



National Rail, 1991-2002: investing in policy reform

Dr Fred Affleck

Affleck Consulting Ltd

Abstract

This paper examines the changes made to the business of the National Rail Corporation Ltd from 1992 to 2002, the strategies used to achieve 'turnaround' of its national network business, and the evolving policy framework in which these strategies operated.

National Rail began to take shape in January 1992. Commercial operations began in February 1993 when National Rail took control of all interstate freight revenue. Over the ensuing five years, all train, terminal and maintenance operations and nominated interstate rail assets were transferred or made available on commercial terms by the five state-based 'legacy' rail authorities.

In 1995 the 'goalposts' shifted, changing the financial outlook for the company. Shareholder governments implemented competitive access to national track and decided not to transfer control of it to National Rail, as had been provided by the shareholders' agreement. In the same year, however, the \$430 million 'One Nation' rail infrastructure program was completed, removing the Melbourne-Adelaide break of gauge.

The major strategies used to achieve financial turnaround were re-engineering terminal and line-haul (to increase control over service delivery); creating IT-based customer interfaces (to strengthen customer loyalty and market reach); operating fewer longer trains (to reduce train hours and provide a reservoir of low marginal cost capacity); acquiring a new single-type locomotive fleet (to ensure reliable motive power and reduce costs); acquiring new wagons (to reduce tare mass and maintenance costs); and attracting business in new markets (by offering innovative services and exploiting open access regimes to leverage market share growth on regional rail networks).

Open access to the national rail network delayed profitability, but made the ultimate turnaround more robust. In financial year 2000/01, National Rail reported a profit of \$2.3 million and an EBITDA of \$67.6 million. A substantial increase in this figure is thought to have been recorded in 2001/02.

Contact author

Dr Fred Affleck

Affleck Consulting Pty Ltd

Tel: (02) 9706 7550

Email: fredaffleck@optushome.com.au

Introduction

On 21 February 2002 ownership of the National Rail Corporation Limited ('National Rail') was transferred to the 'National Rail Consortium' (the new model 'NRC') comprising Australian transport and logistics giants, Toll Holdings and Patrick Corporation. Significantly, it was bundled in this sale with the NSW state-owned corporation FreightCorp.

The potential cost and market-based synergies between National Rail and FreightCorp are significant, and even without privatisation their merger alone would have created a powerful new transport entity. The new combined rail entity will now be joined to the strongly complementary road transport, logistics, port and the stevedoring operations of Toll and Patrick, greatly enlarging the scope of potential synergies and the group's market reach, financial capacity and political clout. The new four-way combination will enable its owners, if they wish, to create a multi-modal national network business in which the full economic and environmental potential of rail can be realised.¹

It is a time of excitement and promise for rail – in contrast with the gloomy prognosis for rail which drove rail reform a decade ago.

'National Rail 2002', was the outcome of a company strategy which created a *rail-based national network freight business* able for the first time to compete successfully in the tough Australian freight market. It was also the product of a decade of rail reform, pushed forward by governments – some of them its shareholders – which has created new competitive structures and taken most of the industry out of public ownership.

A critical assessment of either business strategies or policies is handicapped by lack of access to much confidential data. This paper aims only to provide a brief overview of the policies and strategies which created the National Rail business sold in 2002, in particular:

- The changes achieved in the business of National Rail from 1992 to 2002.
- The business strategies of National Rail from 1992 to 2002 which aimed to create a successful national network rail business.
- The evolving policy framework in which these strategies operated.

In the beginning

Moves to create a single entity to operate the interstate rail freight business began in 1988, and gained substantial momentum by 1990.¹ This was the era of 'cooperative federalism', the end of a decade of research and transport policy development – in which the Interstate Commission among others had played a key role – and which also led to formation of the National Road Transport Commission.

The National Rail Corporation Ltd was incorporated in September 1991² following a formal agreement between the Commonwealth and all mainland state governments in July 1991 (the 'Shareholders Agreement').³ The intention to establish a fully commercial, fully competitive and vertically integrated rail freight organisation was clear in the inter-governmental agreement. However, there was also a clear intention that during the first five years following the commencement of operations, the shareholders would ensure the company was given the legal and financial support required to turn around the profoundly bankrupt business it would inherit.

The basis for establishing the company was mandated by the Shareholders Agreement:⁴

- A requirement for a 'greenfields' enterprise agreement, with single union coverage and a simple classification structure supported by employee multi-skilling.
- Substantial cash equity funding to replace obsolete above and below-rail asset.
- A requirement for rail authorities who operated the interstate freight business before 1992 to transfer functions as and when nominated to National Rail, and to provide access to the assets used for these functions (either by transfer of ownership, long-term lease or for use on commercial terms).
- Shareholder financial support on a tapering scale to the end of the 'establishment period' (five years from the 'date of commencement of operations') to cushion (temporarily) the inefficient cost of some functions transferred from the legacy rail authorities.

The new National Rail management team was recruited in January and February 1992⁵, and work began immediately on drafting Corporate Plan No 1 and on an Enterprise Agreement for negotiation with rail union.

¹ An outline of the history of National Rail's formation is contained in Endnote 1.

Commencement of operations

Operations commenced very modestly in February 1993 when National Rail took control of all revenue from the interstate freight. At this time all train and terminal operations were still provided by the five state-based 'legacy' rail authorities.⁶

The 1990/91 Task Force had proposed that operations commence in October 1991, sixteen months earlier. Clearly this target gave insufficient time to establish an initial management team – which took five months. However, the main delays came from two other sources.

The first was the requirement that all the parties to the 1991 Shareholders Agreement ratify it in their respective Parliaments. This did not occur until January 1993 in Western Australia, and only after the State had withdrawn from equity participation, becoming a mere 'other state' committed only to transferring functions and providing negotiated access to assets.

The second source of delay was the time taken to negotiate the groundbreaking Enterprise Agreement. Facilitated by ACTU, this was also completed in January 1993, and achieved all objectives except single union coverage – the compromise on two was acceptable compared with the previous number of up to 25.

While these delays did not cause serious harm to the company – the Enterprise Agreement was worth waiting for – they began a pattern of delays and shifting fundamentals which made it impracticable to make the company profitable within the 5-year 'establishment period'.⁷

'Commencement' of operations was no more than that. At the beginning National Rail managed only the collection and accounting of revenue, with all operations in the hands of the state-based 'legacy' rail authorities. The second targeted function transfer was management of intermodal terminals, and this could occur only after tortuous negotiation of agreements with rail authorities on the terms and conditions for their continued operation of trains and infrastructure, and recruitment of terminal operating employees.⁸ State-based rail authorities continued to operate interstate freight train services, to crew, fuel and maintain locomotives, maintain wagons, and provide access to track, signalling and communications, in return for payments based on their previous revenue streams from the interstate freight business. Gradually as functions were transferred to National Rail over the ensuing five years, the role of the legacy authorities and their associated revenue streams diminished.

National Rail achieved control of the intermodal terminals (the key customer interface) in Melbourne, Sydney, Brisbane, Adelaide and Alice Springs (not Perth) in April and May 1993. A master plan for their future operation and infrastructure was also completed. Perth Freight Terminal followed in 1994. By 30 June 1993, the total workforce of National Rail was 378.⁹

Recruitment of the train driver workforce also began at this time, and the first trains operated on the broad gauge track between Adelaide and Melbourne in November 1993.

Shifting the goalposts

Almost as soon as National Rail was formed the 'goalposts' began to shift. The game plan for takeover and rebuilding of a fragmented and bankrupt business was inherently complex and risky. Shifting the goalposts was a major distraction from the pressing task of servicing the company's newly acquired customers, and they felt it.

