

CHAPTER 13

CONCLUSIONS AND RECOMMENDATIONS



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CHAPTER SUMMARY AND RECOMMENDATIONS:

This Business Case recommends that Brisbane City Council:

- Approves developing a Concept Design and Impact Management Plan (CDIMP)
- Approves stakeholder engagement to support the ongoing development of Brisbane Metro
- Notes the strong economic merit of Brisbane Metro, noting that on a conservative basis this benefit cost ratio (BCR) is 1.91.
- Notes the estimated capital cost of Brisbane Metro is \$944 million (nominal, P90).
- Notes both a public private partnership (PPP) and traditional delivery options will be considered further.
- Notes Brisbane Metro and Cross River Rail are considered complementary, and that coordinated planning of both projects would provide Brisbane with significant benefits.
- Notes the Brisbane Metro has a positive impact against the objectives of:
 - delivering high-frequency 'turn-up-and-go' services
 - increasing the capacity of the busway network
 - reducing bus congestion on the busway in the Central Business District (CBD) and inner-city
 - reducing the number of buses in the CBD
 - improving travel times and reliability
 - delivering more services to the suburbs.

13.1 Purpose and Overview of this Chapter

The purpose of this chapter is to summarise the key outcomes of the Brisbane Metro Business Case and to present its recommendations.

13.2 Key Findings of the Business Case

13.2.1 Strategic Context

Brisbane is an economic powerhouse for the State of Queensland and is its gateway to the global economy. The prosperity of Brisbane's economy is critical to the prosperity of industry within Queensland and Australia.

Transport is an enabler of economic activity, through providing access for workers to jobs and for goods and services to markets. Ineffective or inefficient movement of people and goods to, and within inner cities, has the potential to reduce productivity and impact economic growth at the local, state and national levels.

By 2041, Brisbane's city centre will have expanded beyond its traditional peninsula location to become a network of inner-city precincts. These will host much more diverse and mobile forms of employment. The ability of businesses and workers to move quickly and easily

within and between these inner-city precincts will be essential to the success of Brisbane's and Queensland's economy.

SEQ's transport network must cater for increased demand to Brisbane's Central Business District (CBD) by better linking outlying residential areas to the region's key employment hub. Employment growth in the CBD and inner-city – and related economic spinoffs – depends on residents across the region being able to get to workplaces in a reliable and reasonable time, particularly during peak periods.

Based on the current operating configuration, the existing bus infrastructure is approaching capacity and may not be able to accommodate significant additional growth. The reliability and operational efficiency of the bus network is also reducing due to constraints of the network, particularly within the CBD.

13.2.2 Problem Definition

Numerous past studies have identified critical constraints and issues for Brisbane's bus network. Through consultation and research, bus customers are highly aware of these issues and that capacity constraints impact their journeys.

In addition to these well-known issues, it is critical to develop a sound understanding of the extent, scale, cause and effect of problems in order to provide a strong evidence-based foundation for developing a project solution.

The identification, assessment and prioritisation of problems has been developed through the consideration of the Brisbane Metro objectives, as well as the numerous studies, strategies and proposals developed by the Australian Government, Queensland Government and Council.

Problems have been investigated at four levels, specifically:

- Strategic problems facing Brisbane and the South East Queensland (SEQ) region, considering the interrelationships between transport, land use and economic productivity and prosperity
- Transport problems facing Brisbane and the SEQ region, including car dependency, congestion and the impact of Brisbane's topography on the efficiency of the transport network
- Bus problems experienced on the Brisbane network, particularly around increasing demand, capacity constraints and reducing reliability
- Rail problems experienced on the SEQ network, including its limited footprint across the region that restricts the ability of rail to cater for travel demands from demographic growth areas.

These problems have been prioritised in order to understand the outcomes sought and service needs. The priority problems to be addressed by Brisbane Metro are:

- Strategic Problem – accessibility and connectivity
- Strategic Problem – economic growth and productivity
- Transport Network Problem – inadequate ability to meet public transport demand without infrastructure intervention and/or service redesign
- Bus Network Problem – capacity constraints limit potential growth of bus services
- Bus Network Problem – degrading journey times and reliability
- Bus Network Problem – worsening amenity in the inner-city.

