

# Chapter 2 Effective and efficient use of rail

## Introduction

**2.1** This chapter addresses the first item in the terms of reference:

How current administrative, institutional, operational and pricing arrangements can be improved to promote effective and efficient use of the national rail network, and to investigate the role of the Commonwealth and States/Territories in achieving consistency in these areas.

**2.2** The chapter focuses on the importance of strategic transport planning in order to enhance the efficiency and effectiveness of the rail industry and discusses related issues such as the Commonwealth role, national strategy, the need to upgrade infrastructure, rail safety, the need for consistency in the rail regulatory framework, environmental issues, innovations and quality of service.

### *Historical overview*

**2.3** For historical reasons, rail development commenced as a series of autonomous and independent networks prior to the federation of Australia in 1901. Consequently, the colonies (later the States) funded and had jurisdiction over their own rail operations, including the infrastructure. As a result, three different width gauges were laid, depending on where the line was built. The major exceptions to the public sector railways were the sugar and mineral trains operated by the private sector in Queensland, NSW, Tasmania and the Pilbara respectively (Subs 16, 73, 83, *Submissions* pp. 126, 1003, 1134).

**2.4** It was not until after World War II that a program to develop a national rail network on a standard gauge linking all capital cities was considered (Kain 1995, p. 14). In 1973, the Commonwealth Government invited the States to transfer their rail systems over to the Commonwealth for the purpose of achieving an interstate national rail network. As a contribution to this program, the *Urban Public Transport (States Grants) Act 1974* provided two-thirds funding for an urban public transport program and in 1975 South Australia and Tasmania signed Rail Transfer Agreements with the Commonwealth, giving the latter total control of their non-urban rail operations. The Australian National Railways Commission (AN) was established in 1975 to manage the national standard gauge rail lines.

**2.5** As part of the 1988 bicentennial celebrations, the Commonwealth funded a program of targeted investments to upgrade the interstate mainline. At the same time, AN became a government business enterprise. In 1991, the National Rail Corporation (NR) was created with the Commonwealth, NSW and Victoria as shareholders. NR managed the interstate rail freight business while AN had responsibility for the interstate standard gauge tracks, the interstate passenger trains (Indian–Pacific, the Ghan and the Overland) and the SA intrastate freight. To help it handle all interstate rail freight, NR was able to nominate rolling stock and marshalling yards in NSW and Victoria.

**2.6** The creation of first AN and then NR meant that the Commonwealth became both a rail owner and operator. AN had to maintain the national rail lines and initially negotiated access with each State individually. When private rail operators wanted to use the interstate standard gauge rail track, AN had to devise an access regime. In many instances, the poor standard of the rail network imposed a major cost burden on the rail freight operators. As a result, interstate rail became progressively less competitive, especially when after 1974 the declared national highway system resulted in improved multi laned highways which reduced operating costs and transit times for the rapidly developing road transport industry (HORSCCTMR 1997, p. 21).

**2.7** The difficulty for rail was that the Commonwealth did not declare a national rail track system which focussed on upgrading and maintaining the standard gauge line. If that had been done, it is conceivable that rail would have increased its share of the interstate freight task. Within the States, however, intrastate freight continued to develop according to commercial demands or legislative requirements. As a result, pockets of successful intrastate freight attested to the effectiveness and efficiency of rail as a transport mode for hauling freight, especially bulk freight such as iron ore, coal, sugar and wheat.

**2.8** In October 1993, the National Transport Planning Taskforce was established to report on national infrastructure needs and operational improvements required to meet future demands for freight transport. The Taskforce commissioned the Bureau of Transport and Communications Economics (BTCE) to assess the adequacy of road, rail, seaport and airport infrastructure. A strategy for Australia's transport network based on the BTCE's reports was published in 1994.

**2.9** In its 1994 analysis of rail infrastructure, the BTCE proposed a twenty year program of rail investments costed at \$3.2 billion to improve the reliability, efficiency and competitiveness of rail. BTCE also estimated maintenance costs at around \$3.5 billion over the same twenty year period provided its proposed infrastructure projects were completed. Otherwise maintenance costs were forecast to increase by some \$1 billion over the period (BTCE 1995a, p. 62).

**2.10** Rail had a major funding boost under the *One Nation* program (1992–95) whereby a total of \$443 million was spent to upgrade the interstate rail tracks and terminals (Sub 26.03, *Submissions* p. 1538). As a result of this program an identifiable national standard gauge rail network stretching from Brisbane to Perth via Melbourne or Broken Hill became a reality. However, this national rail network did *not* become a declared national track unlike road which had a declared and funded national highway system.

**2.11** Nevertheless the Commonwealth's role in rail was increasing. Further changes occurred with the implementation of the National Competition Policy which picked up many of the Hilmer proposals and incorporated previous reform commitments in electricity, gas, water and road transport. This reform package was extensive, covering the following areas:

- agreed principles for structural reform of public monopolies,
- competitive neutrality between the private and public sectors,
- prices oversight of utilities and other corporations with significant monopoly power,
- a national regime to provide third party access to essential facilities, and
- a program of review of legislation restricting competition.

**2.12** A key element of the package was a national access regime, which was given legislative basis under Part IIIA of the *Trade Practices Act 1974* (TPA). This regime defined the conditions under which businesses had access rights to essential infrastructure services, and attempted to ensure that these terms and conditions were reasonable. It also outlined the roles and responsibilities of government bodies which administered the regime—National Competition Council (NCC), Australian Competition and Consumer Commission (ACCC), and Australian Competition Tribunal (Sub 72, 21, *Submissions* pp. 988, 204). Rail access regimes could therefore be the subject of declaration, certification or an undertaking.

**2.13** On 1 July 1996, after the implementation of an Intergovernmental Agreement on Rail Safety (IGA) the Commonwealth and the States accepted:

- mutual recognition of safety accreditation systems,
- information exchange,
- a panel of independent rail investigators, and
- development of an Australian Rail Safety Standard as the basis for accreditation.

**2.14** By 1996 the Commonwealth appeared to have reached a watershed: should it expand its role in rail or should it pull back? Rail's overall share of the total freight and passengers task was not increasing whereas other modes especially road, were growing their share (Exhibit 42, pp. 12–18). Because both AN and NR, the two Commonwealth rail operations, were highly reliant on government subsidies and other non-operational revenue (such as \$800 million in borrowings), a review into AN and NR was commissioned.

**2.15** The review report by J R Brew recommended among other things, that:

- a national track access and infrastructure body should be established in conjunction with the appropriate states,
- AN be sold, and
- NR be established as a commercial structure for competitive freight operations with access to the national track.

Brew concluded that 'the very large rail annual operating losses...could be more appropriately allocated to other pressing requirements such as education and health issues within the Commonwealth and the various States.' (Brew 1996, pp. 7–10)

**2.16** Several of Brew's recommendations were implemented. In November 1997, AN was sold to several private investors while a scoping review of NR with a view to its sale was completed in September 1997. In February 1998 the Australian Rail Track Corporation (ARTC) was created to address inefficiencies inherent in the lack of a single national access regime for those wishing to operate interstate services. The objective was to encourage private sector investment by providing a simple one stop shop for access to the interstate track. As the Department of Transport and Regional Development said:

This decision [to establish a national track access regime] reflected a move to extract the Commonwealth from direct involvement in above rail operations and towards getting the operational environment right, thus creating an environment more conducive to private investment. (Sub 73, *Submissions* p. 1008)

[For Figure 2.1 map]

## National track

**2.17** Although there had never been a declared national track, nevertheless it was possible to speak of a de facto national rail network, consisting of intrastate standard gauge lines linked by upgrades and changes funded under the *One Nation* program. The map at figure 2.1 shows this de facto national track along with other intrastate rail tracks, both public and private.

**2.18** Figure 2.2 shows the lengths of track in all three gauges as well as dual gauges in Australia, according to the Australasian Railway Association (ARA):

**Figure 2.2 Australia's rail network**

(kilometres)

System (public & private)	Broad gauge	Standard gauge	Narrow gauge	Dual gauge
New South Wales		7 713		
Victoria	3 620	1 313		45
Queensland		119	13 476	32
Western Australia		2 599	3 755	172
South Australia	733	4 028	854	18
Tasmania			721	
<b>Total</b>	<b>4 353</b>	<b>15 772</b>	<b>18 806</b>	<b>267</b>

Source ARA, *1998 Yearbook and Industry Directory*, p. 36.

**2.19** The standard gauge links from Brisbane to Perth shown in the map in figure 2.1 form the basis for developing interstate rail as a viable transport option, not only for freight but also for passengers. However, if rail is to increase its modal share, the Commonwealth must decide its role in facilitating this development. The level of required Commonwealth funding and investment is discussed in chapter 5.

## Commonwealth role

**2.20** Consideration of the Commonwealth role in rail, especially in the 21st century, was pivotal to the committee's rail inquiry. Unlike the committee's road funding inquiry, where there were delineated responsibilities for road funding, the committee found that the Commonwealth role in rail was in a state of flux. Suggestions made by witnesses about how a national rail network should be organised, ranged from support for 'a national system that is run by the [Commonwealth] government...with a properly nationally coordinated system' (*Transcripts*, p. 306) to 'While it may seem superficially attractive for all railways in Australia...to be administered by a single authority, in fact we think this view simplistic and national administration of the rail network is probably both unworkable and undesirable' (Sub 88, *Submissions* p. 1172).

**2.21** The Commonwealth is uniquely placed to take a national approach to rail in the context of a total transport strategy. The leadership role the Commonwealth adopted during

discussions on rail in the Australian Transport Council (ATC), enabled many of the breakthrough decisions which culminated in the Rail Summit and the various signed agreements. If interstate rail is to be a viable national transport option, then this Commonwealth leadership role needs to continue. Where the interstate and the intrastate services interact, the Commonwealth and relevant State authorities need to reach agreed arrangements.

**2.22** In the past, the Commonwealth role had largely been a funding one, although the Department of Transport and Regional Development noted that the Commonwealth historically relied on its spending powers to implement transport policies (Sub 73, *Submissions* p. 1008). For instance, the Infrastructure Investment Tax Incentive Scheme was introduced to encourage private sector input into public infrastructure. Then in 1997 the Commonwealth allocated \$250 million over four years from 1998 to help fund an upgrade of the interstate rail track. Another incentive was the 1997 establishment of a \$1 billion Federation Fund to pay for major infrastructure and development works in Australia (see chapter 5 for details). However, these could be seen as one off, start stop payments, not an approach which supports a holistic view of the national transport strategy.

**2.23** The Commonwealth came closer to a strategic approach when it sought to influence the operational arrangements in the rail sector such as reaching agreement with the States on the establishment of ARTC, the commissioning of Maunsell Pty Ltd to examine rail standards and operational requirements, the creation of the Uniformity Task Group (Rail) as a subset of the Standing Council on Transport (SCOT) and asking the department to report on the feasibility of establishing a national land transport commission (Sub 73.01, *Submissions* p. 1429; *Transcripts*, p. 1250).

**2.24** Nevertheless these moves were still isolated approaches to solve immediate identified problems. The committee believes the Commonwealth needs to assess the total transport task and develop a strategy which will move Australia into the 21st century. The committee awaits with interest the report on the feasibility of establishing a national land transport commission, expected to be tabled at the next ATC in November 1998. The committee believes a national land transport commission would be a sensible way to provide impartial advice to the government on the best coordinated land transport strategy for Australia. (See chapter 5 for further discussion). This approach would certainly curtail traditional start stop funding for rail. As the committee said in its earlier report *Planning not Patching: An inquiry into federal road funding*, separate funding for different transport modes in isolation can create 'in the long term a dysfunctional national transport system.' (HORSCCTMR 1997, p. 16)

**2.25** The Department of Primary Industries and Energy (DPIE) envisaged a continuing role for the Commonwealth in rail, developing appropriate policy settings, developing a cost effective regulatory environment and encouraging improved competitiveness in the management and operation of rail through microeconomic reform (Sub 55, *Submissions* p. 737). DPIE argued that an effective and efficient transport system was crucial if Australia was to reduce its transport costs and expand its export trade.

