

Market Update – Trackless Trams in Australasia

Introduction

Over the past 12 months, the Royale Group has been marketing the IERT guidance system to potential buyers in Australia and New Zealand. This includes Government Departments (Federal, State and Local), along with potential delivery partners, consultants and financiers.

The technology has been very well received, but potential buyers are yet to take the next step for a number of reasons:

- The lack of a proven trial, particularly in Australia
- Concern over vehicle type, weight and availability
- The potential impact on the road network
- Their need to address other priorities, ie. COVID-19.

Many of our conversations and presentations have been structured around addressing these issues. Indeed, there have been many positive conversations and alliances formed, and we remain confident that technology will be incorporated into a project in the near future. Following is a summary of our efforts to date.

Achievements

Royale is actively pursuing the following project opportunities:

- Liverpool Fifteenth Avenue Smart Transit Corridor
- Green Square to the Sydney CBD
- Parramatta Light Rail Stage 2 and potential extension along Parramatta Road in Sydney's Inner Western suburbs
- Sunshine Coast Mass Transit, Queensland
- Penrith City's The Quarter
- City of Stirling, Perth, Western Australia
- Sydney's Zero Emission Bus Trial.

There are other potential opportunities in other regions of New South Wales and across Australia and New Zealand. However, they are less advanced than those named above. Details on these projects and our associated market positioning strategies are contained in the following sections.

Relationship Building

CRRC

Following discussions with a number of potential buyers, it became clear that we needed to come to the market with a complete package, ie. guidance system and vehicle. There had

previously been some broad interest in the other “trackless tram” technology being marketed by CRRC. However, there have been some reservations about the “robustness” of the Optical Guidance System deployed on the CRRC vehicle, based on the experience in Las Vegas and other parts of the world. Despite that many buyers like the look of the CRRC vehicle and how it is currently being deployed in China.

Our strategy to bring Shanghai Electric and CRRC together and to now develop a “tram like” vehicle with the more robust IERT technology is now bearing fruit. The deployment, in the near future, of a vehicle with the technology in Shanghai will go a long way toward assisting with our marketing efforts in Australia and New Zealand.

Transport for NSW (TfNSW)

TfNSW is the Government department in New South Wales responsible for approving and operating transport in the state. It is the largest Government transport operator in Australia. Without their approval, nothing will happen. We remain in regular contact, and have provided a number of presentations to them, including Wei Bin Zhang from University of California, Berkeley, in late 2019.

TfNSW will shortly go to market to carry out a Zero Emission Bus trial within its Sydney and Outer Sydney network. This is seen as a potential opportunity to deploy the IERT technology. Success here will be to work in with an existing operator. We are already in discussions with two of them – Interline and Keolis Downer.

Keolis Downer

We have formed a relationship with Keolis Downer – operator of the tram network in Melbourne and the Gold Coast Light Rail, along with the bus and light rail network in Newcastle, New South Wales. They are highly respected across Australia.

Numerous presentations and discussions have been conducted, leading to the signing of a Non-Disclosure Agreement between our organisations. This enables our us to now confidentially share market intelligence about prospective opportunities.

We are currently in discussions with Keolis Downer about the Zero Emission Bus Trial, and the potential use of the technology on routes in Newcastle and the Sydney CBD ([Green Square to the City](#)). In relation to the latter, we have presented to the City of Sydney Council on two occasions, highlighting the benefits of our technology and approach.

In addition, Keolis Downer is looking at the privatisation of parts of the Sydney Bus Network, and considering if there is a potential application for “trackless tram” technology on any of those routes.

Interline Bus Company

Interline Bus Services provides school and route bus services in Campbelltown, Minto, Raby, Macquarie Fields, Ingleburn, Bow Bowing and Liverpool in south west Sydney. This is referred to as Sydney Metropolitan Bus Region 2, and is important because of an opportunity to develop a Rapid Transport link between Liverpool and the new Western

Sydney Airport – currently under construction. [The Fifteenth Avenue Smart Transit Corridor](#) Project, as it is known, is a visionary city-shaping project. Under the Western Sydney City Deal, the NSW Government has committed to a rapid bus connection between the Airport, the new Aerotropolis and Liverpool’s CBD in time for the airport’s opening in 2026.

We have presented to and met with Liverpool Council on a number of occasions, and were close to entering into negotiations on a potential trial of the technology. These discussions were halted after COVID-19. However, it is hoped that we can use the Zero Emission Bus Trial and as a way in which to get the “trial” of the technology back on the agenda. As a result, our discussions with Interline take on even greater importance.

