

How Did Brisbane Get it's Busways? Findings of a study into mode-choice decision-making in Brisbane

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Abstract

How did Brisbane get its busways? And what does this experience tell us about mode-choice decision-making in Australian cities? This paper reports on the processes and decisions taken to introduce bus rapid transport (BRT) into Brisbane in the 1990s and the styles of planning involved. Using theoretical frameworks provided by Innes and Gruber, Forrester and other planning theorists, different 'planning styles' are identified. These concepts were used and tested in the case of the South East Busway, Brisbane's first and very successful introduction of BRT. The research involved archival reviews of reports, plans and media articles showing the development and adoption of busways in Brisbane, and a set of interviews with politicians, state and local government bureaucrats and consultants involved with the decision and a key independent observer who was critical of the project at the time. The results suggest that Brisbane may never have adopted BRT without a clear political champion in Brisbane City Council, who intuitively adopted BRT as a 'solution' for Brisbane and who directed a strong bureaucratic effort to co-opt and win support from others including the then Queensland Transport Minister. Technical-rational analyses were used only to help support pre-determined positions, not to provide mode comparison and assessment for a later mode selection decision. There was no real community social movement supporting the move, and no collaborative planning involved. The results highlight how during recent decades planners have shifted away from traditional technical/analytical roles and are nowadays more facilitators between stakeholders in the transport decision-making process.

Key words: BRT, busways, Brisbane, mode selection, transport planning

1. Introduction

Transport planning in Australian cities continues to be shaped by institutional, political and professional imperatives. Transport planning is defined by the Planning Institute of Australia as "concerned with identifying and planning for the accessibility needs of people and freight within livable and sustainable communities" including the planning for and delivery of different transport modes (including infrastructure and services (Planning Institute of Australia 2012). Transport planning is in part about determining how we spend money on transport infrastructure in that the aim of transport planning should be to come to the best solution possible, within the availability of resources available (Black, 1981). The UK's Transport Planning Society (2013) state that transport planners are critical in identifying how transport systems can be improved to stimulate and support economic growth and that "[they] take a lead in planning and designing for the movement needs of individuals and for the transport of goods, as well as managing transport demand to support economic and environmental efficiency". The focus of this paper is on the processes and 'styles' of planning that are evident in urban transport. These processes and styles of planning become most pronounced in contested decision-making areas, such as the selection of a particular mode for a new public transport facility. We focus in this paper on the case of Brisbane's busways,

which introduced a new modal technology into a major Australian city, as a means to better explore how mode choice decisions are made in the Australian context.

The paper is organised as follows: First, the Brisbane case is outlined to help set out key questions about how transport planning is conceived and practiced in contemporary Australia. The literature on the practices and styles of planning, focused on transport planning, is briefly summarised. The methods of the investigation are then provided, followed by the results, which focus mostly on the reflections of a set of key actors involved in the busway introduction. The discussion that follows seeks to draw the findings back to the literature, identifying implications for contemporary transport planning policy and practice.

2. Busway Research

Brisbane's busways are a form of bus rapid transit (BRT), a transport technology that is increasingly popular in cities worldwide. Essentially, BRT comprises high capacity buses that are prioritised on purpose-designed roads, with stations at widely spaced stopping distances and distinct branding, and which in effect mimic the operation of Light Rail Transit (LRT) systems (Hoffman 2008:xi). In the case of busways, a BRT will operate exclusively in its own right-of-way. Brisbane's busways conform to what Hoffman (2008:1-2) describes as the 'Quickway' model of BRT, with high-speed rights-of-way that provide for a range of routes, many of which bypass some stations in passing lanes, and which branch off to service locations outside the alignment of the busway itself. This offers minimal travel times and high-volume operations. The Quickway model has its own distinct planning and service logic allowing for a dense network of routes that service a wide sector of a city to coalesce into a single corridor. The Brisbane busways have been praised for their best practice design by key international experts (Levinson et al. 2003). A map of the existing Brisbane busway network and proposed future extensions is provided in Figure 1.

Research into BRT has expanded greatly in the last three decades, including in Australia (i.e. see Ardila and Rodriguez 2001; Currie and Delbosc 2010; Gardner 1990; Hensher 1999; Hoffman 2008). BRT systems in Australia expanded by 200% or some 216 route kilometres between 2006 and 2010, with patronage of 86 million passengers per annum in 2010 (Currie and Delbosc 2010:305). But there has constantly been a debate, here as elsewhere, about the relative merits of BRT as opposed to LRT, and there remain research questions about the relative cost-effectiveness of busways of the Quickway design that are outstanding.