Two seismic changes occurred in mid-1995, at the mid-point of the 'establishment period':

- A decision by governments not to permit transfer of track and related infrastructure to National Rail, as provided for in the inter-governmental agreement of 1991 (the Shareholders Agreement).
- Completion of the 'One Nation' rail infrastructure program, which invested a total of \$430 million in the 'defined interstate rail network' and unified the whole interstate rail network in one track gauge.¹⁰

Clearly the second event brought significant benefits to the interstate freight (and passenger) business – it is difficult now to think of the Melbourne end of the east-west rail corridor being isolated with its own locomotive fleet, and incurring the cost of gauge transfers for all freight not terminating in Adelaide or Melbourne. Continuing to operate with a two-gauge network would have added significantly to costs and prevented important operational and service innovations. However, the corporate energy expended in managing the One Nation program had a significant opportunity cost.

The June 1995 decision by governments (three of which were also shareholders) not to permit transfer of track infrastructure to National Rail issued directly from the National Competition Agreement, which provided for vertical separation of infrastructure from operations across all industries thought to be characterised by natural monopoly.

National Rail had, as anticipated by the Shareholders Agreement, formally 'nominated' track infrastructure for transfer to its control (by ownership or lease). The alternative 'no-nomination' option was also very carefully considered by the company, as it offered the prospect of management of the rail transport service uncomplicated by the substantial task of infrastructure management. A related effect was that the cash equity available for investment in new capital could be devoted entirely to above-rail assets, for which it was barely adequate.

Whatever one's view of the economic benefits available from competitive access to infrastructure, it changed the financial outlook for the company dramatically. Immediately it spawned two new competitors in the east-west corridor, SCT (Specialized Container Transport) and TNT Rail, which captured a

substantial proportion of National Rail's revenue – estimated at about \$60 million per year.¹¹

It is perhaps surprising that the long-term damage to the National Rail 'brand' from open access beginning in 1995 was not greater. It occurred at a time when National Rail was totally reliant for its vital operating assets – locomotives and wagons – and for the quality of its service to customers, on the 'legacy' rail systems. The average age of locomotives was over 20 years, and consequently they suffered from a very high rate of failures, the network-wide effects of which disrupted operations in terminals as well as on track. Terminals were also generally congested, and paper-based management systems were not able to provide acceptable levels of reliability. National Rail's inherited customers attacked the company's continual service failures (not unreasonably), having expected (unrealistically) a rapid improvement in service when National Rail took over the business.

Financial and other outcomes

This section examines the outcomes – financial and otherwise – from National Rail up to December 2001. Audited financial outcomes do not provide a true picture of National Rail's performance before the financial year 1998/99. This is because until close to 1 February 1998, when the 'establishment period' ended, National Rail did not control some of its most important costs, eg fuel and maintenance of locomotives nominated for transfer. Before 1 February 1998 significant costs from National Rail's operations were borne by the 'legacy' rail authorities and after 1 February 1996 National Rail received 'wedge payments' to compensate for the excessive cost of some transferred functions.¹²

From start-up in 1992 until 30 June 2001 (the end of the last full year under government ownership), National Rail received approximately \$475 million from its shareholders (equity and 'wedge payments'), and borrowed approximately \$300 million in long-term debt. With these financial resources, it acquired approximately \$680 million in new capital equipment and IT systems, commenced repaying debt and funded operating and other losses incurred in the turnaround period.

The preoccupation in this paper with 'establishment' issues accurately reflects the same preoccupation in National Rail during most of the decade. To achieve reform of the interstate system, it was of course necessary to give attention to service quality and other customer issues. However, this had to take its place beside (sometimes regrettably behind) negotiating transition issues with non-commercial shareholders and legacy railways, including complex and continually evolving financial arrangements, managing very large capital programs, and developing and implementing ground-breaking IT systems. Creating a successful 'new' rail business out of the bankrupt inheritance from the old was a hard slog, and often customer issues did not get the attention that National Rail management believed was desirable.

The starting point

The rail business inherited from the state-based legacy rail authorities was profoundly bankrupt before National Rail's formation.¹³ The operating loss before non-operational items and abnormals incurred in the financial year ending on 30 June 1991 (1990/91) was \$321 million.¹⁴ This was a substantial deterioration from the previous year's loss of \$254 million (calculated on a comparable basis), due largely to a fall in revenue caused by economic recession. Total freight revenue had been stable (in real terms) in the range of \$450-\$500 million for seven years, in spite of a 25% decline in real average freight rates. In 1989/90 the system carried 9.04 million tonnes of freight.

Figures 1 and 2 provide an overview of results in 1989/90 in the principal freight corridors and by business sector. All main corridors and traffic types were incurring losses.

Figure 1 Freight financials – main corridors, 1989/90
\$ millions p.a. (\$1989/90)

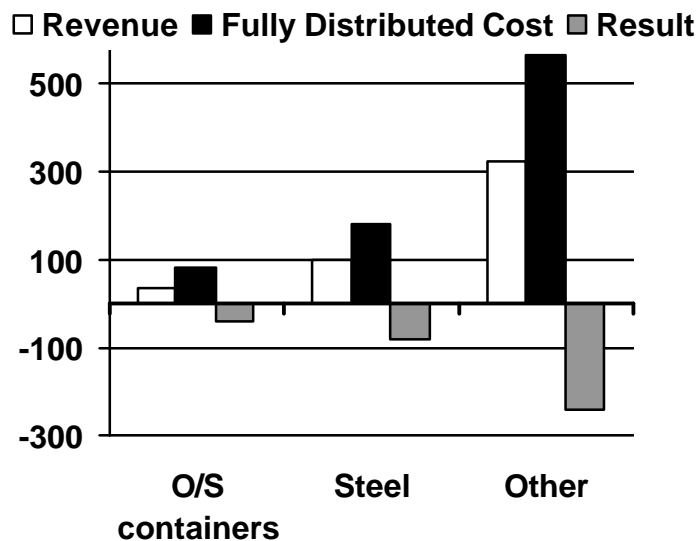
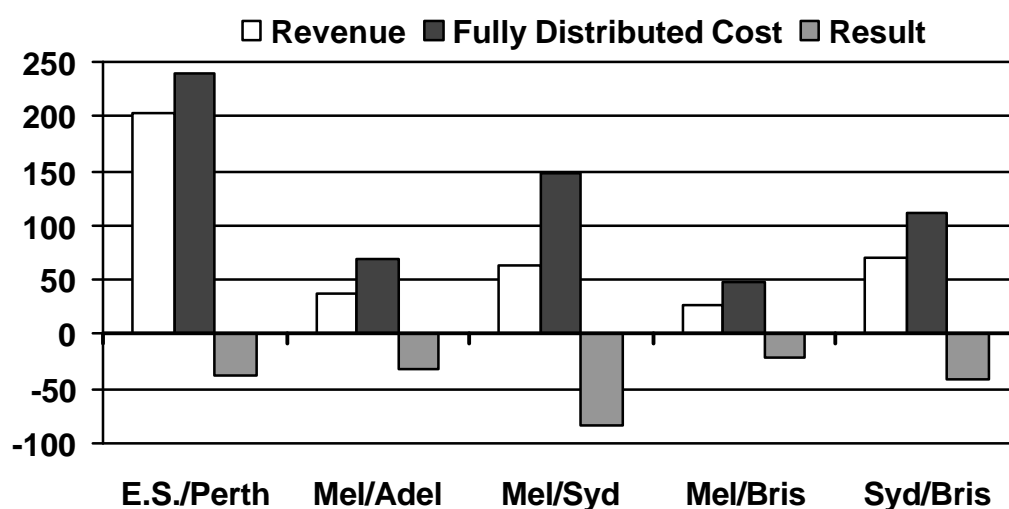


Figure 2 Freight financials – main traffics, 1989/90
\$ millions



Non-financial measures of performance, 1990-2001

Figures 3 to 8 compare a number of key indicators, which clearly show substantial increases in productivity. It is also possible to compare some of these with the changes required to achieve the 'World Standard Efficient Costs' reported in 1990 by the Corporate Planning Working Party advising the National Rail Freight Task Force. As shown in Table 1, the increases achieved have generally been in line with or greater than proposed in 1990.¹⁵

Table 1 Comparison of proposed and actual productivity, 1989/90 and 2000/01

	Increase in performance compared with 1990 (%)	
	Proposed in 1990 (a)	Actual 2000/01
Employee productivity	86	640
Locomotive utilisation	66	108
Wagon utilisation	78	76

(a) Percentage improvements required to achieve 'World Standard Efficient Costs', as reported by the 1990 Working Party. Definitions of utilisation and productivity are the same as in Tables 3, 7 and 8.