**2.26** The States/Territories generally supported a role for the Commonwealth in achieving national objectives in the rail industry. Their comments may be summarised as follows.

- In NSW, Rail Access Corporation (RAC) maintained that 'Funding should be part of a Commonwealth integrated land transport strategy.' (Sub 52, *Submissions* p. 693)

FreightCorp said that government should have an 'enabling' rather than a 'service delivery' role, focussing on:

- the level of regulation, which should be as low as possible and applied only for community well being such as safety;
  - providing a robust, legislative framework in which the industry can operate; and
  - clear uniform access, safety and operational requirements with the market determining the number of operators (Sub 43, *Submissions* p. 568).
- The Victorian Government promoted the Commonwealth as reform leader on key issues (infrastructure, access, standards, safety and accreditation), playing a catalytic role in infrastructure and access. It went on to state that the Commonwealth should be the major driver of increasing involvement of the private sector through investments. Its responsibility for rail (in consultation with the States) should be through two entities covering:
    - access, investment, ownership and performance standards
    - safety and accreditation (Sub 71, *Submissions* pp. 976, 981).
  - The Queensland Government asserted that 'the Commonwealth has a major role to play including the provision of funding for organisational developments and infrastructure upgrades needed to make the interstate rail network more competitive.' (Sub 68, *Submissions* p. 894) Queensland Rail (QR) argued that the Commonwealth role was to ensure an integrated intermodal approach to transport planning and policy development; manage the regulatory framework to improve market function; facilitate effective and equitable competition between transport modes; and promote consistency in safety, telecommunications and operations (Sub 40, *Submissions* pp. 499, 501).
  - The WA Government stated that 'The Commonwealth Government in particular needs to provide funding that delivers \$1 billion in infrastructure improvements to the national rail grid over the next ten years. This is vital if rail is to become more relevant within the Australian transport network.' (Sub 42, *Submissions* p. 557)
  - The SA Government argued that the Commonwealth role was essentially to provide leadership in the formulation of national goals, objectives and outcomes. The Commonwealth should ensure that the national rail network could perform to the standard required to achieve national goals. It should also continue the reform process by providing adequate funds to upgrade track and operational systems, especially to smaller States to support adequate transport infrastructure across all transport modes (Sub 69, *Submissions* pp. 924, 926–8).
  - The Tasmanian Government maintained that the Commonwealth should assume responsibility for ensuring an integrated national transport network by providing a common level of regulatory control for both road and rail. The Commonwealth should also sponsor a national land transport body to promote the integration of transport modes (Sub 60, *Submissions* p. 831).

- The ACT Government supported the cooperative approach taken by the Commonwealth and States/Territories governments at the 1997 Rail Summit and believed the Commonwealth should develop 'a national multi-modal transport model that provides information on the comparative costs and government charges for goods and passengers carried by road, rail and air services.' (Sub 57, *Submissions* pp. 768–70)
- The Northern Territory Government urged the Commonwealth to consider the implications of withdrawing from its current role of providing both passenger and freight train services to Alice Spring (Sub 75, *Submissions* p. 1041).

**2.27** The rail associations and interest groups were similarly supportive of the Commonwealth playing a national leadership role. Their views may be summarised in the following manner.

- The Australasian Railway Association (ARA) supported funding for rail as part of a Commonwealth integrated national land transport strategy, suggesting that the road funding model be copied for rail through declared rails of national importance (Sub 31, *Submissions* pp. 389–90).
- Rail 2000 Incorporated commended the Commonwealth's intention to retain ownership of the national rail network and the creation of ARTC to manage the network. It also argued for a significant program of Commonwealth and State catch up investment so that the improvements made to road may be matched by improvements in rail infrastructure (Sub 47, *Submissions* pp. 609–11).
- Similarly, the Association of Railway Preservation Groups Incorporated, whose members operate historical and heritage trains, supported the establishment of ARTC to manage a national access regime and the move towards national operating standards, as substantial cost savings for rail operators would result (Sub 32, *Submissions* pp. 409–14).

**2.28** Surprisingly few private operators commented on the Commonwealth role in rail. Those that did saw the Commonwealth providing a regulatory regime to facilitate intermodal equity where each mode faced the true costs of its operations including externalities. Within this modal equity, each would then make its own independent investment and usage decisions based on the true costs to the economy of those decisions. Governments could best serve the rail industry by providing a robust, legislative framework in which the industry could operate. The level of regulation should be as low as possible and applied only for community considerations such as safety. There should be clear uniform access, safety and operational requirements with the market determining the number of operators (Subs 22, 29, 50, 88, *Submissions* pp. 219, 313, 662–7, 1172).

**2.29** Some private operators, however, argued that the Commonwealth should play an enabling rather than a service delivery role—through funding of rail 'on an equitable basis with other transport modes' (Sub 50, *Submissions* p. 664). Other private operators were indifferent as to which sector was in operational control so long as the national rail network was of world best practice standards. This was typified by the following comment:

Rio Tinto Coal considers that the primary concerns for the national railway network should be that world best practice standards in terms of value for money for the consumer be achieved. Whether these standards are reached by public or private sector agencies is a secondary issue. (Sub 35, *Submissions* p. 431)



**2.30** Given the strong support for the Commonwealth to determine a national access regime and to set rail safety and operational standards, the committee believes that it is in the national interest for the Commonwealth to assume a leadership role by providing a national perspective in shaping an integrated national transport strategy. In many ways, the Commonwealth is the only government with authority to proceed in this national manner. The 1997 Rail Summit and the agreements which resulted have assured the Commonwealth of this role. The issues regarding a Commonwealth funding or investment role is discussed in chapter 5.

## **National strategy**

**2.31** The committee received a large volume of evidence critical of the lack of a national strategic transport approach and calling for the establishment of a strategic, integrated national transport plan which took into consideration all transport modes.

**2.32** In its submission, the Department of Transport and Regional Development said that the rail network in Australia was fragmented, inefficient and faced competitive pressure from road and shipping. Rail experienced inconsistency, difficulty of access, unreliability and poor customer responsiveness across the national rail network. However, unrestrained road growth in the current modal patterns which adversely affected the quality of life, would increasingly be unacceptable. Better utilisation of the rail infrastructure should be a key component in any response to increased transport demands. National strategic transport planning should address safety issues, increased competitive neutrality and closer integration of transport modes (Sub 73, *Submissions* pp. 1002, 1017–8, 1019–20).

**2.33** The Department of Finance and Administration maintained that a national set of rail regulations applying in all States was the logical solution to costly inconsistencies forming barriers to market entry. There should be harmonisation of arrangements (Sub 56, *Submissions* pp. 757–9). The Institute of Engineers, Australia argued that 'policy makers have focused on the means of transport rather than the function of transport. This has resulted in a division being created between the transport modes, as each has tried to maximise its funding, efficiency and effectiveness in isolation with minimal consideration of the other.' (Sub 49, *Submissions* p. 654)

**2.34** Since freight costs impinged significantly on Australian regional production and resources exports, the Department of Primary Industry and Energy (DPIE) argued that a national transport strategy was vital if Australia's exports were to remain competitive with exports from other countries:

Australia needs an efficient integrated transport system to service the transport needs of agriculture and resource industries and rural communities...a policy environment in which the rail industry could operate efficiently and competitively...In this regard, DPIE sees the need for consistency across the national rail network as a priority. (Sub 55, *Submissions* pp. 722, 737)

**2.35** As indicated at the 1997 Rail Summit, the States were so supportive of a national rail strategy they were willing to consider making jurisdictional concessions to the Commonwealth. Their views may be summed up in the following.

- Integrated land transport policies should be developed—a holistic view to enable all modes to operate together to deliver the efficiencies required. This development should articulate the basis and criteria for government funding programs and the processes for their implementation (Subs 43, 52, 75, *Submissions* pp. 569, 692, 1039).
- A national framework should develop a strategy to increase competition and commercial viability (Sub 71, *Submissions* pp. 976–7).
- The development of a future national transport framework should also take account of broader economic benefits while ensuring national consistency in regulations, standards, access regimes and operating practices (Sub 68, *Submissions* p. 899).
- There should be an integrated intermodal approach to transport planning and policy development with a managed regulatory framework to:
  - improve market function
  - facilitate effective and equitable competition between transport modes
  - promote consistency in safety, telecommunications and operations (Sub 40, *Submissions* pp. 499, 501, 517–8).
- A national strategy would 'result in clear determination of responsibilities, the removal of duplication, progress towards the removal of inconsistencies and an improvement on customer focus.' (Sub 42, *Submissions* p. 558)
- There should be a multi criteria evaluation and assessment of national transport strategies, programs and projects balancing economic, social and environmental objectives within a commercial environment to promote cost effectiveness, uniform operating systems and regulations, national planning, and seamless access (Sub 69, *Submissions* pp. 921, 924).

**2.36** Similarly the private sector supported the development of a national strategic approach to transport planning. A. Goninan and Co. Ltd urged the development of a national land transport policy where road–rail parity with regards to infrastructure and investment was a key issue and there was consistency and certainty (*Transcripts*, p. 284).

**2.37** Thew & McCann Pty Ltd considered that the Commonwealth should create a regulatory and commercial framework wherein rail could perform efficiently and cost effectively to achieve world best practice with appropriate private sector involvement (*Transcripts*, p. 603).

**2.38** Transfield Pty Ltd believed that a national strategy should 'maximise community benefits of rail transport and minimise subsidies by instituting a regime that facilitates private sector ownership and operational development of railway assets in a fair and competitive environment.' (Sub 97, *Submissions* p. 1247) Transfield urged that projects should be integrated and harmonised so that there was less fragmentation and more effective use of investment. 'One should shy away from...little bandaid measures where you have private sector here and private sector there. Suddenly they all sit around the table, each pulling the tablecloth in a different direction.' (*Transcripts*, p. 1205)

**2.39** Rail associations were equally insistent that a national transport strategy be developed. Rail 2000 declared that a national transport strategy should 'improve energy efficiency in the movement of people and goods. The present policies encourage people to choose road transport rather than more energy efficient alternatives.' (Sub 47, *Submissions* p. 628) ARA urged that governments 'must develop integrated land use and transport planning policies in order to minimise road space, fuel use, greenhouse gas emissions, noise, congestion and accidents attributable to urban road transport.' (Sub 31, *Submissions* pp. 376)

**2.40** Other issues impinged on the determination of a national transport strategy. For instance, most rail was intrastate and not interstate, especially in the Greater Sydney region where currently freight gave way to passenger trains during peak hours. In addition, consideration on how a national transport strategy would affect the private rail lines in the Pilbara and in the sugar areas of Queensland had to be borne in mind, especially as Part IIIA of the *Trades Practices Act 1974* may assert an influence. Any national rail strategy therefore has to take these additional aspects into account.

**2.41** The committee believes that the following comments from FreightCorp typified views expressed on what was needed in a national transport strategy:

It is essential that Government develop integrated land transport policies which consider the competitive advantages offered by each transport mode undertaking the required transport task. By taking a holistic view of land transport policy, Governments would be better able to overcome the difficulties experienced in the transport chain, particularly at the ports interface by examining how road and rail can operate together to deliver the efficiencies required.

