to individual providers
- setting student fees and charges
- managing the TAFE system.

The Federal Government contributes funds to the States and Territories through the ANTA, provides ongoing funding for the ANTA's operational costs and funds ANTA national programs. Monies for government-funded training delivery are distributed to the States and Territories through the ANTA Agreement. The allocation is broadly based on the respective population shares for each State and Territory. On average, national funding is matched dollar for dollar by States and Territories.

In addition to funding, the Federal Government plays a central role in national policy formulation in collaboration with the States, Territories and industry. The Agreement also sets out an ongoing peak decision-making and planning role for the ANTA Ministerial Council—comprised of the Federal, State and Territory Ministers for VET—and a strong leadership role for industry through membership on the ANTA Board.

The ANTA allocates funding to 23 National ITABs on a broadly similar basis. ITABs may also receive funding for project management associated with particular activities—for example, National Training Package development. A total of $6.45 million was allocated to National ITABs during 2000–01 and the same amount was budgeted for 2001–02.

The ANTA also channels funding to State and Territory Training Authorities which then allocate funds to training providers. Transport and storage competes with all other sectors for its share of this funding. States and Territories are funded to have a set of State or Territory based industry advisory arrangements, with each one determining the exact nature of these arrangements.[87] Funds allocation is based on planning processes that consider local needs, priorities and delivery costs.

States and Territories do not report to the ANTA on their expenditure in industry and occupational areas. They do, however, report enrolments and associated hours of delivery across industry and occupational areas. Table 12 provides enrolment details for Australia from 1998 to 2000. Data for previous years are not readily available.

Table 13 Total VET enrolments

Year	*Transport and Storage*	*Other Industry Types*	*Share*
1998	34 624	1 750 314	2.0%
1999	38 106	1 953 260	2.0%
2000	44 421	2 063 550	2.2%

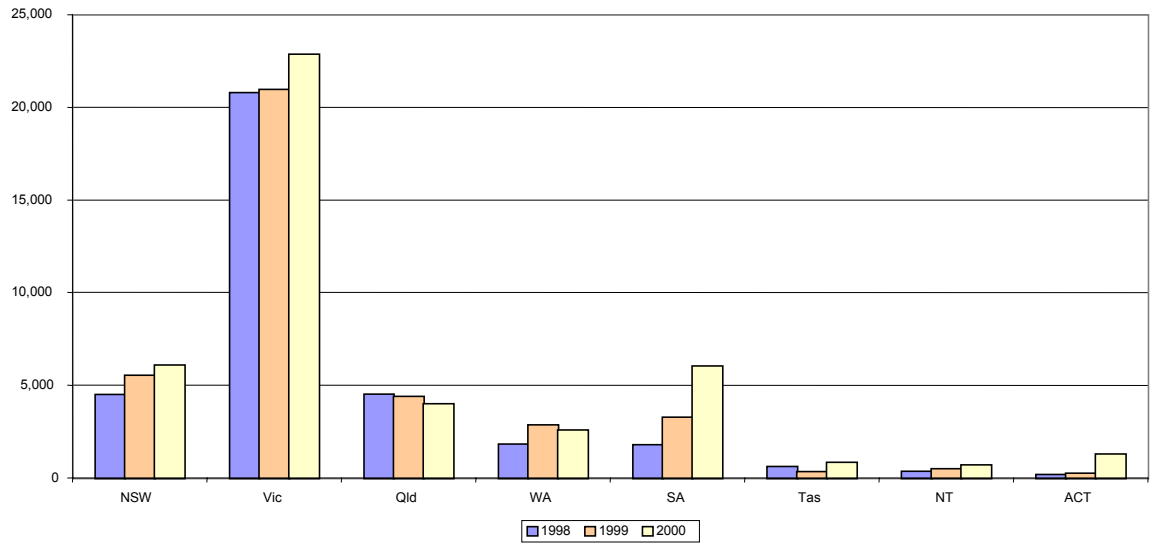
[87] During 2000–01 the ANTA allocated $10.5m to States and Territories for their purchase of industry advisory arrangements. The same amount was budgeted for 2001–02. The Federal Government has indicated its intention to phase out its national funding for State and Territory advisory boards.

Source : *ANTA, 2001, unpublished statistics*

National data for 2000 shows that 44 421 ANTA Agreement-funded course enrolments were in Transport and Storage occupational areas. This number represented 2.2 per cent of total enrolments. On an hourly calculation, 5 350 646 training hours —or 1.5 per cent of total—were in this field. Based on Transport and Storage's percentage of enrolments—as shown in Table 13—the proportion of VET funding provided to the sector is significantly less than its 1999–2000 contribution to GDP of 5.6 per cent. However, at least the absolute level of ANTA Agreement-funded training activity allocated to Transport and Storage has grown in recent years, as has its share of the total.

Chart 4 shows the national distribution of enrolments goes primarily to Victoria, with 60, 55 and 51 per cent of national enrolments from 1998–2000. This disproportionate share needs more analysis, but appears to result from Victorian Government assistance to training providers and perhaps a higher awareness of training issues in Victoria. This performance is laudable. But the Action Agenda is concerned to see this uneven training effort when skills needs in other States and Territories are also significant.

Chart 4 Transport and Storage—State VET enrolments



Source : *ANTA, 2001, unpublished statistics*

Funding allocation can be influenced through National ITABs, such as TDT Australia, that provide Industry Strategic Plans to the ANTA; while State and Territory ITABs provide advice to State and Territory Training Authorities. This advice covers the industry perspective on training needs and priorities. A new VET funding agreement for 2001–03 was agreed in principle by all States and Territories at the ANTA Ministerial Council meeting in June 2001. The new ANTA Agreement will provide an extra $365 million Federal funding over three years to support training places in the States and Territories. The allocation of this new funding should be guided by the disproportionately low VET allocation for national training in Transport and Storage occupations and its uneven spread.

Tertiary funding

To ensure that industry addresses the shortage of personnel with logistics qualifications, it must be prepared to provide support to tertiary courses and students. The provision of government funding

subsidies—for example, New Apprenticeships—will not necessarily address the perceived shortfall in supervisory and middle management levels. This is because industry's uptake of VET favours the basic and intermediate modules 1 to 4 of the Australian Qualification Framework.

Unlike tertiary research programs in the United Kingdom and the United States of America—for example, Cranfield and Pennsylvania Universities—Australian universities currently have no ongoing commitment with industry to undertake research into freight logistics chain management. This is a significant issue for tertiary education because government funding is negligible for undergraduate and postgraduate places in logistics. Federal Government funding for undergraduate university places depends upon the number of enrolments in each faculty.

A survey of relevant tertiary institutions in Australia sought to assess recent and future demand for undergraduate and postgraduate places in logistics courses. Anecdotal evidence, based on limited survey responses, suggests undergraduate student numbers in logistics and related courses are declining. In some cases, this has led to the cessation of several undergraduate logistics courses. Further evidence of this trend was when the RMIT Logistics Management Group told an industry journal that in 2001 there were 280 applications for RMIT's Bachelor of Business (Transport Logistics Management) undergraduate degree, compared with approximately 3600 for the university's marketing degree. Because of this relative lack of demand, RMIT offered only 40 places in the 2001 logistics intake—an increase, nevertheless, on the 22 places offered in 2000.

A further impact on demand for tertiary places is likely to be coming from the attendant Higher Education Contribution Scheme (HECS) liability for students, relative to the capacity to undertake a diploma course in VET which does not attract the HECS. This reduces pressure for funded places and the profile of logistics in universities.

Until universities receive thousands of applications, logistics places will not increase.

To boost student interest, in 2001 RMIT launched industry scholarships funded by Carlton & United Breweries, Coles Myer, Coca-Cola Amatil and TDG Logistics.[88] The scholarships are for the Bachelor of Business in Transport Logistics Management. Students receive $2000 per year, and also earn an average wage of approximately $28 000 in their third year in the field. They are given a mentor whom they can contact at any time during their studies. A scholarship program has also been launched by the Logistics Association of Australia, in partnership with the company, The Logistics Bureau. This program provides undergraduate and postgraduate scholarships for logistics and supply chain study in Australian universities and offers mentor assistance.[89]

These initiatives are laudable. But the extent of current industry support, and the reactive mechanisms for government funding, will not address the shortfall in the supply of personnel with logistics qualifications. Action is needed to increase enrolments in VET and universities to levels that are more representative of the economic significance and skill needs of freight logistics.

16. The freight logistics industry, firms with in-house logistics operations, tertiary institutions, the Australian National Training Authority (ANTA), registered training organisations and Transport and Distribution Training (TDT) Australia to review the provision of funding available for freight logistics education and training and make a case to Federal, State and Territory governments for an appropriate allocation of funds.

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88 *Supply Chain Review*, June 2001

89 The Logistics Association of Australia also provides a Logistics Development Award for young professionals and annual awards for achievement by university and TAFE students.

5.2 SUSTAINABLE FREIGHT LOGISTICS

The freight logistics industry is typically seen as a dirty industry associated with heavy vehicles and diesel fuel emissions. Growing international and domestic pressure to achieve cleaner and more efficient transport and logistics, mean developing more sustainable operations will be essential in maintaining the industry's future competitiveness.

The rapid expansion and innovation in environmental technologies provides increasing opportunities for achieving a cleaner and more efficient freight logistics industry. ITS technologies, freight management and back loading systems and improved waste management practices all offer the potential to reduce the impacts of freight logistics on the environment.

The Action Agenda has identified priority issues that must be addressed to improve the long-term sustainability of the freight logistics industry. These issues include greenhouse gas emissions and air quality, waste management and contamination, environmental standards and practices, and industry awareness of new technologies.

Environmental issues in the freight logistics industry are typically regarded as a cost to business, particularly where regulations are concerned. The Action Agenda has therefore focused on identifying actions that contribute to a cleaner and more sustainable industry while providing opportunities to generate commercial benefits through improved eco-efficiency.

5.2.1 Congestion, air quality and greenhouse emissions

Urban congestion is a major contributor to increased fuel consumption and the consequent transport emissions. As discussed in Chapter 3, Australia's overall freight logistics task is estimated to double between 1995 and 2010. This will increase negative impacts on urban traffic congestion, air quality, greenhouse gas emissions and waste production. Internet trading and e-Fulfilment—door-to-door service—is also growing at eight per cent per annum in Australia which is increasing the frequency of small consignments and light truck movements.

Urban congestion in Australian cities cost $12.8 billion in 1995[90] and the BTE estimates the total cost of urban congestion could rise to approximately $29.7 billion per year by 2015.[91] Air pollution, traffic disruption and road trauma caused by congestion have significant social impacts, particularly on the environment, public health and safety. The freight logistics industry is likely to face growing community pressure to address these issues.

Australia's transport system is a major user of energy resources and the principal contributor to pollution in major cities. Road transport contributes 80 to 90 per cent of Carbon Monoxide (CO) emissions, 50 to 80 per cent of nitrogen oxides (NOX) and 40 to 50 per cent of volatile organic compounds (VOCs). NOX and VOCs are the major precursors in the development of photochemical smog and ozone in metropolitan areas and also contribute to greenhouse gas emissions. Comparisons between Australia and other countries indicate that Australian cities have higher per capita emissions of vehicle pollutants—such as NOX and VOCs—than Asia and Europe.[92]

Data from the United Nations Framework Convention on Climate Change (UNFCCC) also indicate that Australia has the highest per capita greenhouse emissions in the world. In 1998, Australia recorded 25.6 t CO2-e/capita compared with 25.0 t CO2-e/capita in the US.[93]

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90 BTE, November 2000, p. 87

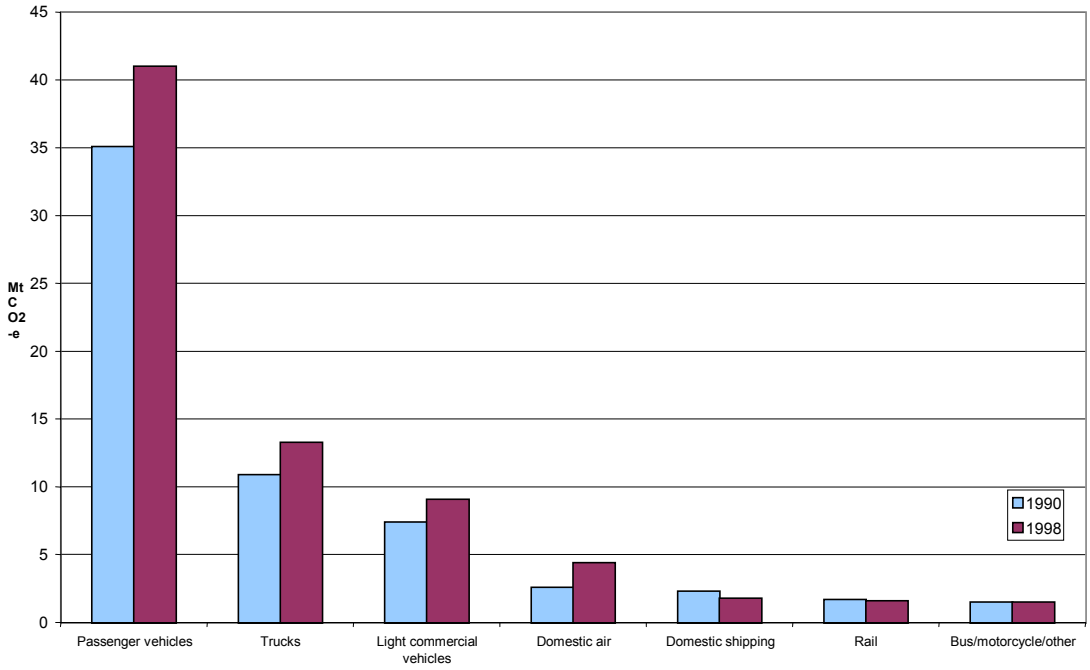
91 BTE Information Sheet 16, *Urban Congestion— the implications for Greenhouse Gas Emissions*, May 2000

92 Kenworthy J., Laube F., Newman P. and Barter P., 1997, *Indicators of Transport Efficiency in 37 Global Cities.*

93 Australian Greenhouse Office, pers. cons. 7 May 2002

The transport sector contributes 17 per cent of total, annual greenhouse emissions in Australia, behind the stationary energy and agricultural sectors which contribute 55 per cent and 20 per cent respectively.[94] However, freight emissions comprise less than half of all emissions from road transport, compared with private passenger vehicles—which consume 60 per cent of all on-road fuel—see Chart 5. Commercial trucks and light commercial vehicles contribute the greatest share of freight emissions compared with aviation, shipping and rail.

Chart 5 Transport emissions by mode, 1990 and 1998



Source : National Greenhouse Gas Inventory Committee, 1999a. Note: Rail emissions do not include electricity consumed by rail.

State, Territory and local governments have sought to manage congestion and urban air quality by developing transport infrastructure—particularly roads—to accommodate increasing transport demand. Major infrastructure road projects can help relieve congestion—for example, the Melbourne City Link project predicted a 20 per cent fuel saving for intra-city road freight movements.[95] Similar projects in other Australian cities, and especially Sydney and Brisbane, could produce comparable savings.

Government regulations help enforce more sustainable logistics practices. Examples of these include:

- restricting heavy vehicle access to high density congestion points
- the limited introduction of electronic road pricing
- the phase out of ozone depleting substances in transport and fire suppression systems.

Intelligent Transport Systems (ITS) have also been implemented overseas and in Australian cities with the development of modern traffic signalling systems to reduce traffic congestion and vehicle emissions. Overseas, local freight pick-up points are proving effective in handling the increasing freight logistics task associated with the fulfilment of retail sales over the Internet. For example,

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94 Australian Greenhouse Office, 1998b, p. 98

95 Article by Phillip Hopkins, *The Age*, 12 July 1999

in Tokyo there are over 32 000 convenience stores that offer Internet account settlement and distribution services to customers. This generates extra revenue to their core retail businesses and has major potential for reducing the impacts on traffic congestion and freight emissions associated with the growing market in Internet-based door to door delivery sales.[96]

Under the ITS National Strategy endorsed by the Australian Transport Council, the Department of Transport and Regional Services (DOTARS), Environment Australia and the National Greenhouse Office are managing a consultancy examining ITS applications for improving air quality and reducing greenhouse gas emissions. This study has reviewed a diverse range of available ITS-based technologies with potential application for improving the efficiency—environmental and multi-dimensional—of freight movements.

However, the take-up and awareness of these technologies within industry and government are not widespread. For example, the study reported that empty running of trucks accounted for 33 per cent of all vehicle kilometres travelled and that there was a significant opportunity for improvement given the existing availability of technologies on the market.[97] Hence there are opportunities for the freight logistics industry to improve the capacity of freight management systems to advertise load availability and provide comprehensive freight scheduling and tracking—as argued in Section 4.5, *e-Logistics*. The Bureau of Transport and Resource Economics (BTRE) recently commenced a study on inter-modal urban freight distribution systems that will make a valuable contribution to knowledge in this area.

Diesel fuels have a significant influence on emission levels from the road freight sector. However, their quality is variable in Australia. The standards of diesel oil and refinery technology currently in place are the main impediments to improving the standard of diesel fuel quality. The Federal Government responded to this under the New Tax System by providing tax incentives for using cleaner fuels.

The renewable energy industry is also developing cleaner, alternative fuels that will have potential application for the freight logistics industry in the future. They include compressed natural gas and hydrogen-based fuel technologies—there is potential for hydrogen-powered vehicles to be available within a few years' time. However, these are insufficient as medium to long-term solutions for an industry that is currently heavily dependent on diesel fuels across all modes. The industry must take its own operational initiatives to lessen its environmental impact. A series of demonstration projects—organised by industry in conjunction with appropriate government agencies and tertiary institutions—could significantly improve awareness and promote the use of renewable energy sources.