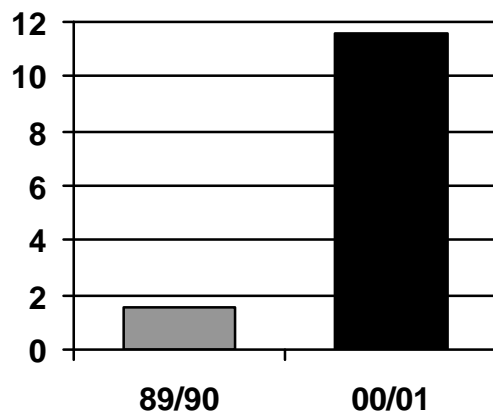
Financial performance to December 2002

In the financial year 2000/01, National Rail reported a bottom line profit of \$2.3 million – its first since the end of the Establishment Period – and a positive cash flow (EBITDA – earnings before interest, tax, depreciation and abnormals) of \$67.6 million. In February 2002, the company reported an unaudited profit for the six months to 31 December 2001 of \$14.3 million (EBITDA of \$47.1).

These figures are in stark contrast with an estimated *negative* EBITDA of \$271 million in the last year before establishment of National Rail, a turnaround of \$339 million pa. This is a measure of the annual impact on state and Commonwealth Treasuries of this rail reform begun in 1990 – a good annual return on their equity investment of \$406.5 million.

Figure 9 shows these results 'pre-National Rail' and from 1998/99, the first full year following completion of the 'establishment period'.

**Figure 3 Average employee productivity, 1989/90 and 2000/01
(Million net tonne kilometres per employee p.a.)**



**Figure 4 Average terminal productivity, 1990/91 and 2000/01
Index: cents per net tonne kilometre (1990/91 = 100)
(‘Terminals’ includes terminals and sidings)**

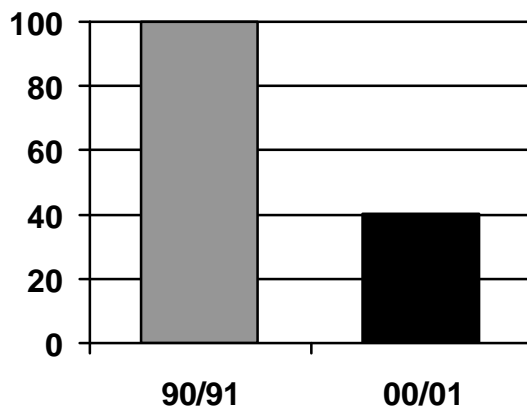


Figure 5 Average train crew productivity, 1990/01 and 2000/01
Index: cents per net tonne kilometres (1990/91 = 100)

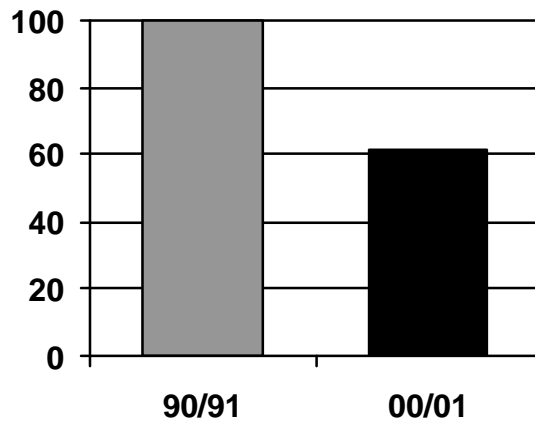


Figure 6 Average fuel efficiency, 1992/93 and 2000/01
Litres per 1,000 gross tonne kilometres

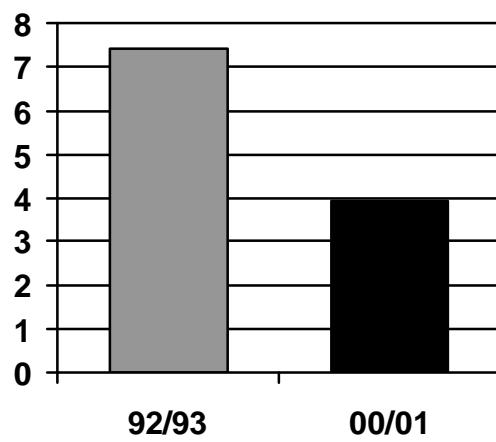


Figure 7 Average locomotive utilisation, 1990/91 and 2000/01
Million gross tonne-kilometres per locomotive p.a.

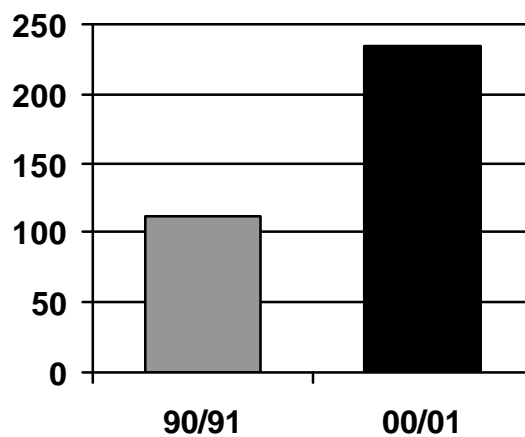


Figure 8 Average wagon utilisation, 1990/91 and 2000/01
 Million net tonne-kilometres per wagon p.a.

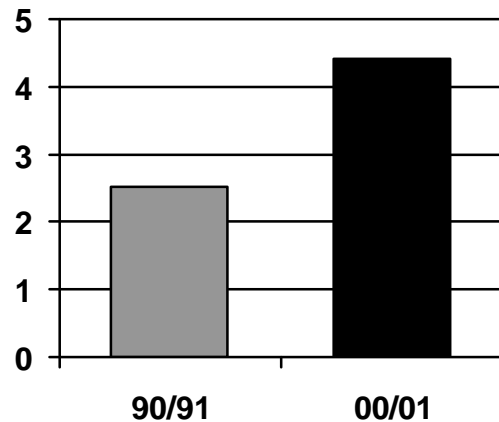
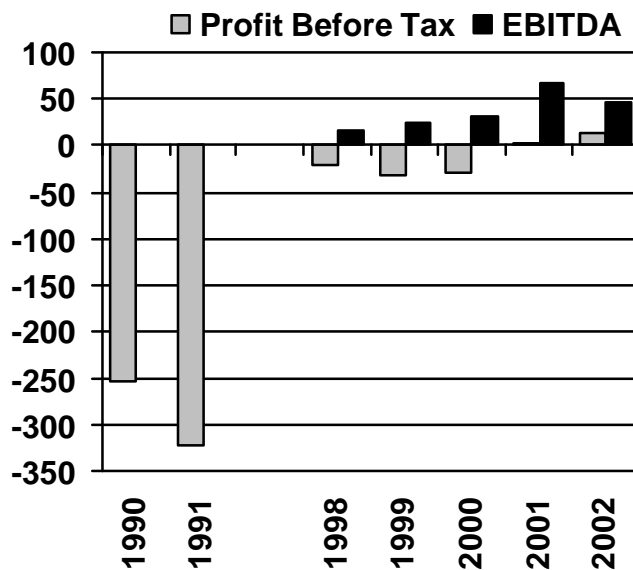