An integrated land transport approach would produce funding decisions that are focused on delivering the most efficient transport outcomes to the community. (Sub 43, *Submissions* p. 569)

**2.42** The committee supports a strategic approach which requires a clear statement of objectives, focuses on outcomes and incorporates ongoing evaluation and review. This strategy needs to facilitate national development, not only in the metropolitan areas but also in regional Australia. It should be truly intermodal, not just focus on a specific mode (rail, road, sea or air) so as to maximise the achievement of national goals. A strategic long term approach has to be both sufficiently robust to survive crises as they occur and sufficiently flexible to be able to adapt to innovation and change. Unless the strategic approach includes room for review and adjustment the plan will be of little use.

**2.43** The committee is concerned that the Commonwealth does not have a published national strategic plan for transport despite the fact that a number of reports, including its own *Planning not Patching*, argued that a national strategic approach is long overdue (HORSCCTMR 1997, p. 16). It is also aware that the Senate Rural and Regional Affairs and Transport References Committee in May 1997 recommended that the Federal Government should develop a coherent land transport policy framework which should take into account financial, economic, social and environmental goals, and should recommend mid and long term investment programs for road and rail in all major corridors (SRRATRC 1997, p. 60).

**2.44** In its 1997 report, *Planning not Patching*, this committee commented on the roles Commonwealth, State/Territory and local governments played in the formulation of a strategic transport plan. The committee also envisaged a role for the private sector and community groups in influencing the planning process through directly involving them in the strategic planning process or through providing an opportunity for public comment on any proposed strategic plan for the transport network (HORSCCTMR 1997, p. 18). The committee notes that almost a year has elapsed since its recommendation for an integrated national strategic plan for transport was made but the Government has not yet responded.

**2.45** As demonstrated at the 1997 Rail Summit and the evidence gathered by the committee, the States are supportive of the Commonwealth in a leadership role for establishing a strategic integrated national transport plan. The committee believes nationwide consultations should contribute to the development of the national transport strategy which should be published by 1 July 1999. Further, the strategy should pinpoint Commonwealth commitment and support for the national agreed outcomes. The ATC request for an assessment of the feasibility of a national land transport commission may be the first step in the direction of a national multi modal perspective. The need for greater certainty and commitment to funding to underpin national transport is discussed in chapter 5. The committee therefore reiterates its earlier recommendation for a national strategic transport plan as stated in *Planning not Patching* (HORSCCTMR 1997, p. 18).

## **2.46 Recommendation 1**

**The committee recommends that the Commonwealth assume the leadership role and consult widely in developing an integrated national transport strategic plan to be published by 1 July 1999.**

**2.47** In any consideration of an integrated strategic plan for a national transport network, the committee believes that special attention should be directed to ensuring a more equitable treatment for all transport modes. The approach to transport should be viewed as a single national network, with the different modes providing customers with choice. The basis for government funding should reflect this approach. Any public funding has to be based on a benefit cost analysis, taking into account externalities. There should be clear delineations of responsibilities:

- at different levels of government
- between private and public sectors

so that a complementary streamlined approach to the development of a single national transport network is possible.

## **Infrastructure**

**2.48** Speed restrictions (some as low as 20 kilometres per hour) in many key areas are the clearest demonstration of the inadequacy of the rail infrastructure. The committee received evidence of deficiencies which included: formation, ballast, drainage, old rail and sleepers, gradients, alignments, and height and width clearances.

**2.49** If rail is to play a significant role in Australia's national transport network, then rail infrastructure has to be upgraded so that its condition is comparable with its competitors. In spite of the rail infrastructure upgrades funded by the *One Nation* program (1992–95), the committee was informed repeatedly by witnesses that large sections of Australia's intercapital standard gauge rail tracks still reflected 19th century steam engineering needs. Speed restrictions imposed for safety reasons meant that the rail industry was at a massive disadvantage and likely to face possible demise on the eve of the 21st century (Sub 26, 31, *Submissions* pp. 238, 389).

**2.50** The poor condition of the busiest rail corridors impedes efficient and competitive rail operations by imposing speed and load restrictions; by preventing adoption of technological improvements such as double stacked containers; and in turn causing excessive fuel consumption and maintenance costs (; *Transcripts*, pp. 239–40, 673–4).

**2.51** NR provided the committee with data to show that speed restrictions for 1997 existed on seven per cent of the national track for a variety of reasons such as poor sleeper quality, poor substructure, rail fatigue, poor rail surface, rail welds or joints, unreliable signalling equipment and obsolete standards for level crossings (Subs 26, 26.03, *Submissions* pp. 246, 284–7, 1558–9). While seven per cent does not appear a large proportion, its effect on timeliness is crucial because inordinate delays make rail less competitive to road. For instance the train journey between Adelaide and Melbourne, for both freight and passengers was three hours longer than the same journey by road (*Transcripts*, p. 922).

**2.52** In addition, since existing rail freight services are often not competitive with road transport, rail infrastructure was underutilised and therefore attracted less investment for both maintenance and capital improvements. As a result total rail freight (as measured by tonnes carried) declined, for instance, on the Melbourne–Sydney corridor from 40 per cent in 1970 to 23 per cent in 1990 (Sub 8, *Submissions* p. 59; Exhibit 42, pp. 11–12). BTE figures and modelling projections confirmed that rail was losing its bulk and non bulk share, even though for some commodities, rail continued to be the best option (Exhibit 42, pp. 3–33). Rail was seen by many as a drain on revenue. On the face of it, there were few incentives for governments to invest in rail, especially as the task seemed expenditure intensive and neverending.

**2.53** There appeared to be a tendency in the industry to blame Commonwealth and State Governments for inefficiency and heavy losses associated with rail services (*Transcripts*, p. 821). Rail therefore became the poor cousin, unable to attract funds and investments unlike road which had funding under a wide range of road categories in both tied and untied payments. As a result, a significant gulf grew between support for a national approach to rail at the Commonwealth level and at the level of State based rail organisations.

**2.54** The committee believes that in order to attract greater commitment to and interest in the rail industry, upgrading the national track has to be given priority. As the infrastructure currently stands evidence suggests that some major sections may not survive beyond the next five years unless extensive repairs are undertaken. Some private sector operators are hesitant to increase their involvement or to even contemplate participating in rail because of rail infrastructure's parlous state.

**2.55** For instance, Boxcar Pty Ltd stated that 'it is unlikely at this point that our company would spend considerable new capital on rail given the confusion that exists in the industry.' (*Transcripts*, p. 814) However, Boxcar went on to say:

I guess the proposal I am putting forward is: we are not looking for another handout. *One Nation* only ever came once and was a job creation scheme. It was a good excuse to get some money for the railways and it was terrific. The reality is that we do not appear to have a vehicle at which there are equivalent decisions made by competent people relating to what gets spent on roads and what gets spent on rail. It is subject entirely to a lobby process. The road industry is good at it. They are well funded, well versed and lobby extremely well. Unfortunately, as Australians, I do not think we get the best bang for the buck as a result....Certainly segments of the network are now becoming simply dangerous to operate on. (*Transcripts*, pp. 816–7)

**2.56** John Holland Construction & Engineering Pty Ltd in its evidence about the *One Nation* standard gauge track laying from Pura Pura to the SA border said that it had been given instruction to lay concrete sleepers without proper ballast quality and depth, despite its written concerns to NR, the project manager (*Transcripts*, p. 1075). In its supplementary submission, John Holland Construction & Engineering Pty Ltd maintained that follow up rehabilitation was necessary, especially on the section between Pura Pura to Maroona (Sub 3.01, *Submissions* p. 1518).

**2.57** In response to these comments, NR stated that the *One Nation* program had been strictly cash limited, requiring strict management of the project scope and costs. NR had anticipated that it would eventually be the track owners and therefore it could continue track upgrading after the completion of the *One Nation* program. This did not occur. NR maintained that there had been a reasonable expectation that any reduction in scope required by the cash limitations could be supported by on going recurrent maintenance programs afterwards (Sub 26.03, *Submissions* pp. 1550–1).

**2.58** VicTrack Access informed the committee that since 1995, it had maintained the Victorian section of the standard gauge track to its condition at handover. It went on to say that 'Victoria never accepted the final product as meeting the standard and was compelled to impose speed restrictions from the commencement of operations on the standard gauge between Newport and Maroona.' (Sub 113.01, *Submissions* p. 1619) However, mindful of the poor state of that section between Pura Pura to Maroona, the Victorian Government had now committed in excess of \$12 million to complete the concrete sleeper project (Sub 113.01, *Submissions* p. 1621).

**2.59** The committee is concerned that old rail may be relaid on concrete sleepers in this sector. It questions the wisdom of this bandaid approach since the ballast and the welded rail lines also need to be replaced. During its June 1998 inspection of the standard gauge interstate track on Cressy Plain from Ararat to Gheringhap, the committee was able to verify the appalling conditions of this part of the national track. It firmly believes speed restrictions would be lifted if the track was in top condition since the terrain is so flat.

**2.60** In contrast, the infrastructure the committee inspected in the Pilbara showed the wisdom of regular high quality maintenance and of continuous tracks laid on concrete with the correct drainage, ballast and formation. The private railways used by the iron ore industry in the Pilbara have demonstrated how effectively and efficiently rail can carry heavy axle loads when the below rail infrastructure is designed and built correctly, and maintained in peak condition.

**2.61** For instance, a standard Hamersley train consisting of two locomotives of 4400 horse power (3282 kilowatts) each plus 226 ore cars each with a load of 100 tonnes and axle weights of 32.5 tonnes travelled at 80 km/h loaded and 70 km/h empty. The trains were 2.4 km long and had gross weights of 28 000 tonnes (Sub 16, *Submissions* pp. 132–3). BHP trains were similar with each train carrying approximately 25 000 tonnes of ore along 426 km of tracks. These trains were assessed as world's best practice (*Transcripts*, pp. 980–2). Similar loads in trucks would be less cost effective, damaging both roads and the environs.

**2.62** The committee is aware that Australia's public rail system had been assessed at various times as being below world standard (*Transcripts*, p. 360–2). A number of witnesses noted that the rail system required extensive improvements so that efficiency could be increased and private operators would be attracted to rail, especially to interstate development (*Transcripts*, pp. 353–4, 816–7, 1017, 1143).

**2.63** The committee believes that upgrading the national track is of utmost urgency if rail is to maintain its current share of the freight task and if passengers are to continue to ride interstate passenger trains such as the Overland. The committee further believes that without this upgrade the future for rail as a viable transport mode may be jeopardized within five years. The end result would be increased traffic on road with its resultant increased maintenance costs and environmental damage.

**2.64** The BTCE in its 1994 working paper indicated that some \$3.2 billion (1994 prices) was required to bring the interstate national track up to an acceptable standard (BTCE 1995a, p. 63). When presenting its 1998 data on modal share trends, BTE argued that in order to retain its current share of the freight business, rail still had to be upgraded and maintained. A more extensive improvement was needed if rail wanted to grow its share of the transport task (Exhibit 42).

**2.65** The committee is aware that some improvements were already occurring. For instance, since the completion of the *One Nation* program in 1995, NR had negotiated with RAC, VicTrack and ARTC to upgrade crossing loops and signalling so that NR may run longer trains, especially on the north–south corridor. In return RAC provided NR with adjustments to access fees (Sub 26.01, *Submissions* p. 1513).

**2.66** On the basis of evidence presented, the committee believes that the most crucial task from a national perspective is the declaration of a national track for interstate rail services. This would provide the foundation on which to build an improved rail service with a focus on national outcomes and address the chronic deficiencies in the interstate infrastructure.