5.2.2 City logistics

Japan and Europe have made progress in research on city logistics as an integrated planning approach for solving freight distribution problems. City logistics is a comprehensive framework for planning and developing freight distribution systems in urban areas. It involves a broad spectrum of stakeholders, including shippers, freight forwarders, transport operators, government policy makers, logistics specialists, residents and town planners.[98] City logistics considers the whole freight distribution system rather than attempting to optimise each part of the system in isolation. Another advantage of city logistics is that it fully considers the costs and benefits to the public sector while optimising business outcomes. It does this by developing the most efficient

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96 Nemoto, Toshihori, 1999, *Impacts of Information and Communication Technology on Urban Logistics Systems*

97 BTE, November 2000

98 Comments on *The Freight Logistics in Australia Consultation Draft*, Russell G. Thompson, Department of Civil and Environmental Engineering, The University of Melbourne, December 2001

freight distribution models based on freight corridor analysis, peak traffic congestion times and energy consumption.

A key aim of city logistics is to facilitate freight movement while managing truck volumes, particularly during peak demand periods. To achieve this, a wide range of schemes are being researched involving the innovative application of ITS and freight information management systems to rationalise existing logistics and transport operations. Key examples include:

- advanced information systems
- cooperative freight transport systems
- public logistics terminals stationed outside key congestion areas
- demand management
- underground freight management systems.

Given the projected growth in Australia's freight logistics task coupled with its high urban population density, it is imperative that industry and governments develop a more long-sighted and integrated approach to urban freight distribution. Failing to embrace a more collaborative approach will risk unsustainable increases in traffic congestion and pollution. This would be unsatisfactory for business and the community.

The Action Agenda recommends that industry and governments promote strategies for achieving a greener freight logistics industry. The strategies would support:

- integrated planning in freight distribution and management
- the uptake of appropriate ITS technologies and cleaner fuels, to lessen the impact of freight congestion, air pollution and greenhouse emissions.

17. The freight logistics industry and governments to review solutions—including those identified under the *National Strategy for Intelligent Transport Systems* (*e-transport*)—for increasing efficiency and reducing congestion and greenhouse gas emissions associated with freight movements, and implement strategies to promote awareness and support take-up.

5.2.3 Eco-efficiency, waste management, and green logistics

Solid waste management is a significant environmental problem in Australia, with leaching of heavy metals and other contaminants into the ecosystem and water supply. The increasing costs of land fill, and resource depletion, are leading most Organisation for Economic Cooperation and Development (OECD) countries to develop waste management policies, regulations and industry codes of practice aimed at cutting waste. The freight logistics sector contributes significantly to solid waste in Australia through the disposal of transport machinery, equipment, freight packaging materials, and the dumping of ballast and other refuse at sea. The task of removing and transporting waste product comprises a significant share of all freight movements in Australia. Therefore, the efficiency with which it is managed affects the sustainability of the wider freight logistics industry.

Many firms in Australia are striving for greater eco-efficiency in their business operations. Eco-efficiency is defined as using resources more efficiently to reduce waste and resource use in business while improving business outcomes.[99] In the freight logistics sector some firms are demonstrating eco-efficiency by reducing waste-related costs. Their strategies for achieving this include more streamlined distribution and handling, and improved packaging standards aimed at maximising logistics efficiency. However, improvements are occurring unevenly throughout the

[99] Environment Australia, March 1999

industry. There is scope for a wider take-up of waste management strategies—across all transport modes—that are integrated in freight logistics chains.

In many European countries there are not enough land and resources to manage the ever-increasing burden of solid waste. This has resulted in some governments imposing strict regulations that require manufacturers to accept discarded products from consumers for re-processing and re-use. Reverse logistics, originally designed to deal with product returns, is now being developed to deal with this problem. Logistics service providers and manufacturers are designing complete product flows, from the point of origin to point of disposal, that minimise waste throughout the logistics chain.

Reverse logistics is more than simply recycling. It is the use of 'green logistics' techniques to manage the reduction and disposal of all by-products along the logistics chain. The growth in importance of reverse logistics overseas is an industry development that Australian logistics service providers must respond to if they are to participate in global logistics chains.

The Australian and New Zealand Environment and Conservation Council of Ministers, local government and members of logistics chains have agreed to a National Packaging Covenant. It acts as a self-regulatory agreement based on shared responsibility of all players along logistics chains to ensure that packaging materials are handled in an environmentally responsible manner.[100] The Covenant's aim is to minimise the environmental impacts of consumer packaging waste throughout the product's entire life-cycle by developing a reverse loop for packaging. This is an area that would benefit from greater focus by the freight logistics industry and its customers. This could be achieved by developing strategies to raise industry awareness about available waste reduction technologies.

18. The freight logistics industry, users of logistics services and government agencies to undertake a full life-cycle assessment of several representative freight logistics chains to examine opportunities for applying the principles of reverse logistics to achieve improved environmental outcomes.

19. The freight logistics industry, users of logistics services, and government agencies to establish an awareness program of the technologies available to eliminate packaging waste from freight logistics chains.

5.2.4 Environmental accreditation, standards and practices

The voluntary adoption of environmental management systems (EMS) and standards is not widespread in the freight logistics industry. This is partly due to the perception that more sustainable business practices—particularly the voluntary development of standards, are:

- resource intensive
- carry high implementation costs
- unlikely to provide a commercial rate of return.

However, many firms are now realising the commercial benefits of adopting environmental standards that demonstrate their green logistics credentials. They are achieving efficiency gains in their use of resources and energy, and are gaining recognition for taking positive action to improve the environmental sustainability of their businesses.

The Action Agenda regards the widespread development and uptake of environmental standards and accreditation as essential steps in realising a cleaner and more sustainable freight logistics industry. Achieving environmental sustainability in the industry will also depend on building awareness of the commercial opportunities of more eco-efficient logistics practices, and the

[100] Environment Australia, August 1999

impacts of new international environmental standards on Australia's exports. For example, the regulatory requirements of Australia's trading partners are likely to increase pressure on Australian logistics suppliers to be capable of managing product by-products, packaging and waste. The development of more rigorous industry environmental standards will play an important part in affirming the future competitiveness not only of the freight logistics industry but of Australia's export performance as a whole.

Areas where industry could start improving current environmental standards include:

- A review—in conjunction with appropriate government agencies—of the current guidelines for handling, spraying and cleaning containers, trucks, tankers and rail carriages to ensure that consistent environmental and hygiene standards are being practiced nationally.
- The development of industry-wide packaging standards aimed at maximising transport logistics efficiency and sustainability. For example, the standards could include volume, handling, minimal damages and identification.

Adopting environmental standards and related accreditation will also encourage positive behaviour. It will enable greater recognition of logistics and transport service providers who develop innovative solutions to environmental problems.

The ISO 14000 series of standards is currently being developed by the International Standards Organisation (ISO) and has been endorsed by Standards Australia and New Zealand as the AS/NZS ISO 14000 series.[101] This series is a collection of standards that will enable firms to introduce environmental management into their business processes to achieve improved financial performance and reduced environmental impacts. The ISO standard series has significant potential for being developed and applied by Australian logistics firms that are seeking to improve environmental performance through establishing EMS, or that are seeking specific certification to help promote their services to customers.

As mentioned in Section 4.3, *Quality Assurance Standards*, current accreditation standards do not emphasise the environment. There is a need for new environmental practice standards to be included in broader industry accreditation schemes and quality assurance systems.

20. The freight logistics industry, in conjunction with government agencies, to develop and implement a national freight logistics accreditation scheme that encourages Australian firms to adopt the Australian Standard/New Zealand Standard (AS/NZS) International Standards Organisation (ISO) 14000 series and improve environmental management within the freight logistics industry.

5.3 EXPORTING FREIGHT LOGISTICS SERVICES

The freight logistics industry, with support from governments, has established a solid profile for Australia as a comprehensive provider of logistics expertise. For example, Australian logistics consultants have won contracts with the Asian Development Bank, the United Nations Economic and Social Commission for Asia and the Pacific and the Association of South-East Asian Nations (ASEAN) Secretariat. Australian tertiary institutions, particularly the RMIT and the Australian Institute of Export, have established logistics-related courses in the Asia-Pacific region in collaboration with locally-based institutions.

Australian companies, such as Linfox, Toll Holdings, Strang Tradex and Mayne Logistics, provide logistics services in South East Asia. The Port of Brisbane is undertaking dredging contacts in Haiphong and in the Mekong delta, as well as providing maritime and port consultancy services.

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[101] Environment Australia, March 1999

Australia's strong logistics profile is underpinned by its expertise in developing appropriate logistics technologies for:

- cool chain and cold storage
- packaging and handling
- fleet management
- strategic planning
- information technology solutions.

Additionally, exporting logistics training packages provides an opportunity to showcase Australian logistics expertise generally.

5.3.1 Export opportunities

Despite good progress, there remain many untapped markets for exporting Australian logistics services and related products. Logistics activities that have export potential include:

- bar coding and scanning
- post-harvest and cool chain maintenance
- tracking and tracing
- packaging and handling
- creative transport, distribution and storage solutions
- improved through-chain use of technology.

Significant scope also exists for the further expansion of Australian freight logistics companies offshore.

To succeed in highly competitive global markets however, suppliers of logistics services must develop a better understanding of the social, economic and cultural environment in which they seek to operate. Sound knowledge of foreign consumers' expectations is a vital first step. A joint venture partner in the overseas country may establish operations and/or market expansion as they are able to undertake market research and suggest modifications to logistics services and products to fit market niches.

The Federal, State and Territory governments, through their networks of overseas posts and trade agencies, are able to provide information on market opportunities. In addition, they work directly at a government-to-government level to facilitate trade. There are also several government agencies, such as Austrade, that provide specialised advice and/or assistance about how best to access or develop an export market. Exporters must be prepared to take the time to thoroughly understand their proposed foreign operating environment and build working relationships.

The freight logistics industry, in conjunction with education and training institutions and governments, should actively support the development of logistics training packages for overseas logistics chain participants. The packages would be delivered by Australian institutions in partnership with Australian logistics service providers—with the latter helping overseas clients implement their learning when they go home.

The best outcomes for exporting Australian logistics services and products are likely to be achieved through a cooperative government and industry effort and a whole of government approach to supporting Australian logistics exporters. To provide a more structured approach to exporting Australian logistics expertise, the Action Agenda suggests the freight logistics industry—with assistance from relevant Federal, State and Territory Government agencies—establish a working group to:

- review current approaches and develop strategies to increase the export of freight logistics services and products
- identify and promote target markets to Australian industry
- identify and advise governments of market access difficulties
- provide advice about programs that could assist logistics firms enter new markets or expand in existing ones.

The rewards for pursuing an Australian logistics export strategy are substantial. For example, the logistics sector in South-East Asia is conservatively estimated at five per cent of GDP. Using this estimate, logistics activities in this potential market could be worth $US30 billion. Other markets, for example China and India, would be worth considerably more. Developing a competitive and dynamic logistics industry in Australia will maximise Australia's opportunity to capture a share of these markets.

21. The freight logistics industry, with assistance from government agencies, to establish a freight logistics export working group to review current approaches and to address how best to achieve the increased export of freight logistics services and related products.

5.3.2 Export assistance programs

There are several export assistance programs available from Federal, State and Territory government agencies to assist companies seeking to enter export markets. These programs generally provide financial assistance for activities such as marketing and promotion at trade fairs.

However, the Action Agenda believes these assistance programs would be enhanced if they incorporated elements that strengthened the global logistics chain capabilities of Australian exporters. This observation is made for two reasons.

First, as discussed throughout this report, the nature of competitive advantage is changing. Relying on the better product, either in terms of quality or price, is no longer the deciding factor in being competitive in the global marketplace. Instead, overseas customers are increasingly demanding that suppliers have the capability to incorporate themselves within the customer's global logistics network. This capacity may involve technical specifications, standards of quality and timeliness, or even the right attitude of the supplier to build effective logistics chain relationships.

Second, government export assistance programs that focus primarily on marketing activities run the risk of weakening the global logistics capability of Australian exporters. For example, the typical marketing strategy of differentiating an exporter's product can significantly affect the exporter's logistics chain through smaller and more frequent export shipments. The more awareness Australian exporters have about their logistics capabilities, the more confident they can be in signing long term contracts that they can sustain.

One way of incorporating global logistics chain capabilities into government export assistance programs would be to involve Australian suppliers of logistics services as partners with Australian exporters. This would strengthen the competitive advantage of Australian exporters, and facilitate increased use of Australian logistics services in global logistics chains. This produces a win-win opportunity for Australian exporters of both services and products.

22. The Federal Government, in cooperation with the State and Territory governments, to explore the potential for using export assistance programs to promote the development of the global logistics chain capabilities of

Australian exporters in partnership with Australian logistics service providers.

6 PLANNING, INFRASTRUCTURE AND REGULATION

6.1 PLANNING AND INFRASTRUCTURE

> *Quality and timely infrastructure is an essential element in modern economic development…It is generally regarded…that modern, competitively priced infrastructure services underpin economic growth, job creation, basic health and social amenity.*[102]

The BTE study, *Logistics in Australia—a preliminary analysis*, notes that infrastructure is one of the key inputs in the provision of logistics services.[103] It identifies inadequate infrastructure as one of the broad factors that limit integration in the industry.

The study notes that components of freight logistics performance include order cycle times, on-time delivery, transit times and product condition on delivery. The adequacy of the infrastructure used in providing freight logistics services, particularly transport, is central to improving these components of freight logistics performance.

The quality and operation of existing infrastructure—and planning for future infrastructure—are essential to the sustainability, competitiveness and overall performance of the freight logistics industry.

There are three types of infrastructure used to provide freight logistics services:

- transport—comprising the transport modes, intermodal facilities and freight centres
- storage and warehousing
- communications—including telephone services, email and the Internet.

6.1.1 Transport infrastructure

For much of the last 25 years, transport policy has been dominated by microeconomic reform considerations. This led to the policy focus being on modal rather than on intermodal matters and the freight system as a whole. Nevertheless, there were positive effects for logistics management. As modal performance and choice improved, the industry benefited. Logistics providers and their customers had more logistics options to choose from, and the logistics system became more sophisticated.

The BTE notes that:

> *Upgrading of national highways and rail infrastructure has facilitated faster and more reliable transit times.*[104]

An example of this is the Australian Rail Track Corporation's (ARTC's) infrastructure investment program on the east-west corridor. It has played an important role in improving freight train transit times and reliability between Melbourne, Adelaide and Perth. This, combined with a reduction in freight rates relative to road for the corridor, has contributed to east-west rail market share reaching 77 per cent—from a low of 65.2 per cent in 1995–96. The investment program demonstrated that rail is an essential, sustainable element of Australia's transport logistics network.[105]

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102 O'Neill, Denis, 1999, p. 1, *The Challenge*, Paper presented at the Regional Australia Summit 27–29 October

103 BTE, op. cit. p. 61

104 Ibid p. 37

105 ARTC Media Release, 26 April 2001, *East-West Rail Market Share Hits 77 per cent*, p. 1

However, Australia's transport infrastructure network is only as strong as its weakest links. There are still widely accepted shortcomings in this infrastructure that affect the performance of the freight logistics industry. Improvements are being made in some parts of the network, and those efforts are to be applauded. But inadequate transport infrastructure in several key areas—or failure to optimise the use of existing infrastructure—is responsible for reducing the network's overall performance.

As noted above, significant improvements have been made in rail infrastructure's performance on the east-west corridor But there has been very little investment in the north-south track in recent decades, and that section of the rail network is considered to be most in need of upgrading.[106]

The infrastructure of the road network is similarly uneven. While it is generally considered to be in better condition than the rail network, there are several neglected parts of the road network. These reduce the effectiveness of road transport to deliver efficient freight logistics outcomes. For example, congested arterial and urban roads—and rural roads unable to handle B-double vehicles—reduce the national road network's effectiveness in linking suppliers and customers.

Seaport and airport infrastructures face pressure from projected growth in volumes and are affected by inadequate landside access for both road and rail. Urban encroachment around port facilities is threatening future land use for port expansion, transport infrastructure and freight corridors.[107] In their report *Planning not Patching: An Inquiry into Federal Road Funding*, the House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform noted that a significant amount of evidence presented:

> *...suggested deficiencies in the adequacy and extent of the national highway system, particularly in relation to a lack of high quality links to ports, airports, rail terminals and industrial facilities in major urban areas.*[108]

Rail freight access through Sydney is an example of how transport networks can be affected by inadequate links. In launching the national rail audit report, the ARTC's Chief Executive Officer said:

> *Sydney is like a life-threatening blood clot in the arteries of the rail network. Until it is unblocked it threatens the viability of the whole interstate track.*[109]

The 2001 Australian Infrastructure Report Card, published by the Institution of Engineers Australia, examined road, railway, airport and seaport infrastructure.[110] The results varied from a D-minus for rail to a B for airports and seaports.[111] The members of the Australian Infrastructure Report Card Alliance noted that there is significant room for improvement in all sectors of Australia's infrastructure.[112]

The ability to access transport infrastructure is as important as the quality of the physical infrastructure itself. Pricing, safety and environmental regulation, and technical compatibility, can affect access to infrastructure—regulatory issues are addressed in Section 6.2. Competition policy is also an important issue and is considered in Section 6.3.

