

WORLD-CLASS RAIL FOR A WORLD-CLASS CITY

Sydney 23 June 2005

Conference Report

The Conference

This conference was organised by the Sydney Division of Engineers Australia, with the three objectives of :

- contributing to improving the Sydney rail system;
- contributing to innovative solutions of integrating technology, business and community outcomes; and
- challenging the solutions presented by the experts.

The Conference was chaired by **Professor Vernon Ireland**, the Immediate Past President of Engineers Sydney and Deputy Chair of Engineers Australia's national Centre for Engineering Leadership and Management.

About 100 delegates attended. This included a significant number employed by RailCorp.

The Presentations

The first presentation was made by **Robert Whitehead**, the editor of the *Sydney Morning Herald*. He described the *Herald's* "Campaign for Sydney", which he claimed had enough material in hand (mostly contributed by professionals acting clandestinely) to last for six months. He presented the railway proposals (for heavy rail, metro rail and light rail) that had previously appeared in the *Herald*.

He was followed by **Tony Poulter**, the Global Head of Project Finance Asia Pacific at PricewaterhouseCoopers. Tony Poulter described the difference between the economic and financial performance of a railway, and presented some interesting comparisons between the Singapore MRT, the Hong Kong MTR, the London Tube and CityRail. CityRail has the highest cash cost per passenger at \$4.86 (Singapore's cost is \$0.58), the lowest density of population served at 1,900 persons/km² (London's is 11,652) and the lowest cost recovery rate at 45% (Hong Kong's is 323%) of the four. He concluded that the issue for CityRail is one of funding (ie of finding new sources of revenue), not of financing (ie of managing cash flow); that a long term economic view is needed; that the primary responsibility lies with the Government; but that the private sector nevertheless has a key role.

Garry Glazebrook, consultant, did not have time to complete his lengthy presentation, but he did suggest, based on past research (eg the Warren Centre, the Campaign for Sydney), that the design requirements for World Class Transit were five: Coverage (both time and space); Connections; Competitive Travel Time; Comfort, Security and Safety; and Cost-effectiveness and Affordability. Interesting that Reliability did not feature! He

rated Sydney's network as C-D for Coverage, F for Connectedness, B-F for Competitive Travel Time, A-C for Comfort etc, and B-D for Cost-Effectiveness. He presented proposals for the heavy rail network by 2020 (he supported the recently announced NW and SW Rail Links and the Cross-Harbour link, and the Clearways Program). At about this point he ran out of time, but there were also proposals in his intended presentation for an inner city light rail network, and for adoption of ultra-light rail (Austrans) where appropriate. He concluded that "the alternative is for Sydney to evolve into a US style freeway dependent city with large environmental, social and economic costs."

Simon Lane, former Chief Executive of the State Rail Authority and now Chief Operating Officer of SBS Transit in Singapore, described how the Singapore transit system operates. He raised laughter when he described the minimum operating standards that he was required to achieve in Singapore: they were far above CityRail's performance. In Singapore public transport (in all its forms) is seen as a facilitator of social life, and it is priced so that the cost of consumption covers the cost of supply. Hence integration is multi-dimensional – of land use planning and transport planning, of private and public transport, and of individual modes within public transport.

Marzi Desanti, from the Tourism and Transport Forum, spoke about the need to understand Sydney's population and its travel patterns, about traffic congestion and about pricing and funding of transport. He reminded the conference that the young and the old have travel needs which are seldom met by the railway. He asserted that traffic congestion was the number one issue for Sydney residents, and that funding reform was a necessity. This would require political leadership, the harnessing of the private sector to be involved in public transport, investment in technology and, for transparency, a clear link with pricing reform. He concluded by asking rhetorically, "Is the current approach to funding transport, including rail, sustainable?" A negative answer was implicit in his presentation.

Chris Skinner, a systems engineer, sprinkled his presentation liberally with quotes from the David Williamson play "The Permanent Way". He was basically advocating a systems engineering approach, described as "the orderly process of bringing a system into being. A system constitutes a complex combination of resources ... integrated ... to fulfil a designated need." He concluded that it was time to rethink rail services for commuters; that the technology to implement a rethink exists; that the private sector can be franchised; that standards should be invoked, eg for smart-card ticketing; and that systems engineering was required for the rail network!