## 2.67 Recommendation 2

**The committee recommends that the Commonwealth, in consultation with States and Territories, enhance the role of rail in the national transport network by:**

- **declaring a national track for interstate rail services on the standard gauge network from Brisbane to Perth**
- **addressing chronic deficiencies in the interstate national track**
- **adopting agreed national standards for the condition of the national track.**

**2.68** A number of witnesses identified specific sections of the national track infrastructure which needed prompt urgent attention (Sub 26.04, *Submissions* pp. 1595–6; Exhibit 46, pp. 2–4). Of high priority would be upgrades to the Sydney–Brisbane and Sydney–Melbourne line so that the north–south corridor could function as it should in moving both freight and passengers. In addition, there are 'enhancements' which would help to make rail more flexible, and more effective and efficient in its service delivery. Top of the list would be modifications in order to circumvent the congestion and curfews around the Sydney metropolitan region where interstate trains—both freight and passengers—may be held up for many hours. Second would be alterations to the bridges and tunnels in the Adelaide Hills to accommodate double stacked containers all the way from Melbourne to Perth. Another would be raising the height and clearance of the Bunbury tunnel in Melbourne.

**2.69** The ATC agreement to a one stop shop, single access regime and administration body was an important step towards improving the rail industry. The agreement was supported by the Commonwealth allocation of \$250 million over four years to the ARTC to upgrade the essential projects offering high net benefits. Yet in that same Budget, road transport was allocated \$873.3 million and sea transport was allocated \$132.8 million just for 1997–98. As several witnesses pointed out, Commonwealth funding for rail and road is far from equitable.

**2.70** The Australian Local Government Association believed that there should be 'an integrated approach to the provision of road and rail infrastructure that takes account of the total costs to the community, including social as well as economic considerations.' (Sub 20, *Submissions* p. 196) The City of Unley presented a cogent case for taking local service needs into account in planning the national track (Sub 34, *Submissions* p. 425).

**2.71** Were a national land transport commission created, then it may be possible for land infrastructure funding decisions to be made from a holistic perspective—an integrated picture of where the most effective results could be achieved. An example of such an integrated approach at the State level is WA Government Railway Commission's (Westrail) development of its urban transport system.



**2.72** The committee is mindful that if Australia's transport needs are to be fully addressed, then national achievable standards should be developed and accepted by the States/Territories so that all transport infrastructure upgrades and improvements may be assessed against these standards.

**2.73** The committee is also aware that opportunities exist for some State governments to use rail control and management negotiations to leverage greater funding commitments from the Commonwealth. The committee's thinking on rail infrastructure funding and investment is discussed in chapter 5.

## Safety

**2.74** An issue which affects rail effectiveness and efficiency is the present diversity of existing State based safety regulations and State safety requirements for rail operators—twenty two different safe working systems and eighteen different radio frequencies are used on the interstate network. The committee was told that overall rail safety performance was affected by the different (and at times conflicting) signals and operating procedures as trains traversed the interstate line, especially as some signals could mean different responses in various States (Sub 40, *Submissions* p. 499; *Transcripts*, pp. 5–6). Westrail, in expressing concerns about rail safety legislation and occupational health and safety legislation, said:

We have already had a number of reasonably serious incidents with interstate trains and the liability issue as to who is responsible and who is legally liable for the damage and so on is extremely complex. (*Transcripts*, p. 1066)

**2.75** Rarely do rail accidents result from a single cause. Instead a series of factors interact, making it difficult to apportion blame and therefore assign liability. Sometimes changes to operating procedures may contribute to accidents. For instance, when NR successfully introduced single driver trains as part of its enterprise agreement no 2, drivers were concerned that alone in the train cab for eight or ten hours, late at night or early in the morning, they may not stay awake, despite the vigilance buttons and other safety features. Recognising the legitimacy of such concerns, NR devised a fatigue index to roster drivers so that fatigue may be better managed in twelve hours shifts. Improved communication equipment was also installed so that perceived driver isolation was circumvented. These changes were accepted by the unions as adequate prevention strategies (*Transcripts*, pp. 72–3, 231–2).

**2.76** According to Thew & McCann Pty Ltd, the evolution of Australian rail safety standards after 1995, the 1996 IGA and the recognition of Australian Rail Safety Standard AS4292 as the national benchmark helped Australia to earn a reputation for safety and provided the foundation for progress towards consistent safety standards and practices (Subs 40, 93, *Submissions* pp. 500, 1212). However, this safety record is dependent on reduced speeds along some of the tracks and this impacts on rail's efficiency and effectiveness.

### *Need for consistency*

**2.77** The committee is concerned about the multiplicity of regulations which currently still exist, as the lack of certainty and consistency may act as a barrier to likely future investment or private sector participation.

**2.78** Boxcar Pty Ltd expressed it thus:

Certainly the current system whereby each state did its own thing differently from everybody else and is now not doing anything because these systems are being sold...needs to be changed. (*Transcripts*, p. 822)

**2.79** Mindful of the pressing concerns on the issue of safety, the ATC in September 1997, commissioned a report on safety, technical and operational standards/requirements and asked for the identification of issues which needed to be addressed. At the same time, the Ministers committed to a set of rail reform proposals and priority issues—'in particular the development of uniform standards and operational procedures.' (Sub 73.01, *Submissions* p. 1429)

**2.80** Maunsell Pty Ltd which undertook to report on rail safety, found that the management of interstate rail operations was generally poor as a result of the fragmented operational requirements between jurisdictions. Rail operators found their effectiveness and efficiency adversely affected. Maunsell highlighted the need for leadership to facilitate a coordinated approach to improve the competitive position of the rail sector. The report recommended a targeted approach to nine key areas to allow for variation, innovation and quick adaptation to change within the rail industry:

- safeworking, crew management and training
- communications requirements
- management information systems
- train operating standards
- axle load restrictions
- rolling stock design specifications
- rolling stock gauge
- safety accreditation
- access arrangements (ATC 1998, p. ix, Tables 1, 2, 3)

**2.81** The committee was informed by the Department of Transport and Regional Development that a uniformity task group has been convened by the Standing Council on Transport (SCOT) to progress rail uniformity reform, although 'uniformity is not required in every area of the rail industry....such an approach would actually stifle innovation leading the rail industry to become stagnant and uncompetitive.' The department anticipated that the actual process of implementing the priority tasks and progressing consistency in rail would require the following:

- commitment from the rail industry to the findings and recommendations outlined by Maunsell,
- a process to ensure that the key identified uniformity areas were addressed, and
- government commitment of resources to facilitate priority uniformity tasks and actions (Sub 73.01, *Submissions* pp. 1430, 1432–3).

**2.82** Given the national importance of overall rail safety performance, the committee believes that as part of its leadership role, the Commonwealth should ensure that consistent safety standards and practices are quickly developed in the national interest. In order to do this properly, the Commonwealth should provide a specific one-off grant, in addition to funding for infrastructure upgrades, to enable the immediate development and implementation of agreed consistent safety regulations and operations—including signalling and communication systems—for the national track.

**2.83** As part of this development, consideration should be given to better training of rail employees; the award of appropriate qualifications to drivers and other rail workers.

#### *Training and qualifications*

**2.84** The committee is aware that licensed pilots, shipmasters, engineers and other senior crew members for aircraft and ships have to be trained in accredited courses and attain recognised qualifications. For example, courses for aircrew are available from flying schools in Australia and for mariners through the Australian Maritime College, Launceston. While the courses do not have exactly the same curricula, there is consistency and agreed standards across the States. Once qualified, the licensed person is able to operate anywhere in Australia.

**2.85** Nationally agreed standards and accredited courses have not been available for rail employees. The committee is aware that traditionally State rail authorities trained their own employees. While this tradition is providing essential hands-on skills and local knowledge, it may not provide accepted competency based training and it certainly does not provide nationally accredited qualifications. The committee believes that development of accepted competency based training and nationally accredited qualifications is an important progression for the rail industry. A rail regulatory body should be responsible for approving of the training and the qualifications.

**2.86** It has come to the committee's attention recently that Australian Rail Training (ART)—formerly part of NSW SRA—has been established to provide competency based training nationally for the transport industry generally with specialist expertise in all aspects of the rail industry. As distance education training is also available from ART, it is possible for all rail employees to avail themselves of the opportunity to gain nationally accredited qualifications (ARA 1998, p. 16). The committee strongly recommends that accredited rail based courses be available in more colleges around Australia. The committee supports the need for nationally accredited courses for rail workers to be delivered through TAFE colleges or approved education centres.

**2.87** If rail is to develop and play a meaningful role as a viable transport alternative then the Commonwealth needs to determine the direction rail should take in order to ensure greater rail safety. The committee strongly urges the Commonwealth to consider a national level of consistency across a number of elements, including training; the establishment of a national regulatory body; and close cooperation with the States for safety accreditation.

#### **2.88 Recommendation 3**

**The committee recommends that the Commonwealth takes a strategic approach to provide consistency in rail safety standards and practices for the national track.**

#### **2.89 Recommendation 4**

**The committee recommends that the Commonwealth provides a specific one-off grant to standardise signalling, radio and telecommunications, and safety operations for the national track.**

## 2.90 Recommendation 5

**The committee recommends that the Commonwealth in conjunction with the States/Territories and appropriate parties, develop and accredit national qualifications based on consistent curricula and accredited training courses available to all rail employees from approved educational centres.**

### *National safe working rules*

**2.91** The committee was urged to consider separating operation, regulation and investigation responsibilities along with the development of a national safe working rules book in cooperation with the States. It is costly for rail operators to have different sets of equipment and different safe working rules (Sub 91, *Submissions* p. 1186; *Transcripts*, pp. 7–9, 1066, 1161).

**2.92** Equally it is not efficient for train drivers and engineers to have to master several sets of at times contradictory operating regulations. Together the diversity in equipment and regulations could contribute to accidents especially if training and experience are inadequate. The fact that Australia has a reputation for safety and reliability is largely due to strict speed regulations on long sections of the track (Sub 93, *Submissions* p. 1212). The end result is that rail operates inefficiently.

### *Safety regulatory and investigative bodies*

**2.93** Under the 1996 IGA, rail accidents are usually investigated on a no fault, no blame basis by a panel of independent investigators drawn from a third party State. Some witnesses suggested this was not sufficient given the diversity of regulations operating. Instead rail could adopt an arrangement similar to air where two bodies are responsible for air safety—the Civil Aviation Safety Authority (CASA) to set the safety standards and procedures, and the Bureau of Air Safety Investigation (BASI) to investigate safety deficiencies and the causes of incidents or accidents (*Transcripts*, pp. 7, 197, 230–1).

**2.94** Similarly, two separate bodies exist for the shipping industry—the Australian Maritime Safety Authority (AMSA) and the Marine Incident Investigation Unit (MIIU).

**2.95** The committee believes responsibility for rail operation, regulation and investigation should be clearly delineated. Independence should be obvious in safety matters. The authority responsible for setting the regulations should not be the body investigating any incident or accident and both should be clearly differentiated from the rail operators. Any authorities established should be national, independent of owners and operators whether public or private. The committee is attracted to the concept of having one body responsible for setting the nationally consistent rail safety standards and procedures, and another to investigate rail safety deficiencies and the causes of accidents.