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106 ARTC Media Release, 1 May 2001, *Rail Audit Shows $500m Investment Needed*, p. 2

107 Freight Transport Logistics Industry Action Agenda Steering Committee, 2001, *Linking Ahead*, p. 12

108 House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform, October 1997, *Planning not Patching: An Inquiry into Federal Road Funding*, p. 21

109 ARTC Media Release, 1 May 2001, ibid.

110 The Australian Institute of Engineers, 2001, *2001 Australian Infrastructure Report Card*, p. 1

111 Ratings are based on the consideration of asset condition, asset availability and reliability, asset management and sustainability (including economic, environmental and social issues).

112 Australian Infrastructure Report Card Alliance, 2001, *Communiqué from the Members of the Australian Infrastructure Report Card Alliance*, p. 1

Freight centres

Freight centres are an important component of transport infrastructure, comprising facilities at strategic locations along the transport network—including regional, metropolitan and local freight centres. They include facilities referred to as consolidation centres, distribution centres, inland container depots, local delivery centres, freight terminals and intermodal facilities. The BTE notes:

> *There have been major changes…since the 1980s, with…an expansion of consolidation facilities and distribution centres.*[113]

Freight centres can provide several different freight logistics services. The feature they have in common, however, is that they all have an important role in the efficient distribution of freight across the network. As such, they are central to the performance of the freight logistics industry and to achieving more seamless logistics practices. Freight centres also provide an opportunity for significant environmental benefits. Improved consolidation and the opportunity for shared deliveries—particularly through local freight centres—results in fewer road trips and reduced emissions.

There have been several collaborations between rail and road operators to establish inland container depots. An example of this was an initiative in Sydney's west to provide congestion relief—associated with container handling—and to allow better use of existing infrastructure and the port interface. In recent years, industry has also started to recognise the benefits that freight centres can provide in improving freight logistics performance. Consequently, proposals for freight centres through the network have increased.

Intermodal freight terminals in urban and regional centres have therefore become a significant issue for governments and industry. Examples of intermodal facility developments at the operational or proposal stage are Minto and St. Mary's in metropolitan Sydney; Kewdale in Perth; and Port Adelaide Flat, Outer Harbour, Islington, and Dry Creek in Adelaide. In regional areas they include Parkes, Blayney, Bathurst, Griffith and Wagga Wagga in New South Wales; Port Augusta, Port Augusta West, and the Barossa Valley in South Australia; and Shepparton, Wodonga and Ballarat in Victoria.

In many cases, freight centres have been funded through the private sector with local government also involved in developing project proposals—particularly in regional areas. Where public sector funding was provided, it was often through government-owned rail and port authorities. New projects were based around existing sites and infrastructure—for example, FreightCorp's development of metropolitan and regional freight centres in New South Wales.

The recent spate of new freight centre proposals requires a joint effort between governments and industry to develop a framework for planning and promoting these facilities. The concern with the number of proposals for various freight centres along the transport network is that—without a strategic framework for their planning—sub-optimal investment decisions may be made. In the Australian context, there has been relatively little work to date investigating the optimal configuration of freight centres and how it can be achieved.

Another consideration is the efficiencies that may be created through new approaches to the availability of Australian Customs Service (ACS) and Australian Quarantine and Inspection Service (AQIS) services at appropriate metropolitan and regional freight centres.

Access to Customs electronic systems will provide a similar service quality to regional operators as their port-based counterparts receive. Customs is not presently considering formal inland port options. Their analysis suggests there are few efficiencies to be gained in addition to the new early report/early status arrangements—see Section 4.5, *e-Logistics*. There are also legislative

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[113] BTE, op.cit. pp. 17–18

impediments.[114] However the ACS recognises its impact on logistics chains and will continue considering proposals relating to the establishment of international freight operations in regional centres.[115]

From the AQIS perspective, the experience of the quarantine facility at Merbein in Victoria for table grape exports is promising, and should be analysed for broader application in regional Australia. Other 'shared responsibility' or 'partnership with industry' inspection arrangements should also be analysed. These include co-regulation—where industry can achieve accreditation to undertake the primary product inspection role; and centralised inspections—where industries that are willing to work together can coordinate export inspections. However, there remains concern in some export industries about the responsiveness of AQIS services; for example:

- advance booking times for inspection which don't allow for the vagaries of harvest
- uncertainty about container delivery
- inconsistencies in the application of AQIS standards between offices.

Initial research into the development of intermodal terminals identified some critical success factors that need to be considered in future studies. Indicative critical success factors include the:

- venture's perceived costs and/or benefits
- value of the market base supporting the facility
- volumes required to create a sustainable critical mass throughput
- proximity to key arterial roads
- existing rail track conditions
- access to the national network
- community's acceptance.[116]

In constructing a comprehensive check-list of prevailing factors it should be remembered that certain elements will prove common to all sites, while others will be site particular. However, freight centres in themselves will not be effective without first-rate infrastructure connections and, usually, at least some associated transport infrastructure investment will be needed.

6.1.2 Warehousing and storage

Warehousing and storage facilities are an essential component of the logistics distribution system. Their activities include:

- receiving goods from suppliers
- storage
- order picking and assembly

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[114] Other than gazetted airports—Section 15 of the *Customs Act 1901*—there are no inland ports in Australia. Legislation requires that only actual seaports and airports are appointed for the clearance of import or export cargo. At present, cargo under ACS control can be moved under bond from gazetted wharves and airports to ACS licensed depots to be held or deconsolidated prior to ACS clearance. Licensed depots may be established anywhere, subject to meeting all criteria set out in the *Customs Act 1901*. Currently, most licensed depots are within a 40 kilometre radius of an ACS office. Where depots are outside this radius, the depot operator bears the cost of inspections by ACS, with the cost rising the further the distance from ACS offices. A license condition is connection to sea and/or air cargo automation system(s).

[115] It should also be noted that the Victorian Government is supporting several initiatives aimed at facilitating private sector investment in inland ports.

[116] Indec Consulting 2000, *Intermodal Facility at Port Augusta*, Section 3.4, p. 9 and Stage 2-28; Muller G, 1995, *Intermodal Freight Transportation*, 3rd edition, p. 143; National Research Council and Transportation Research Board, 1996, *Transportation Research Circular: Intermodal Freight Terminal of the Future*, pp. 72 and 89

- packaging and re-packaging
- transfers between transport vehicles and transport modes.[117]

There is some overlap with freight centres which can involve limited storage. But the distinguishing feature of warehousing and storage facilities is that they retain goods for longer periods and are linked more closely into inventory management systems.

The number and location of warehousing and storage facilities around Australia have changed significantly over the last couple of decades. Many single-user warehouses have closed and consolidation and distribution centres have increased.[118] Their number and location are influenced by:

- the effectiveness of the transport network—its speed and reliability
- land use policy—and related access arrangements—in the relevant locations
- the cost of land—warehouses tend to be use large plots of land.

As discussed in Chapter 2, overseas studies suggest warehousing and storage are very significant economic activities. However, this is not reflected in Australian Bureau of Statistics (ABS) estimates for the storage sector. This is attributed to only part of warehousing and storage activities being included under the 'storage' component of the Australian and New Zealand Standard Industrial Classification's (ANZSIC) Transport and Storage category. In-house warehousing and storage—for example, by large retailers—would see its value being included in other industry classifications.

The BTE notes that improved logistics performance is helped by:

> *...warehouses and depots facilitate lower production costs…transport cost savings…and handling of significant changes in product demand.*[119]

There are also particular considerations in the area of bulk commodities. For grain products, consolidation and storage pose critical challenges. Large volumes are handled in short, seasonal timeframes where each handling point adds to costs and can cause degradation in product quality. These challenges are compounded by marketing and food safety requirements that require ongoing segregation and clear audit trails. Mineral exports are moved on a critical time path basis with less use of on-port storage relative to loading direct from rail transport.

In the past, when the attention of policy makers turned to logistics, the emphasis was on transport—the 'flow component' of logistics. The handling and storage component of logistics was overlooked because the public sector's role in this area was principally limited to land use issues—and these were the policy domain of local government. Storage infrastructure has been funded almost entirely through the private sector or government marketing authorities.

For logistics policy to be effective, however, it must consider all components of the freight task. This will typically highlight such matters as the siting of warehouses and storage centres, their operating hours and their role in reprocessing under the reverse logistics concept discussed in Section 5.2.3.

6.1.3 Communications

Communications infrastructure is critical to freight logistics because of the need to manage information.

While Australia has a well-developed communications system there are gaps in the network. In extreme cases even fixed telephone lines are unreliable, and the quality of mobile phone access is

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117 BTE, op. cit. p. 23
118 BTE, op. cit. pp. 17–18
119 BTE, op. cit. p. 23

poor in many regional and rural areas. Perhaps the biggest issue is the reliability and speed of Internet access.

This affects several sectors of the economy—particularly those concentrated in regional areas such as farming and mining—and impedes the efficient performance of the whole supply chain. In addition, freight transport can be affected through black holes in the network, affecting mobile phone coverage and track and trace capabilities.

In this context, it is clear that regional areas are more likely to be subject to poor communications infrastructure. This has been the subject of considerable debate, and Federal Government action to improve coverage, over the last few years. The risk remains that regional firms are still disadvantaged, with attendant implications for regional growth capabilities.

In addition to the issue of the communications infrastructure itself, is the issue of take-up of communications-based technology. This is discussed in Section 4.5, *e-Logistics*.

6.1.4 A way forward

The issues identified above are not new. They have been raised before in several inquiries and studies—some of which have been noted in the discussion.

This previous work, however, tended to focus on the issues in the context of improving the performance of particular elements of transport, such as road or rail. The broader logistics environment and its requirements were not considered. This is understandable given the historic organisation of freight transport. In both industry and government, it was organised around mode and function and lacked a broader freight logistics industry focus.

In discussions with industry, several infrastructure issues have emerged as central to improving the performance of the freight logistics industry as a whole. These focus on:

- disjointed planning and development decisions
- moving to an integrated approach to infrastructure investment and operation that focuses on the total transport task.

There are concerns that inadequate planning for transport corridors is constraining the network's capacity to handle the growing freight task. The Managing Director of the Melbourne Port Corporation has made the point that

> *...city ports such as Melbourne need fast, reliable and efficient land transport corridors into and out of their terminals, by both road and rail. Conflict with people movement is often acute…[and] the pace of change and trade growth through many city ports since containerisation has generally outstripped the ability of planning processes and decision-making to keep pace and ensure the provision of adequate corridors for intermodal linkages.*[120]

In considering the capacity of existing transport corridors, every opportunity to better utilise existing infrastructure must be taken. While there have been steps in this direction, considerable scope remains for further improvements. The take-up of e-Logistics applications has great potential to improve infrastructure utilisation—as indicated in Section 4.5. Changing work practices such as 24x7 operations also present opportunities to enhance the efficiency of the industry. More seamless logistics practices lessen or slow the requirements for additional infrastructure. The workplace relations aspects of these operations are considered in Section 4.6.

Local government has a particular role in facilitating better infrastructure outcomes for both existing facilities and new developments. Councils have an important responsibility to appreciate

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120 Whitaker, Dr Chris, 2001, *Intermodality: getting it right at the Port of Melbourne*, Intermodal Australia speech, 26–27 February, p. 4

the significance of their area's involvement in freight logistics chains. Wherever possible, their land-use planning decisions should support freight logistics chains in cooperation with industry and other levels of government. Local governments have another important role in informing their communities about the importance of freight logistics to their economic growth and daily lives. They could do this, for example, by explaining the trade-off between fresh food availability all week and the related need for truck deliveries.

There is a strong case for a more transparent decision-making process that considers the requirements of the freight logistics industry and general economic considerations, as well as broader environmental and social considerations. Without seeking to reduce the rigour applying to investment decisions, all relevant factors need to be considered when choosing projects. They include impacts on product quality and reliability of delivery, regional development and the environment. The National Transport Planning Taskforce (NTPT), in its report *Building for the Job: A Strategy for Australia's Transport Network*, noted:

> *...management of environmental and social effects should be an essential part of the overall transport infrastructure investment decision-making process.*[121]

For the freight logistics industry to operate efficiently, it is imperative that it be able to meet demand as it arises. The industry is best placed to advise on the future demand for freight logistics services and to identify emerging trends and possible changes in user requirements. Therefore, it must be closely involved in infrastructure planning. Industry's involvement—both logistics service providers and users of those services—will also help strengthen the viability of associated financing decisions, including public-private partnerships. Hence a cooperative approach to infrastructure planning is required that encompasses all levels of government and industry.

The Action Agenda proposes the following strategies for infrastructure planning and investment. They address issues identified by industry as impeding the performance of the freight logistics industry and involve governments at all levels:

- Governments to work with the freight logistics industry and local communities to adopt a long-term strategic focus to develop infrastructure. This will have shared objectives which maximise economic efficiency, minimise the impact on the environment and optimise the utility of the infrastructure for local communities. It includes the need for transport infrastructure to be planned and operated so that the freight movement elements are integrated with the people movement elements.
- Governments to develop a national logistics strategy for freight transport on a 'whole-of-government' basis. This would include specific modal, intermodal and general infrastructure requirements, and objectives for modal balance.
- Governments to pursue collectively with industry, integrated urban infrastructure planning that optimises the use of freight transport corridors and the capacity of metropolitan and suburban freight centres. This will reduce congestion associated with urban freight movements, improve freight access through urban areas and recognise the amenity of local communities.
- Governments to identify and support the key freight corridors for regional Australia—particularly those related to export flows—and prioritise their support for regional freight centres in these corridors.

The objective is to provide a clear framework for all levels of government to follow, and for industry to use in its own planning decisions. The framework would not be prescriptive. But it would be expected that departures from it would not be made lightly, and then only after close consultation and consideration with industry and other affected governments and communities.

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[121] National Transport Planning Taskforce, December 1994, *Building for the Job: A Strategy for Australia's Transport Network*, p. vi

To facilitate the more integrated approach, governments will also need to provide greater flexibility in their infrastructure funding programs, and in the links between programs. For example, the Federal Government's *Roads for Recovery* program could encourage planning for regional freight transport infrastructure projects across local government boundaries.[122] State and Territory government road funding could support these projects.

For major national infrastructure programs, such as the National Highway program, freight logistics needs should be fully addressed—for example, in terms of access to large urban and regional freight centres. The Federal Government, as program provider, and the State and Territory road authorities would share this responsibility. These would be further integrated with rail track investments where significant highway and rail systems intersect. In turn, close working relationships would be needed with affected local governments and private investors.

The National Transport Secretariat (NTS) recently completed a project for the Australian Transport Council (ATC) that analysed—using a cross-modal approach—the capacity and operating performance of freight transport corridors critical to the national economy. The project identified the national freight network, analysed broad network performance, and identified and prioritised strategic areas for action and proposed an implementation strategy. The action areas identified included:

- inter-capital freight corridors
- regional and remote freight
- urban freight initiatives
- system-wide initiatives.

This report will be presented to the ATC at its August 2002 meeting. If Ministers endorse the implementation process it will be a step towards addressing the Action Agenda's concerns and responding to the actions proposed.

However, not all infrastructure involves governments. There is a major issue of the quality and operation of private infrastructure at critical stages of freight logistics chains—for example, road-rail intermodal terminals, airports and seaports. The Integrated Logistics Network (ILN) and the Australian Freight Council Network (AFCN) have undertaken several studies to identify where the logistics chain can be improved to enhance perishable product quality. The 1999–2001 Temperature Monitoring Program—by monitoring several air and sea freight trials—highlighted significant breakdowns in perishable chain handling and management procedures.

These studies demonstrated that improving the efficiency of on-airport and on-seaport handling is essential if air and sea cargo exports are to retain their value. Given airfreight services' importance in perishable chains, a national audit of on-airport infrastructure would highlight the nature and extent of problem areas and identify necessary improvements that need to be made. Similar audits of other logistics facilities may also be warranted.

In the meantime, the Sea and Air Freight Export Councils have started establishing collaborative approaches between service providers and exporters that can help address deficiencies identified in logistics chains. As discussed in Section 4.3, the Australian Quality Logistics System Demonstration Project reviewed the logistics and related quality standards currently in place in three perishable chains to Singapore. It highlighted the need for an industry-driven, voluntary national accreditation system for the logistics aspects of end-to-end export chains.

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122 This would require legislative amendment.

23. Federal, State and Territory governments, working with the freight logistics industry and local government, to develop a long term strategic framework to guide freight logistics infrastructure planning and investment decisions, which:

- **identifies and defines a national logistics network covering the major freight corridors, related modes and intermodal points**
- **reviews the network's adequacy against future requirements, sustainability and sound asset management principles**
- **commits to maintaining a high standard of freight infrastructure and to prioritising planning and investment decisions.**

24. On the basis of this strategic framework, relevant governments to secure adequate transport corridors and modal interface areas for the efficient development of major seaports and airports and related road, rail and storage and warehousing services.

25. Federal, State and Territory governments to work with the freight logistics industry and local government to:

- **identify the role of major metropolitan and regional freight centres in the national strategic framework**
- **develop an analytical structure which can be used in planning for the development or expansion of these centres and the related infrastructure, including the links with smaller local distribution points.**

26. The Federal Government to review its approach to infrastructure funding to provide for improved logistics chain outcomes through flexibility in program design and cooperation across traditional government boundaries and, through the Australian Transport Council (ATC), encourage State and Territory Governments to conduct similar reviews.

27. The freight logistics industry to undertake audits of the operation of logistics facilities where impediments to efficient and effective operation have been identified. As a priority, an audit of on-airport handling facilities should be undertaken.