Another key research gap is in terms of how new systems such as busways are first considered by planners and decision-makers, and secondly, how they progress from inception to completion and the planning processes that occur along the way. The most pertinent study in this area has been the work of Pulichino and Coughlin (2005) who explored the way in which political decision-makers and planners provided preferential treatment for buses, defined as anything from signal priority through to installing busways. Drawing on research on eleven cities in Europe and North America they found that technical and financial analysis has consistently shown bus investment to be preferable to LRT or highways. Benchmarking studies by planners and international visits were critical in influencing policy makers to make bus-based investment decisions (Pulichino and Coughlin 2005:84). And whilst famous BRT cities such as Curitiba and Bogota had political champions ('policy entrepreneurs') emerge who implemented these systems from above with little technical or consensual decision-making processes, cities such as Ottawa had seemingly arrived at BRT more by consensus and technical appraisal (Pulichino and Coughlin 2005:85). These differences suggest context-specific transport planning cultures, with concurrent shifts in the role of planners and their activities.

Figure 1: Brisbane’s busway network and proposed extensions (source: Translink). Please note: map not to scale and indicative only.



3. Planning styles

Innes and Gruber (2005) and Sager (2009b) have provided conceptual frameworks that help describe the 'styles' of planning. Synthesising their approaches one can identify: 1) a technical-rationalist style based on analysis (the planners as expert); 2) a political champion style (where planners act to support the dictates of strong political leaders, or play a political and advocacy role themselves); 3) a social movement style (the planner as activist); and 4) a collaborative style (the planner as facilitator and mediator). Other styles certainly exist (see Forester 1999; Innes and Gruber 2005; Sager 2009a for more) but these four approaches represent the majority of activity that may be observed in the planning field.

Transport planning has generally held to the technical-rationalist style, particularly given the field's focus on modelling. This approach underpins the significant technical analysis used to support many mode choice decisions for transport projects in the Australian context, where planners use technical-rational approaches to analyse and help choose the best option. For instance, the Gold Coast Light Rail feasibility study used a multi-criteria assessment (MCA) process with detailed technical analyses to assess mode options, and to systematically weigh variables against set criteria (Gold Coast City Council 2011). In the technical-rational approach the planner is viewed as a value-neutral-analyst providing advice to political decision-makers, detached from the political fray (Ozawa and Seltzer 1999:258). The theory of instrumental rationality this approach implies has been subject to strong critique by planning theorists such as Friedmann (1998), Healey (1997) and Forester (1999) though many in the transport professions have been resistant to change. The framework derived from Innes and Gruber (2005) and Sager (2009b) provides us with a conceptual understanding from which to explore the styles of planning used in contentious transport projects in Australia, and to better understand the roles of planners and their activities in the present day.

4. Approach and method

The research used an archival review of documents relating to the early development of the Brisbane busways and a set of a set of seven interviews with key personnel directly involved in the South East Busway project, which introduced BRT to Brisbane. Participants were selected for their involvement in the BRT mode decision-making process. This included the two key local government bureaucrats involved, the key state government bureaucrat, a number of influential private consultants and a leading academic who advised on the project. These participants are de-identified and their previous roles outlined in Table 1. Interviews were in the form of semi-structured interviews, with a focus on allowing respondents to tell their complete story of the busway's development from their own perspective. Interviews were conducted either in person or by telephone, with in some cases answers to questions provided in writing at the participant's request. The interviews were partially transcribed and these transcripts explored using thematic analysis. For more on the methods used for these interviews see Tanko (2013:34-38).

Table 1: Interview participants

Participant	Role and involvement
Local Councillor 1 (LC1)	Head of Brisbane Transport, Brisbane City Council
Local Councillor 2 (LC2)	Divisional Manager – Transport, Brisbane City Council
State Government Employee 1 (SGE1)	Senior Executive in the Qld Department of Transport in charge of implementing the Busway Project
Private Consultant 1 (PC1)	Owner and head of a private transport consultancy firm based in Brisbane
Private Consultant 2 (PC2)	Contributing author of Preliminary Brisbane Busway Plan
Private Consultant 3 (PC3)	Project director for the planning of the Busway network
Transport Academic 1 (TA1)	Paid to provide a submission to key Parliamentary Committee examining the South East Transit Project.

