



Public Private Partnership: Melbourne City Link, Australia

Background

By 1995, residents and officials of Melbourne, Australia, had reached their limit with traffic congestion. Highways were terminated on the fringes of the city, causing gridlock on residential and urban streets that were handling traffic up to 80 percent greater than capacity. With no alternative routes, freight trucks had to travel through the central business district, exacerbating congestion. Traffic had become so severe that it was harming the city's social, environmental and economic well-being.

In addition to this, opening up of West Gate Bridge in 1979 boosted the traffic pressure that finally led to idea to develop a City Link. The project was designed to satisfy a number of transport objectives, including:

- Providing a freeway link to connect three existing flyovers.
- Facilitating movement of traffic around downtown area
- To improve accessibility to major sporting, recreational facilities, and the Port of Melbourne.

PPP Structure of the Project

In 1992 Victorian Labour Government invited the businesses interested in building, owning and operating City Link to submit a bid. In 1994, Melbourne City Link Authority (an agency of Victorian Government) was established to oversee the implementation of City Link project. In 1995, City Link agreement was awarded under a concession deed to Transurban City Link Limited¹ to build-own-operate-transfer (BOOT), levy tolls and maintain it for a 34 years until 14 June 2034, after which City Link will be transferred to the State Government.

The Melbourne City Link is a six-lane 14 mile motorway comprising Western Link and Southern Link, plus two tunnels, a bridge and an elevated roadway. In addition, it also provides seamless link to three existing freeways by connecting Tullmarine freeway, West Gate freeway and the South eastern Arterial via two tunnels. The design and construction of City Link was undertaken by a joint venture between Transfield and the Japanese company Obayashi Corporation (TOVJ), under contract to Transurban. The design and construction of the Western Link was outsourced to Boulderstone Hornibrook Engineering and

¹ Transurban City Link Limited is a private consortium comprising Transfield Holdings Private Ltd and Obayashi Corporation.

the supply of the electronic tolling system to Translink Systems.²

The cost of the project was estimated in 1996 at about AUS\$1.8 billion. Out of which approximately 13 per cent of contract value was provided by the Victorian Government, approximately 63 per cent value was financed by private sector, which included AUS\$120 million loan from National Australian bank for 19 years, additional debt financed by an Australian-French syndicate. The remaining 24 per cent was financed through an equity raising effort launched in March 1996.

Key Features of Project

The City Link project was built between 1996 and 2000. It was the largest BOOT project in Australia and was eight times larger than any other project in Melbourne at that time. City Link set a benchmark for PPPs in Australia, and particularly in Victoria, as this was the first time the private sector had owned and managed road infrastructure. City Link is Australia's first electronic toll road, with no toll booths and tolls collected either through transponders or license plate image recognition technology. Road users register with the operator, either by opening a toll account or buying a pass. Those who open an everyday account receive a small in-vehicle device known as an e-TAG^{®3} device. When a driver's vehicle passes through a toll gantry, the e-TAG is detected by a scanner mounted above the roadway and the tolling computer processes the toll for that zone to the driver's toll account. Along with this, the project uses overhead structures near residential areas instead of sound walls to reduce the level of noise heard by residents of nearby areas that is produced by users of highway.

Impacts and Benefits

The main aim of City Link was to reduce traffic congestion by building a link by-passing the central area among three high-capacity freeways in Melbourne. In light of its objective, City Link Provides following benefits to residents of Melbourne:

² Translink is a company jointly owned by Transfield and Transroute of France.

³ e-TAG[®] is a registered trade mark of City Link Melbourne Limited ABN 65 070 810 678.

Economic Benefits⁴

The City Link project was intended to achieve a range of social, economic and environmental benefits, including facilitating traffic movement around the central administrative district (CAD), improving vehicle access to the CAD, as well as the port, airport and rail facilities.

Reduced Traffic Congestion: Development of City Link has contributed significantly to time saving and further improvement by operating City Link as a fully electronic toll highway. This led to travel time savings of approximately AUS\$ 118 million (in 1993 dollars) in 2000-01, the first full year of operation. In 2011, travel time saving was estimated at \$187 million or some 71 per cent of the total on-road benefits of City Link.

Job Creation: Development of City Link created 6,000-8,000 jobs in Victoria during the construction phase. In addition, as a result of City Link employment levels would be permanently raised by about 0.1 per cent.

Industrial Benefits: With development of City Link, off-road benefits across industries, especially increased efficiency of warehouses, improved linkage from industries to markets get enhanced.

Quality of Life: As a result of traffic being diverted from CAD, has led to development of new parts of city around the Yarra River and Port Phillip Bay. In addition, it also led to enhancement in values of property of \$25 to \$30 million.

Environmental Benefits

City Link was also justified on environmental grounds. Its development has significantly contributed to environment because of following reasons:

Reduced noise Pollution: Reduction in traffic congestion and installation of overhead structure has led to reduction in noise pollution.

Improved air Quality: Monitoring of discharge from the tunnel ventilation system and emissions, the drainage systems and the groundwater quality in the aquifers surrounding the tunnels by the Environment Protection Authority (EPA) Victoria in the operational phase of City Link, has ensured improved quality of air in urban areas. In addition to this, plantation of more than two million trees, plants and shrubs along the toll road also adds to improved environmental benefits.

Reduce greenhouse gas emissions: Vehicles travelling on toll roads where there are no cash toll booths produce lower volumes of greenhouse gases than they would to complete the same destination on alternative routes

⁴ Allen Consulting Group (1996) 'The Economic Impact of Melbourne City Link' Melbourne: Consultancy Report to the Melbourne City Link Authority.

where congestion and traffic lights create stop/start traffic conditions.

Learning's and Outcomes

Faster delivery: Involvement of the private sector in different phases of a project can expedite the financing and delivery of projects, lower project costs by avoiding inflationary cost increases, application of best practices and new technology. The private sector has an incentive to minimize construction delays in order to minimize costs and bring forward their revenue stream.

Innovation and Expertise: Private sector involvement encourages the development of new and creative approaches for financing, development, implementation, operation and maintenance. For instance, in case of City Link development of toll road free of toll booth was an innovation of private sector, which in turn helped in reducing congestion and offering smooth traffic flow.

Conclusions

This project has improved the road network and traffic capacity in and around Melbourne by connecting three highways, building a new bridge crossing and adding 14.3 miles of new freeways. City Link developed under PPP model has provided significant benefits to economy, both in terms of environment and economic terms. City Link project sets an example of opportunities for private sector to introduce innovative solutions. It also provided a reasonable return to the private partners to the PPP arrangement and the potential to retire all debt associated with the bridge construction and tunnel rehabilitation within years of the bridge opening. This represents a win-win situation for both the public and private partners to the PPP arrangement. Even though this was the first BOOT highway project of this extent undertaken in Melbourne, it is widely regarded as a successful PPP project.

Recent Updates (Up to July 2013)

As the long-term owner and operator of City Link, Transurban is committed to further enhancing the on-road experience for motorists on City Link and the service provided to City Link customers. City Link owner Transurban revealed more users are pouring more than \$1.3 million a day as a toll to use the toll road and added that the 22km road netted it \$499 million in revenue last financial year, an increase of 6.5 per cent.⁵

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⁵ Harris, A, "City Link operator TransUrban reaps \$499 million in revenue", *Herald Sun News*, July 10, 2013.