Figure 9 National Rail financial results, 1990-2002
 \$ Millions¹⁶



Strategies for profit

How was this turnaround achieved? National Rail's strategy for profit was simple, although complex to implement. It had the following main elements:

- Re-engineering terminal and line-haul tasks to increase control over service delivery, exploiting the resultant quality service to achieve profitable business growth.
- Creating IT-based customer interfaces to make services more customer-friendly and strengthen customer loyalty and market reach

- Operating fewer longer trains, and therefore reducing total train hours, and providing a large reservoir of available capacity which could be filled at low marginal cost.
- Acquiring a new single-type locomotive fleet, to ensure reliable motive power, reduce the rate of fuel consumption and the cost of servicing and maintenance.
- Acquiring new wagons with a higher gross-to-tare ratio, to reduce non-revenue paying mass, reduce fuel consumption and reduce maintenance.
- Attracting new business in new markets by offering innovative service packages, and exploiting open access regimes to leverage market share growth on regional rail networks.

These lead strategies required a substantial program of investment in new plant and equipment (locomotives, wagons, servicing facilities, maintenance plant, materials handling equipment, terminal infrastructure, IT and communications systems). Total capital investment was \$680 million between 1993 and 2001.

The essential catalyst for change was strong leadership by the Managing Director Vince Graham and his committed management team, and a resilient teamwork culture.

Major strategies were underpinned by a range of support systems aimed at facilitating growth in market share and productivity:

- 'National Rail' branding and corporate identity supporting a number of well differentiated product brands (most recognisable in the market have been NR Intermodal, NR Express and its Trailerrail product, and SteelLink).
- Intensive competency-based training.
- Continual change in service and asset control systems and work practices.

Unfortunately, without access to substantial company data – which inevitably remains confidential – it is not possible to assess the contribution made by each element of National Rail's turnaround strategy to the financial results achieved.

Increasing control over operations for reliable service delivery

Reliable and efficient service was and is an essential for business survival in the competitive freight market. However, the assets, systems and personnel available to National Rail at the commencement of business in 1993 and for some time afterwards were not capable of providing these essentials, and almost five years were required to achieve satisfactory levels of performance.

The two most powerful strategies for gaining more effective control over service delivery were the acquisition of a new locomotive fleet and implementation of the company's IT-based 'Freight Control System' (FCS). Starting in 1993, actions taken (and some issues on the way) were:

- The new terminal workforce was trained to be multi-skilled. Many of these new 'Terminal Operators' were new to the rail industry,¹⁷ and all were trained in both forklift, the management of freight loading, and computer operations.

'Multi-skilling' was not a total success in early years, and was criticised by some customers who took the view that skill levels would be enhanced by greater specialisation. In the long-term, multi-skilling has been successful in identifying the aptitudes of the workforce, and most have become more specialised. Many Terminal Operators have developed careers inside and outside National Rail well beyond their expectations, as they have become very skilled in process and people management, in sales and marketing, and in the development and implementation of complex IT systems.

- Based on a comprehensive national Terminal Master Plan, most terminals were re-configured and re-equipped with new forklifts, reachstackers, rubber tyre gantry cranes, and ITVs (internal transfer vehicles) commencing in 1993. The greatest changes occurred in Melbourne, Sydney and Brisbane, where the length of tracks available for container handling was extended to accommodate 1,500 metre trains.¹⁸ New entry gates with enhanced facilities for processing inwards and outwards truck movements were constructed in all terminals. For the Melbourne Freight Terminal the Dock Link Road, part of the One Nation program, provided a new access road.
- The company took delivery of a new fleet of 120 GE 'Dash-8' type 4,000 hp locomotives in late 1997 and early 1998 from Australian manufacturers Goninan & Co. Much of the 'legacy' locomotive fleet had provided poor quality motive power. For example, in the three peak pre-Christmas months of October-November-December 1993, as National Rail was beginning to take over train operations, locomotive failures caused monthly average unplanned train delays of 310 hours, reducing on-train arrivals to an average of 38% in these months (29% in December 1993).

The availability of reliable motive power revolutionised service reliability overnight, taking on-time freight availability out of the range between 10% and 70%¹⁹ into the range between 85% and 95%. The impact on customer acceptance of the National Rail brand was dramatic. At the same time as taking delivery of the new locomotive fleet, National Rail also put in place a long-term maintenance contract with the manufacturer in a new purpose built facility in the Melbourne suburb of Spotswood.

- The Freight Control System (FCS) (the IT system which was fully implemented near the end of 1999) was developed in a number of stages, starting with a complete re-engineering of terminal and line-haul operations. Ultimately FCS has implemented modules for managing container consignments, acceptance and tracking; terminal, train and asset management; and customer billing. FCS now permeates all aspects of the company's operations. It also provides intermodal customers with a user-friendly interface for booking containers onto National Rail trains; it also provides a similar interface for other customers. The impact of FCS in giving the company control over almost all aspects of its operations and customer relations would be difficult to exaggerate.
- Supporting this IT system was a management system for planning and controlling operations which combined very strong capability (and very committed and experienced staff) for short (day-to-day), medium (weekly and monthly) and long-term (annual) planning. It was a dictum that the company must develop a 'planning culture' to create robust 'train plans' which could continue delivering quality service even in the face of network disruption caused by weather, equipment failures, accidents or other factors.
- All operating units of the company obtained AS9002 quality certification, initially for their individual operations; all terminals achieved certification in 1994/95. The 'paper-chase' aspects of quality certification have been criticised. However, the discipline of documenting procedures which have evolved informally and learned 'on-the-job' was a powerful force for change, and was responsible for improved control over many processes.

The combined effect of these changes in rail assets and operations is most easily seen in the levels of performance achieved by the end of December 2001: 91% 'on-time freight availability' averaged across business groups, and 'average transaction time' in intermodal terminals of 16.4 minutes.²⁰

Getting closer to customers to enhance customers' loyalty

The major initiatives to forge closer relationships with customers were:

- Creation of the *FreightWeb* freight booking and consignment management system accessible to customers via the Internet. By mid-2001, approximately 95% of all National Rail customers were using this system. A significant number of *FreightWeb* terminals had also been installed in the premises of end-customers (customers of rail-based freight forwarders). This e-commerce system now provides not only on-line freight bookings, but also on-line consignment tracking and other customer-specific performance reports.

- A major revision of the freight tariff in the 1995, aimed at removing an accretion of special rates and concessions which had entrenched significant discrimination between customers. As might be expected not all customers were happy with this reform, but it was a necessary part of ensuring that all customers had an equal opportunity to achieve business growth. In place of the old system, new discount rates were made available equally to all customers to provide incentives to reward those who were consistently successful in building tonnage and revenue on National Rail services.
- Formal contracts with major customers have provided mutual incentives for performance. The most rigorous and demanding have been those with BHP and its successors, in which financial penalties and incentives are pegged to agreed levels of on-time freight availability and other performance criteria. Where possible, these agreements have also included benefit sharing from productivity improvements; for example from the substantial cost reductions made available from the introduction of improved train pathing and new low-tare wagons used for moving steel feedstock. Similar performance-incentives were established for forwarders with particularly demanding customers such as Australia Post.
- Most recently, National Rail entered into medium and long-term partnering agreements with a number of major forwarders, to create more binding ties of loyalty in this very volatile part of the customer base.

