High Speed Rail and Rail Freight Forum

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See P4 reference to Oxley-Fieldstone JV

A history of high speed rail in Australia

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"Those who do not learn from history are doomed to repeat it" - George Santayana

The quotation above suggests that we should know what was done in the past on high speed rail in Australia; recognise what work can be built on; and understand where mistakes were made and how to avoid repeating them.

The Bicentennial High-Speed Railway Project

For completeness it is necessary to mention that in 1981 the Institution of Engineers, as it then was – now Engineers Australia - unveiled a *Bicentennial High-Speed Railway Project.* The scheme proposed upgrading of existing tracks and some sections of new alignment, so that the journey between Sydney and Melbourne could be completed in 9 hours, Sydney-Canberra in 3 hours, with similar time savings to Brisbane and Adelaide. It did not envisage Australia moving into the era of true high speed train travel, defined initially as trains running at speeds of more than 200km/h on purpose-built tracks. The first such railway began operations in Japan in 1964. The proposal was not picked up by either government or the private sector.

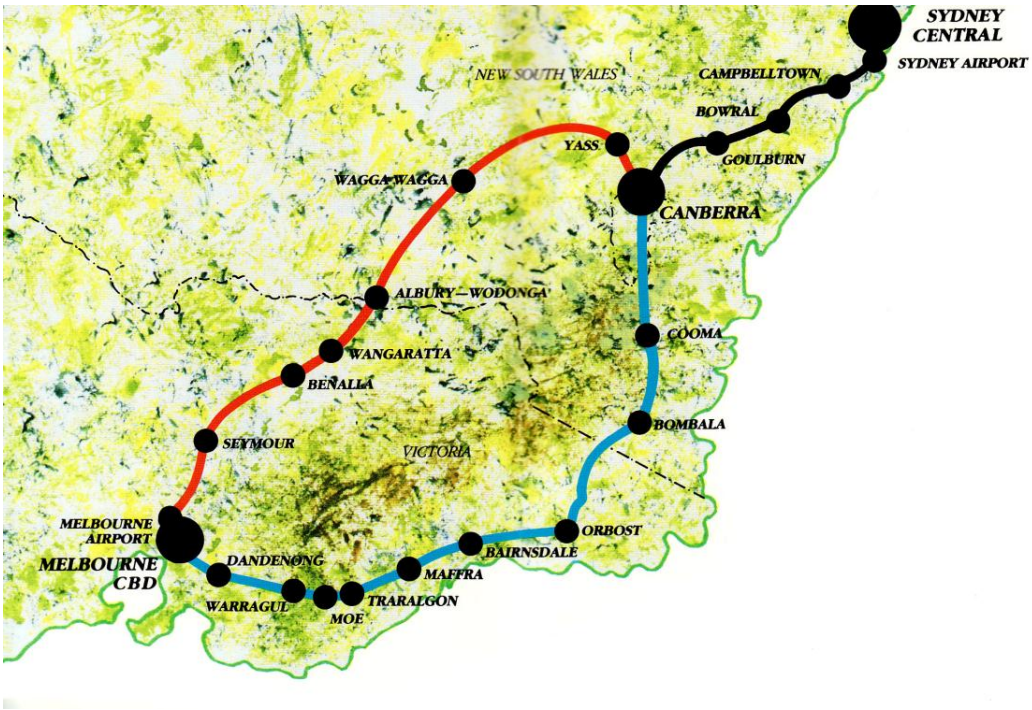
The VFT project - Sydney-Melbourne

The VFT Joint Venture spent $15 million on feasibility studies for a Sydney-Melbourne high-speed railway between 1986 and 1991. The proposal first became public, originating from CSIRO, in 1984. The partners in the joint venture were TNT, Kumagai, Elders IXL and BHP.

The VFT was true high speed, with an operating speed of 350km/h envisaged, a far-sighted approach.

The VFT joint venture undertook comprehensive engineering and market studies, using leading consultants from Australia (including the then Institute of Transport Studies at the University of Sydney), Japan and France.