5. Results

5.1. Context

It is somewhat surprising that Brisbane invested so heavily in fully separated busways given the city's historical legacy of an extensive commuter rail network of over 200 km, focused on the CBD. The city also once had an extensive streetcar network work that was municipalised (taken over by the Brisbane City Council (BCC)) in the 1920s and replaced by bus operations in the 1960s. This left the city in the mid-1990s with a state government rail operator and, within the very large Brisbane City boundaries, a single powerful local government bus operator in Brisbane Transport, a division of BCC (Cole 1984). The two public transport systems were mostly operated as distinct, segregated networks. Only at few locations did buses interchange with trains, standardised multi-modal ticketing had yet to be introduced, and as few as 9% of train patrons arrived at stations by bus (Mees 1997). Many bus services paralleled train lines (and still do) creating competition for patronage. Investment in the rail and bus networks was relatively modest in the post-war era, as the focus of investment was put into developing freeway networks in line with the recommendations of the 1965 *Brisbane Transportation Study* (Wilbur Smith and Associates 1965).

Two road revolts with electoral consequences then shifted the trajectory of transport planning in the city. In 1991, Jim Soorley was elected Lord Mayor of Brisbane City, in part thanks to an anti-roads platform against the Route 20 link proposed for the inner-Northern suburbs. Soon after in 1995, the state Labor government was unseated in part due to the unpopularity of key arterial and freeway proposals, including the South Coast (or 'Koala') Motorway which was to run parallel to the east of the existing Pacific Motorway to the Gold Coast (Krosch 2010:21-22). As such, the new regimes in both state and local government were reticent to build roads or preserve corridors. They commenced a new approach of 'balanced' transport planning. It was within this milieu that the busway concept first emerged and was rapidly adopted.

5.2. When and where did the busway concept emerge?

The interviewees were unanimous that the busway was first put on the agenda around 1994 by Cr Maureen Hayes, who was then Chair of Traffic and Transport at Brisbane City Council. She was exploring with the Lord Mayor and council officers options for improving travel times and lessening congestion effects on the Brisbane Transport bus fleet. The head of

Hornibrook Buslines, who run buses in nearby Redcliffe, had recently visited Ottawa's busway system and encouraged the Council to visit as a side-trip to the 1994 American Public Transport Association (APTA) conference held in Boston. Seemingly impressed by what they saw in Ottawa, BCC commissioned the consultants McCormick Rankin to produce a preliminary report on the concept in 1995 (McCormick Rankin 1995). This mainly conceptual plan proposed busway corridors running north, south, east and west of Brisbane's city centre, as shown in Figure 2. Reviewing the report one finds it features few figures, negligible evaluation and very little technical analysis. The rail network is almost completely ignored, including options to encourage interchange. Key interviewees report that at this stage the technical work that was happening behind the scenes in BCC was limited to estimations of future transport demands and movement patterns in the city, along with considerations of how to stage possible busways, and tentative funding options. The Council chair began to promote and advocate for the proposal. But only limited consultation with other stakeholders occurred at this earliest phase. Some interviewees suggest there was significant belief in the concept within BCC and the consultants involved, as well as its possible public acceptance:

"If it could be shown to be fast and efficient like Ottawa, the Busway and public transport in general would be accepted" (PC1, 2013).

In state government, however, there was significant resistance to the proposal, particularly in the key transport department. The interviewees did not highlight suggestions as to why there was resistance at first, other than one who suggested "...maybe because they hadn't thought of it" (SGE1, 2012). As a state government road, the Pacific Motorway could in no way be provided with a busway without the Transport Minister and his department coming around to Council's view. But there was a vehicle to do this, as a South East Queensland Transit Authority (SEQTA) had been established, which forced some level of cooperation between BCC and the state government.

The 1995 State Election, which was so heavily influenced by the South Coast Motorway protest, helped change the game. To meet the growing traffic demand in the city's southern corridor without the South Coast Motorway, the Goss Labor government, which clung to power for some months until the Mundingburra by-election, proposed widening the Pacific Motorway and South East Freeway corridor to eight lanes of general traffic. However, the section within Brisbane City's boundaries, along the SE Freeway, which runs some 15 kilometers to the edge of the central business district, was to be widened for either buslanes or a busway, even though no-one quite knew what the latter would look like, and there had been nil technical appraisal.

"The configuration at this time wasn't known - whether it was going to be simply bus lanes, or as it turned out, a fully segregated bus highway" (SGE1, 2013).

Post-Mundingburra and the installation of the National/Liberal coalition, Vaughan Johnston, a rural National Party member, became Minister for Transport. He abolished the SEQTA, which might have proved problematic for the busway proposal. But he also established a new process of 'integrated regional transport planning' that sought to better service public transport. It was a process that culminated later in the 1997 *Integrated Regional Transport Plan* (IRTP) (Queensland Transport 1997). The team working on the IRTP adopted mode share targets to reduce future car use and promote public transport. Inserted, somewhat clumsily, into the 1996 draft was a clear proposal to include for busways, despite, still, there not being any significant technical appraisal. But it took the original BCC proposal and expanded it, promoting an 'SEQ Regional Busway System' growing into 75km of dedicated busways and around 65 stations (Queensland Transport 1996:35). Unlike the rail system, feeder buses would serve the busway then continue along it to the CBD.