13.2.3 Options Analysis

A comprehensive approach to identification and assessment of options was undertaken for Brisbane Metro which is aligned with Queensland State Infrastructure Plan (SIP) and the Australian Infrastructure Plan. Both plans encourage the identification and consideration of reform, better use and service improvements.

The options identification and assessment process resulted in 23 distinct options being identified and then evaluated against the project objectives to identify which options addressed the priority problems.

This process concluded that the revised Brisbane Metro was the best option to address the problems to deliver an integrated transport solution that delivers the greatest amount of benefits to public transport customers and to Brisbane as a whole. Accordingly, the revised Brisbane Metro was publicly announced in March 2017.

13.2.4 Project Solution

A set of common principles have been developed which respond to the problems, and are used to guide the Brisbane Metro solution.

The Brisbane Metro solution is more than an infrastructure solution. In order to successfully address the priority problems, there are a range of elements that are required to complement and work in conjunction with this infrastructure. Together these elements present a unique opportunity to undertake a number of changes and enhancements to Brisbane's bus network, to deliver significant benefits to Brisbane's public transport customers and to the Brisbane economy.

The 'elements' that work together to deliver the Brisbane Metro are:

- Element 1: Network and service changes
- Element 2: Policy and operational changes
- Element 3: Existing, upgraded and new infrastructure
- Element 4: New vehicle fleet
- Element 5: New management and information systems.

By combining these elements, the Brisbane Metro delivers significantly greater benefits than any single solution to addressing Brisbane's bus capacity and congestion issues.

Brisbane Metro requires service changes to the busway network and bus services to ensure the capacity and reliability principles are achieved. As metro services will be part of a broader public transport network and will co-locate with bus services on the busway, service changes are required to ensure the metro operates effectively and efficiently.

Changes to a number of current operational policies are required to be introduced as part of the Brisbane Metro. These changes seek to improve dwell times by allowing faster and more efficient customer boarding and alighting, thereby helping to improve travel times and reliability.

Re-use of existing infrastructure (including the busway) aligned with targeted investment in new infrastructure, will help address critical inner-city bottlenecks and increase capacity of the busway. Infrastructure changes including a new underground Cultural Centre station and segregated route from Victoria Bridge to King George Square respond to the identified

problems. Additional platform lengthening is also proposed to address changes in vehicle mix (longer vehicles) as well as increased frequencies on the busway.

New high-quality, high-capacity metro vehicles are proposed to operate the Brisbane Metro routes on the busway in line with their proposed premium rapid transit function and providing the required capacity

New management and information systems are also proposed to improve the efficiency of operations and maximise the use of the existing (and proposed upgraded) busway system capacity. This will include additional information and busway management systems to inform customers in advance which platform zone their service will arrive at, which as well as improving customer experience will also reduce dwell times and variability at stations.

13.2.5 Customer and Product Analysis and Benefits

The customer and product analysis for Brisbane Metro has been informed by a structured modelling of transport conditions to help understand the implications of the Brisbane Metro transport interventions compared to without Brisbane Metro.

The customer and product analysis and commentary indicates that the Brisbane Metro will enhance inner-city public transport peak capacity and unlock the potential for the existing dedicated busway system to allow for growth in the wider region. Furthermore, it contributes to wider transport objectives by improving regional accessibility, increasing public transport attractiveness and integration, reducing the dependence on private transport and enhancing the region's economic vitality.

The customer and product analysis also finds that Brisbane Metro performs an important complementary role to Cross River Rail (CRR), helping to deliver against key state planning objectives.

13.2.6 City and Place Analysis and Benefits

Brisbane Metro links Brisbane's key economic, knowledge, innovation, health and research clusters. The high-frequency, high-capacity metro will provide an accessible and reliable public transport service, which will drive economic growth, business interaction and support efficient connectivity.