## 2.96 Recommendation 6

**The committee recommends that the Commonwealth establish for the national track:**

- **a rail safety authority**
- **a rail incident investigation unit to report directly to the appropriate Commonwealth Minister.**

## Regulatory framework

**2.97** The diversity which occurred in safety standards and procedures also characterised operational procedures and regulations in different jurisdictions. This created a situation where interstate trains had to accommodate inconsistent regulations resulting in reduced efficiency as rail operators devoted time and resources to ensure compliance. The Department of Finance maintained that 'It is widely acknowledged that the IGA has not reduced the regulatory burden on operators as it was expected to do. In some cases structural separation has increased the number of different bodies in one state that operators need accreditation from.' (Sub 56, *Submissions* p. 758)

**2.98** Thew & McCann Pty Ltd, a company which specialises in signalling and safety equipment, emphasised the need for a 'regulatory and commercial framework wherein rail can perform efficiently and cost effectively to achieve world's best practice with appropriate private sector involvement. Regulatory restrictions which prevent rail from competing on a level playing field should be eliminated. Likewise, national standardisation should be promoted to increase economic efficiency.' (*Transcripts*, p. 603)

**2.99** A. Goninan & Co Limited, a major private sector technology provider, said that standardisation had progressed in track, communications, signalling and safe working recently. However, locomotive cab standards, brake systems, bogie and wheel standards and design load allowances still varied from State to State. This meant that some locomotives required several sets of similar equipment incorporated into its design—an expense which could be abolished were national standard equipment installed.

**2.100** Goninan urged greater standardisation of rolling stock, rolling stock components and systems since such standardisation would result in more cost effective, nationally acceptable fleets (Sub 91, *Submissions* p. 1186). The committee concurs with this suggestion as it seems a sensible approach for ensuring greater efficiency, cost reduction and flexibility in the rail industry.

**2.101** NR maintained that the differences in policies resulted from differing risk assessments and asset protection to minimise maintenance costs. The standard of track structure (weight of rail, type of sleeper and fastening, depth and quality of ballast) varied, with the highest standards in NSW and the lowest in Victoria. Speed limits also differed for the same trains on different parts of the interstate network, resulting in longer scheduled transit times.

**2.102** There appeared to be no consistency in the different safe working systems. For instance, on the former AN track from Adelaide to Kalgoorlie axle mass/speed limit on 47kg rail was identical in NSW to axle mass/speed limit on 60kg rail. NR provided the committee with the complex variations which existed on the national track system for the period of August–September 1997 (Sub 26, *Submissions* pp. 247, 275–77).

**2.103** The committee notes these variations in the national track infrastructure, sections of which it has seen for itself. The committee believes the inconsistent standard of the national track has a detrimental effect on rail's effectiveness and efficiency, especially when the appalling condition of the infrastructure causes severe speed reductions. As the national body with responsibility for the national track, the ARTC should be able to impose a national standard as well as performance indicators and international benchmarks.

**2.104** Along with many other witnesses, QR mentioned there were twenty two different safe working systems and eighteen different radio frequencies used on the interstate network (Sub 40, *Submissions* p. 499). QR believed that it was 'absolutely essential, now we are in global and national markets, that we address those issues...The agreement that was signed by Ministers late last year [1997] has the effect we will get harmonisation of systems, which is absolutely essential' (*Transcripts*, p. 488).

**2.105** WA Department of Transport commented that effectiveness and efficiency would evolve from 'a single network in respect to pricing, investment and operational standards and practices, with safety regulation being handled independently of owners and operators, be they public or private.' (Sub 42, *Submissions* p. 558)

**2.106** It is not surprising therefore that various issues need to be considered when determining a national regulatory framework—accreditation, integration, consistency and access. What should be the basis of a national framework: government regulation and intervention, an independent body to oversight, or self-regulation? The committee believes that consistency in safety and operating regulations, accreditation and access for interstate rail operators is essential.

## **Accreditation**

**2.107** A regulatory framework, however, involves more than just consistent or compatible safety and operating procedures, regulations and standards. At present there is no nationwide accreditation process whereby a rail operator may register to use the interstate rail network in the way a road operator simply registers a vehicle to use on any road in Australia. Instead there are five different rail accreditation bodies.

**2.108** At the Rail Summit, the ATC was aware that national infrastructure management and operational systems had not responded effectively to changes in the above rail development. It noted that:

...no party involved in interstate rail is satisfied with the service provided by the infrastructure, the arrangements for access to it, and regulation of operations across State borders. Having completed the national standard gauge network, regulatory and operational 'breaks in gauge' need to be eliminated. (ATC Communique, 10 September 1997, p. 2)

**2.109** The different accreditation requirements add to the processing and the resultant frustration thereby affecting effectiveness and efficiency in the rail industry (*Transcripts*, pp. 661, 675–6). The case study in box 2.1 is an example of the time consuming negotiations private rail operators have had to undertake in order to get accreditation.

### **Box 2.1 Northern Rivers Railroad: attempts at accreditation**

Northern Rivers Railroad (NRR) expressed its frustration at its twelve month long accreditation process whereby it was not able to negotiate with the access provider direct. Instead NRR approached the Queensland Department of Transport which then wrote to the NSW Department of Transport which in turn would approach RAC.

NRR argued 'If we are registered in one State, you would think that we would be right for the other States...our drivers are accredited to operate in Brisbane...the Queensland Department of Transport [only has] to satisfy themselves that we have all of their regulations as well.' (*Transcripts*, p. 589)

When Queensland Transport was questioned on this aspect, it responded:

The company actually deals with the NSW Department of Transport on a one stop shop approach. So that company writes to the NSW Department of Transport and asks it to facilitate accreditation wherever it wants to operate...We have written back a number of times to NSW and asked them where they are with Northern Rivers Railroad's accreditation. It has told us that Northern Rivers Railroad is not yet accredited in NSW and will not be probably until around March [1998]...It has an interim accreditation on a specific part of its railway and it does not yet meet the Australian standard...We do not accredit rolling stock as such in Queensland. We accredit the railway to make sure it has processes in place. (*Transcripts*, pp. 638–9)

Queensland Transport explained that it adopted a mutual recognition approach whereby a railway accredited interstate could get accreditation in Queensland subject to any other specific conditions that might apply (*Transcripts*, pp. 637–8).

As NRR succeeded in gaining accreditation in NSW in mid-1998, NRR anticipates being given accreditation to operate in Queensland by August 1998, given the mutual recognition approach outlined by Queensland Transport at the public hearing.

**2.110** Other private operators also indicated their frustration. During its negotiations with Victorian rail authorities, West Coast Railway had to hire at some cost, rolling stock for about eighteen months before accreditation was confirmed (*Transcripts*, p. 805). Boxcar Pty Ltd indicated that national rail accreditation with an agreed way to get an operating licence would be worthwhile. Boxcar also pointed out that there were enormous differences between operating a train on a country line with very little traffic and the requirements of the main line where there was a 'saturated' corridor. These differences need to be accommodated in any national accreditation regulatory network (*Transcripts*, p. 822).

**2.111** The committee notes the problems that exist as a result of different accreditation requirements in different jurisdictions. It believes that the ARTC, as the body which has responsibility for access on the national standard gauge track, should develop policies, guidelines and mechanisms to promote harmonisation, greater consistency and mutual recognition. Further discussion on accreditation and its effect on access may be found in chapter 4.

## Access

**2.112** A regulatory framework must also take into account issues related to access beyond what is available through Part IIIA of the *Trades Practices Act 1974*. Stakeholders need to define what they mean by harmonisation, uniformity, consistency. These terms may not imply 'identical' but merely 'compatible' standards. A policy framework should support not only allocative efficiency but should examine the costs and benefits of each issue.

**2.113** A policy framework should consider the impact of State/Territory preference agreements already in place. For instance, while a national track should be declared, rail track paths should be sufficiently flexible to accommodate intrastate rail needs. A policy framework should not create excessive transaction costs since this may impede negotiation/arbitration and a desire to create competition.

**2.114** On the basis of the evidence, the committee believes there is a need for a national framework, as a subset of the national strategy to ensure a consistent approach to safety, access, competition, accreditation practices, procedures and standards, investment and other incentives. While there were strong arguments supporting State intervention in the provision of certain rail services, public or private ownership was not a fundamental issue in improving the operation, management and use of rail systems. Rather, the argument should focus on the regulations and operating procedures that underpin the system, no matter who is the operator or provider.

**2.115** Policy initiatives to facilitate more efficient interstate operations must ensure they do not concurrently create operating difficulties for intrastate operations. A policy framework ideally should be national, transparent, accountable, market driven, consistent, certain and predictable, realistic to industry, establish competitive neutrality, compatible and not in conflict with State regulations. This should be the goal that the Commonwealth and States/Territories work towards.

### **2.116 Recommendation 7**

**The committee recommends that the Commonwealth, in consultation with the States/Territories and appropriate parties, immediately develop a national regulatory framework that promotes operational consistency in:**

- **accreditation practices**
- **operating procedures and standards**

**across the national track system and associated jurisdictions to ensure effectiveness and efficiency.**

**2.117** The committee envisages that operational procedures and standards mentioned in recommendation 7 would be immediately addressed ahead of recommendations 5 and 6.



## Community service obligations

**2.118** During the inquiry the committee was told that public rail industries which up till recently had been operating as fully integrated systems, could no longer afford to run at the losses they were incurring. However, it was difficult to assess the full cost of various rail operations, including the actual level of community service obligations (CSOs) paid to rail operators (*Transcripts*, p. 25). Currently there appears to be a lack of consistency in the calculation, payment and reporting of CSOs across jurisdictions. The committee believes that each government should clearly define, calculate and fund CSOs to ensure transparency and accountability.

**2.119** The Department of Transport and Regional Development maintained that 'If you believe that there is a service that warrants being provided, which will not be provided in the absence of government contribution, the government should quantify that and pay it.' (*Transcripts*, p. 25) The Victorian Government defined CSOs 'as the non-commercial programs and activities of government business enterprises designed to meet community and social objectives determined by governments.' (Sub 71, *Submissions* p. 980) CSOs therefore were paid to public operators to ensure that rail services were available where such services were warranted.

**2.120** In addition, CSOs were paid to private rail operators such as West Coast Railway (*Transcripts*, p. 803). West Coast Railway indicated that there was a formula based on existing government fare systems which had seventeen different ticket types. These were averaged and West Coast Railway was paid a particular commission for every passenger carried (Sub 74.02, *Submissions* p. 1623; *Transcripts*, pp. 806–8).

**2.121** Charles Hoppe commented that:

It has been my observation that where CSOs are a significant part of a railway's funding, private sector operators increasingly think like the government agencies they work for—with however an incentive to be clever. In these cases the government is the market, not the end customer. (Sub 110, *Submissions* p. 1486)

**2.122** DPIE supported CSOs being transparently funded from the Budget on the grounds that CSOs should be a clearly defined contract between a rail transport provider and the government, identifying what market segments or railway lines were to be supported and why:

The government and society would be able to assess whether the benefits from any CSOs justify its costs or whether social/equity objectives could be met by other means...Investment distortions associated with profit-earning sectors of business supporting loss-making sectors will be avoided if areas funded by CSOs are clearly identifiable. (Sub 55, *Submissions* pp. 733–4)

**2.123** FCL Interstate Transport Services Pty Ltd recommended that CSOs should be paid to the access authority and not to the train operator so that there was fair competition and the CSO payments could be used to improve the infrastructure and/or reduce the access rate (Sub 9, *Submissions* p. 69).

**2.124** The Highway Safety Action Group of NSW maintained that if the road industry were to pay its true costs reflecting externalities, and if good management practices were in place in the rail industry, then the need for CSO funding would be considerably reduced (*Transcripts*, p. 105). A similar argument was put by Tranz Rail Ltd which operates in New Zealand. Evidence was given that the Auckland regional government was working towards charging road vehicles the true costs of using clogged networks.