After lunch I made my presentation entitled "A Reality Check for Sydney's Railways". I reminded delegates that the principal problem of the railways in the eyes of the users was reliability – if present cancellations, delays and overcrowding could not be reduced, then any question of a vision of a rail-based future could be forgotten. I also showed data that highlighted the niche role of the railways in Sydney's transport system – moving workers in and out of the CBD – and pointed out that rail travel involves only about 5% of urban weekday trips. At weekends the figure falls to 2%. More people use trains in combination with buses than use trains alone, so it is imperative that the rail and bus systems be better

integrated. Clear objectives need to be established for the public transport system in total before rail's role can be properly identified. Most of the city's rail infrastructure is more than a hundred years old, and the system has been starved of funds in recent decades. As a result many of the envisaged solutions are now very expensive, and rail needs to make a convincing case for public funds to be poured into it rather than into competing applications.

Philip Laird from the University of Wollongong offered some perspectives on rail safety. He pointed out that rail transport is safer than road – on one estimate for freight the ratio of accident costs (cents per net tonne km) was 17 to 1 in favour of rail in Australia. He showed how safety performance varied between systems, and advocated adoption of Automatic Train Protection (ATP) procedures in NSW, although the report of the inquiry into the Glenbrook train disaster stopped short of recommending this. His conclusion was that while rail transport is much safer than road transport, some rail systems are safer than others and NSW has to do better.

John Renne from Rutgers University (New Jersey) presented some US experience of how the introduction of rail had reduced car dependence. He is an advocate for transit-oriented development (TOD), and showed pictures of many examples of TOD. He also presented data that showed how, in the US, TOD areas and the general metropolitan regions in which they are contained showed opposite trends from 1970 to 2000 for the percentage of commute trips carried by transit, walking and cycling, and other measures. He finished by referring to a study undertaken in the US to identify relevant measures of the effects of TOD (http://trb.org/publications/nchrp/nchrp_rd_294.pdf)

The final formal presentation was made by **Peter Newman**, the Director of the Institute for Sustainability and Technology Policy at Murdoch University (Perth) and the NSW Sustainability Commissioner. He was making the business case for rail by showing that economic growth and transit go together. The material he presented was familiar from many other presentations, based on data in "Cities and Automobile Dependence: An International Sourcebook". He showed that good transit benefits city economies by reducing the proportion of wealth spent on transport; by reducing the external costs of transport; by saving time (the Marchetti constant was much referred to here); by saving space (the calculation of how many more lanes of freeway would be needed if Sydney removed its train to the CBD was a little hypothetical, as no-one is proposing to do this); then, well illustrated, by creating city spaces suitable for the "global knowledge/services economy"; and, lastly, by creating certainty for investment. From his book "Sustainability and Cities" two policies for overcoming automobile dependence were identified as critical: ensuring that public transport is faster than cars in all main corridors; and creating local centres and town centres that are viable – to minimise travel – and enable local priority for walk/bike/bus. He concluded by showing a few examples of cities that had achieved their vision.

The Recommendations

Vernon Ireland then led attendees through a list of potential improvements to the rail system. This was not completed in the allotted timespan and the end result will be posted on the web site of Engineers Australia (Sydney Division) in due course.

The Aftermath

On July 4 2005 the Sydney Division released a statement to the media to announce that it was taking on an advocacy role for urban transport in Sydney. The statement concluded by saying:

The conference speakers and audience contributions identified a number of key issues including:

- *The need for public commitment to rail as the backbone of an effective public transport system for all large urban areas*
- *The need for a holistic approach to planning for transport and land use and hence the need for a single authority for transport planning and operations [the need for a single authority to cover both planning AND operations was not universally accepted – my comment]*
- *A recognition of the total operating cost of each of the transport modes including public and private vehicles and consequential pricing and subsidy models to manage demand and provide optimum service levels*
- *A wide range of metrics and performance indicators are needed far beyond the simplistic measure of on-time running. Many of these were discussed at the conference and will be published on the EA web site in July.*

The two major directions for advocacy will be:

- *Firstly to persuade government at all levels to place greater priority on urban transport as both a challenge and a power influencing factor on sustainability and economic effectiveness*
- *Secondly to advocate greater emphasis on reducing the consumption of energy and the use of sustainable energy sources for all modes of transport*

This advocacy will inevitably need to address a wide range of approaches to encourage greater use of public transport, cycling and walking with greater attention to intermodal transfer, traveller information and flexible payment.

Postscript (August 2005)

Robert Whitehead resigned as editor of the SMH in July. Material that was promised to appear on the Sydney Division (Engineers Australia) web site later in July by the above press release did not appear.