Locking in a growth path at marginal cost

Growth in freight on all corridors has contributed to National Rail's growing profitability. Most significant has been the growth in the long-distance Melbourne-Brisbane corridor, illustrated in Figure 10.

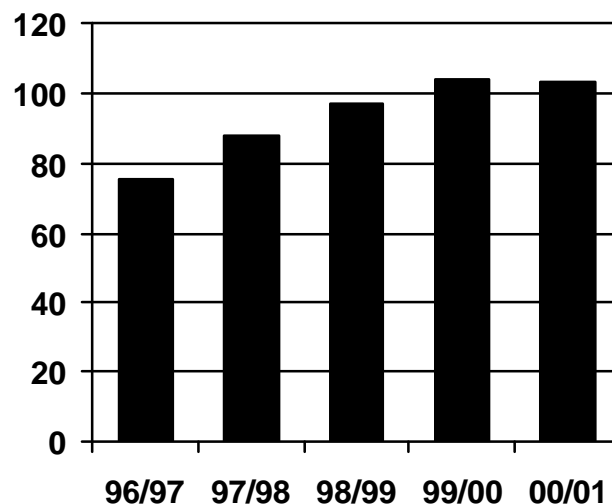
The key competitive advantage of rail is the low marginal cost of carrying additional freight – that is, if more freight (net tonne-kilometres) can be carried without significant extra train operations (train hours). The requirement is for longer trains on which there is surplus capacity. A bonus of cost savings can be earned by combining existing capacity provided by separate trains into fewer longer trains, taking advantage of the network pattern of train operations. Savings come in the form of reduced locomotive maintenance, track access fees, crewing costs, and fuel consumption.

To put the long-train strategy in place required three things:

- Locomotives of sufficient power that they could haul long trains; operational and financial modelling indicated that with the NR-class 4,000-hp locomotives, the optimal train length was approximately 1,500 metres.

- Low-tare wagons to maximise revenue-earning carrying capacity and minimise fuel-consuming dead weight; a new fleet of articulated 'five-pack' intermodal wagons was purchased to achieve these tactical objectives.
- Longer crossing loops at key locations on the east coast and between Adelaide and Melbourne to enable longer trains to cross on single-line track (all track on the national network is single-line except through the Sydney area). A program of new and extended loops was initiated and trains now operate routinely at 1,400 metres, but the number and locations of longer crossing loops is not yet optimal for efficient operations, and capacity is limited. Improved safe-working systems, together with long 'passing lanes' (say up to 20 km in length) are now being envisaged.

Figure 10 Victoria-Queensland freight corridor, 1996/97-2000/01
Containers carried by National Rail (Thousand TEU p.a.)



Trains on the east coast in particular have been pushed out from 600-800 metres in the mid-1990s for 'Superfreighter' intermodal trains to 1,200-1,400 metres by 2001, with 1,500 metres the goal. On the east-west corridor, double stacking west of Adelaide adds similarly to capacity, with the proviso that for denser freight, relatively low permissible axle loads limit its use. In both corridors 'shared service' trains were the norm for National Rail.

The long-train strategy has been the key to efficient profitable growth of freight volume, revenue on the east coast, which was formerly a financial 'black hole'; it is understood that even Sydney-Melbourne has now become a marginally profitable corridor.

The gains from the long train strategy have been enhanced more recently by a network-based strategy of combined train operations. National Rail's early segregation of train operations into separate intermodal and industrial (largely

steel) train services on the national network has been superseded by a combined network train operating policy in which longer more economic trains are created by combining services from two or more business groups on the same train. It has taken a long time to understand fully the important distinction between *trains* (which move freight regardless of its type), *products* (eg transport of containers or commodities like steel feedstock, requiring differently designed rollingstock, but which can be coupled together in the same train), and *services* (eg intermodal and industrial freight) which provide departure and arrival times attractive to customers). Provided the differing services required by customers can be matched to shared train schedules – generally aimed at the ‘highest’ service being provided – the cost savings available from this operating policy are substantial, with obvious competitive consequences. Only where more frequent services are required by customers – eg for road-competitive Express services – are separate trains operated for separate products or separate services.

Cost competitive motive power

The acquisition of a new fleet of locomotives by National Rail in the late 1990s has been mentioned as a key factor in its financial turnaround. The strategy adopted was radical, and provoked some surprise in the company when first proposed, but the detailed evaluation of options quickly demonstrated its merit.

The options for fleet acquisition were to transfer a fleet of locomotives from the legacy rail authorities (in 1993 planning indicated that approximately 224 with a weighted average age of 11.5 years should be transferred) – or to acquire a new fleet. Evaluation showed that transfer of the old fleet was not an attractive option in terms of either cost or service quality. Some performance comparisons of the legacy fleet and the new NR class locomotives are described earlier in this paper. Figures 11 and 12 show some other comparisons between the legacy fleet historical actuals and actuals for the NR class in 2000/01.

Figure 11 Motive power unit costs for 'Legacy' fleet (1993) and NR Class (July-Dec 2001 (Cents per NTK)

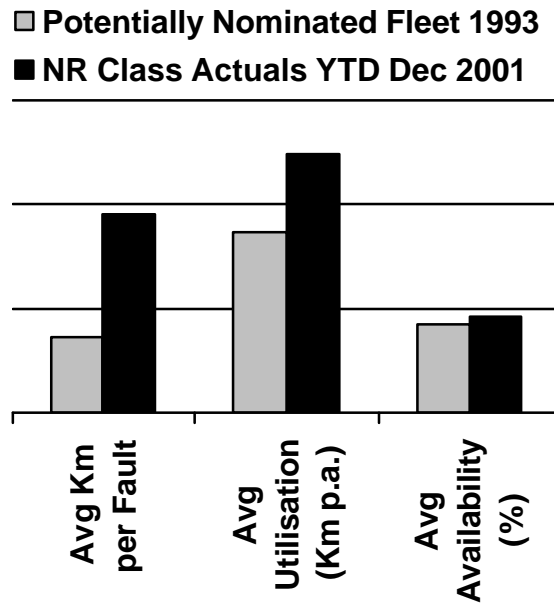
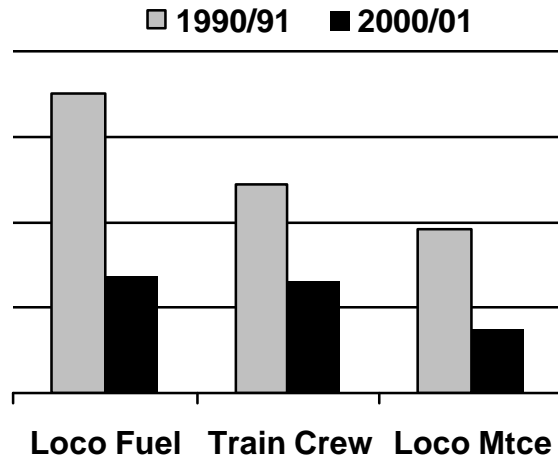


Figure 12 'Legacy' locomotive fleet and NR Class Non-financial KPIs (1993 and actuals July-Dec 2001)



Innovative service packages to attack new markets

Innovation in the types of services which rail can offer has also been an important part of the National Rail strategy, although the potential which has been created by the recent merger of National Rail and FreightCorp with Toll and Patrick should significantly extend this potential.

The 'RoadRailer' bi-modal trains inherited from Australian National, which had pioneered them in the 1980s, provided the basis for services which successfully compete with over-the-road consolidated freight and refrigerated trucking services. These trains, which were re-branded 'Trailerail', were first operated between Melbourne and Perth, and later also between Sydney and Perth. Combined with fast intermodal services, the NR Express product grew at a compound rate of more than 70% per year after 1995/96, and continues to grow.