Rather than subsidising something we put the true costs back on the private motorists and we can then charge a price to operate commercial rail system and the need for government funding, in the form of CSOs, disappears. That is what we are working towards in Auckland with the local government trying to work that through the central government. (*Transcripts*, p. 170)

**2.125** The committee also notes the following comments made by the Victorian Government:

As CSOs become more transparent, it is likely to become increasingly difficult for governments to justify a CSO which simply prefers one mode of transport over another, particularly where freight is concerned...it is difficult to argue that significant CSOs should be paid in respect of a national rail network primarily focussed on freight traffic over the longer term in order to offset externality costs. (Sub 71, *Submissions* p. 980)

**2.126** The committee is aware that CSOs for rail services are largely paid by State governments and therefore strictly speaking are outside this inquiry. However, on the basis of the evidence received, the committee urges each government to develop a formula to define, value/calculate and fund CSOs; reach a decision as to whom is paid—service provider, customer or access body; make CSOs payments transparent and accountable; and give consideration to the effects on regional areas were CSOs reduced.

## **Integration**

**2.127** As part of the regulatory framework, the committee believes the Commonwealth needs to encourage better integration within rail and between rail and other transport services (road, sea and air) in order to improve effectiveness and efficiency of all transport modes. Certainly rail freight and passenger services have benefited where integration of transport services had been introduced. A call for transport integration had widespread support during the inquiry.

**2.128** The committee is sympathetic to intermodal transport integration as it jells with the committee's belief that the establishment of a national land transport commission would promote an integrated approach to both road and rail infrastructure for the overall improvement in effectiveness and efficiency of the national transport network. Integration with other transport modes could greatly benefit the movement of freight and passenger rail services.

## *Freight*

**2.129** The Sydney Ports Corporation urged some consideration for coastal shipping since 'Australia with its large coastline is ideally suited to coastal shipping...in that much of the infrastructure needed is already in place.' The Corporation went on to say that rail could play a part in this integration since rail was an underutilised resource and could effectively provide landbridging services (Sub 62, *Submissions* pp. 840–1).

**2.130** The SA Department of Transport in its support of the Adelaide–Darwin project, was keen to integrate rail with ports:

If we are going to provide very efficient landbridging of containers, then the issue of double stacking of containers become evident. That would require some significant infrastructure expenditure to provide the clearance under some bridges within the metropolitan network and in tunnels through the Adelaide Hills...the rail link and the ability to be able to get containers from South Australia to Victoria very quickly and vice versa is very important in an integrated sense. (*Transcripts*, pp. 879–82)

**2.131** Improved transport integration for the freight task was especially essential at terminals where there were often time delays. Delays impacted on delivery where timeliness and reliability were paramount. As Woolworths Limited indicated, currently too much time was lost in using rail 'and we cannot afford to lose twenty–four hours in getting containers off the wharf, into our system and out and away.' (*Transcripts*, p. 1217) Toll Holdings Limited confirmed that it had also experienced delays in the loading and unloading of trucks at rail terminals (*Transcripts*, p. 1153).

**2.132** Ford Motor Company of Australia Limited (Ford Australia) assessed transport providers in terms of transit time, transit damage and price. Road was favoured for most of Ford Australia's transport requirements because it operated twenty four hours a day, delivered door to door, involved only one handler and was reliable.

**2.133** The reasons for Ford Australia's reluctance to use rail included:

- commercial inflexibility in rail rate negotiations,
- inflexible rail timetables and fluctuations in arrival times,
- prohibitive insurance rates for rail transportation,
- outdated rolling stock and lack of investment in rail infrastructure,
- lack of standard gauge between States creating the need for bogie exchanges,
- double handling of motor vehicles thereby increasing the risk of transit damage,
- location of rail terminals in heavy traffic areas thus increasing the difficulty and cost of further distribution, and
- availability of B–double and ultimately B–triple trailers meant road was the only economically viable option for Melbourne–Sydney and Melbourne–Adelaide. (Sub 90, *Submissions* pp. 1178–9)

**2.134** Ford Australia indicated it may still use rail for long distance transportation, defined as 'that which cannot be covered within a single driving shift'. However, if improvements were made to rail, then Ford Australia would seriously reconsider rail as an option again. For Ford Australia 'to continue as a viable entity in Australia, it can utilise rail only if it makes economic sense and the shortcomings referred to previously are clearly addressed.' (Sub 90, *Submissions* p. 1180)

**2.135** The committee strongly urges governments and rail industry to coordinate freight movements with rail's modal counterparts so that all can work together to increase effective and efficient delivery of freight. The committee is also conscious that rail infrastructure needs upgrading if rail is to contribute effectively in this integration. This issue is discussed elsewhere in the chapter.

### *Passenger*

**2.136** Integration within rail would benefit rail passengers since sometimes a change of trains is required to reach a destination. The committee, however, is aware that even urban passengers sometimes are not well served and may need to travel to the city centre in order to change trains. Similarly interstate passengers are often inconvenienced at transit stations. The committee noted that transport connection needs of interstate passengers appear to have low priority in the scheduling of urban passenger trains or other public transport services (*Transcripts*, pp. 912–5).

**2.137** As Great Southern Railway Ltd (GSR) said in relation to its interstate passenger services:

It actually goes to the heart of so many of the central arguments of this inquiry because the whole lack of coordination, lack of planning and lack of goal setting perhaps in railways in general in Australia seems to me to be a very important part of this inquiry (*Transcripts*, pp. 915)

**2.138** The Public Transport Users Association (PUTA) argued for the integration of rail services with local transport services—including cross country and feeder bus services and car hire—to provide a higher level of public transport service as an alternative to private cars (*Transcripts*, p. 833). The PTUA argued that passengers appeared to be poorly served by the urban and intercity rail systems. It maintained that Australia's interstate rail had high fares, infrequent services (once daily or less), with regional stops at inconvenient times, and often there were minimal or a complete absence of bus connections. The result is a rail system that repels 'choice' passengers (including tourists) and survives by transporting those with little choice, particularly social security recipients, and 'rail buffs' who endure the inconvenient service for the 'experience' of riding a train. (Sub 100, *Submissions* p. 1263) Box 2.2 provides a snapshot of urban rail services in Australia in 1993–94.

**2.139** Some State passenger services, however, have already implemented modal integration. QR maintained that the role of government was to ensure an integrated intermodal approach to transport planning and policy development; manage the regulatory framework to improve market function; facilitate effective and equitable competition between transport modes; and promote consistency in safety, telecommunications and operations (Sub 40, *Submissions* p. 499). Rail links to airports were being constructed in both Sydney and Brisbane to overcome traffic congestion and to provide convenience for travellers (*Transcripts*, p. 1211).

## **Box 2.2 Urban rail**

In the last fifty years, Australian major cities have transformed into sprawling suburban low density 'satellite towns' made possible by the affordability of cars and the rapid improvements to roads. As rental charges in the central business district (CBD) increased and CBD parking became more difficult, businesses also began to move to these satellite towns. The result was a decline in the use of urban rail since many workers would drive to work—there being sometimes no other feasible alternative, especially as no rail line was available—and shoppers could go to their local shopping complex. This decline is tracked by BTE statistics provided to the committee.

Australian urban rail statistics are dominated by two systems: NSW and Victoria. Urban rail carried 406 million passengers in 1993–94, with 235 million travelling on the Sydney system and 101 million in Melbourne, while an Australian total has been calculated as 695 million passenger–kilometres (Exhibit 47, pp. 10–1). From BTE graphs, in 1995 rail moved fewer passengers than bus or other means such as light commercial vehicles or motorcycles. Rail's share, measured in passenger kilometres, declined from over 40 per cent in 1945 to almost 4 per cent in 1998. Under current trends its share will continue to decline slowly (Exhibit 47, p. 3). What may arrest the decline are rapid improvements to the passenger rail task, as is planned by a number of State rail authorities.

As a result of the decline in rail passenger usage, total Australian urban rail services in 1993–94 incurred an aggregate deficit of \$875 million while revenue from fares paid totalled \$457 million. At this aggregated level, the urban rail deficit accounted for over 80 percent of the total deficit incurred by government rail authorities (Exhibit 47, p. 10).

BTE calculated the mean unit revenue for urban rail in 1993–94 as \$1.73 per passenger or 10.1 cents per passenger–kilometre. In comparison, the mean urban rail cost for 1993–94 was \$3.89 per passenger or 22.7 cents per passenger–kilometre. BTE cautioned that this cost may be affected by the NSW and Victorian governments assuming a significant amount of the rail debts in the 1980s, thus reducing the amount of interest costs (Exhibit 47, p. 12).

Contributing to the deficit were concessional fare passengers. In 1993–94, concession reimbursements in NSW accounted for 42 per cent of total NSW revenue; in Victoria it was 25.8 percent while at the other extreme, in Queensland concession reimbursement was only 15 per cent.

In addition, subsidies were paid to the rail authorities for urban services. Subsidies were defined as all government payments to rail except for concession reimbursements. The mean subsidy payment made in 1993–94 was \$1.16 per passenger or 6.8 cents per passenger–kilometre (Exhibit 47, p. 13).

**2.140** QR developed functional integration in its Traveltrain group, which operates long distance and tourist trains. These trains integrate commuter and tourist needs by providing a total travel experience and by linking the outback to the coastal regions down to Brisbane. The committee believes that other passengers such as business people will be attracted to use rail if trains offered additional facilities such as fax, phone and computer outlets. Certainly the new tilt trains which will commence operation in Queensland in late 1998 have these facilities.

**2.141** NSW State Rail Authority tested a modified integrated passenger system during the 1998 Easter Show and assessed it a success. As a further improvement, the NSW Government announced recently some \$880.5 million to integrate passenger services from Turrella to Richmond. NSW also plans a new multimodal interchange at Liverpool and a buses only road linking rail stations at Liverpool and Parramatta in order to encourage passengers to use rail services (NSW Department of Transport 1997, p. 17). In July 1998, NSW made a further announcement for a \$1.4 billion rail project linking Parramatta to Chatswood via outer western suburbs such as Rydlemere, Dundas and Carlingford and providing Macquarie University with a direct rail link.

**2.142** Westrail claimed that Perth was the only city which ran an integrated transport service, where rail, bus and ferry complemented rather than competed with each other. So popular has the rail service become that additional rolling stock had been ordered to support passenger growth (*Transcripts*, p. 1061). Westrail argued that 'the issue facing governments at the moment is not one of road-rail competitiveness but one of maintaining rail share and growing it' (*Transcripts*, p. 1053).

**2.143** The Public Transport Users Association indicated that improved passenger rail service which link rail (both light and heavy) to other transport modes will grow passenger usage of rail, especially as people become more aware of the increasing expense of using private cars. Like the rail service in Switzerland, passenger rail in Australia needs to be affordable, reliable, flexible and comfortable (Sub 100, *Submissions* p. 1263).

**2.144** The committee received limited evidence on most interstate passenger services. It notes that new technologies (see later in this chapter) may offer opportunities for interstate passenger services in the future.

## **Environmental issues**

**2.145** The committee believes that environmental issues and other externalities—congestion, accidents, air and noise pollution, gas emissions and greenhouse effects—should be taken into consideration when assessing the efficiency and effectiveness of the transport industry, whether mode by mode or comparatively. In essence, a negative externality occurs when an individual engaged in an activity imposes costs on another but the person affected cannot normally be compensated through the market mechanism. For instance, the closure of rail branch lines in regional Australia meant trucks became the prime transport for most goods. This intensified road traffic resulted in increased road infrastructure maintenance costs for local governments and the local community (Sub 20, *Submissions* pp. 197–8).