6.2 REGULATION

Government regulation of freight logistics includes public safety, management of infrastructure and containment of noise and emissions—areas in which the community seeks protection from any adverse impacts of freight logistics activity. However, operational regulation needs to be approached carefully. Governments need to balance protecting important community interests and containing impacts on the efficiency and costs of the freight logistics industry.

It is now widely accepted by governments and industry that harmonisation of regulations across Australia—and with international regulatory standards—will facilitate the smooth movement of freight through national and international logistics chains. However, to date the focus in regulatory change and reform has been on individual modes. There have been only a few good examples of regulatory reform seeking consistency between modes—for example, the dangerous goods regime in the rail industry that has drawn on the road transport regime. There are no examples of a comprehensive freight logistics chain approach.

At the modal level, substantial progress has been made in reforming road transport regulation since the establishment of the National Road Transport Commission (NRTC) over 10 years ago. The NRTC's work has led to greater uniformity in road transport regulations across Australia and reduced industry costs.

The Australian Rail Operations Unit (AROU) was established under an Inter-Governmental Agreement (IGA) on Rail Uniformity in January 2000. The IGA charged the AROU to work with the rail industry to finalise and implement a Code of Practice for the Defined Interstate Rail Network.

The Code comprises five volumes. The first three volumes—covering general principles, operations and safe working practices—were published in July 2001. Volume 4 on track, civil and electrical infrastructure is expected to be published by June 2002 and the fifth volume on rollingstock is currently being drafted.

Implementing the first three volumes of the Code has started with other track access providers progressing their implementation strategies. Early indications are that compliance with the Code will be high across the entire interstate rail network. However, for the IGA's objectives to be achieved, and for maximum benefits to be realised by the rail industry, the Code needs to be adopted as a single document. The AROU is working with industry to achieve this; however, the model is still under discussion. While industry supports the Code's aims, there is some concern that the voluntary implementation strategy will inhibit uniform adoption.

National regulatory reform in the aviation and maritime industries has not been a major priority from a freight logistics perspective. This is due in part to the significance of international regulatory bodies in determining regulatory frameworks—although the Action Agenda notes that impacts can occur and need to be monitored on other modes and domestic regulatory processes.

A further and related consideration is that Australia's international trade is subject to customs and quarantine requirements, which can have significant impacts in logistics chains. Australian customs processes are a benchmark for several other customs administrations. The ACS seeks to maintain close relationships with industry to facilitate cargo flows while retaining appropriate border controls. AQIS also seeks to have a close relationship with industry while ensuring the growing emphasis on public health and environmental safety is maintained. However, as discussed in other parts of this report, both areas need to retain a continuing focus on the level of regulation, its costs and reliability impacts on the flows of goods.

The Action Agenda's role is not to review progress in regulatory reform for individual transport modes or functions. However, it is clear that there is some way to go to achieving more consistent national standards. As well as delays in developing and agreeing new, more consistent modal regulations, the implementation of agreed reforms is often irregular and delayed in some jurisdictions. This adds to industry costs and affects logistics efficiency. If governments moved more quickly to reform regulation in each of the transport modes, it would benefit overall logistics efficiency in Australia, and our overseas trade. This reform should be predicated on achieving greater economic efficiency at the same time as ensuring that regulation is kept to the minimum necessary to meet community requirements.

6.2.1 A logistics perspective for regulatory reform

The Action Agenda's main concern is on the elements of reform as they affect the handling of goods across modes—domestically and internationally. Five principles should guide governments' regulatory reform in the freight logistics industry.

- A 'whole of logistics chain' approach should be the first principle for government regulation practice. If change in one area of regulation will have significant impacts elsewhere in the logistics chain, then this needs to be identified and assessed before final decisions are made.

There may be related opportunities to establish common rules across modes for like goods, which would assist handling and information flows.

- As a second guiding principle, governments need to recognise the linkages between:
  - regulation
  - accreditation regimes
  - industry performance
  - quality assurance standards.

  Regulatory processes should support efficient attainment of accreditation and quality benchmarks, by providing clear requirements that freight logistics operators must, at a minimum, meet before seeking assessment.

  Wherever possible, the regulatory base should be consistent with the accreditation and quality assurance streams. This will avoid duplicating the costs faced by companies seeking to achieve recognition in both. These matters should fall within the inquiry proposed in Action 4 in Section 4.3. There are also links to the education and training proposals in the Action Agenda. National consistency in licensing requirements will ensure commonality in curricula and testing, and facilitate movement of skilled personnel across different logistics chains within Australia—see Section 5.1.5.
- A third guiding principle for governments should be to move, where feasible, toward performance-based standards—rather than tight technical specifications—as a base for regulatory reform. This would give industry more flexibility, while still providing required protection for industry workers, customers and the community. It would foster innovation in the industry, and speed the introduction of reforms, as in many cases further legislation would not be needed.
- A fourth principle relates to enforcing regulations. Enforcement arrangements—including for self-regulation—need to be clear and capable of consistent application and auditing. In the Action Agenda process, Australian transport operators expressed concerns about inconsistent compliance and enforcement regimes. Freight logistics operators who place high priority on meeting their regulatory obligations should feel confident that those operators who flout or bend the rules are being detected and disciplined.
- The fifth and final principle is that, in delivering their regulatory functions, government agencies need to adapt to changes in the logistics task. This requires appropriate resourcing, and flexibility in the location and form of regulatory inspections and releases. The discussion in Section 6.1.1 on freight centres is a good example of how new structures—in suburban and regional freight consolidation—are affecting the delivery of ACS and AQIS services.

6.2.2 Strategies for change

In developing a broader logistics focus from these principles, governments have several strategies open to them. As a first step, the ATC could invite the freight logistics industry to audit the regulatory environment across freight logistics chains to highlight problem areas—particularly from an intermodal perspective. The audit results could be used to establish priorities for action. It is noted that the NRTC is now more involved in regulatory review that touches on intermodal considerations. The NRTC's experience would be a useful starting point in the audit activity.

In this context, the Action Agenda supports strongly the philosophy underlying the 'chain of responsibility' model developed by the NRTC.[123] This model—which is being given legislative support by Australian governments—is consistent with sound logistics chain practice and is a pioneering step in national regulatory reform. The model aims to make those in the transport chain

[123] National Road Transport Commission, Information Bulletin June 2001, *Chain of Responsibility*

who have particular responsibilities, legally liable for any offence committed because they did not adequately discharge those responsibilities.

The new legislation targets speeding, illegal driving, working hours, overloading, exceeding vehicle dimensions and poorly restrained loads. The laws apply to those inside and outside road transport companies who consign, handle, transport or receive goods where they breach a law, are aware of a breach, or ought to know of a breach. There are substantial logistics elements in this approach—and the component NRTC work addressing the problem of overweight containers particularly highlights intermodal and logistics chain responsibilities. The Action Agenda sees a valuable opportunity for governments to continue along these broader lines in their future regulatory reforms; and to extend chain of responsibility legislation and practice more widely across Australian logistics chains.

As part of the new approach, governments should work with industry to ensure that regulatory regimes are supported through sound auditing procedures and respected compliance and enforcement processes. In addition, it should support firms by facilitating progress towards accreditation under particular regulatory requirements or quality standards.

The current review of the *National Road Transport Commission Act* provides an opportunity to consider institutional arrangements for addressing issues of intermodal regulatory reform. The review's terms of reference encompass the scope to consider reform in other transport modes—particularly rail—and whether an integrated approach might be more effective in future.

The Action Agenda considers that the reform process established by the NRTC has substantial strengths through the thorough development of proposals and the subsequent formal voting mechanism in the ATC. The process of rail reform could gain significant impetus, and help promote real progress in intermodal transport, if it were treated in a similar way to road transport reform and given explicit decision-making processes.

The decisions that result from the NRTC Act review should have as a key objective taking advantage of broader intermodal and logistics opportunities, and address all major options to enhance logistics efficiency. This would include the scope for the one structure to be established to further regulate reform for freight transport as a whole, across government jurisdictions. There should also be a greater focus on the implementation of reform, with tighter time lines for legislative and regulatory change, its application on the ground, and related monitoring of impacts.

Related to accountability and the sharing of responsibilities is the issue of insurance, and the concerns of risk and liability. At present there are various provisions for coverage of international shipments. Exporting goods by sea is addressed by the *Carriage of Goods By Sea Act 1991*—amended in 1997 and by Regulation in 1998—and by air through the Warsaw Convention (1929) to which Australia is a signatory.

Domestically the situation is more open. For example, there is no legislative framework for transporting commercial freight by road and rail. Users of land transport have to settle their own commercial arrangements—including insuring their goods.[124] Users of these domestic transport services can obtain insurance for goods lost or damaged while in transit, irrespective of where the fault lies, and can also resort to common law rights in limited circumstances. A variety of arrangements exist in practice. Many operators have no load insurance provisions, and some large manufacturers self-insure their consignments—perhaps with an initial excess borne by the operator—or require the operator to insure particular loads.

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[124] The *Trade Practices Act 1974*, Section 74(3) exempts providers of services for land transport and storage of goods from liability from Section 74(1) for loss or damage to the goods they carry. This would be an issue for consideration in the proposed review arrangements of carriage of goods by land in Action 30.

As discussed in Chapters 2 and 4, to be fully effective, logistics chains require full accountability and an appropriate sharing of risk and responsibility. Any capacity for key players in a chain to renege on their responsibilities—and/or impose undue risk and related costs on others—is inconsistent with the principles of best practice logistics chain management.

In this context, liability for the domestic carriage of goods has been an issue for a long time. Despite several reviews in the last 20 years, many industry participants believe the issue remains unresolved. The Action Agenda considers it timely to review the liability arrangements for the domestic carriage of goods. It recommends the various industry interests—carriers, shippers, customers and insurers—combine with government support, to work towards resolving the issue. This review should focus on the national interest as the basis for assessing alternative arrangements for sharing risk.

Finally, in considering further regulatory reform—particularly in the more complex areas of intermodal movement of freight—it will be important to ensure that changes are based consistently on the analysis of benefits as well as costs, over appropriate time-frames which allow for full implementation and operational impact. These assessments should also consider the broader logistics chain impacts of particular proposals.

The Action Agenda did not receive any significant input on the impact of international regulation on the flows of Australia's exports and imports. But freight logistics issues no doubt exist—including in the overlap with accreditation and quality standards. One area where this occurs, for example, is the dual recognition of the Australian and International Standards Organisation (ISO) pallet standards. Logistics networks are becoming increasingly global and consolidation among multinational firms is increasing. As export and import trade continue to grow strongly, non-conformance due to variations in standards and systems will generate direct and indirect costs.

28. The freight logistics industry to provide to the Australian Transport Council (ATC) an assessment of current progress in regulatory reform affecting freight logistics, against the objectives of achieving greater efficiency and removing impediments and unnecessary regulation, with the ATC to agree to a strategy to address problem areas.

29. Governments to adopt an open and transparent approach to regulatory reform in all modes, that includes industry consultation and is underpinned by a logistics chain perspective and a 'chain of responsibility' philosophy. The approach could build on the decision-making model of the National Road Transport Commission (NRTC), but should also include measures for effective implementation of regulatory reforms.

30. The freight logistics industry, users of freight logistics services and the insurance industry, in consultation with governments, to review arrangements covering loss or damage of goods carried within Australia to determine if alternative arrangements would be in the national interest.

6.3 COMPETITION POLICY

In 1995, all Australian governments agreed to a reform package called the National Competition Policy (NCP). Two new bodies were formed to implement the NCP:

- The National Competition Council, whose main roles are to:
  - assess governments' progress in implementing the competition policy reforms
  - provide advice on the design and coverage of access rules under the National Access Regime, and

  - provide public education about the NCP generally
- The Australian Competition and Consumer Commission (ACCC), which took over responsibility for administering the *Prices Surveillance Act 1983* and the *Trade Practices Act 1974* (TPA). The TPA was broadened under the NCP so that its prohibitions of anti-competitive conduct could apply to virtually all businesses in Australia.

Since the mid-1990s, the freight logistics industry has undergone significant change, including:

- privatisation of rail operations
- national regulatory reform for road transport
- the consolidation of transport companies.

Some of these developments have been directly influenced by the new competition policy arrangements.

Despite these positive developments, the facts, application and interpretation of competition policy and the role of the ACCC appear to be causing concern and confusion in the freight logistics industry. Key areas of concern include:

- fair and equitable access to both public and privately owned infrastructure—mainly rail
- possible implications under the TPA for cooperative arrangements between companies in a supply chain, such as strategic alliances and service level agreements.

6.3.1 Access issues

There is a fundamental tension between the need for an asset owner to make a reasonable return on their investment and for transport operators to have fair and equitable access to infrastructure. Transport operators need to have certainty of access to the various transport modes, as well as reasonable terms and access conditions. This certainty is not typically a problem in road, sea and air transport, but can present real problems in relation to rail track access:

- transport operators may have to negotiate access over several publicly and/or privately owned sectors, which often have different contractual and pricing regimes
- the track owner may itself be a transport competitor, operating upstream or downstream transport services in competition with other transport operators
- rail operators pay for their infrastructure through genuine mass-distance based access. (On the other hand, heavy vehicle road access costs comprise vehicle registration fees and fuel excise, which can give a significant competitive advantage to road freight operators.)[125]

Concerns have also been raised about the financial and temporal burdens imposed. The Productivity Commission report, *Review of the National Access Regime,*[126] and the Senate Select Committee report, *Riding the Waves of Change,*[127] comment on the protracted and costly nature of resolving access issues. Submissions to both these reports indicated that substantial costs could arise through the number of respondents in access cases, consultants' reports, and the length of time to develop and respond to applications.

These issues demonstrate that the question of operational access to infrastructure is complex. The Action Agenda does not have a specific task to investigate access arrangements under competition

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[125] Submissions from the Australian Rail Association (ARA), February 2002 and Railway Technical Society of Australia (RTSA), December, 2001. However, this area remains one of vigorous debate with road transport interests arguing that trucks 'pay their way'.

[126] Productivity Commission Position Paper, March 2001, *Review of the National Access Regime*, Canberra

[127] Senate Select Committee on the Socio-Economic Consequences of the National Competition Policy, February 2000, *Riding the Waves of Change*, Canberra. In responding, the Government acknowledged that while there were concerns with the time that may be taken to consider proposals for access, it was reasonable given the complexity and delicacy of the issues and the availability of necessary information.

policy, nor the resources to do so. Besides, Australia's policy experience with access regulation, and resulting case history, is still limited.

However, from its perspective of supporting further efficiency and competitiveness in Australian freight logistics, the Action Agenda has a strong interest in the future direction of access arrangements. It supports strongly the objective of facilitating choice between freight transport operators—private and public—and the transport modes to which they have access. It also supports providing a fair return to the owners of the underlying infrastructure—including the requirement to develop and maintain that infrastructure. Further, the Action Agenda considers that, in developing policy on access arrangements and in providing guidance to regulatory authorities, governments should require account to be taken of the impact of access decisions on the overall efficiency of freight logistics chains.

31. The freight logistics industry to provide governments with an assessment of the impact that access regimes for public and private infrastructure have on business, taking into account the need for fair and equitable treatment of infrastructure owners and transport operators, and the impact on the efficiency of freight logistics chains.

6.3.2 Cooperative arrangements and mergers

There can be significant benefits from using cooperative arrangements in the freight logistics industry. These arrangements improve the range of services offered and the overall standard of service delivery. Such arrangements can be between logistics providers and between purchasers of logistics services.

It is desirable that cooperative arrangements are supported by service level or similar agreements that maintain transparency in terms of the product, standard of service and price in the market place. The overall level of competition should not be compromised, as firms would still be actively competing with each other in individual products or services, for a place in a logistics chain, and against other logistics chains.

There are some perceptions in the industry that the ACCC is generally against cooperative arrangements. The Commission's stance on the application of the TPA to alliances involving overseas partners and/or markets is seen as particularly confusing. In such instances, it is often unclear which part of the supply chain is considered domestic, and whether all, or only part, of such chains are subject to the TPA. Whether these concerns are valid or not, industry can find itself opting to do nothing rather than endeavouring to create the strategic alliances necessary to compete globally and improve domestic competition.[128] Perceptions that cooperation may not be possible appear to have bred reluctance towards adopting more efficient and effective logistics practices.

Under the TPA, cooperative agreements that do not substantially reduce competition are not illegal. Even where a cooperative agreement would result in a substantial reduction in competition, the ACCC might authorise it under the TPA if there are significant public benefits that outweigh the reduction in competition.

However, where cooperative arrangements involve bona fide breaches of the TPA, they will be pursued by the ACCC. Companies considering strategic alliances need to consider the impact of the proposed agreement on competition. If doubt exists, they should seek the ACCC's advice before entering into any arrangement.

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[128] Strategic alliances are best described as a cooperative arrangement where two or more companies enter into an agreement to jointly produce a business product or service.

A positive way of addressing awareness issues is to encourage freight logistics firms and/or their customers to adopt compliance regimes that meet the requirements of the TPA. Compliance regimes are a commitment by senior management and boards of directors to:

- implement and continually update a regime that identifies potential compliance risks
- establish processes within an organisation to assess compliance with the TPA
- handle complaints, including ACCC reviews.

Effectively, the compliance plan should be a binding list of do's and don'ts within an organisation.

There are also perceptions that compliance with the merger and acquisition provisions of the TPA can be an impediment to industry competing in a global environment. However, there have not been any transport-related applications rejected by the ACCC in recent times. It should be noted that the ACCC might authorise mergers even though they may substantially reduce competition if there are sufficient public benefits. It is impossible to determine if any mergers/joint ventures have been contemplated, but not pursued.