Extensive work was done on the Sydney-Canberra route; there was less detailed work done between Canberra and Melbourne, because the emphasis was on primary route selection. The 'inland' route was chosen on the basis of cost, not environmental issues as often supposed, although it is a fact that the coastal route through East Gippsland was opposed by environmentalists.



Map showing the alternative routes studied by the VFT project

VFT did not have a technology partner, and did not choose a technology supplier.

In October 1990 a study by Access Economics – at the time the largest benefit-cost study ever done on a project in Australia – showed a net benefit from the project of $9.9 billion.

The VFT project stopped, with the feasibility study incomplete, because of the Federal Government's refusal to agree to the proposed tax treatment. There was a broader problem of government indifference – federal and state - to the project. Government processes were poorly defined. The fate of the VFT was a factor leading to the later introduction of infrastructure bonds.

The basic financial parameters of the VFT looked promising, although the study did not get close to approaching the issues of financing the project.

VFT did not go through a competition, and no competitors emerged. Because of the lack of competition, much information was published - unlike later high speed rail proposals.

There were lessons learned from the VFT. Route determination was mishandled, despite good intentions; the impression was left that VFT would require a corridor with a width of a kilometre, which caused considerable concern particularly in the NSW Southern Highlands; the NSW Government was not helpful in the route development process.

The joint venture's interest in land value capture, although abandoned well before the project was halted, led to a lasting impression that the VFT was motivated by a wish for real estate profits, rather than being a transport project.

The second attempt: Speedrail

Speedrail Pty Ltd was formed in Canberra in 1993; Alstom Australia formed a joint venture with Speedrail Pty Ltd to pursue the project.

Two key decisions were made: to focus on Sydney-Canberra rather than Sydney-Melbourne; and to adopt the French TGV technology, with Alstom Australia coming into the group.

Three elements which helped the revival of interest in high speed rail, following the earlier VFT, were:

- growth in the market since 1987 indicated viability
- the advent of infrastructure bonds
- the decision to build the airport railway in Sydney removed $500 million from the capital costs

The initial proposal was presented to the NSW, Commonwealth and ACT governments in August 1993; the Commonwealth Government made the project public.

There was a long delay in government reaction, particularly in NSW, where the Minister favoured tilt trains and had called for registrations of interest in a Sydney-Canberra tilt train service.

In April 1994 it was decided to undertake an initial feasibility study, making use of $100,000 in support from the Federal and ACT governments. Consultants included the Institute of Transport Studies, Systra (the French Railways consultancy), Maunsell/Snowy

Mountains Engineering Corporation and Oxley Fieldstone as financial adviser; with substantial input also from Alstom.

The feasibility study was completed May 1995. Key parameters included:

- 270 km route length
- 320 km/h operating speed
- 81 minutes trip time
- Services every 45 minutes

At that time it was planned that some services would use Parramatta as their Sydney terminal.

By this time there had been a change of government in NSW. Changes of government, and changes in ministerial appointments, were an ongoing hazard for the project, as they are for all long-drawn-out projects.

There was a distraction: the New South Wales Government trialed a Swedish tilt train in mid-1995. Propelled by two XPT power cars, the train carried passengers between Sydney and Canberra for a period of eight weeks. It achieved a slight reduction in journey time – not only as a result of the tilting technology – but the trip time was still about three and a half hours. This exercise reportedly cost $7 million.

In July 1995 the NSW and ACT governments decided there should be a joint evaluation, to include a consideration of notional tilt train alternatives. The evaluation did not start until early 1996 after the Commonwealth had agreed to participate. The results of this evaluation were never made public. At this time the term 'no net cost to government' was coined, and proved to be an ongoing problem. The project was to be delivered at 'no net cost to government'. What exactly did that mean?

Potential competitors including maglev and tilt train suppliers began to emerge, calling for a formal competition – which had long been favoured by NSW.

In December 1996 the Commonwealth Government announced it would join the other two governments in a competitive process. Registrations of Interest closed in April 1997, and detailed bids were submitted in April 1998.

Six proponents bid – later reduced to four: two of them proposed tilt trains, with some upgrading of the existing railway; one offered German magnetic levitation technology; and the fourth was Speedrail.