Innovative bulk mineral services in New South Wales have grown at similar rates through aggressive marketing in the state's open access rail environment and through close attention to the detail of customer requirements. Since the Bulk Division was established in 1995/96, bulk freight revenue grew to \$42 million in the financial year 2000/01, contributing significantly to National Rail's financial turnaround.

The combined National Rail and Queensland Rail 'NQ Direct' service delivering North Queensland tropical fruit into markets in Sydney and Melbourne have also grown quickly owing to persistent attention to solving operational problems created by the break of gauge in Brisbane. The size of this market is very large and offers a substantial growth path for freight in the Brisbane/Melbourne rail corridor.

The strategies that could not be tested

The missing strategy for National Rail was one which would bring it into direct contact with its end-users of containerised freight. Where rail is able to create a direct customer-to-carrier relationship, without an intermediary (eg a freight forwarder), customer loyalty can be enhanced through performance based financial incentives, and revenue yields are also improved.

For the majority of the National Rail revenue base – intermodal freight, which accounted for 57% of total revenue in 2000/01 – business is conducted through freight forwarders, who are the marketing arm of rail line-haul service providers. End-user customer loyalty is to the freight forwarder, who takes his profit before the rail line-haul operator sees the freight. Rail profit margins have consequently been low to negative for this business until the cost-reduction strategies described above were possible.

Strategies aimed at extending the market reach of rail to capture end-users' freight business – eg by operating freight forwarder subsidiaries and cross

docking, were impractical while in government ownership. These strategies required extra capital and at least a modest program to acquire one or more forwarders who could provide efficient non-rail services. Government shareholders are too risk-averse and capital-poor to provide the support needed for these strategies. Privatisation has provided the basis for these strategies and others with similar objectives in future.

There were also mistakes made, some serious. The first and one of the most damaging was a decision in 1995 to discontinue van (boxcar) services to Western Australia, which was followed by the successful start-up of SCT's rail business, the first new entrant to use the new open access competition law on the interstate rail network. Another was the implied threat to National Rail's freight forwarder customers to approach *their* customers, cutting them out or reducing their role and market power. The reaction of some was unfriendly, and many recall the threat as such. The scenario has potentially re-emerged with the transfer of control over National Rail to the largest of their number.

Was National Rail the right model for rail reform?

A detailed analysis of the 'National Rail model' for rail reform would take much more time and space than is possible in this short paper. However, it is certain that some features of the model were strongly instrumental in achieving the results obtained by 2002. Whether a different model could have produced a more rapid turnaround must be a moot point for now.

The 1991 National Rail initiative was a success, although it has not yet reached its full potential. By the 2001/02 financial year the company had turned the corner, but was still some distance from earning an acceptable return on equity. However, the reaction of the share market to the acquisition by Toll and Patrick suggests that many believe it can be lifted to an acceptable level with the help of new synergies now available from its merger with FreightCorp.

The turnaround in customer service quality and profit took longer than expected – possibly too long. However, the condition of assets and systems in the 'pre-National Rail' business were worse than had been appreciated when the venture was begun. Obtaining and sustaining agreement to a complex implementation strategy from five State governments and four 'legacy' railways with their own political and business objectives was also more difficult than had been imagined in the heady days of 'cooperative federalism'. And 'corporate memories' in the bureaucracy and among shareholder Ministers were short.

The features of the 'National Rail model' which were the keys to achieving by 2002 the broad outcomes which had been sought by its architects in 1990/91 were:

- Incorporation of the company under the Corporations Law, which gave it independence to pursue a business strategy free from overt government interference; fortuitously, ownership by three governments (none with a

controlling interest) was an additional advantage. However, it was a 'negative' type of independence, and government ownership still constrained the company by cutting off access to new capital and by a bureaucratic and risk-averse attitude to business strategy. Of all the government-owned entities formed to progress rail reform, National Rail and the Federal-Government owned Australian Rail Track Corporation Ltd are still the only ones formed under the Corporations Law.

- The \$406.5 million in cash equity provided up-front by government shareholders for investment in new capital equipment enabled the company's to build a new business based on quality service and high productivity.
- Transfer of assets (at the company's option) was critical to its ability to secure essential assets for early operations, and for longer-term strategic advantage, especially the capital city terminals. On the other hand, starting with a hand-picked labour force and a 'greenfields' Enterprise Agreement – with its simplified and flexible skill and pay structure – facilitated large productivity gains and in the longer term re-engineering of operating functions. It also facilitated out-sourcing of non-core functions including maintenance and IT.
- Workforce representation by only two industry-based unions simplified negotiation of Enterprise Agreements and eliminated demarcation disputes. The support of key unions and the national peak union council, the ACTU, was very important in getting agreement on the start-up Enterprise Agreement in 1993. The company's on-going push to implement driver-only operations on most trains east of Port Augusta and to lift terminal productivity eroded some of this good will, but lost production and degraded service quality due to disputes was small until late in 1999 near the end of negotiations for Enterprise Agreement No 4.
- Competition and vertical separation were not part of the original 'National Rail model'. When it became apparent during 1994 that governments might wish to graft them onto the 1991 model, the company recommended against it, because it would prevent National Rail from controlling the infrastructure on which it depended – and depends – for service quality and efficiency, and would also prevent the company extending its reform strategy to track and communications. These factors were more important than the prospect of competition from new entrants. However, the reality of competition was also very damaging when it began in 1995.
- With the perspective of nearly seven years' hindsight on the painful advent of competition, the company would probably now see 'open access' as a 'blessing in disguise' for the extra pressure it exerted to lift service quality and reduce costs. The company also benefited directly from 'open access' in New South Wales, where its fledgling bulk business has grown rapidly to four nearly times its original size with profitable mineral hauls, some brought to rail from road.

Affleck

- Open access probably delayed profitability (by seriously eroding the company's revenue base in the east-west corridor), but it almost certainly made the ultimate turnaround more robust.

Endnotes

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- ¹ For its road and rail operations, the new entity owns no rails or pavement except in rail and road terminals; for line-haul transport, it is a user of rail and road infrastructure owned and maintained mainly by government-owned bodies.
- ² The members of the inaugural Board of Directors, who were first appointed between 19 September 1991 and 28 April 1992, comprised: Ted Butcher (Chairman), Vince Graham (Managing Director), Laurie Carmichael, Gavin Keneally, Max Moore-Wilton, Stuart Morgan, Steve Stanko, James Strong and Peter Young.
- ³ The *Agreement About the Establishment of National Rail Corporation Limited* (30 July 1991), which was concluded after lengthy inter-governmental negotiations, set down the principles and the detailed arrangements for transfer of functions and access to and transfer of rail authorities' assets, and for funding and other support from shareholders during National Rail's 'establishment period' (intended to be five years); the agreement is the Schedule to the *National Rail Corporation Agreement Act 1992* (Cwth), which also contains the Memorandum and Articles of Association of the company.

This inter-governmental agreement brought to a successful conclusion more than 18 months of negotiation and study by governments, rail authorities and rail unions.

At the 7 September 1990 meeting of the Australian Transport Advisory Council (ATAC), Ministers had agreed to establish a National Rail Freight Initiative Task Force (chaired by former Interstate Commission President Ted Butcher) to develop proposals and recommendations on formation of a fully commercial 'National Rail Freight Corporation'.

In October 1989 major freight forwarders and major rail customers TNT, Brambles, Mayne Nickless and BHP, supported by rail authorities, commonwealth and state governments convened the National Freight Initiative to examine scenarios for a single interstate rail freight operator. This led to the ATAC decision, while alternative recommendations that Australian National Railways (AN) be restructured with Federal and state government equity to operate interstate freight and passenger services were rejected (House of Representative Standing Committee on Transport, Communications and Infrastructure, *Rail: Five Systems – One Solution: The Efficiency of Australian National's East-West Operations*, November 1989).