It therefore seems appropriate to investigate more fully:

- the trade practices policy issues facing the industry
- the level of awareness at firm level
- how policy is implemented on the ground
- an assessment of whether changes to current policy are desirable and necessary.

The Action Agenda identified this area as one that could usefully be discussed in the industry-government arrangements proposed in Section 7.4.

6.4 THE STRATEGIC SIGNIFICANCE OF RAIL

Planning, infrastructure, regulation and competition policy are particularly significant in Australian rail transport and combine to pose particular challenges for future freight logistics performance.

There is substantial support throughout the freight logistics industry, users of logistics services and the community for providing a stronger base for rail in meeting Australia's transport task. This has been demonstrated in three major national reports in recent years and by related debate in industry, the States and Territories.[129] Rail has traditional advantages in long-haul transport. But benefits are also perceived from its:

- different impacts on the environment and urban congestion
- indirect gains in road safety
- reduced road infrastructure and maintenance needs.

The rail market can be considered as consisting of three sub-markets, each having different operating characteristics and commercial outcomes.

Bulk minerals

This sub-group consists of heavy haul mining products including coal, iron ore, and concentrates.Such operations have substantial freight densities and consistency of supply, and are

[129] House of Representatives Standing Committee on Communications, Transport and Macroeconomic Reform, July 1998, *Tracking Australia* (Neville Report)*;* Rail Projects Taskforce*,* April 1999, *Revitalising Rail – the Private Sector Solution* (Smorgon Report), Canberra, and Productivity Commission, August 1999, *Progress in Rail Reform*

considered best practice when compared with overseas rail operations. Rail providers generally achieve a commercial rate of return and prices reflect the competitive advantage for rail over road.

Bulk agricultural products

Products such as export and domestic grains do not achieve the same consistency of supply, with weather factors influencing tonnage yield from year to year. Further, rail infrastructure servicing the grain belt is considered pioneer class and operating efficiency is substantially diminished. The grain industry supply chain is fundamentally complex and many factors external to rail operation affect its overall performance. Some State operations receive support payments—through Community Service Obligations—and rail operators make a modest commercial return.

General and containerised freight

This sub-market is varied, but covers mainly the freight movements of manufactured goods and shipping containers The freight rates for these rail operations on the north-south corridor are typically set as a price taker against the constraint of road freight rates and service levels. They are influenced by several factors including the complexity of a multi-modal rail-based service compared with the door-to-door service by a road-only movement. Secondly, the condition of the interstate rail network on the high volume north-south corridors is of too poor quality for rail to provide a comparable service outcome against road. Rail operators generally do not receive a commercial rate of return for this market segment, and capital costs are considered sunk.

Over the last five years, there has been an active response by governments in Australia to opportunities in rail, particularly for the second and third sub-markets described above. Many Federal and State Government-owned rail operations have been sold to the private sector—with some gains in efficiency and new investment. Smaller regional rail companies have also been established, however their long term commercial viability is not as assured.

Other measures have produced some positive results for rail operators, their customers and the community. They include:

- upgrading of some rail infrastructure—and there is commitment or interest in further upgrading and new rail investments
- rail has been exempted from diesel fuel excise
- regulatory reform has commenced
- best practices in rail safety investigation processes are being developed.

In the mid-1990s, new market entrants such as SCT, Toll Holdings and Patrick Rail conducted services using the incumbent rail operator, National Rail Corporation. The resultant increase in above rail competition led to higher rail volumes in some corridors, but it is not clear that sustainable rates of return have yet been achieved. On some corridors, it is also unclear whether the overall rail market has grown significantly. The sale of National Rail Corporation and Freightcorp to the National Rail Consortium removes an area of uncertainty, but it is not clear what effect this will have on service integration within and between rail and the broader logistics system.

Despite these recent developments, there remains a wide range of concerns that the pace and quality of change is insufficient to meet the needs and expectations of industry. Issues that have come before the Action Agenda are:

- Genuine above rail competition at the intra-State level has only been established in NSW and for that part of the interstate network managed by the ARTC. Despite promising reform to facilitate rail network access, above rail competition within Victoria, Queensland and Western Australia remains a theoretical proposition, with bureaucratic complexity the greatest impediment.

- Major continuing inadequacies in key rail infrastructure—national and intra-State—and insufficient commitment to new investment to address those inadequacies.
- Poor to non-existent planning for rail access to seaports, especially through urban corridors.
- Decision-making processes that do not effectively allocate the limited funds available, and which get bogged down between levels of government.
- The lack of a complete single access regime for the main national network.
- Access regimes that do not encourage new types of operation—for example, short-haul trains between seaports and freight centres.
- Significant inconsistencies remaining in rail regulation between States, with attendant cost burdens to industry.

These problem areas combine to frustrate many logistics companies with rail elements in their operations. They significantly reduce rail's potential to compete with road—and to a lesser degree coastal shipping—in providing logistics solutions in the general and containerised sub-market.

The Action Agenda recognises that Australian Transport Ministers are aware that there is a long way to go in rail reform. Ministers re-affirmed their commitment to rail reform at their May 2001 meeting, and the National Transport Secretariat has recently reviewed progress and reported to ATC Ministers.

As the issues are essentially on the public sector side, the Action Agenda considers that it would be a significant sign to industry if Australian governments gave further priority to accelerating rail reform across its many facets. This would require a substantial commitment to providing necessary resources—in both investment and management—over at least a five-year period.

None of this is proposed to be to the detriment of other transport modes, which face their own challenges and also have their own infrastructure and regulatory needs. Neither does it imply that governments should not apply the most rigorous analytical procedures to rail-related expenditures, and consider the relative claims of other modes in specific corridors—consistent with the framework proposed in Section 6.1.4. However, rail has suffered from decades of relative neglect, and needs high priority in government decision-making if it is to provide an effective and ongoing contribution to Australian freight logistics chains.

32. Australian governments to develop a comprehensive strategy to accelerate rail reform—with particular priority to addressing planning, infrastructure, access and regulatory needs at national, State, Territory and regional levels.

7 LEADERSHIP

7.1 CURRENT SITUATION

Adopting the Action Agenda's proposals will enhance significantly the operation and competitiveness of the Australian freight logistics industry. However, implementation will be enhanced further if industry and governments take a new, more comprehensive approach to policy development, and consult and communicate about national freight logistics issues. A strong and lasting commitment by industry and governments to leadership in freight logistics is fundamental to the ultimate success of the process commenced by the Action Agenda.

At present, both industry and government are highly fragmented in the way they address freight logistics issues. This is despite the importance of Australia's overall logistics performance to national and regional economic growth, and international competitiveness.

There is currently no nationally coordinated approach by industry to the development of freight logistics. There are industry associations by mode, by role in parts of the logistics chain, and by professional capacity. These associations vary considerably in the extent of their profile in industry, community and government dealings. Many of these associations also have national and State and Territory offices, and in some cases regional groups, with varying levels of autonomy. Some associations have wider coverage—such as related manufacturing interests—and may include training, accreditation, or industrial relations functions. A few associations include members of their customer group. But generally the customer viewpoint is seen as a separate matter, and more as a competitive concern for individual firms than a collective interest. Not many industry customers appear overly concerned with this, despite the importance of their views to the industry's development.

The number of participants in the freight logistics industry makes it difficult to achieve national coherence. Approximately 30 associations related to the freight logistics industry have been identified at the national level, and approximately 300 associations have an interest in the industry's performance from a customer perspective.[130] These figures would grow dramatically—probably at least five-fold—if State, Territory and regional affiliates were included.

Related to the range of industry associations is the issue of trade union coverage. There are four major unions involved across the freight logistics industry. Several others have interests in various areas, and the Australian Council of Trade Unions also has a major interest in industry developments. Of the major national industry associations, only the Australian Trucking Association (ATA) and the Australasian Railway Association have trade union membership. Industrial relations issues are usually seen as a responsibility for individual firms or for industry associations, which can work against involving unions in industry goal-setting. It is highly desirable that a consolidated freight logistics industry viewpoint includes employee as well as employer inputs.

On the government side, there is a similar challenge of scale. The Federal, State and Territory governments all have a close involvement with the industry, as do the more than 700 local governments in Australia. At each level of government there are also varying ranges of departments and agencies with freight logistics impacts—the great majority of these have, or are structured around, specific modal or functional responsibilities. As a result, transport policies at each level of government have typically been developed on a modal basis and have not addressed transport systems as a whole.

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130 *Directory of Australian Associations July 2001—November 2001*, edition 41, Information Australia

The Australian Transport Council (ATC) and its underpinning bodies provide a forum for Federal, State, Territory and local governments to discuss transport issues. An important recent addition was the establishment of the National Transport Secretariat (NTS). Its brief includes advising the Council on logistics issues of national significance. The Council has also recently supported the role of the Integrated Logistics Network (ILN), which is responsible for advancing intermodal and logistics cooperation.[131] However, there are otherwise no national coordinating arrangements from a freight logistics chain perspective—which go outside the traditional, typically single mode, transport boundaries—within or between the levels of government.

The lack of a coordinated approach to logistics issues continues when it comes to industry-government consultation and liaison. There is no national forum in which industry and governments can discuss freight logistics issues and strategies, including infrastructure elements. This is also the case in most States and Territories. In the absence of appropriate forums, most planning and regulatory issues that arise in freight logistics are not debated by industry and government nor addressed at a system-wide level. Such issues include the movement of freight internationally or between regions—often crossing State or Territory borders.

An encouraging area of progress has been the establishment of air and sea freight export councils in each State and an Air Freight Working Group in the Northern Territory. The councils coordinate several of their activities with the State agency officials represented on the ILN. Their Executive Officers have formed a national network— the Australian Freight Council Network (AFCN)—to bring a national perspective to those issues that cross State and Territory boundaries.

The Councils provide a unique, industry-driven forum that brings together key members of the export supply chain. The freight council networks contribute to the industry by:

- linking the key trade gateways to regional Australia
- using the expertise of a wide cross-section of export industry producers and transport logistics service providers
- playing an increasingly significant role in the improvement of Australia's regional and urban supply chain performance
- demonstrating the benefits of industry and government cooperation on freight logistics issues across modes and disciplines.

The Action Agenda is not suggesting that solutions to the current shortcomings in focus and coordination on freight logistics are simple. Nor should it be implied that establishing management and coordination structures within and across industry and governments would in itself lead to better cooperation, decisions, and outcomes. Rather, this chapter's essential point is that if industry and governments at peak levels are serious in their quest for much improved national freight logistics performance, then they must:

- promptly address the constraints of current institutional structures and the focus on individual modes
- achieve early improvements in national communication, consultation and decision-making.

This strong leadership would send a clear signal throughout industry and government—and to the wider community—that freight logistics is receiving high priority. It would also provide impetus down the line for participants to work together to enhance their particular freight logistics chains.

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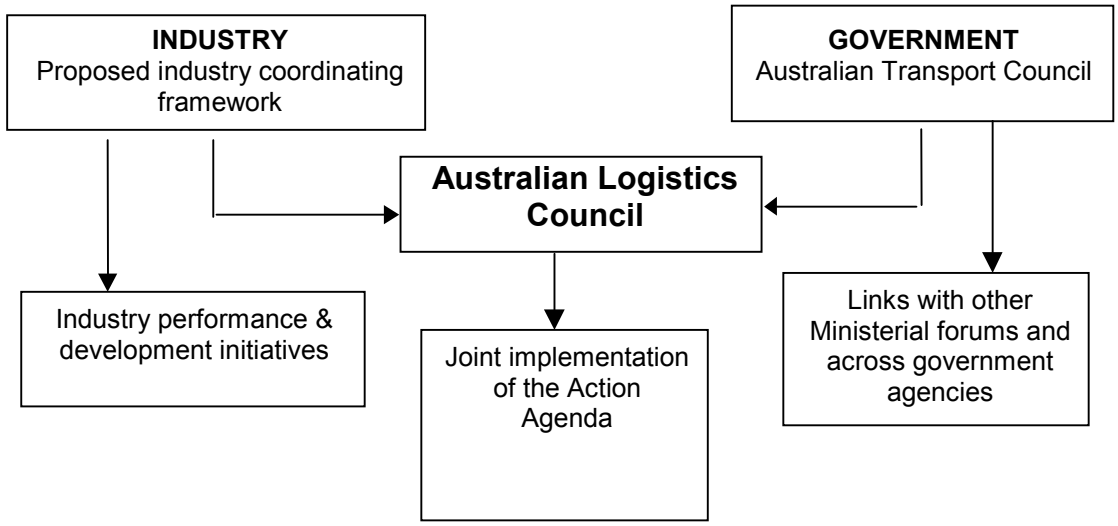
[131] Some of these officials are from departments such as State and Regional Development and, therefore, would not normally be associated with the ATC structure. Hence the ILN has been helpful in bringing a wider perspective together.

The sequence of actions to achieve this outcome essentially rests with the freight logistics industry and governments. The approach proposed in this chapter—and summarised in Figure 7—is for three high-level actions to follow the Federal Government's release of the Action Agenda:

- industry representatives to form an industry coalition, and administrative framework, to achieve an integrated industry voice
- the ATC to support the Action Agenda and develop a cross-government approach
- the early establishment of a representative Australian Logistics Council to:
  - oversee the joint implementation of the Action Agenda
  - provide for ongoing dialogue on national freight logistics issues.

Figure 7 Proposed leadership structure and linkages



7.2 A UNIFIED VOICE FOR INDUSTRY

Historically, the freight transport industry's organisational structure was partially derived from the need for operators to address a high degree of regulation from governments. Typically, operators encountered different, and complex, regulations in each State. The need to comply with several sets of regulations also contributed, in part, to the dominance of modal transport operators over other freight logistics service providers.

As previous chapters have shown, there was, and remains, much to do in reforming regulation and operation in individual modes, and this has understandably become a particular focus for industry interests. In this process modes often appear to be in adversarial competition for business and government support. This applies particularly to the 'road versus rail' debate that has worked against a more coherent freight logistics industry position.

Other factors that inhibited development of a broader industry focus were the dominant role of government in rail operations, and the small number of Australian companies providing integrated services across modes and through logistics chains. This situation has now changed:

- There is greater recognition by governments of the importance of harmonised regulations, nationally and internationally.
- Governments have reduced, and are further reducing, their direct role in transport operations.

- Considerable industry restructuring is underway through mergers, acquisitions and alliances—both horizontal and vertical.
- Related to this restructuring, rail demonstrates greater potential to compete more effectively with road in many situations, if its operating environment is enhanced.

More logistics companies are servicing both road and rail as well as being involved in non-transport logistics services. Customers are now more interested in receiving a quality freight logistics service than in specifying the transport mode used to provide the services. They want a reliable service provider who will deliver their goods on time and in good condition. These developments are leading industry associations, and the larger freight logistics companies, to a broader perspective about managing the freight logistics task.

7.2.1 Taking the opportunity

A new opportunity exists for the elements of the Australian freight logistics industry to come together in a cohesive way to achieve a more unified national freight logistics voice.

The Action Agenda proposes that this opportunity be taken through key industry associations and industry leaders meeting and agreeing on the advantages of a national, industry-based approach to freight logistics. The starting principles for this discussion should include:

- The industry, and its customers, to recognise the critical importance of freight logistics to national, regional and corporate competitiveness and growth.
- The need for all industry members to participate more actively in setting the future direction and goals for Australian freight logistics.
- All industry parties acknowledging and valuing the diversity of firms and activities that make up the industry, and recognise the importance of small and medium enterprises (SMEs) to the industry.
- The freight logistics industry actively supporting good corporate citizenship, by adopting performance standards that:
  - incorporate a code of ethics
  - recognise community needs
  - value and reward the workforce appropriately
  - acknowledge the need for sustainable development.
- The industry and its customers acknowledge that effective collaboration is a critical factor in successful logistics chains. In addition, building trust and sharing information are central to forming effective logistics chain partnerships—given that the greater part of freight logistics business is predictable and can be planned.
- The need for industry to be more pro-active in developing the impetus to lead the change in governments' approach by clearly defining its needs and what it wants governments to deliver.
- The industry recognises the need for effective two-way communication networks—within and outside of the industry. This will provide close linkages between industry members, customers and governments.

7.2.2 Strategies to achieve the unified structure

To be implemented effectively, many actions proposed in this report require a central coordinating framework for the freight logistics industry. Hence, key considerations are:

- the framework of the integrated approach—for example, whether it be an annual gathering with rotating organisational responsibilities, a formal alliance of associations, or a new industry peak body with its own secretariat

- the types of communication mechanisms—for example, a web-site, newsletters and conferences.

Some preliminary work would need to be done to assess the potential effectiveness of enhancing current structures. It should also be stressed that the Action Agenda supports rationalised, tight arrangements—certainly excessive layers of coordination should be avoided.

The Action Agenda does not wish to be prescriptive in proposing particular industry arrangements or structures. But, the one matter the Action Agenda is firm on, is that the industry must establish its own, independent peak structure. In the past, governments have appointed industry consultative mechanisms rather than encouraging industry to establish its own arrangements. In saying this, the Action Agenda recognises that governments, and particularly the Federal Government, have a constructive role in facilitating the development of a national industry voice. The Australian Logistics Council proposed in Section 7.4 is not an alternative to industry developing its own structure, as the Council is a joint body with particular responsibilities.

There are many options available and the details are best settled in discussion amongst those associations, companies and individuals who will be providing intellectual and financial input. The Action Agenda does not nominate representatives from these groups who might lead the discussions. That is something that is also best left to the parties involved.