[Parramatta Light Rail Stage 2 and the Inner West](#)

There has been quite a bit of speculation and market discussion about the feasibility of using “trackless trams” for the next stage of the Parramatta Light Rail Project. The first stage is under construction. The second stage will connect Stage 1 and Parramatta CBD to Ermington, Melrose Park, Wentworth Point and Sydney Olympic Park. It will have 10-12 stops over a ten-kilometre two-way track, with travel times of around 25 minutes from Sydney Olympic Park to Camellia, and a further eight minutes to Parramatta CBD. Concerns have already been raised about the associated cost and time to construct; particularly given budget concerns post COVID-19.

Most of this route travels through the “inner west” of Sydney. We have presented and are in ongoing discussions with the Chair of the Inner West Region of Councils. It had previously [carried out a study](#) which was in support of the use of “trackless trams” in the area.

Other opportunities to be explored in New South Wales include:

- The [Quarter Project](#) at Penrith. We have already met with Council
- Wollongong, south of Sydney

[Sunshine Coast Regional Council](#)

Earlier this year, we gave a presentation to representatives of the Sunshine Coast Regional Council in Queensland. It is currently building its case for the development of an integrated mass transit system to service the Sunshine Coast’s growing population. The Preliminary Business Case, prepared by PwC proposed three options for stage one of the mass transit solution should be taken forward to full analysis of benefits and costs in the final preliminary business case:

- An upgrade of bus lanes on the sides of the major roads with new specially branded buses to provide a 'Quality Bus Corridor'.
- A bus rapid transit system much like light rail but with electric buses up to 25 metres long.
- A light rail system with 45 metres long trams running in their own right of way mostly in the centre of the major roads.

Our presentation highlighted the fact that we could provide either a light rail or bus rapid transit option, at a fraction of the cost of competing technologies. This was well received. However, it was noted that they were still several years away from procurement.

City of Stirling, Western Australia

Presentations and discussions have been held with the City of Stirling in Western Australia, which have announced that they have “planning approval” for [a trackless tram project](#) in their region. This project, prior to COVID-19, was described as the Council’s No.1 Priority. Once again, the presentation was well received. The Mayor, Chief Executive and other senior executives of Council participated in the discussion, but highlighted that they wanted to see a “total package”, ie. vehicle and technology. They also expressed some concern about the potential damage to their road network due to the weight of a “tram like” vehicle and the precise nature of the vehicle’s performance. Talks are on hold while the Council deals with COVID-19 related issues, and we remain in contact.

Plenary

Plenary is a leading public-private partnership (PPP or P3) specialist, with a portfolio of 69 assets under management worth more than \$42 billion across Australia, Canada and the US. Among them is the Gold Coast Light Rail Project. Value Capture is a particular specialisation of Plenary, where it is able to recover some or all of the value that public infrastructure generates for private landowners. We have forged a relationship with Plenary, due to its reputation in the infrastructure industry and expertise in value capture. It has long been regarded that Light Rail projects provide perfect opportunities for value capture due to the permanent nature of the infrastructure installation. We have sought to demonstrate that the same value can be created through a trackless tram approach.

Bombardier

Royale has signed a non-disclosure agreement with Bombardier Transportation Australia with the objective of providing market intelligence and expertise in the potential local delivery of vehicles. Bombardier has been investing in Australia for more than 70 years. As a trusted rail industry partner with over 1,000 employees, Bombardier designs, engineers, manufactures and maintains rolling stock across Australia, along with providing signalling, rail equipment, asset management and through-life support to customers and operators. It possesses local engineering and manufacturing capabilities, and provides solutions for signalling, propulsion and control technology, asset management and through-life support.

Currie & Brown

Currie & Brown is a global leader in cost management/quantity surveying services and has a successful record across many industry sectors. Royale engaged Currie & Brown to provide independent costings for a potential trial of the technology through the central business district of Liverpool. This has proved to be an invaluable tool when issues of cost arise.

Sydney University’s Institute of Transport & Logistics Studies (ITLS)

We have recognised that gaining academic support for what is effectively a new form of public transport would be vital if we were to succeed in the Australia market. With that in mind, an association was formed with the highly regarded Institute of Transport and Logistics Studies (ITLS) at Sydney University. Late last year, ITLS hosted a presentation from Wei Bin Zhang on the IERT technology to an audience of close to 100 people from across industry, government and academia.