Meanwhile Leighton Contractors joined the project, and Alstom and Leighton became joint proponents as Speedrail Group, in 1997. Qantas was a key associate of the project.

The outcome of the competition was that Speedrail Group was announced as preferred proponent in August 1998.

It then took until early 1999 for a 'proving up' agreement to be signed; and in November 1999 a developed submission was given to governments.

Because of the competition, and the confidential nature of negotiation with governments and with financiers, Speedrail published much less information than VFT. No detailed information was made public on either financial or economic performance of the project. Importantly, the 'no net cost to government' issue was never publicly resolved. Speedrail believed that it readily met this test, based on its economic evaluation; the government remained silent. Everything was done behind closed doors.

Speedrail was by far the most highly developed of any of the high speed projects yet considered, including up to the present day. If government support had been forthcoming the project could have quickly proceeded to financial close.
Equity and debt financing were in place. Construction plans and operating plans were in place; Qantas was to operate the service. Arranging finance was a very large task (and will be for any future high speed rail project); each bank commissioned its own demand study.

The bureaucratic evaluation of the developed submission was completed in about February 2000, and a report was prepared for the governments in March. Speedrail fine-tuned its offer to governments in meetings around the middle of the year.

In the first half of 2000, Speedrail undertook a preliminary analysis, and public relations activities, to promote an extended proposal, extending from Melbourne to Brisbane. This was to counter a view that Sydney-Canberra should not receive government support since it was no more than a link between two privileged cities.

Other work undertaken in 2000 included more detailed analysis of the impact of an extended high speed rail network on Sydney Airport, confirming that it would delay the airport reaching full capacity for 20 to 30 years; and there was further work on the 'no net cost' issue.

In December 2000 the Commonwealth Government announced that it would not support the Speedrail project. $26 million had been spent, with no return. Never again would the private sector take the lead in promoting or developing high speed rail in Australia.

It was mentioned earlier that changes in governments and ministers often lead to delays in process. Time delays kill projects. Financiers want to 'do the deal' and move on to the next job. The table below shows key personnel changes during the Speedrail project.

Year	Federal Government			New South Wales			ACT	Victoria	
	Prime Minister	Deputy PM	Min for Transport	Premier	Min for Transport	SRA CEO	Chief Minister	Premier	Min for Transport
1993	Paul Keating	Brian Howe	Richards,Collins, Brereton	John Fahey	Bruce Baird	John Brew	Rosemary Follet	Jeff Kennett	Alan Brown
1994	Paul Keating	Brian Howe	Laurie Brereton	John Fahey	Bruce Baird	John Brew, Gordon Messiter	Rosemary Follet	Jeff Kennett	Alan Brown
1995	Paul Keating	Brian Howe Kim Beasley	Laurie Brereton	John Fahey Bob Carr	Bruce Baird, Brian Langton	Gordon Messiter, Len Harper	Rosemary Follet, Kate Carnell	Jeff Kennett	Alan Brown
1996	Paul Keating John Howard	Kim Beasley, Tim Fischer	Laurie Brereton, John Sharp	Bob Carr	Brian Langton	Len Harper	Kate Carnell	Jeff Kennett	Alan Brown
1997	Paul Keating John Howard	Tim Fischer	John Sharp, Mark Vaile	Bob Carr	Carl Scully	David Hill, Simon Lane	Kate Carnell	Jeff Kennett	Alan Brown, Robin Cooper
1998	John Howard	Tim Fischer	Mark Vaile, John Anderson	Bob Carr	Carl Scully	Simon Lane	Kate Carnell	Jeff Kennett	Robin Cooper
1999	John Howard	Tim Fischer, John Anderson	John Anderson	Bob Carr	Carl Scully	Simon Lane, Ron Christie	Kate Carnell	Jeff Kennett, Steve Bracks	Robin Cooper, Peter Batchelor
2000	John Howard	John Anderson	John Anderson	Bob Carr	Carl Scully	Ron Christie, Lucio De Bartolomeo	Kate Carnell, Gary Humphries	Steve Bracks	Peter Batchelor

Changes in key appointments in the course of the Speedrail project

Examination of the table shows that for 9 key positions there are 32 names in total.