A high priority for the new structure would be to consider the broader image of the industry and develop ways of achieving a more positive positioning. Starting points would be wide dissemination of information on the industry's contribution to the economy and community—to establish clearly that 'freight matters'. This would link in to the education and training initiatives proposed in Section 5.1 and particularly Action 12, by contributing to promotional packages to highlight the career opportunities available in the industry.

The industry's consultative framework would also have a major task within the industry in promoting cultural change. This would mean a greater focus on its contribution to supply chain performance and the necessary cooperation and information sharing which must accompany it. Encouragement of ongoing learning environments will also support that cultural change—as proposed in Section 5.1.6.

In these strategies, the involvement of industry leaders as champions of change and advocates of the culture shift will be critical to success. The industry should support this leadership, and, in time, provide recognition through industry awards. Industry champions are critical to:

- establishing a higher profile for freight logistics in the community
- developing strengthened relationships with governments
- promoting change across freight logistics activities.

The Action Agenda appreciates that a new industry coalition will not happen overnight. The evolutionary nature of the freight logistics industry means that the current structure of industry relationships has existed for decades. The development of an integrated national approach will require several years' commitment. Two important contributors to a successful outcome will be clear signals of support from governments; and recognising and building on the strengths of existing relationships—including at State, Territory and regional level.

The desired outcome is to develop a community of interest around freight logistics, where all organisations associated with national and international provision of freight logistics are members of that community. The aim would be to achieve a culture shift and related efficiencies in communication and general operations. This would help generate a dynamic, interactive and progressive industry that, through this community, becomes self-driven and self-motivated. The community concept could also have particular impact at the State, regional and local levels, where key players could link up on an urban or regional basis. This approach appears to have worked successfully in Ireland and Israel.

It is pleasing that the community of interest concept is being piloted in Australia. Members of the Newcastle port and logistics community agreed to take-up the challenge of developing the Hunter Region as a premier maritime and logistics precinct.[132] The Australian Maritime Network initiated this, after members of the port's community saw the Action Agenda's *Consultation Draft*. The Maritime and Logistics Forum Hunter comprises local and national operators and will facilitate greater understanding of each party's commercial realities. It will enable cooperation on areas of mutual interest to the benefit of logistics service providers, users and consumers.

The Department of Transport and Regional Services (DOTARS) is supporting the Maritime and Logistics Forum Hunter. The Department sees the potential benefits that local and regional community groups can deliver in terms of meeting national objectives. It is willing to explore other opportunities for pilot local and regional groups if the Hunter forum is successful.

33. Representatives of the freight logistics industry to agree on the benefits of moving to an integrated approach to freight logistics and, after assessing existing structures, establish a national consultative framework to:

- **develop effective communication mechanisms throughout the industry and with key bodies representing users of logistics services**
- **establish what the industry seeks from governments, and strategies to convey those views**
- **achieve a stronger industry profile in the community**
- **develop outcome indicators.**

7.3 A NEW APPROACH FROM GOVERNMENTS

As indicated in Section 7.1, governments have recently signalled a more integrated approach to freight logistics.

The ATC established the NTS in May 2000 to advance national and cross-government development of transport strategies. After its meeting in May 2001, the ATC released a *Special Communiqué* which set strategic, priority outcomes required from the Australian national transport system over the next 10 years.[133] These priority outcomes include:

- an integrated transport system
- better environmental impacts
- national and regional economic development.

While the term 'freight logistics' is not used in the Communiqué, the first six strategic issues identified accord closely with the Action Agenda's direction—infrastructure, moving freight, collaboration and integration, planning, environment and consistency.

As also discussed in Section 7.1, the ATC has supported the ILN as part of inter-governmental cooperative arrangements. Governments have provided initial funding and support to the Air and Sea Freight Export Councils, and regulatory reform is now infiltrating cross-modal areas.

At the local government level, many suburban communities and those on freight routes are opposed to freight transport. However, people living in regional producer areas have a keen appreciation of the importance of efficient logistics—including corridor links—to their economic development.

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132 Australian Maritime Network 2002

133 Australian Transport Council, May 2001, *Special Communiqué*

7.3.1 The rationale for change

If governments are to substantially change their approach to logistics—and to support and work with industry in lifting industry's performance—then they must go much further than the present, partial shifts in direction.

There is an increasing recognition by overseas governments of the importance of an integrated policy approach to freight logistics—both from the perspective of national competitive advantage and addressing social and environmental impacts. The Allen Consulting Group concluded that Australia is lagging behind developments in some of the leading countries in freight logistics policy.[134] Specific comparisons are difficult given the differing circumstances and institutional structures of other countries. However, the Allen report detected advantages in Australia taking a 'whole of government' approach to foster cross-fertilisation between jurisdictions, and to overcome contradictory policy and regulatory approaches. Considering freight logistics as broader than a transport issue is important to achieving cultural change. The Allen Consulting Group saw scope for applying the more integrated approach, sector by sector, drawing on the experience of the Prime Minister's Supermarket to Asia Initiative.

The Organisation for Economic Cooperation and Development (OECD) has also highlighted opportunities for governments to develop more integrated transport policies and facilitate intermodal transport opportunities. It notes that industry has increasingly adopted an intermodal approach to transport services, to meet changing demands from client industries. Governments need to match these developments in their infrastructure and transport services, in their environment and competition policies, and in their administrative and institutional structures.[135]

Using international and national experience, Australian governments, individually and collectively, should address the following principles:

- Governments at all levels to acknowledge the importance of freight logistics to trade, and national and regional economic growth.
- Governments to recognise the benefits of an overarching physical and regulatory framework that facilitates sustainable and profitable freight logistics operations.
- Governments to acknowledge the importance of including the freight logistics industry as an essential partner in:
  - infrastructure planning and provision
  - regulatory change
  - logistics-related public policy.
- Governments to agree to pursue vigorously the harmonisation and standardisation of regulatory and policy arrangements from a freight logistics chain perspective—nationally and with overseas jurisdictions.

The Action Agenda appreciates that Australian governments will need to continue arrangements for specific transport modes, given their particular policy and regulatory requirements. However, that focus needs to be complemented by a new emphasis on broader freight logistics considerations in meeting the national freight task, as described by these principles.

7.3.2 Supportive strategies

It is important to emphasise the scepticism in the freight logistics industry about governments' commitment to improved national logistics performance. Nationally, for example, there have been

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134 The Allen Consulting Group, *Comparative Public Policy on Freight Logistics,* June 2001

135 Organisation for Economic Cooperation and Development, 2001, *Intermodal Freight Transport – Institutional Aspects*

numerous government-sponsored or parliamentary inquiries over the last 10 years into elements of the freight task but with little follow-through of findings and recommendations.[136] Governments' support for the Action Agenda—demonstrated by active policy implementation and a new relationship with industry—will encourage industry's own implementation task and its formation of a national consultative framework. An early start to several strategies will be necessary to support the development of Australian freight logistics.

Firstly, governments will need to provide the appropriate administrative and skills base in their own transport and logistics agencies to work with the emerging profile of an Australian freight logistics industry. Modal-based structures require breaking down and/or effective coordinating arrangements established. This will ensure intermodal and logistics dimensions are covered adequately, and that governments better understand the impacts of their decisions on other jurisdictions. Staff skills are likely to require strengthening in intermodal issues, technologies, and broader logistics elements such as warehousing, storage and packaging.

Secondly, governments will need to strengthen their coordination structures horizontally across their agencies. For example, the Federal Government currently has:

- three departments actively developing supply chain concepts
- a major defence logistics task
- large impacts on freight logistics through its communications, education and environmental responsibilities
- a role as an active participant in many logistics chains through customs, quarantine and transport regulatory functions.

There are substantial benefits available through Federal agencies working more closely together from a freight logistics perspective. Apart from avoiding duplication and inconsistent effort, a united Federal approach can provide effective policy advice, links between programs and better service delivery to industry. Cooperation between agencies in the Action Agenda's development has provided a start in this direction. A positive example of action at the State and Territory level is the comprehensive review of logistics-related activities in Victoria.[137]

Thirdly, coordination between levels of government should be enhanced. The starting point for enhancement is in the ATC. Discussion of this report and its implications for national transport strategy will be critical to the initial impetus of the Action Agenda. In that process, the ATC should consider the involvement of other Ministerial forums, particularly the Local Government and Planning Ministers Council, the meeting of Regional Development Ministers, and the Australia and New Zealand Environment and Conservation Council of Ministers.

Fourthly, governments must ensure broader logistics dimensions are considered when making decisions about individual projects, local planning strategies and regulatory proposals. These decisions should be related to their position in freight logistics chains and their impact on chain efficiency. This requires development of, and adherence to, appropriate coordination arrangements and analytical procedures consistent with the strategic framework proposed in Section 6.1.4.

Finally, governments will need to enhance their own communications networks with the logistics industry and the broader logistics sector. This will ensure regular and effective consultation on matters of national, State and Territory or regional significance. As for industry, it will be critical to have champions for the new approach in the ranks of Ministers and senior officials.

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[136] These inquiries were the subject of analysis in the Action Agenda's discussion paper, *Linking Ahead.* The Action Agenda is, of course, the latest exercise of this nature.

[137] On 12 September 2001, the Victorian Government released the *State Audit on the Transport, Distribution and Logistics Secto*r, and its initial policy response. See also The Allen Consulting Group Report (2001) for more examples of what Australian governments are doing.

34. The Federal Government to place the Action Agenda before the Australian Transport Council (ATC), and seek from the Council a collective response which:

- **indicates its support for the establishment of a freight logistics industry consultative framework, and the Council's willingness to work with the freight logistics industry to implement the Action Agenda**
- **reviews the potential role for the freight export council concept to support the industry consultative arrangements and liaison with governments**
- **includes ongoing support and coordination responsibilities through the Standing Committee on Transport (SCOT), the National Transport Secretariat (NTS) and the Integrated Logistics Network (ILN).**

35. The Federal Government to establish arrangements for the ongoing coordination of Federal activities that impact on freight logistics, and for these arrangements to be linked directly with State and Territory government activities.

7.4 INDUSTRY-GOVERNMENT COLLABORATION

There are many parts of this Action Agenda that require joint action nationally from industry and governments. For example, to enhance analysis of industry performance, government action is required to coordinate the collection and dissemination of basic data. At the same time, industry must be willing to commit sufficient resources to supply that data. Further, there are many areas where industry or governments will benefit by receiving input from the other party in order to progress their accepted areas of individual responsibility.

It is therefore critical that shared arrangements are developed for Ministers, industry leaders and major national associations to agree to areas of joint interest and responsibility. These arrangements would reflect a shared view that industry and governments must work together in freight logistics policy development and decision-making. The arrangements would also recognise that industry and governments must show joint leadership and take strong early steps to implement the Action Agenda.

Accordingly, the Action Agenda proposes that the freight logistics industry and governments agree to a process for ongoing collaboration, initially at the national level. This national leadership would be demonstrated through the establishment of an Australian Logistics Council (ALC) to implement the Action Agenda.

The ALC's membership should come predominantly from the freight logistics industry. It should also include users of logistics services, government representatives and specialists in education and training, and technology. As well as their general industry background, members should be chosen for their ability to bring a broad range of logistics perspectives to the Council; for example experience in regional operations and/or small and medium sized firms. Council members should also:

- demonstrate a commitment to seek out and pursue objectives of mutual interest to the broad spectrum of logistics stakeholders
- be available for dialogue with the industry consultative framework proposed in Action 33 and the collective government arrangements proposed in Action 34.

The ALC would hold regular meetings to review the Action Agenda implementation process and to discuss emerging national issues. The Council would report to governments—through the

Federal Minister for Transport and Regional Services and the ATC—and industry, and hold an annual forum.

The Council's major task would be to oversee the Action Agenda's implementation. Its charter should provide flexibility to pursue other logistics activities of mutual interest to industry and governments. An example is the further analysis of the industry's need for highly skilled, qualified logistics and supply chain managers. The DOTARS has indicated a willingness to provide initial resources to the Council's secretariat and contributions might be sought from other agencies and industry.

While the Action Agenda sees the ALC as providing national leadership, engagement with State, Territory, regional and local initiatives will be critical to its overall success. Hence, it is recommended that the ALC should aim to support and add value to other important logistics initiatives being undertaken throughout Australia. This outcome could be achieved by the Council working with governments and industry groups to develop formal and informal networks that transcend traditional jurisdictional boundaries. The focus of these networks should be pursuit of mutual interest. This would facilitate the improved coordination and dissemination of strategic knowledge to industry and governments—an underlying theme of many of the actions contained in this report.

The Council—and other industry-government forums—should also consider the future potential of the air and sea freight export councils to contribute to the Action Agenda's implementation. The freight councils are at, or coming to, the end of their initial funding phase. Their continuation will depend on increased support from industry and some ongoing assistance from Federal, State and Territory governments.

The freight councils have led the way in showing that industry and governments can work together in freight logistics matters. It would be inimical to the Action Agenda's philosophy if the freight council concept was not considered as one of the foundations for implementing the proposed actions. Industry and governments have interests in:

- how the council focus might broaden from exports of perishables to other flows of freight—or what complementary structures might be set up to cover these other flows
- how individual councils can contribute effectively to national processes
- the future funding arrangements for the councils.

However, at this stage the Action Agenda does not propose a formal structure linking the ALC with the freight councils or with any other State or Territory agency. There is considerable variation across the States and Territories in logistics consultative frameworks, and it would be inappropriate for the Action Agenda to attempt to reconcile these various frameworks. The Action Agenda acknowledges that considerable progress in developing industry–government partnerships is already being achieved at the sub-national level, and that its national focus is complementary to such initiatives. The objective should be to share information, avoid duplication and work together on projects of joint interest.

36. An Australian Logistics Council to be established, comprising representatives of the freight logistics industry, users of logistics services, education and training providers and governments to:

- **drive implementation of the Action Agenda**
- **set implementation priorities and milestones**
- **develop links to related initiatives at State, Territory, regional and local levels**
- **hold an annual stakeholders' forum to evaluate progress**

- **facilitate evaluation of the Action Agenda's impact after three years and again after five years.**

8 IMPLEMENTATION AND EVALUATION

8.1 PRIORITIES FOR IMPLEMENTATION

The Action Agenda's successful implementation will depend on the ongoing support and commitment of the freight logistics industry and governments.

The preceding 36 actions cover a diverse range of issues that raise different considerations for timing and approach to implementation. Some actions, which are more complex and inter-related, will require significant time to take effect. However, there are also actions dealing with more specific operational issues that can deliver early benefits and provide a solid platform for the on-going implementation process.

Industry leaders have identified five priority areas that must be addressed to achieve a successful Action Agenda outcome and provide lasting credibility for the reform processes commenced by the Action Agenda. These priority areas are:

Leadership

Developing leadership at the national level, and improving coordination of decision-making within and between industry and governments, will be essential to achieving industry-wide support for the Action Agenda's implementation.

People

Investing in people through improved training and education is a major cornerstone to realising a more successful future for the industry. Investment in people improves productivity and increases Australia's ability to compete effectively in global markets.

Infrastructure

More focussed and transparent decisions by governments—with direct input from industry—will improve planning for strategic new infrastructure projects and achieve more efficient operation of existing infrastructure. This will aid industry decision-making, support regional development and better manage freight impacts in urban areas.

Innovation through technology and knowledge

Greater awareness and take-up of integrated e-Logistics applications will increase efficiency and responsiveness. Improved data and analysis—together with a focus on best practice and quality standards—will boost performance. Innovation overall will be enhanced by support for research and development (R&D) and its dissemination.

Sustainability

A proactive approach to sustainability issues will deliver better environmental outcomes and a more socially responsive industry, enhancing the industry's image.

All of the actions proposed in this report can be categorised under the above headings. The challenge in implementation will be to make early progress in the actions that matter. Specific actions are identified to lead each of the five priority areas. However, this does not mean that the other actions are not important. For example, further consideration should be given at an early stage to providing advice to governments on industry priorities for regulatory reform—as proposed in Action 28.

8.1.2 Implementation arrangements

The Action Agenda's Terms of reference provide for the Steering Committee to be responsible for implementation arrangements. However, the Action Agenda recommends that the Australian Logistics Council (ALC) proposed in Action 36—see Section 7.4—be established quickly to take responsibility for the implementation process. The Action Agenda believes this is preferable to relying on the existing Steering Committee which has reservations about its current size and suitability.

The ALC would develop an implementation strategy for individual or groups of actions and allocate responsibility. It would also be required to make an annual report to the Minister for Transport and Regional Services—and through the Minister, to the Australian Transport Council (ATC)—on its implementation of the Action Agenda. The report would be publicly released. The annual industry forum would provide an opportunity for stakeholders to discuss implementation progress, and the Council might decide to finalise its report after each forum.

In some cases, special groups might be established for specific implementation tasks—for example, a high-level committee of industry representatives would be invaluable to advise on priorities for implementing Actions 12–16 on education and training. There is also a capacity to use current industry and government advisory bodies to help the Council with the implementation task. For instance, the Australian Freight Council Network (AFCN) may be well-placed to provide support through their work program. Similarly for government actions, existing bodies with logistics capabilities such as the National Transport Secretariat (NTS) and the Integrated Logistics Network (ILN) may be able to contribute to, or coordinate, some actions. Some members of the current Steering Committee, or their organisations, may also wish to be involved in implementation to provide continuity to the overall process.

Table 14 sets out a preliminary indication of the implementation priority, timing and responsibility for each action. The Action Agenda considers it reasonable to expect implementation of all actions to have commenced within three years. An immediate start should be made in implementing key actions.