The decision of ATAC was endorsed by a Heads of Government Agreement at a Special Premiers' Conference on 31 October 1990, which agreed that:

- The National Rail Freight Corporation (NRFC) would be formed as a company under the Companies Code with Commonwealth, state and territory equity participation.
- Its business would encompass all the railways' existing interstate freight business.
- It would have the corporate goal to earn a commercial rate of return on its assets without reliance on government guarantees.

This Heads of Government Agreement also recognised that a number of conditions were essential for the NRFC, of which the following are most significant:

- It must be formed on a "strictly commercial basis, with a financially viable corporate plan".
- The NRFC "shall have access (by ownership or other appropriate arrangements) to assets, including track infrastructure, necessary to achieve commercial viability".
- It should have a single "'clean sheet' enterprise agreement".
- The *Trade Practices Act 1974* shall apply to the NRFC.

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- “Institutional and operating arrangements shall facilitate the most efficient cost structure including the use of contractors, private sector operations of rail terminals, common user terminals involving NRFC and the private sector, and for private sector operations on the network.”

With these principles as a framework, the NRFC Task Force proceeded to fill in the detail for formation of the company. Working parties on corporate planning, operations, industrial relations and terminals – comprising rail executives, unions, federal and state governments and the private sector – as well as consultants, assessed all aspects of the proposed new venture.

The report to ATAC in April 1991 (*Report of the National Rail Freight Initiative Task Force to the 5 April 1991 Meeting of the Australian Transport Advisory Council*, unpublished, 119 pages, 21 March 1991), concluded that “the NRFC can be commercially viable after an interim establishment period...” and recommended (*inter alia*):

- That an ‘interim board’ be created from the Task Force to progress arrangements to incorporate a company, which would appoint a management team. Equity in the new company should be contributed by the Commonwealth (34%), NSW (29%), Victoria (19%), WA (16%), and Queensland (2%); but voting rights should be on the basis of equal representation for each shareholder. Following full commercial establishment (i.e. achievement of a commercial level of profitability, planned to occur in 1996) the company should be recapitalised on a fully commercial basis. In the establishment phase (1992-1996) the company’s capital requirements should be met by 50% debt and equity.
- That the company should take over major capital city intermodal terminals from 1 October 1991, and complete formal start operations in 1992.
- That “the NRFC should move to control the permanent way and infrastructure that is essential for its operations on a commercial basis”.

Also influential at this time was the report of the Industry Commission on recommended rail reforms (*Rail Transport*, Report No 13, 2 vols, Canberra, 21 August 1991), which proposed a range of reforms including (*inter alia*) competitive access to rail infrastructure, vertical separation of rail infrastructure (in an accounting sense only), and outsourcing rail maintenance; it also endorsed formation of the NRC.

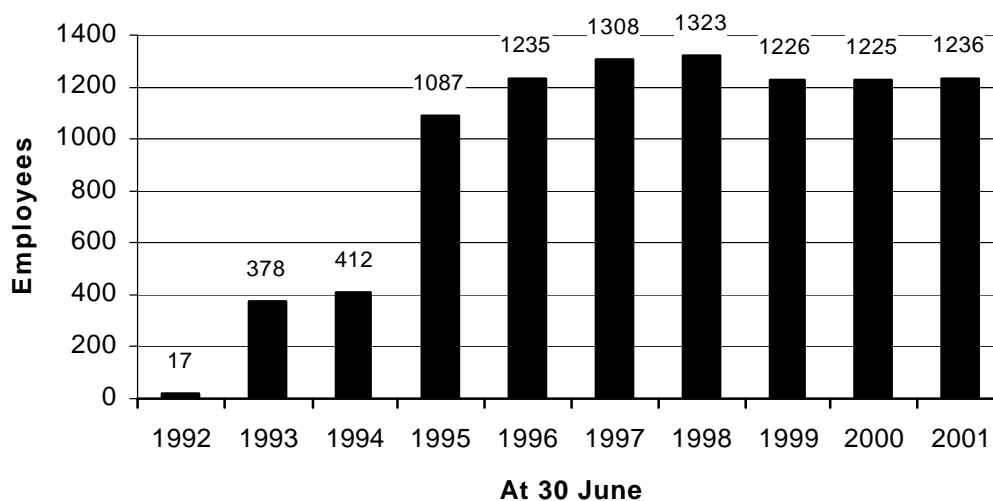
Capitalisation of the company, which remained static to the time of its sale, comprised \$406.5 million in equity contributed by the commonwealth and two states: Commonwealth \$295.8 million (72.8%), New South Wales \$75.6 million (18.6%), and Victoria \$35.1 million (8.6%); a further \$8.0 million equity was to be contributed by Western Australia, but before commencement of operations by the company in 1993, WA withdrew. With Queensland and South Australia it became an “other state” pledged to transfer functions and provide access to assets (by transfer, long-term lease or on commercial terms).

- ⁴ A summary of the Shareholders Agreement is contained in National Rail’s *Annual Report* for the year ending 30 June 1992, page 4.
- ⁵ The initial management team comprised: Vince Graham (Managing Director), Ian Roxburgh (Company Secretary), Robert Greatrex (Chief Financial Officer), Frank Tait (General Manager Intermodal), Rod O’Loan (General Manager Industrial Products), Michael Purcell (National Operations Manager), Barry O’Sullivan (General Manager Employee Relations and Development), Kym Norley (General Manager Strategic Development), and Fred Affleck (General Manager Corporate Affairs).
- ⁶ Commonwealth-owned Australian National Railways Commission (AN), and state-owned State Rail Authority of NSW (SRA), Public Transport Commission of Victoria (PTC), Queensland Rail and Westrail.

AN was privatised in November 1997, to form the Australia Southern Railroad, Tasrail and the Great Southern [passenger] Railway; the SRA's freight business was separated to become Freight Rail, later FreightCorp; the PTC's freight business was separated to become V/Line Freight, later Freight Australia after its sale in 1999 to Rail America; Westrail's freight business was sold in 2000 to the Australian Railroad Group.

- ⁷ The end of the 'establishment period' was pushed forward to 1 February 1998 by the initial delay in the official 'date of commencement of operations' on 1 February 1993. The National Rail Enterprise Agreement, to run for two years, was signed on 6 February 1993 by National Rail, the ACTU, the Public Transport Union and the Australian Services Union.
- ⁸ In most terminals a large proportion of existing employees were retained, although all were required to apply for the new multi-skilled positions. In the PTC-owned Melbourne Freight Terminal all positions were filled by new recruits not previously employed by the PTC.
- ⁹ National Rail's workforce grew from 17 on 30 June 1992 to 1,236 (full-time equivalent) on 30 June 2001; taking account of all engagements and separations, a total of 2,150 people were employed by National Rail from 1 January 1992 to 22 February 2002. The graph below summarises the end-of-year (30 June) totals (source: Annual Reports):

National Rail Total Employees



- ¹⁰ For details of the completed program see: National Rail, *One Nation Rail Infrastructure June 92 – June 95: Completion Report*, October 1996; a copy is available in the Parliamentary Library, Canberra. The total investment in track and terminal infrastructure by the One Nation program was \$429 million, of which projects to the value of \$350 million were managed by National Rail. A number of terminal and other smaller projects were subsequently acquired by National Rail.
- ¹¹ The total of approximately \$60 million p.a. combined the impact of loss of volume and reduction in the average freight rate, both of which were caused by new competition in the east-west corridor from 1995.
- ¹² The complex financial arrangements contained in the shareholders' agreement which applied during the 'establishment period' (1 February 1993 to 31 January 1998) are explained in

some detail in National Rail's *Annual Reports*. The following is an extract from *Annual Reports* explaining some aspects of these arrangements:

National Rail was legally able to commence operations on 1 February 1993. Under its Shareholders' Agreement, certain financial arrangements appl[ie]d to National Rail in its first three years of operations, known as the "Transition Period", which effectively ensure[d] that losses on interstate rail freight [were] quarantined to the rail systems of origin. This allow[ed] time for National Rail to establish itself in the market place and to achieve profitability within the "Establishment Period" which the Shareholders' Agreement defines as the first five years of operation, ending 31 January 1998.