**2.146** Positive externalities on the other hand provide benefits to those affected by them. For example, in 1996–97, NR carried 16.9 billion tonne kilometres of freight. Had the same

amount of freight been carried by road, 3100 B–doubles would have been needed, causing greater road congestion and damage (Sub 31, *Submissions* p. 384). Similarly, greater use of rail for transporting hazardous material would remove the frequency of the trucks carrying this material on the road, thus further reducing motor accident risks and possible spillages (Sub 55, *Submissions* p. 724).

**2.147** The committee is also aware that fuel is a finite commodity and should be used to maximise its effectiveness. There is ample evidence to show that a locomotive pulling wagons which total a kilometre or more in length is more fuel efficient than road transport carrying similar payloads. Similarly, passenger rail is more fuel efficient than buses which are more fuel efficient than private cars. Public transport should therefore be encouraged since bus, light rail and rail are fuel effective ways to carry individual passengers.

**2.148** The committee is also mindful of the age of locomotives and rolling stock some of which are quite fuel inefficient. If rail is to grow both its business and modal share, then upgrading the rolling stock is equally important. Well maintained rolling stock enables a more effective journey and will reduce track maintenance.

**2.149** QR maintained that 'on the broader issues—the environmental issues and the growth of our cities...there should be more funding for urban upgrade. Our cities are being choked and the real answer is urban [rail] transport. I think we proved that with our Gold Coast railway. We thought we would carry one million people in the first year on the new Gold Coast railway and we carried 1.3 million and it is expanding.' (*Transcripts*, p. 473) However, although urban rail is under State jurisdiction and therefore outside Commonwealth jurisdiction, the committee believes State governments need to assess their respective environmental issues and devise their respective solutions.

**2.150** In considering the environmental advantages of rail, the Institution of Engineers, Australia stated that 'the overall cost to provide the basic infrastructure on rail is significantly less than it is with road for carrying equivalent axle loads. Not only that, the potential damage that is caused is also taken away from road.' (*Transcripts*, p. 240) The Institution argued that road infrastructure would cost substantially less were roads used only for light load vehicles, passenger cars and buses (*Transcripts*, pp. 163, 240).

**2.151** The money saved could be used to upgrade rail so that it could haul the heavy axle loads. Furthermore, the committee was informed that while no one was denying that a train deteriorated the infrastructure it travelled on, the overall cost of rail infrastructure and maintenance was less than for road (*Transcripts*, pp. 163, 240).

**2.152** Rail 2000 recommended that externalities should be apportioned on an equivalent basis to road and rail transport both at the planning stage and for ongoing charges. Rail 2000 added that 'as rail transport is inherently more benign environmentally and generally imposes fewer costs on the community than road, a level playing field treatment will improve the competitive position of rail' (Sub 47, *Submissions* p. 637).

**2.153** In its report *Transport and Greenhouse*, BTCE stated that although the Australian transport sector as a whole contributed about 12 per cent to Australia's total emissions of greenhouse gases, popular focus tended to be on transport, especially cars. However, most of the arguments were not based on cost effectiveness. The BTCE's report attempted to assess the cost effectiveness of sixteen abatement measures, especially the costs and benefits of associated externalities. The report also took into account the availability of 'no regrets' measures—those that reduce net greenhouse gas emission levels but whose total social cost is zero or negative over some specified time period (BTCE 1996, p. 503).

**2.154** BTCE concluded that:

The main 'no regrets' measures in the longer term are metropolitan road user charges, reducing urban transport fares, city-wide parking charges, labelling new cars to inform buyers of their fuel efficiency ratings and shifting intercapital freight from road to rail...because the upgrading of more links between cities increases network economies...however, using rail for freight would reduce greenhouse gas emissions by only about 3 million tonnes of CO<sub>2</sub> equivalent...due primarily to the limited scope of switching freight from road to rail. (BTCE 1996, p. xxxix)

**2.155** This last point made by BTCE in 1996 referred to the then existing condition of the rail industry. The committee is aware that with improvements in rail infrastructure, greenhouse gas emissions could be reduced by more than 3 million tonnes of CO<sub>2</sub> equivalent, especially if rail was successful in attracting more freight from road. The committee believes that more research and development in the rail industry will also help increase the reduction of CO<sub>2</sub> equivalent.

**2.156** From an extreme rail bias, it would be tempting to combine the two measures suggested by BTCE—automatically scrap all commercial road freight vehicles over twelve years old and shift intercapital freight from road to rail. However, as a socially optimal level lies somewhere between—namely the social benefits of reducing a negative externality must outweigh the social costs of doing so, the committee explored suggestions given as evidence, such as congestion and mass distance charging. The committee was also mindful of road charges in New Zealand being four times that of Australia's (*Transcripts*, p. 164).

**2.157** Macquarie Bank recommended uniform road pricing, with the funds raised being ploughed back into the transport system. Examples given of a uniform road pricing regime included New Zealand which 'is looking at a global satellite positioning system where every car will have a global satellite positioning system, which will download and they will be charged based upon where they have driven and what they have done...It has the benefit over fuel tax in that you can actually tax people when they want to use the commodity that is scarcest.' (*Transcripts*, p. 359)

**2.158** The committee is conscious that environmental considerations have to be taken into account when examining ways to make rail more effective and efficient. The Commonwealth needs to address the imbalance in taxes and charges applied to both rail and road and explicitly value the benefits and costs of externalities, particularly environmental concerns in transport use and development. Further discussion on rail and road treatment appears in chapter 5.



## Quality of service

**2.159** The committee is aware that the quality of rail service will determine its use. Road has an advantage as it is a timely door to door service. Rail is essentially a long distance bulk carrier where freight is not so time sensitive. If time was of the essence or the linehaul was short, then road was likely to win the business, especially when loading and discharging times were added to the journey times. Witnesses spoke of inconsistent arrival times by rail so that staff were kept waiting on car assembly lines or supermarket shelves could not be stocked at night (*Transcripts*, pp. 715, 1214).

**2.160** Exacerbating the problem are congestion and curfews in Sydney. NR and FreightCorp both commented that in Sydney, freight sometimes had to give way to passenger trains under a curfew of up to four hours both in the morning and evening (*Transcripts*, pp. 65, 253). Time was critical for some freight lines since a delay may throw out an entire schedule, especially where freight had to transfer to another mode (*Transcripts*, pp. 255, 779). For these reasons, rail's reputation tends to suffer and its ability to deliver consistent quality service was often denigrated.

**2.161** SRA recently ordered urban trains to travel as slowly as 10 km/h because of the condition of some of the suburban tracks while in some regional areas speeds were reduced from 100 km/h to 20 km/h (*Sydney Morning Herald* 19 May 1998, p. 5). NR recently commissioned some powerful locomotives but was unable to use them to full capacity as the track and the passing loops were below the required quality. The recent successful negotiations with RAC, Vic Track and ARTC to improve the infrastructure will enable NR to commence running more efficient and effective trains in 1998–99 (Sub 26.01, *Submissions* pp. 1513–14).

**2.162** However, other factors enter into the equation. Volume of freight enabled economies of scale yet these were often negated by other aspects of rail linehaul (*Transcripts*, pp. 47–8). Witnesses indicated that using road involved only one handler, whereas rail required road vehicles at either end.

**2.163** Comments were also made about goods damage and theft on rail sidings. One witness spoke of 'a total lack of customer consciousness on the part of the management of the networks' (*Transcripts*, pp. 713–4). Another said that 'Most companies expect on time delivery and undamaged goods—a reliable service.' (*Transcripts*, p. 778) The implication was that rail was lacking in these aspects.

**2.164** Rail's quality of service was perhaps typified in the following arrangement. CRT Group Pty Ltd pointed out that since the present NR south bound interstate service, for cost reasons, did not stop at Albury, goods went straight past to Melbourne and had to be transferred to the V/Line broad gauge back to Albury—'an absurd inefficiency' (Sub 36, *Submissions* p. 438; *Transcripts*, p. 778).

**2.165** Improvements in the quality of rail service may also entice more passengers from private cars. A clear example of this was the number of passengers who chose to travel on the Brisbane–Gold Coast line, 300 000 more than anticipated in the first twelve months of service. Similarly people travelled by rail to the Sydney Easter Show in March–April 1998, especially as the station was close to the Show entrance.

**2.166** Passengers commented that their arrival was in a 'timely manner' (*Sydney Morning Herald* 14 April 1998). Confidence in the reliability of the service enhanced the NSW State Rail Authority's (SRA) reputation to deliver quality of service. Encouragement to use public transport was also provided in the form of \$25 pre-booked parking tickets and the location of parking lots well away from the Show entrance (*Daily Telegraph* 9 March 1998, p. 4).

**2.167** The committee is aware that passengers and freight will move from road to rail when rail provides a service that responds to customer needs, the service is reliable and innovative, and charges are competitive. The committee was impressed by the efforts made by a number of rail operators to improve service. However, it is also conscious that the improvements have been uneven and much still remains to be done.

## Innovations

**2.168** New technology is one way to improve the rail industry although improvements may also be achieved by new strategies and changes in process and practices. Technological advances enable the rail industry to streamline its operations, become more cost effective and generally enhance effectiveness and efficiency. During the inquiry the committee was told about various ways rail operators introduced innovations into their rail business.

### *Electronic monitoring*

**2.169** FreightCorp, for instance introduced an electronic data interchange (EDI) whereby all Hunter Valley locomotives and wagons were barcoded to improve efficiency. A pooled database between FreightCorp and Port Waratah coal services meant that a train and its load were immediately recognised by the port (*Transcripts*, p. 268). A similar EDI was used for the rest of FreightCorp's fleet to support efficient interaction for its various partners—shipping companies, stevedores, road freight operators—and customers.

**2.170** In doing so, however, FreightCorp decided to provide total logistics solutions—container storage, handling and short haul road operations. This new intermodal strategy resulted in other changes to FreightCorp's operations at the Clyde terminal which virtually became 'an inland port', an intermodal facility in western Sydney. A further extension was the development of FreightCorp's Internet message hub so orders and tracking could be reliably streamlined (Sub 43.01, *Submissions* pp. 1421–2). The introduction of EDI therefore resulted in other innovations percolating through the operation thereby enhancing effectiveness and efficiency and attracting more business.

**2.171** Similarly, NR informed the committee that all its terminals were fully computerised and customers were able to book a container through the NR freight web system on the Internet. As a result, from the moment a truck entered a NR terminal gate and punched in its trip number its progress in the terminal was monitored. Hourly, daily and weekly reports enabled NR to analyse and seek improvements to truck turnaround times (*Transcripts*, p. 1279).

### *Intermodal changes*

**2.172** An interesting innovation the committee heard concerned logistics. Roll-on roll-off technology led to improved intermodal links, reduced the time in loading and unloading from one mode to another and in effect, meant clients dealt with a single handler only. Roll-on roll-off technology is not new but it enables a prime mover to unhook its trailer so the latter can be converted into a rail wagon. The advantage of this technology was in savings in labour, fuel, time and cost as well as greater efficiency resulting in increased business. Instead of many of heavy B-triples on the highway, eighty three semitrailer equivalents with one driver and two locomotives would move freight in less or similar time (*Transcripts*, p. 793).