Table 14 Suggested implementation timetable

LEADERSHIP			
Implementation and development			
Priority Action (Phase 1) Action 36 Establish the Australian Logistics Council			
	Supporting Actions		**Suggested Timing**
	Action 33	Establish national industry consultative framework	Phases 1-3
	34	Australian Transport Council support	Phase 1
	35	Coordinate government activities	Phase 1
Regulation			
	Action 28	Review progress in regulatory reform	Phases 1-3
	29	Broaden approach to regulatory reform	Phase 2
	30	Insurance and liability review	Phase 3
Exporting services			
	Action 21	Review export performance	Phase 2
	22	Promote global logistics chain capabilities	Phases 2-3

Table 14: Suggested implementation timetable (cont.)

INFRASTRUCTURE			
Infrastructure			
Priority Action (Phase 1) Action 23 Develop strategic framework			
	Supporting Actions		**Suggested Timing**
	Action 24	Secure transport corridors	Phases 1-3
	25	Assist freight centre planning	Phases 1-3
	26	Review Federal infrastructure funding	Phases 1-2
	27	Audit logistics facilities	Phases 1-3
	31	Assess access regimes	Phase 2
	32	Accelerate rail reform	Phases 1-3
PEOPLE			
Education and training			
Priority Action (Phase 1) Action 13 Develop national education and training framework			
	Supporting Actions		**Suggested Timing**
	Action 12	Promote career and training opportunities	Phases 2-3
	14	Develop learning networks	Phases 2-3
	15	Create education and training web portal	Phase 3
	16	Review education and training funding	Phase 1
Workplace relations			
	Action 10	More flexible work arrangements	Phase 2
	11	Improve occupational health and safety	Phases 1-3
INNOVATION THROUGH TECHNOLOGY AND KNOWLEDGE			
e-Logistics			
Priority Action (Phase 1) Action 9 Address inter-connectivity of systems			
	Supporting Actions		**Suggested Timing**
	Action 7	Demonstrate benefits of e-Logistics	Phase 2
	8	Improve freight distribution through e-Logistics	Phase 1
Strategic Knowledge			
Priority Action (Phase 1) Action 1 Enhance data and analysis			
	Supporting Actions		**Suggested Timing**
	Action 2	Provide best practice information packages	Phases 1-3
	3	Produce template service level agreements	Phase 3
	4	Review accreditation arrangements	Phase 1

Table 14: Suggested implementation timetable (cont.)

Innovation, research and development			
	Action 5	Analyse innovation processes	Phase 1
	6	Improve research and development capabilities	Phase 2
SUSTAINABILITY			
Sustainability			
Priority Action (Phase 1) Action 20 Promote environmental accreditation			
	Supporting Actions		**Suggested Timing**
	Action 17	Reduce congestion and emissions	Phases 2-3
	18	Life-cycle assessments to reduce environmental impacts	Phases 1-3
	19	Eliminate packaging waste	Phases 1-2

Phase 1: Start immediately—underpins or is a pre-requisite for other actions

Phase 2: Start within 18 months—may require full or partial completion of Phase 1 actions

Phase 3: Start within 3 years

In Table 14, implementation is prioritised into three phases between 2002 and 2005. However, as the proposed Council would be responsible for developing the final implementation strategy, the timing and manner in which actions are implemented may change. This would depend on synergies between different actions and the final priority allocated to them.

8.2 EVALUATION ARRANGEMENTS

The ALC would also be responsible for establishing evaluation arrangements to assess the Action Agenda's impact—unless the Federal Government wishes to make other arrangements. It is suggested that major evaluations be completed after three years, and again, after five years. Annual reviews should be held at intermediate points and their results reported to the annual forum. The Council should also regularly consider its own effectiveness in driving the implementation task.

The evaluations should include inputs from industry, governments and other stakeholders, and be advertised to attract a wide range of contributions. It is desirable that the major evaluations are commissioned from independent sources.

8.2.1 Evaluation framework

The Action Agenda appreciates that the evaluation framework is initially a matter for the Federal Government in considering its response to this report. However, the Action Agenda recommends that the evaluation process involve a thorough appraisal of the effectiveness, efficiency and appropriateness of the impact of each action in meeting its objectives.

At the aggregate level, measures of effectiveness for the Action Agenda might be based on assessing the actions overall to determine whether they:

- Prove successful in removing identified impediments to the efficiency and effectiveness of freight logistics operations.
- Result in improved coordination by governments and industry in investment in key areas of industry development—including infrastructure, education and training, R&D and innovation.

- Result in more effective cooperation and coordination within, and between, the freight logistics industry and governments—with industry helping governments improve the effectiveness of government policies and programs.
- Achieve greater international competitiveness of the freight logistics industry and support its export performance.
- Help reduce costs to the Australian business community and enable Australian businesses to compete more effectively in global markets.

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APPENDIX 1: TERMS OF REFERENCE

The Industry Steering Committee, with the support of the Department of Transport and Regional Services, will:

1. Develop and implement a strategy to advance the development of an economic, socially and environmentally sustainable, internationally competitive freight transport logistics industry. This strategy is to be based on a commitment by industry to provide freight transport logistic services appropriate to the needs of customers and values of the community.
2. Develop and implement the Freight Transport Logistics Industry Action Agenda including:
    a. comparing Australia to internationally competitive, world best practice organisations and supply chains and investigating what practices can be applied to Australia to increase the efficiency of our freight transport logistics industry;
    b. identifying impediments to the development of the industry and suggest solutions;
    c. identifying and prioritising outcomes necessary to enhance growth;
    d. identifying and prioritising actions required to achieve outcomes;
    e. developing a timetable for undertaking priority actions and achieving outcomes;
    f. allocating responsibility amongst stakeholders for each action; and
    g. the regular reviewing and reporting to the Minister on progress of the Action Agenda.
3. Develop a communication strategy to promote and gain industry support for the Action Agenda.
4. Encourage mutual trust and co-operation between government and the freight transport logistics industry.
5. Disseminate information to industry and governments regarding the Committee's business.

APPENDIX 2: STEERING COMMITTEE AND WORKING GROUP MEMBERSHIP

CHAIR

John Bowdler	Director, John Bowdler and Associates Pty Ltd

MEMBERS

Julian Barson	Managing Director, Australian Personnel Solutions
Barry Beecroft	Executive Manager Business Development and Logistics, Wesfarmers Transport (resigned March 2001)
Tony Boll	Chief Executive South Pacific, Danzas AEI
Tony Bonett	National Transport Manager, Nestlé
Keith Campbell	Executive Manager, Logistics Association of Australia
Geoff Christopherson	Director Higher Education, School of Marketing, Royal Melbourne Institute of Technology
Robert Coode	Administration Manager Export & Industrial Sales, Murray Goulburn Coop Co Ltd
Greg Gibbins	Director, FCL Interstate Transport
Jeff Hastings	Managing Director, Xylem International Pty Ltd (appointed April 2001)
Brian Jeffriess	President, Tuna Boat Owners Association
Bruce McDonald	Chairman, Macfield Group of Companies (resigned June 2001)
Charles McLaughlin	National Transport Manager, Woolworths Ltd
Neil Matthews	Director, Strategic Design + Development
Troy May	Chairman, Importers Association of Australia (appointed April 2001)
Stephen Morris	Executive Director, Customs Brokers & Forwarders Council of Australia Inc
Graeme Morrisby	Tasmanian Perishables Manager, Ansett Australia Cargo (appointed April 2001, resigned June 2001)
Tom Pinder	Operations Manager, Perkins Shipping
Llew Russell	Chairman, Sea Freight Council of NSW
Greg Smith	General Manager Operations, Port of Brisbane Corporation
Andrew Stewart	Director, Publishing Services Australia
John Strang	Chairman, Strang International Pty Ltd
Andrew Young	Group Manager Logistics, Sinclair Knight Merz

BUSINESS PROCESS REENGINEERING WORKING GROUP

Andrew Stewart, Publishing Services Australia

Andrew Young, Sinclair Knight Merz Pty Ltd

Julian Barson, Australian Personnel Solutions

Greg Gibbins, FCL Interstate Transport

Greg Smith, Port of Brisbane Corporation

Tony Boll, Danzas AEI

Charles McLaughlin, Woolworths Ltd

Robert Coode, Murray Goulburn Coop

Troy May, Importers Association of Australia

Graeme Sargent, Toll Logistics, Newcastle

Neil McKellar, Goodman Fielder

Brent Stafford, ITS Australia

Cathy Thawley, Tradegate ECA

Barry Keogh, Tradegate ECA

Nicola Viney, ACS

Steven Bailey, AQIS

Wayne Atkinson, AQIS

Flora Carapellucci, DEWRSB

Jamie Lowe, DEWRSB

Phil Malone, NOIE

Victor Pawley, NOIE

Mark Brownell, WA Dept of Transport

Gail Confait, WA Dept of Transport

Philip Petersen, Tas Dept of Infrastructure, Energy & Resources

INDUSTRY DIRECTIONS WORKING GROUP

Greg Gibbins, FCL Interstate Transport

Llew Russell, Sea Freight Council of NSW

John Bowdler, Chair FTLIAA

Tony Bonett, Nestle Australia Ltd

Jeff Hastings, Xylem International Pty Ltd

Neil Matthews, Strategic Design & Development

Tom Pinder, Perkins Shipping Group

Richard Pierse Victorian Air Freight Council

Mike Coffey, River Heights Trading Consultancy

Tom McCabe, BHP Transport

Malcolm Bush, Air Freight Export Council of NSW

Bernard Trevanion, VECCI

Paul Jeckeln , LAA Secretariat, QLD Division

Lt Col Stephen Kinloch, Dept of Defence

Mike Higginbottom, Patrick - The Australian Stevedore

EDUCATION AND TRAINING WORKING GROUP

Geoff Christopherson, RMIT Business

Keith Campbell, Logistics Assoc of Australia

Stephen Morris, Customs Brokers & Forwarders Council

Julian Barson, Australian Personnel Solutions

Neil Chambers, VIC Sea Freight Council

Gerard Langes, TDT Australia

Colin Grant, BHP Corporate

Bob Miller, Institute of Applied Logistics, SA

Brian Bertwistle, Toll North Pty Ltd

Robert Dick, Institute of Chartered Shipbrokers

Phillip Fitch, AFFA

Philip Hillsdon, DETYA

Malissa Dryden, DISR

David Rumsey, Rumsey & Associates Pty Ltd

Ann Brewer, Institute of Transport

Noel Annett, DETYA

Jamie Lowe, DEWRSB

Gail Confait, WA Dept of Transport

SECRETARIAT*

Joanne Blackburn

Desiree Campbell

Anthony Carlson

Patrick Keating

John Lennie

Tim Miller

Elke Reinstalder

Jamie Thomson

Karen Wilkinson

Winton Brocklebank

Liz Caren

Gary Dolman

Anita Kulessa

James Messervy

Frank Mueller

Simon Stratton

Peter Van Rens

Emma Yates

* DOTARS officers who have contributed to the development of the Action Agenda.

APPENDIX 3: INDUSTRY CONSULTATIONS

NATIONAL BODIES

Association of Australian Ports and Marine Authorities Inc

Australasian Railway Association Inc

Australian Chamber of Commerce and Industry, Trade & International Affairs Committee

Australian Council of Trade Unions

Australian Federation of Freight Forwarders

Australian Freight Council Network

Australian Local Government Association

Australian Mining Industry Council

Australian National Training Authority

Australian Trucking Association

Chartered Institute of Transport in Australia

Integrated Logistics Network

National Bulk Commodities Group

National Road Transport Commission

Transport Logistics Working Group of the Supermarket to Asia Council

Transport Workers Union

CAPITAL CITIES

Sydney

Accenture

Air Freight Council of NSW

Austrac

Deutsche Post Global Mail (Australia) Pty Ltd

Freightcorp

Goodman Fielder Ltd

Institute of Transport, University of Sydney

Patrick Corporation

NSW Department of State and Regional Development

NSW Department of Transport

NSW Road Transport Association Inc

OOCL (Australia) Pty Ltd

Schenker Australia Pty Ltd

Sea Freight Council of NSW

Sydney Airport Corporation

Sydney Ports Corporation

Melbourne

Australian Fresh Food Alliance Pty Ltd

Australia Post

BHP Transport and Logistics

Coles-Myer Ltd

Council of Logistics Managers

CRT Group

Department of Infrastructure

Department of State and Regional Development

Fosters Brewing Group

Freight Australia

Getfreight

Linfox Properties

Mayne Logistics

Melbourne Airport Inc

Melbourne Port Corporation

TNT Logistics & TNT Automotive Logistics

Victorian Air Freight Council

Victorian Infrastructure Council

Victorian Sea Freight Council

Victorian Transport Association

Victorian Transport, Distribution & Logistics Audit—Industry Reference Group

Brisbane

Air Freight Council of Queensland

FH Transport

Hawkins Road Transport Pty Ltd

K & S Transport

Port of Brisbane Corporation

Queensland Department of State Development

Queensland Department of Transport

Queensland Rail

Queensland Rail Network Access

Queensland University of Technology

Sea Freight Council of Queensland

Perth

GILMAC/Mackie Hay

Grain Pool of WA Logistics Committee

The Green Leaf Food Company

Adelaide

Institute of Applied Logistics

Mitsubishi Motors Australia Ltd

SA Department of Transport, Urban Planning and the Arts

Scott's Transport Industries Pty Ltd

Hobart

Tasmanian Apple & Pear Growers Association Inc

Tasmanian Chamber of Commerce and Industry

Tasmanian Department of Infrastructure, Energy & Resources

Tasmanian Department of State Development

Tasmanian Exports Co-operative Society Ltd

Tasmanian Export Council

Tassal Ltd

Toll Tasmania

Canberra

ACT Chief Ministers Department

ACT Office of Business, Tourism and the Arts

Canberra International Airport

Carkeet Transport Pty Ltd

REGIONAL CENTRES

Albury & Wodonga

Albury & Wodonga City Councils

Greenfreight Pty Ltd

Investment Albury Wodonga

Lewington's Transport Pty Ltd

Macquarie Textiles

Uncle Bens of Australia

Griffith

Alpens (Griffith) Pty Ltd

Bruno Altin & Co

Freightcorp

Griffith City Council

NSW Wine Industry Association

Riverina Food Group

Riverina Regional Development Board Inc

Leeton

Murrumbidgee Irrigation

Ricegrowers Co-operative Ltd

Shepparton

Calandro Engineering

Goulburn Valley Road Safety Council Inc

Greater Shepparton City Council

Visypak

Zurcus Coolstore & Packaging

Devonport

Field Fresh Tasmania

Port of Devonport Corporation Pty Ltd

Tasmanian Cargo Services Pty Ltd

APPENDIX 4: WORKSHOP REPORT

REPORT OF THE FREIGHT TRANSPORT LOGISTICS INDUSTRY ACTION AGENDA WORKSHOP 31 JULY 2001 THE ST. KILDA NOVOTEL

BACKGROUND

The Deputy Prime Minister's terms of reference for the Industry Steering Committee requires:

- the identification of impediments to the development of the industry and suggest solutions;
- the identification and prioritisation of outcomes necessary to enhance growth; and
- the identification and prioritisation of actions required to achieve outcomes.

In order to achieve these objectives, the Industry Steering Committee decided to conduct a one day workshop. The workshop was open to all Committee members, members of the three working groups established by the Committee, and a number of invited experts. A full list of attendees is attached.

Des Powell of Powell Management Services was chosen to facilitate the workshop.

OVERVIEW OF WORKSHOP OUTCOMES

The Industry Steering Committee was very impressed by the energy and effort displayed by the workshop participants and the facilitator.

The Committee was also very pleased that the outcomes of the workshop re-affirmed the direction and priorities being pursued by the Committee. In general, these are:

- the importance of creating a positive industry image;
- the need to improve our knowledge of how the industry operates;
- a desire to present a unified industry vision to governments, and the need to work more closely with governments;
- the critical action of addressing education and training issues; and
- the need to work harder on demonstrating the importance of infrastructure planning.

CONDUCT OF THE WORKSHOP

During the workshop, participants were required to consider:

- the future environment that will affect the freight logistics industry;
- the desired outcomes one might want from a dynamic and sustainable freight logistics industry;
- the preliminary draft actions that will help achieve the desired outcomes; and
- the priority of those actions.

THE FUTURE ENVIRONMENT

The workshop participants were given the opportunity to discuss long term issues that will have a significant impact upon the freight logistics industry. This discussion is summarised below:

Globalisation and regionalisation

- Further dissolving of national sovereignty and influence over the national economy.
- Increased multi-national ownership of national assets.
- Increased complexity of supply chains and logistics options.

Technology

- Greater use of technology will result in a smarter industry.
- Facilitates increased complexity of supply chains and logistics options.
- Opportunities to reduce negative externalities such as emissions and noise levels.

Industry structure

- Rationalisation through acquisitions and mergers.
- Increased industry concentration will be tempered by need for 'local touch'.
- Cooperation will remain a viable alternative to acquisition and merger strategies.

Connectivity

- Increased reliance on ICT for competitive advantage will increase demand for connectivity.
- Increased reliance on supply chain competition will require firms to improve their connectivity between partners in the chain.
- Multiple supply chain options for the one trade will mean 'single trade' firms will need to have open connectivity systems.
- 'Multiple trade firms' (eg, intermodal terminal operators) will need to have open connectivity systems.
- A hurdle to moving to an environment of open connectivity systems will be the market advantages of 'proprietary systems'.
- While 'proprietary systems' exist, there will be a greater need for firms to collaborate on connectivity issues.