What are the lessons learned from the failure of VFT and Speedrail? Two appear especially important.

- There needs to be a clear understanding, from the outset, of government and private sector roles, especially regarding finance. This certainly did not happen with VFT or Speedrail.

- Australian Government leadership and support are crucial. High speed rail projects are very large and very complex. The states and the ACT are important, but high level commitment from the Commonwealth is essential.

The VHS East Coast Scoping Study

A new study – the VHS East Coast Scoping Study – was announced by Commonwealth Government in December 2000 when Speedrail was terminated.

It was undertaken by the (then) Department of Transport and Regional Services; it examined the Brisbane - Sydney - Melbourne corridor, and a first phase report was published in November 2001.

Unexpectedly, its analysis indicated that a 350km/h train would take up to 4.5 hours from Sydney to Melbourne, affecting demand and revenue; the report indicated the

project would struggle to produce a positive economic NPV. The analysis and findings were surprising.

The study considered magnetic levitation as well as wheel on rail; the headline capital cost – the magnetic levitation figure – was $59 billion, then perceived as an enormous amount. It resulted in a strong, negative 'sticker shock' reaction.

The Government terminated the study – and this was followed by nearly eight years of inactivity. For the best part of a decade there was no work undertaken on high speed rail in Australia.

Further studies in 2009 and 2010

Activity started again in 2009. In July of that year the CRC for Rail Innovation announced that it would undertake a feasibility study of high speed rail; the study was completed, and the report released, in January 2010, with positive findings in relation to likely modal share. The report identified critical success factors for high speed rail.

In September 2010 Infrastructure Partnerships Australia issued a report entitled *East Coast High Capacity Infrastructure Corridors – a realistic pathway to very fast trains*. The production of these reports indicated that momentum was once again building for high speed rail.

Strategic study on the implementation of high speed rail on the east coast of Australia

This brings us to the current study. Before the 2010 federal election, both major parties committed themselves to a study of high speed rail. Following the re-election of the Labor Government, and its agreement with the Greens, the present study was formally announced and terms of reference released, on 31 October 2010.

There is a key difference between this study and previous work. This time there has been a very clear recognition from the start that the project will require a large amount of public sector funding – a change from the misconceptions which were the undoing of the VFT and Speedrail projects.

Stage 1 was completed in July 2011, with very positive findings in terms of high speed rail's ability to attract customers, including diverting them from air travel. This is important, because public scepticism about high speed rail is often based on an assertion that "Australia does not have the population to support high speed rail".

As a digression, it is worth noting that Sydney-Melbourne is the world's fifth-busiest air route, and that Sydney-Brisbane is the twelfth busiest, according to information

published in *The Economist* in May 2012[1]. The issue is not population; it is travel between key centres.

It is worth noting that the very high capital cost figures in the current study's initial report – up to $108 billion – attracted much less reaction than the figure of $59 billion did in 2001.

Stage 2 is close to completion. Let us hope that this will be followed by a decision to move to financing, design and construction.

Conclusion

In 1984 when the VFT was launched, only three countries were running high speed rail services, defined as trains running at more than 200 km/h on purpose-built tracks. Those countries were Japan, Italy and France. If the VFT project had advanced reasonably quickly, Australia would have been about the sixth country in the world to have high speed rail, the other newcomers being Germany and Spain.

What an opportunity was lost. Today many countries have trains running at speeds of 300 km/h or more. Australia, if it was to move forward today, would be behind a dozen countries now with high speed rail, and about a further ten countries building or planning it, including Saudi Arabia and Morocco. We think of cities such as Casablanca and Marrakesh as romantic outposts, but soon you will be able to go to them by high speed train.

Fortunately attitudes have changed. Compare the reactions – disinterest, suspicion and sometimes hostility – to VFT, to attitudes to high speed rail in Australia today. More people have experienced high speed rail travel overseas. Air travel, even at low cost, is not seen as a panacea; we see congestion in the air and at airports, as well as on roads where it is often acute.

Let us hope that changes in attitude, on the part of the community and of governments, lead to positive actions in the near future.

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[1] *The Economist* online, May 14 2012