[During the transition period National Rail entered into 'service contracts' with rail authorities for them to provide services to National Rail – eg train and terminal operations and wagon and locomotive maintenance. As National Rail engaged staff, established initial management systems and assumed responsibility for discreet functions (in accordance with nominations set out in Corporate Plans – which were approved annually by shareholders – and subsequently modified by shareholders) the scope of services provided by these contracts was progressively narrowed and eventually terminated when all functions had been transferred.]

During Stage 1 of the Transition Period which for practical reasons cover[ed] the period from 1 February 1993 to 5 February 1994, National Rail collected certain interstate rail freight revenue, deducted its reasonable costs and distributed the remaining revenue among rail authorities in accordance with established revenue sharing arrangements [as payment for services rendered under the 'service contracts'].

Shareholders also agreed to provide compensatory payments, under clause 5(4)(b) of the shareholders' agreement to the company to meet the difference between the initial cost of inefficient functions assumed by the company from shareholder rail authorities and "NRC standard costs", which are based on world's best practice. These compensatory payments from shareholders [were] limited to three years from the date of assumption of individual functions and cease at the end of the 'establishment period', which the shareholders' agreement defines as the first five years of operations (which will end on 31 January 1998).

Stage 2 of the Transition Period cover[ed] the period from 6 February 1994 to 31 January 1996. During Stage 2, the Shareholders' Agreement provide[d] for National Rail to assume pricing responsibility and revenue risks, to a limited extent, for the entire interstate rail freight business. It was intended [by the shareholders' agreement] that amounts paid to rail authorities for specific functions yet to be assumed by National Rail [i.e. services provided pursuant to the 'service contracts'] would be capped at the implicit cost for each such function, established during the Stage 1 period.

Compensatory payments under clause 5(4)(b) of the shareholders' agreement [were] payable to the company by the Commonwealth, New South Wales and Victorian shareholders since commencement of operations.... Due to the lack of cost data, however, the derivation of implicit costs for specific functions has not been possible. [Therefore] a ... mechanism [for] ... implementation of the shareholder's intended financial arrangements for years two and three of the transition period between the company and the shareholder rail authorities... was agreed which involved the effective offsetting of compensatory payments due from shareholders against amounts payable to their rail authorities for services provided.... As a consequence, compensatory payments effectively received by the company during the transition period [were not] brought to account as revenue but effectively subsumed within rail authorities. [Compensation payments – known colloquially as 'wedge payments' – were paid in cash from 1 February 1996 (the end of the transition period) to 31 January 1998 (the end of the establishment period).]

The company commissioned an independent report to quantify compensatory payments due from shareholders for functions assumed and made this report available to shareholders prior to the end of the transition period.

The shareholders' agreement allow[ed] the company to request access to assets held by shareholder rail authorities used in interstate rail freight activities. Where the shareholder grant[ed] long term access or direct[ed] its rail authority to transfer the requested assets

to the company, the debt ensuing [was] satisfied through the issuing of shares to the shareholder. This ... [occurred beginning at the] end of the establishment period (Source: National Rail, *Annual Reports*, 1994/95 and 1995/96, Financial Statements, Notes 2 and 3).

- ¹³ Except where otherwise stated, the following material is taken from a report commissioned by National Rail in 1991 from Travers Morgan Pty Ltd, *Interstate Rail Freight Business Summary*, unpublished, November 1991, 28 pp.
- ¹⁴ The makeup of this figure is \$462 million in revenue and \$783 million in expenses (including overheads and depreciation [\$50 million] but excluding debt-related expenses and abnormals). The source of these figures is the financial analysis of results reported by the five 'legacy' rail authorities by BT Finance for National Rail (January 1992) reported in *Benchmarking Review of Operating Costs*, by Ernst & Young Business Consulting Services for National Rail, September 1998, page 5.
- ¹⁵ National Freight Initiative, *Report of the Committee on Establishment of a National Rail Freight Corporation*, unpublished, 20 July 1990, page 8). In 1998, Ernst and Young Business Consulting Services undertook a 'benchmarking study' for the National Rail Board. In its final report it presented a table summarising the factors that had reduced National Rail expenditure (source: Ernst & Young, *Benchmarking Review of Operating Costs*, for National Rail, September 1998, page 6):

Expense Category	Main Reasons For Improvement
Fuel	New NR class locomotives Improved train utilisation
Crew	Flexible Enterprise Agreement - crews do not change at State borders
Locomotive Maintenance	New locomotives New maintenance facility Competitive maintenance contract
Wagon Maintenance	New wagons New maintenance facility A reduction in the number of wagons used Purchasing of cheaper overseas spare parts
Terminal Costs	Management practices Flexible Enterprise Agreement Business Re-engineering - Information Technology Capital program
Track access	Strong negotiations Standardisation of track gauge Track improvements - bridges replaced, concrete sleepers, etc More efficient train plan
Overheads	Leaner corporate and business staffing structures Strong business coordination Information technology projects
Depreciation	Reduced locomotive fleet Track depreciation not included

- ¹⁶ The results shown in Figure 9 are as follows:

\$ Million	1989/90(a)	1990/91(a)	1997/98	1998/99	1999/00	2000/01	2001/02(b)
Profit / loss before tax	<i>Not available</i>	<i>Not available</i>	-20.4	-31.6	-30.1	2.3	14.3
EBITDA	-254	-321	16.0	25.0	32.0	67.6	47.1

The second table below shows these outcomes adjusted for inflation (CPI):

\$ Million (June 2000)	1989/90(a)	1990/91(a)	1997/98	1998/99	1999/00	2000/01	2001/02(b)
Profit / loss before tax	<i>Not available</i>	<i>Not available</i>	-22.6	-34.6	-31.9	2.3	14.3
EBITDA	-332	-405	17.7	27.4	33.9	67.6	47.1

Notes to tables: (a) The figures available for pre-National Rail years do not include depreciation, interest and amortisation, or income tax (capital-related expenses were not brought to account in the financial statements of several rail authorities; none were tax-paying bodies in 1990); therefore the results shown for 1989/90 and 1990/91 can most realistically be presented as EBITDA. (b) Half year to 31 December 2001.

- ¹⁷ For example, all employees engaged by National Rail for the Melbourne Freight Terminal at South Dynon, were new to the industry (none had previously worked for the Public Transport Commission of Victoria); on the other hand, in the Adelaide Freight Terminal at Islington, all initially recruited employees had previously worked in the terminal for the Australian National Railways Commission.
- ¹⁸ In all these terminals the inherited boundaries required trains to be loaded in two parts of 750 metres length.
- ¹⁹ The poor performance of the inherited locomotive fleet was aggravated by refusal of the legacy rail authorities to transfer the locomotive maintenance function to National Rail; this finally occurred in 1997.
- ²⁰ 'On-time freight availability' is the percentage of goods available to customers at destination within 30 minutes of the advertised time; the 'average transaction time' is the average turnaround time per TEU (20-foot equivalent unit) in intermodal terminals. Comparable figures for the early years of National Rail's operations are not available.