Social issues

- Social issues seen as the biggest threat to the freight logistics industry's future.
- Urban encroachment into freight logistic precincts increasing the conflict between local community desires and the industry's operational requirements.
- Noise pollution and congestion impacts are seen as biggest issues at the local level.
- Safety is seen as an important national issue.
- The need for governments to respond to environment issues is seen as the most significant 'global' issue for the industry.
- By not clearly articulating the social elements of particular decisions in a transparent manner, particularly in government infrastructure investment strategies, governments do not help the industry respond pro-actively to the community's social demands.

Environment

- The community is increasingly demanding:

reduced emissions from transport operations;

reduced fossil fuel use; and

environmentally friendly packaging.

- Current and potential government responses to these demands are seen as key drivers of change in the freight logistics industry.
- It was acknowledged that the community perceives the logistics industry, particularly the transport component, as a negative influence on the environment, but at the same time, the community continues to demand the services provided by the industry.

DESIRED OUTCOMES

The workshop identified six desirable outcomes for the freight logistics industry:

- The right infrastructure for the right freight task (efficiency and effectiveness of effort).
- The use of appropriate available technologies (world best practice of technology use rather than necessarily the use of leading edge technologies).
- A socially responsible industry, particularly when it comes to the environment.
- A smarter industry, where the industry invests in its people and attracts the best to the industry.
- A consistent and transparent legislative, regulatory and certification regime.
- A strong supply chain mentality permeates all sectors of the industry.

SPECIFIC ACTIONS ARISING

It is not appropriate for this report on the workshop to detail the 27 actions developed by the participants. This is because many of the actions were reported in draft form. However, the following provides an indication of the type of actions suggested, and their associated priority. In doing so, the actions have been grouped into the ten broad themes that the Industry Steering Committee developed the day following the workshop.

Knowledge and analysis

The four actions relating to this theme were broad ranging, however, the development of a database of information and data was seen as a priority, and all actions were considered to require a joint government and industry commitment.

During the discussion of these actions the point was made that there have been numerous studies over the years that contain vital information of use to the industry. However, the dissemination of this information was seen to be very poor. Consequently, a general comment could be that not only should the collection of data and the conduct of studies be coordinated, but so too should the dissemination of that information and consequent review of any impacts.

Industry structure (Trade Practices)

The current and future structure of the industry has been recognised as an issue, particularly in relation to the *Trade Practices Act* and possible impediments to cooperation. However, developing actions to address this issue has been difficult.

Nevertheless, one suggested action was that a study of alternative business models could be undertaken to understand how different business models can influence supply chain management techniques. From this, it may be possible to better articulate what might achieve effective logistics chains while still being appropriate under the *Trade Practices Act*.

The industry-government relationship

It is recognised that for the industry to be effective in articulating the issues that affect it, the industry must improve the way it organises itself to manage change. Consequently, some sort of 'whole-of-industry' representative body was called for. However, there were some differing opinions to what form that representative body should take.

In the end, there was agreement that what was needed immediately was a type of ginger group, consisting of both industry and government identities, to drive change at the highest level.

Related actions saw such a body championing:

- The need to encourage cultural change using strategies such as industry branding and champions; and
- The need to improve the education and learning opportunities for industry.

Another action suggested the establishment of a national and 'whole of government' body to oversee logistics issues. This reflected the concern that not only is the industry fragmented, but so too is the government influence upon the industry.

Education and training

The actions relating to education and training were seen as both industry and government initiatives, and of the highest priority. These actions related to the creation of a national education framework for logistics, and the dissemination of available logistics initiatives that relate to that framework. It was also suggested that more needs to be done to promote the importance of investing in the industry's workforce and the positive dynamic of allowing skills to be recognised across the industry.

Industry promotion

The workshop agreed to the specific action by industry to develop strategies to raise the industry's profile. This was seen as an urgent and important priority.

Using the higher profile as leverage, it was agreed that industry and government should develop and implement a marketing strategy for the export of logistics services.

Infrastructure and planning

Five actions relating to this theme were agreed to, ranging from the securing and protecting of freight corridors and precincts, to the identification and support for regional freight hubs.

A related action required the provision of infrastructure in rural areas, including the information and communications infrastructure and support services.

In general, it was agreed that both industry and governments needed to agree to an infrastructure plan for the industry, and that governments should be committed to help implement that plan.

Business process and service delivery

The actions relating to this theme were about change management. The identified change required was the need to assist firms in the adoption of the most appropriately available, best practice techniques. To assist in this, some of the actions identified included:

- Providing technical support and knowledge for businesses, particularly SMEs;
- Identifying and promoting the internal benefits for firms in adopting these techniques and practices; and
- Australia participating in international fora dealing with best practice logistics, and for a mechanism to disseminate appropriate information to be developed.

Research and development and innovation

In support of the actions relating to knowledge and analysis, the actions relating to improving the research and development capability of the industry focused on obtaining and disseminating world best practice to industry. The suggested actions in this category were not seen as important as other actions in the short term.

Environment

Contrary to the importance placed on the environment at the beginning of the workshop, only one action relating to the environment was suggested. This action related to the development of incentives for organisations to develop and/or utilise environmentally sustainable freight transport systems.

The Steering Committee acknowledged that this theme required further investigation and action.

Regulations and standards

The workshop did have some difficulty in clearly articulating problems relating to the regulatory framework faced by the industry. This was acknowledged as an area that needed further investigation.

However, the workshop did suggest the action of supporting the ongoing fatigue management reforms at the national level, for all modes, including the introduction of chain of responsibility legislation. In doing so, it was acknowledged that it may be appropriate for the final Action Agenda report to comment on current initiatives that are supported by industry because of the positive long term contributions the initiatives make to the industry.

CONCLUSIONS

The workshop was a positive step to achieving a practical Action Agenda for the freight logistics industry.

The level of expertise contributing on the day was of the highest order, and there was a feeling of excitement about the achievement made on the day.

Nevertheless, while the workshop produced some very good actions to be developed into the final report, there were still some areas that required further investigation by the Steering Committee.

WORKSHOP ATTENDEES

FIRST NAME	SURNAME	ORGANISATION
Facilitator		
Des	**Powell**	Powell Management Services
Industry Steering Committee Members		
Tony	**Bonett**	Nestle Australia Ltd
John	**Bowdler**	Chair, FTLIAA
Keith	**Campbell**	Logistics Association of Australia
Geoff	**Christopherson**	RMIT Business
Robert	**Coode**	Murray Goulburn Co-Op
Greg	**Gibbins**	FCL Interstate Transport Services
Jeff	**Hastings**	Xylem International Pty Ltd
Neil	**Matthews**	Strategic Design & Development Consulting
Troy	**May**	Importers Association of Australia
Stephen	**Morris**	Customs Brokers & Forwarders Council of Australia Inc
Tom	**Pinder**	Perkins Shipping Group
Llew	**Russell**	Shipping Australia Limited
Andrew	**Stewart**	Publishing Services Australia
Andrew	**Young**	Sinclair Knight Merz P/L
Industry Members		
Neil	**Chambers**	Victorian Sea Freight Industry Council
Mike	**Coffey**	River Heights Trading Consultancy
Colin	**Grant**	BHP Corporate
Stephen	**Joy**	KPMG
Steve	**Meyrick**	Meyrick & Associates
Barry	**Keogh**	Tradegate ECA
Craig	**Silva**	Australian National Training Authority
Bernard	**Trevanion**	Victorian Chamber of Commerce & Industry
Guests		
Elizabeth	**Barber**	Australian Defence Force Academy
Dr Sophia	**Everett**	Macquarie University
Professor Luis	**Ferreira**	Queensland University of Technology
Mauro	**Pisegna**	TNT Logistics
Peter	**Reece**	Australian Transport Association

Associate Professor Ross	**Robinson**	Macquarie University
Jim	**Scott**	Quality Assurance Services
Professor Kees	**Sonneveld**	Victoria University
Anne	**Story**	Story Horticulture

Government

Winton	**Brocklebank**	Dept of Transport & Regional Services
Anthony	**Carlson**	Dept of Transport & Regional Services
Lt Col Steve	**Kinloch**	Dept of Defence
Jamie	**Lowe**	Dept of Employment, Workplace Relations and Small Business
Frank	**Mueller**	Dept of Transport & Regional Services
Alison	**Neil**	Australian Customs Service
Debbie	**Newton**	Dept of Agriculture, Fisheries and Forestry Australia
Bob	**Pegler**	Dept of Industry, Science and Resources
Philip	**Petersen**	Tas Dept of Infrastructure, Energy and Resources
Jamie	**Thomson**	Dept of Transport & Regional Services
Timothy	**Toomey**	Dept of Foreign Affairs & Trade
Nicola	**Viney**	Australian Customs Service
Helen	**Whan**	National Transport Secretariat

APPENDIX 5: RESPONDENTS TO CONSULTATION DRAFT

RESPONDENTS TO THE CONSULTATION DRAFT OCTOBER 2001

Agriculture Fisheries and Forestry Australia (AFFA)

Albany Port Authority

Arnhemland Progress Association

ARRB Transport Research Ltd

Association of Australian Ports and Marine Authorities Inc

Austrade

Australian Council of Trade Unions

Australian Industry Group – International

Australian Local Government Association

Australian Maritime College

Australian National Training Authority (ANTA)

Australian Railway Association

Australian Shipowners Association

Australian Trucking Association

Australian Wheat Board

Australia Post

Bathurst City Council

Bryant, Wood, Wallish & Associates

Bureau of Transport Economics

Bureau of Rural Sciences (AFFA)

Chartered Institute of Transport in Australia

Conference of Asia Pacific Express Carriers (CAPEC)

CRT Group

Customs Brokers and Forwarders Association of Australia Inc

Dapiran, G Peter

Defence Material Organisation

Department of Education, Science & Training

Department of Employment & Workplace Relations

Department of Foreign Affairs and Trade

EAN Australia

Food Science Australia

Freighttenders Pty Ltd

RESPONDENTS TO THE CONSULTATION DRAFT continued

Geraldton Port Authority

Hensher, Professor David

Inland Marketing Corp Ltd

Integrated Logistics Network

Jays Corporate Services

Johnstons Transport

Kamcorp Pty Ltd

Ken Dooley

Lang Corporation Ltd

Lobo, Dr Tony

Macklin Transport

McArthur Shipping & Agency Co Pty Ltd

Menzies Cargo Services

Minter Magic & Sunraysia Exports

National Farmers Federation

National Transport Secretariat

NSW Department of Transport

NSW Farmers Federation

NSW Sea Freight Council

OECD

QLD Department of State Development

QLD Transport

Railway Technical Society of Australasia

RMIT Business

SA Sea & Air Freight Council

SRSL Enterprises Pty Ltd

Sydney Airport Corp Ltd

Sydney Ports Corporation

Tasmanian Department of Infrastructure, Energy and Resources

Tasmanian Department of State Development

Tasmanian Electronic Commerce Centre Pty Ltd

Thompson, Dr Russell

Transport NSW

Transport SA

RESPONDENTS TO THE CONSULTATION DRAFT continued

Transport Training Victoria

Transport Workers Union

Victorian Department of Infrastructure

Victoria University

WA Department for Planning and Infrastructure

Wattyl Paints

Winegrape Growers' Council of Australia

APPENDIX 6: INDUSTRY LEADERS ROUNDTABLE ATTENDEES

Deputy Prime Minister and Minister for Transport and Regional Services Industry Leaders Roundtable

ATTENDEES

FIRST NAME	SURNAME	ORGANISATION	
Industry Members			
Mike	**Almond**	Chairman elect	Australian Trucking Association
Chris	**Althaus**	CEO	Australian Trucking Association
Carol	**Bate**	CEO	Gardiner Foundation
Greg	**Beashel**	General Manager Operations	QLD Sugar Ltd
Wayne	**Birney**	General Manager, Logistics	Coles-Myer Ltd
Harris	**Boulton**	Deputy Director	Australian Food and Grocery Council
Andrew	**Buckland**	CEO	Capricorn Capital Ltd
Steve	**Buckle**	Regional Transport Manager	Mars Group
Allen	**Buckley**	CEO	Australian Air Express
Andrew	**Burgess**	Director ANZ	P & O Ports
Malcolm	**Bush**	Executive Officer	Air Freight Export Council NSW
Peter	**Byrne**	National Chairman	Australian Airports Association
Ron	**Cameron**	Executive Officer	SA Air Freight Export Council
Laura	**Casteel Anderson**	Chair	Council of Logistics Managers
Andrew	**Combe**	Project Director	Supermarket to Asia Council
Chris	**Corrigan**	Managing Director	Patrick Corporation Ltd
David	**Cranwell**	General Manager, Logistics	Mayne Group Ltd
Anna	**Cronin**	Executive Director	National Farmers Federation
Jens	**Dahl**	General Manager	OOCL
Peter	**Dapiran**	Coordinator Graduate Logistics Program	Monash University
Peter	**Edmonds**	Chairman	SA Freight Council for Sea Cargo Ltd
Peter	**Fox**	CEO	Linfox Properties
Peter	**Frampton**	Executive Manager Freight	QANTAS
Billy	**Gibbins**	Managing Director	FCL Interstate Transport Services

Industry members (cont)

Jill	**Gillingham**	Chief Operating Officer	Australian Wheat Board
Len	**Harper**	Executive Director	Chartered Institute of Transport
Fritz	**Heinzmann**	Managing Director	Schenker Stinnes Logistics
Steven	**Heraghty**	Managing Director	Bowport Allroads
John	**Hirst**	Executive Director	Association of Australian Port and Marine Authorities
Mitch	**Hooke**	CEO	Australian Food and Grocery Council
Wayne	**James**	CEO Australia Southern Railroad	Australian Railroad Group
Paul	**Kerr**	General Manager, Logistics	Murray-Goulburn Co-operative
Ralph	**Larbey**	Marine Logistics Executive	Rio Tinto Shipping
Paul	**Little**	Managing Director	Toll Holdings Ltd
Brian	**Lovell**	CEO	Australian Federation International Forwarders
Mark	**Luby**	CEO	CHEP Asia Pacific
Michael	**Luscombe**	General Manager – Supply Chain	Woolworths Ltd
Peter	**Marshall**	Managing Director	Western Bulk Carriers Australia
Bruce	**McGowan**	President	BHP Transport and Logistics
David	**Messer**	1st Vice President	Australian Institute of Purchasing & Materials Management
Peter	**Morris**	Director, Economics and Commerce	Minerals Council of Australia
Terry	**O'Brien**	Managing Director	Simplot Australia Pty Ltd
Lachlan	**Payne**	CEO	Australian Shipowners Association
Richard	**Pierse**	Chairman	VIC Air Freight Perishables Takforce
Jim	**Riordan**	Managing Director	Brambles Marine Group
Don	**Rothnie**	President	Australian Institute of Purchasing & Materials Management
Anthony	**Rowley**	Project Director	Tasmanian Electronic Commerce Centre Pty Ltd
Greg	**Russell**	Director Aviation	Sydney Airport
Kerry	**Sanderson**	CEO	Fremantle Port Authority
Terry	**Sinclair**	Group Manager National Logistics	Australia Post
Lim	**Soon Leng**	Regional Vice President South West Pacific	Singapore Airlines Cargo

Industry members (cont)

Martin	**Svikis**	CEO	Specialised Container Transport
George	**Tanos**	Managing Director	Blayney Foods
Rod	**Troutbeck**	Head, School of Engineering	QLD University of Technology
Craig	**Van der Laan**	Company Secretary	Brambles
Marinus	**Van Onselen**	CEO	Freight Australia
Barry	**Vellnagel**	Executive Chairman	National Bulk Commodities Group
Chris	**Whitaker**	Managing Director	Melbourne Ports
Mark	**Williams**	Logistics Manager	CRT Group

Action Agenda Industry Steering Committee members

Julian	**Barson**	Managing Director	Australian Personnel Solutions
Tony	**Boll**	CEO	South Pacific, Danzas AEI
Tony	**Bonett**	National Transport Manager	Nestle Australia
John	**Bowdler**	Chair	Industry Steering Committee
Keith	**Campbell**	Executive Manager	Logistics Association Australia
Geoff	**Christopherson**	Director Higher Education	RMIT Business
		Postgraduate Studies	
		School of Marketing	
Greg	**Gibbins**	Director	FCL Interstate Transport Services
Jeff	**Hastings**	Managing Director	Xylem International Pty Ltd
Neil	**Matthews**	Director	Strategic Design + Development
Charles	**McLaughlin**	National Transport Manager	Woolworths Ltd
Llew	**Russell**	Chairman	Sea Freight Council NSW
Andrew	**Stewart**	Director	Publishing Services Australia
John	**Strang**	Chairman	Strang International Pty Ltd
Andrew	**Young**	Group Manager Logistics	Sinclair, Knight, Merz Pty Ltd

Observers

Paul	**Chamberlin**	Media Adviser	Minister's Office
Peter	**Cripps**	National Manager Infrastructure	Australian Trade Commission
Hellen	**Georgopoulos**	Division Head, Business Competitiveness Division	Dept Industry, Tourism and Resources
Jim	**Glasson**	Director, Ports and Freight	Dept Transport, NSW

Observers (cont)

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Peter	**Langhorne**	Chief of Staff	Minister's Office
Tony	**McMullan**	Adviser, Surface Transport	Minister's Office
Des	**Powell**	Executive Director, Ports & Marine Division	Dept Infrastructure, VIC
Peter	**Rufford**	National Transport Advisor	Australian Local Government Association
Brian	**MacDonald**	Manager, Road Transport	Dept of Urban Services, ACT
Bruce	**Wilson**	Director-General of Transport	Dept Transport, QLD
Zoe	**Wilson**	Assistant Adviser, Surface Transport	Minister's Office
Richard	**Wood**	Departmental Liaison Officer	Minister's Office