The Brisbane Metro can also increase the attraction of the inner-city by both supporting access to areas of high density living and by connecting economic precincts together. The Brisbane Metro will achieve this outcome by enhancing connections between the city's key precincts, linking major points of activity and destinations via a high-frequency passenger transport system.

Brisbane Metro complements the Queensland Government's proposed CRR Project, providing substantial city building benefits due to the combined projects making significant improvements to (and integration of) the public transport network, stations and station precincts.

The combined projects also provide for place making benefits, as together they are catalysts to reimagine stations precincts and provide a better and more consistent customer experience, particularly at the two interchange stations of Roma Street and Boggo Road.

13.2.7 Complementing Cross River Rail

Cross River Rail overlaps with Brisbane Metro at two points on the combined network (being at Roma Street and Boggo Road stations), which act as interchange points for customers to move between the corridors.

The projects provide for substantial city building benefits due to the combined projects making significant improvements to (and integration of) the public transport network, stations and station precincts.

The projects also provide for place making benefits, as together they are catalysts to reimagine stations precincts and provide a better and consistent customer experience.

The combined projects are anticipated to induce customer demand and provide substantial benefits by making significant improvements to (and integration of) the public transport network, stations and station precincts.

Coordinated planning of both projects would therefore lead to Brisbane commuters being able to utilise high-capacity, high-frequency and reliable public transport options for the key commuter locations across Brisbane.

13.2.8 Community Consultation and Public Interest Assessment

Engagement with the community and stakeholders has played an important role in the evolution of Brisbane Metro. Ongoing engagement is important to provide opportunities for residents, customers and stakeholders to provide feedback and input throughout the development of Brisbane Metro.

Consideration of the issues raised by stakeholders and the community played a critical role in the options assessment process and selection of a preferred project option.

Communication and engagement activities undertaken during the business case have focused on informing the community about the revised Brisbane Metro, demonstrating how Council has listened to community and stakeholders to refine and evolve the solution, identifying issues and concerns and seeking feedback on various aspects of Brisbane Metro.

Feedback has indicated strong support for the revised Brisbane Metro, particularly the expansion of metro services to more areas and the ability for bus and metro services to share the busway.

The outcomes of community and stakeholder engagement, as well as the social impact assessment, concept design and operational planning undertaken as part of the development of Brisbane Metro to date have been used to assess whether it is in the public interest.

Findings show that based on the current project development, Brisbane Metro provides equitable outcomes for all stakeholders, due to the overall improvements in public transport services it will provide for Brisbane.

Council will continue to engage with the community and stakeholders and develop a Concept Design and Impact Management Plan (CDIMP) to enable further feedback on the development of Brisbane Metro.

13.2.9 Cost, Risk and Economic Analysis

The nominal, P90 risk adjusted capital costs for the Brisbane Metro total approximately \$944 million. Key elements of the estimate include station construction costs for the new Cultural

Centre underground station, the purchase of 60 metro vehicles and tunnelling works on Adelaide Street.

The nominal, P90 risk adjusted operating costs for Year 1 of operation of the Brisbane Metro total approximately \$41 million.

A conservative Cost Benefit Analysis for the Brisbane Metro shows a BCR of 1.91. That is, for every dollar of total expenditure, the program is expected to return \$1.91 of benefits to the Brisbane economy.

The Brisbane Metro delivers significant ongoing economic benefits, particularly to public transport users and road users, which is attributable to the targeted capital investment on a brownfield asset which is combined with a redesigned, more efficient service network.

13.2.10 Delivery Options and Value-for-Money Analysis

The VfM assessment of the Brisbane Metro concluded that additional delivery model and VfM analysis is required in order to determine a preferred delivery model. Therefore, it is recommended both the PPP and traditional delivery options be considered further.

13.3 Recommendations

This Business Case recommends that Council:

- Approves developing a CDIMP
- Approves stakeholder engagement to support the ongoing development of Brisbane Metro
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