**2.173** The following estimated annual savings from using the roll-on roll-off technology, based on a number of sources including BTCE papers, were given to the committee:

- for road damage \$22.73 million savings equivalent
  - for road accidents (truck related) \$5.27 million savings equivalent
  - for environmental costs \$3.33 million savings equivalent
- (Sub 8.01, *Submissions* p. 1525)

**2.174** Three companies are using variations of this technology. From 1994–95, Trailerrail Bi-Modal Freight (Trailerrail), a division of NR, provided a roll-on roll-off service between Melbourne, Adelaide and Perth. A service will commence in late 1998 from Sydney to Perth. Its fleet included thirty seven refrigerated pantechonicon trailers in addition to its other trailers, all of which were heavier and more expensive to build than the normal road or rail single purpose equivalent. Therefore charges were higher. However, the time saved was attractive to customers as the trailers were loaded and unloaded easily and quickly and there was no double handling. Trailerrail maintained that its transit time Melbourne–Perth was 47 hours compared to the truck's legal speed time of 52 hours. Its flexibility enabled the trailers to proceed by road were rail disrupted by track damage or vice versa. Trailerrail's customer base comprised road transport users and was growing (Sub 114, *Submissions* pp. 1576–80).

**2.175** FCL Interstate Transport Services Pty Ltd (FCL) also provided an interstate intermodal road–rail service using FreightCorp and NR locomotives, tapping into their Internet freight web sites. FCL specialised in moving perishable freight over long distances using mechanical and nonmechanical refrigeration. It used customised containers modified by a Tasmanian firm. In order to maximise cubic capacity for light freight, FCL pioneered a nineteen metre (62 foot) container which could be doublestacked over forty–eight feet containers on the Parkes–Perth corridor (*Transcripts*, pp. 388–91).

**2.176** RailRoad Technologies Pty Ltd described a similar process which is due to commence operation out of Sydney and Melbourne in early 1999. RailRoad Technologies would laser profile the load and assign each one a transponder number so that turnaround time would be reduced. RailRoad Technologies maintained that urgent trailers or loads could come off the flatbeds within five minutes as the trailers could be put anywhere along the length of the train. Therefore it was possible for several prime movers to be loading and unloading at the same time without getting in each other's way. However, RailRoad Technologies requires special raised platforms on either side of the track, whereas Trailerrail is able to utilise any level ground (Sub 8, *Submissions* pp. 57–8; *Transcripts*, pp. 785–99).

### *Technical changes in the Pilbara*

**2.177** When the committee inspected rail operations in the Pilbara, it was shown how new technologies were applied to enable the iron ore railways to be maintained at peak condition. For instance, BHP Iron Ore used a computerised identification code on every locomotive and wagon. It used ultrasound detection to seek broken or defective rail every ten days and was installing electronically controlled pneumatic brakes so all wagons stopped simultaneously. BHP Iron Ore also was testing a video imaging system for each of its wagons so that 3-D imaging of wheels, brake shoes, bearings and other parts could be carefully checked and monitored (*Transcripts*, pp. 981–2). Both BHP Iron Ore and Hamersley used simulators to enable drivers to be trained effectively for all conditions along their tracks.

**2.178** Westrail said it had benefited from the Pilbara railways as staff moved regularly between Westrail and the Pilbara and there was regular interchange on technical issues. For instance, the locotrol technology—remote control locomotives perfected in the Pilbara—had been introduced into Westrail's system (*Transcripts*, p. 1065).

### *Control systems*

**2.179** Foxboro Australia Pty Ltd, a supplier of control systems for rail and other service industries told the committee that it would be possible to interconnect control and signalling systems so that trains could be scheduled more smoothly and interlinked with the demands of other transport modes. In fact, Foxboro had recently provided and installed such a system in Hong Kong where a total transport solution now operated (*Transcripts*, p. 617). The committee is also aware of other train control systems which may be worth introducing into urban rail.

**2.180** Foxboro described how for various reasons, the former State Rail Authority, prior to disaggregation, had spent more than \$50 million with another supplier on a control system and related technology 'that has now been mothballed. The suppliers of that particular control system have failed to meet the expectations of the corporation, and because of the lack of a partnering arrangement in place, the problem has not been solved and the solution has not been found...The problem occurred in that they were spending a lot of money on technology, did not really have a good solution in mind and failed to be able to provide a solution to the authority.' (*Transcripts*, p. 618) SRA confirmed that the control system was not effectively functional although some of the actual component parts such as the computers are being used in other operational areas.

**2.181** Bearing this NSW experience in mind, the committee believes that Foxboro's suggestion is a sound one: namely new technological solutions should be examined by more than just the public sector rail operator so that independent technical expert advice and assessment may be given. The committee therefore urges rail authorities and rail operators to ensure that there is more rigorous independent assessment of new technology prior to any commitment to its introduction.

**2.182** The promotion of research and development is important so appropriate rail innovations may be incorporated to enhance rail effectiveness and efficiency. Research enables development and improvement to rolling stock and infrastructure with ways to reduce travel times, increasing speeds, increasing loads and other efficiencies.

**2.183** The road industry, for instance, is effective in ensuring that trucks carrying freight are the most efficient while the motor industry competitively improves cars to promote regular

upgrades. The committee heard evidence supporting a national rail research body—a centre for training and overseeing technical innovations and is sympathetic to the concept (Sub 80, *Submissions* pp. 1100–1; *Transcripts*, pp. 513–5).

### *Export of expertise*

**2.184** Innovations may be initiated in Australia and then disseminated internationally. From 1989 QR marketed itself successfully as an international consultant based on its skills, knowledge, innovations and technological expertise. With one of the world's largest narrow gauge networks operating in tropical, subtropical and arid climatic conditions, QR saw itself having much in common with Asian nations. QR completed projects in over thirty countries including India, Malaysia, Indonesia, Thailand, Vietnam, Philippines, China, Hong Kong, Taiwan, New Zealand, United Kingdom. QR also provided training for operatives from other countries (*Transcripts*, pp. 1102–5).

**2.185** The Australian Railway Industry Corporation (ARIC) told the committee that the Australian railway industry had exports valued at over A\$500 million in 1995–96. In 1996–97, the value of the rail export industry increased to A\$530 million—'a growth rate virtually unmatched by any other Australian industry and certainly unmatched by any other manufacturing industry.' (Sub 63, *Submissions* p. 851) ARIC explained that the exported rail technology and expertise 'have a major impact on the makeup of the rail industry and consequently of transport in this country....a lot of the export business enjoyed by local companies...would not be possible without a buoyant local industry....So it is important that there is a strong link between that domestic base and the international base.' (*Transcripts*, p. 1098)

**2.186** The committee notes that Australian Railway Industry Corporation Ltd (ARIC) expects to be trading, especially in Asia, some \$2 billion in the next five years. The committee believes that this export of skills, technology and expertise will impact positively on the domestic rail industry, especially as many of the operators are involved in both markets. With the increase in private sector involvement, the committee supports the efforts of QR, Rail Services Australia (RSA), Goninan, Walkers, John Holland and other companies to expand into world markets. Joint ventures between public and private sector rail and other arrangements as suggested by witnesses seem an ideal mechanism, especially as Australian Government involvement in a project 'works well in the Asian market' (*Transcripts*, p. 1104).

### *High speed train*

**2.187** In the course of this inquiry, the committee gathered evidence about the high speed train proposals for Sydney–Canberra. The three technologies proposed by bidders were *train à grande vitesse* (TGV), magnetic levitation (Maglev) and tilt. Each had its advantages and disadvantages and variations in costs. However, the committee has some concerns with the concept of introducing a high speed service, especially if it meant there will be a significantly different technology to existing systems.

**2.188** Of the four final high speed proposals, the committee received evidence from three of the proponents. While acknowledging that the committee received evidence at an early stage, it questions whether a high speed train would be able to attract sufficient passengers from air, private car and coach. Based on figures supplied by the BTE, a high speed rail service would need to take nearly all of the traffic from alternative modes on the Sydney–Canberra route (Exhibit 42, pp. 51–5).

**2.189** Also, in the absence of numbers of passengers travelling on particular segments of the Sydney–Canberra route, it was unclear whether proponents would seek passengers travelling within Sydney (St James–Campbelltown), or undertaking short journeys on segments of the Sydney–Canberra route. In addition, the committee believes that the expectation of significant increases in tourist traffic resulting from the introduction of the high speed train is speculative.

**2.190** A further concern for the committee is possible access problems in NSW. As three of the proposals wish to use existing corridors, access may present major difficulties for the project, especially as existing metropolitan corridors are currently quite congested and the infrastructure needs upgrading. Even where new tracks are required the negotiation for easement and land acquisition may pose problems.

**2.191** Another concern relates to how well the high speed train will integrate with existing rail and other transport modes. As discussed elsewhere in this chapter, the committee supports intermodal integration for maximum effectiveness and efficiency. The committee believes that this aspect of the project should be given high priority. Otherwise a high speed train based on a totally different technology could create yet another 'break in gauge' in Australia's rail system.

**2.192** The committee believes that if Australia is to grow its rail freight and passenger business then it must encourage rail research and development. The Commonwealth has to provide direction to enable Australia to choose the best affordable rail innovations and technology to link its major cities and regional areas.

## **Conclusion**

**2.193** Based on the evidence presented, the committee concludes that efficient and effective use of the national rail network is achievable. The Commonwealth has a leadership role in developing a national strategic transport plan. The committee believes a strategic approach requires a clear statement of objectives, focuses on outcomes and incorporates ongoing evaluation and review. A national strategic transport plan needs to facilitate development, not only in metropolitan areas but also in regional Australia. It should be holistic and intermodal, not just focus on a specific mode such as rail, road, sea or air.

**2.194** The Commonwealth in consultation with the States/Territories should declare a national track for interstate rail services. The strategic approach also needs to address chronic deficiencies in the interstate national track and move to agreed national standards for the condition of the national track.

**2.195** The committee urges that a national framework be developed to cover a consistent approach to safety, access, competition, accreditation practices, operating procedures and standards. National strategic transport planning as it applies to rail should address safety issues, improve competitive neutrality, closer integration of transport modes, and research into infrastructure and rolling stock.

**2.196** As part of this development, consideration should be given to better training of rail employees and the award of appropriate qualifications to drivers and other rail workers. The committee supports a training regime for all rail employees to be delivered through approved educational centres.

**2.197** The committee also believes that the Commonwealth should develop a regulatory framework in consultation with the States to help the Australian rail industry attain international best practices. As part of the regulatory framework, the committee believes the Commonwealth should encourage rail innovations and better integration within rail. A regulatory framework must also take into account safety issues and issues related to access beyond what is available through Part IIIA of the *Trades Practices Act 1974*, as discussed in chapter 4. The committee supports the separation of regulatory and investigative powers. It believes that there should be a rail safety authority and a rail incident investigation unit for the national track.

**2.198** The States/Territories support a role for the Commonwealth in achieving national objectives for the rail industry. The committee believes that environmental issues and other externalities—congestion, accidents, air and noise pollution, gas emissions and greenhouse effects—should be taken into consideration when assessing the efficiency and effectiveness of rail within the transport industry.

**2.199** The committee is aware that the quality of rail service will determine its use. Better utilisation of the rail infrastructure should be a key component in any response to increased transport demands. The committee is mindful of the age of the locomotives and rolling stock some of which are quite fuel inefficient. If rail is to increase its market share, then upgrading the locomotives and rolling stock is as important as upgrading the track. New technology (such as EDI, roll-on roll-off) is one way to improve the rail industry although improvements may also be achieved by new strategies and changes in operations. Efficiency and effectiveness in rail may be further increased by attracting private operators to rail, especially to interstate rail development.

**2.200** Effectiveness and efficiency in rail will be maximised if access issues are fully resolved and rail infrastructure is upgraded and maintained. The Commonwealth's main role is to provide leadership to ensure these aspects are addressed sensibly and adequately within the next twelve months. Otherwise Australia's rail industry may deteriorate to a point where it is irretrievable.