Figure 2: Conceptual busway network proposal (source: McCormick Rankin 1995)

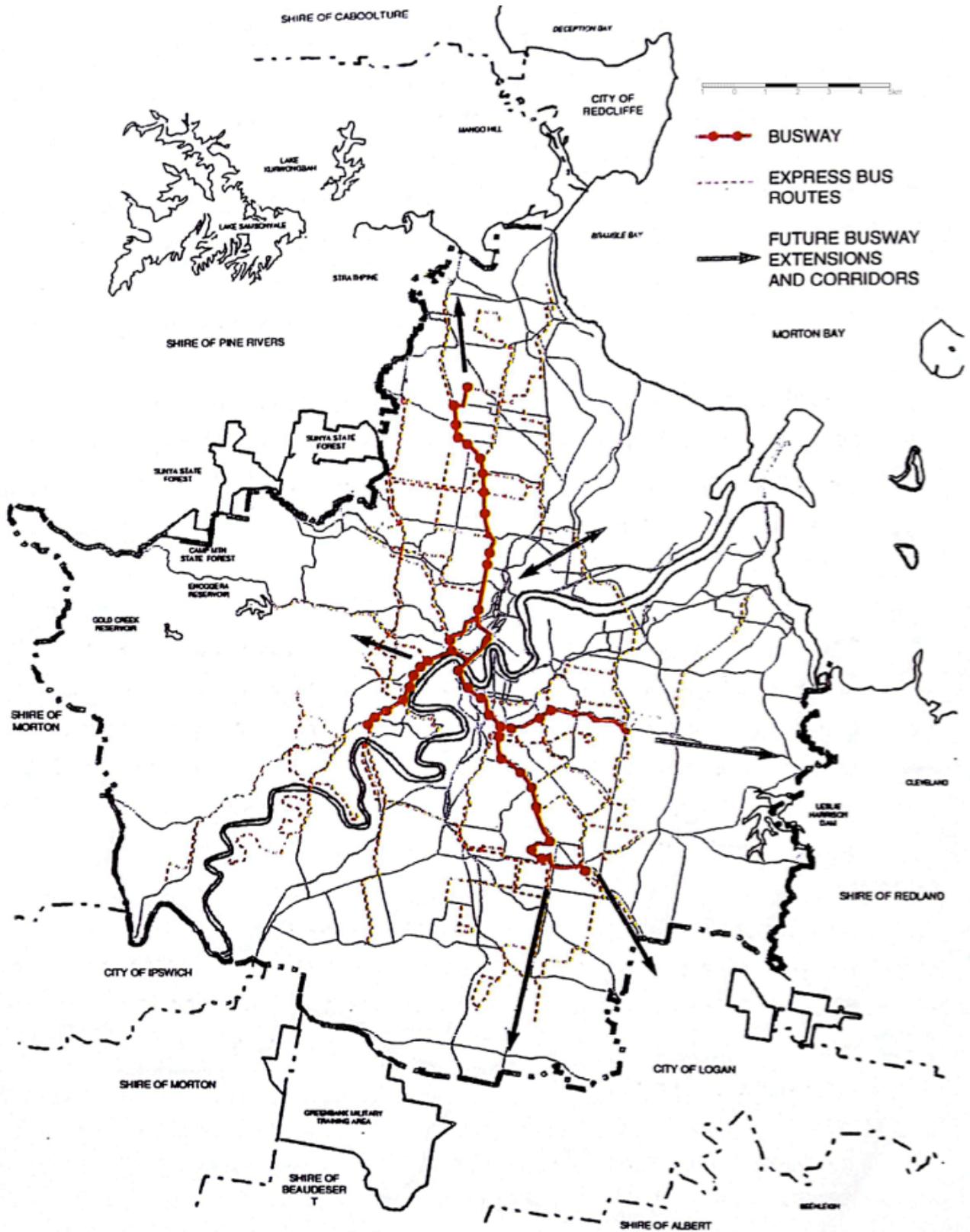
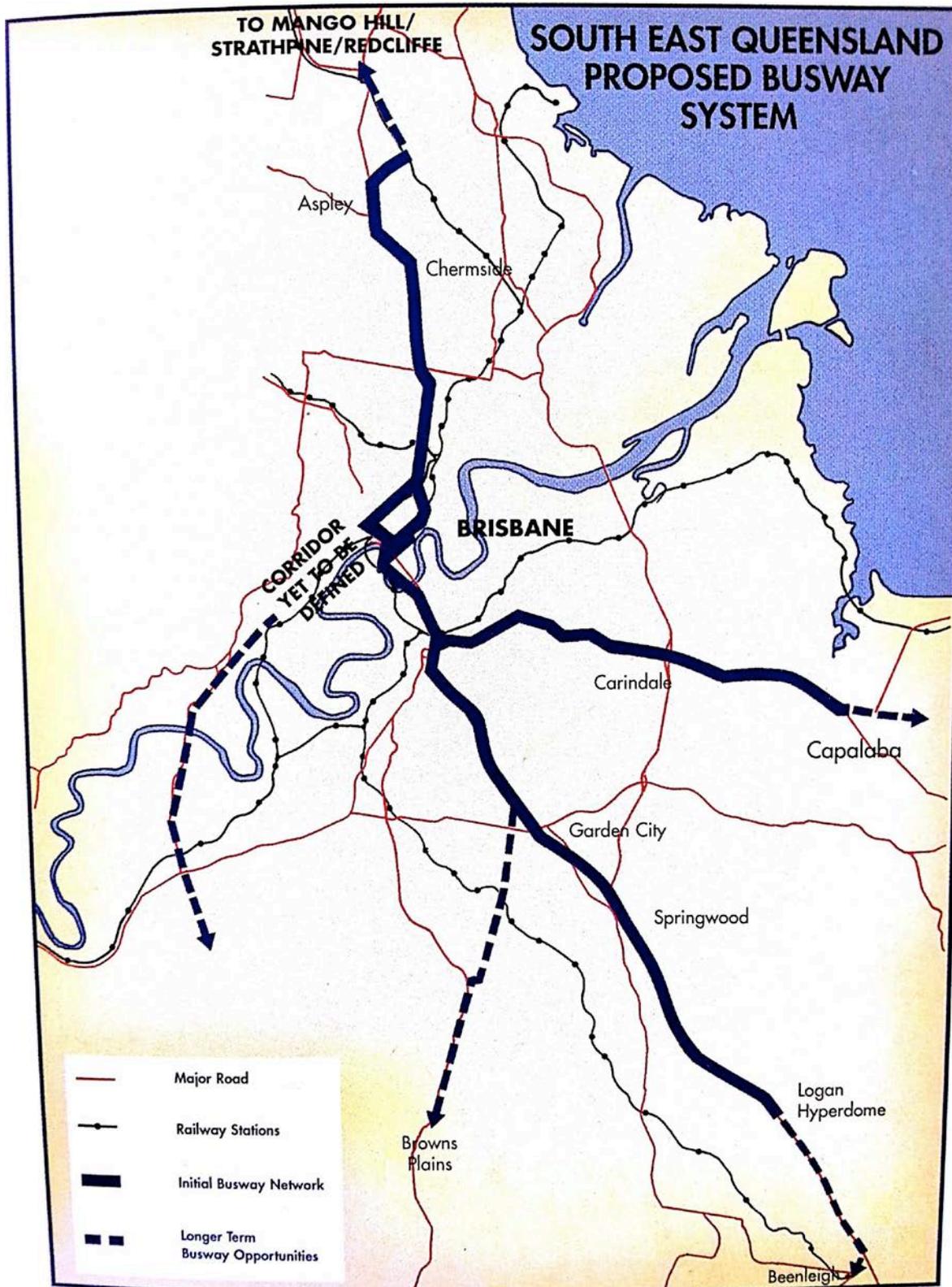


Figure 3: The 'SEQ Regional Busway System' proposed in the 1996 Draft ITRP (Queensland Transport 1996:37). Please note: map not to scale and indicative only.



The inclusion of busways, to such a degree, in part relates to problems of rail planning and management at the time, and either the lack of capacity or willingness of Queensland Rail to be proactive. The *“reason Busways were in the plan was because we couldn’t do any rail*

planning” and that “*No one except the planning team was behind it*” (improving rail) (SGE1). Only cursory analysis of an LRT option for the corridor was considered, but dismissed relatively quickly, one interviewee noting that “*at the end of the day, it was determined to be very costly and disruptive to traffic where it would run at grade on the existing roadways*” (PC3, 2013).

By early 1996 two options seemed possible. Widening the South East Freeway for general traffic or bus lanes or the option of a busway. The planners involved in state and local governments both took on an advocacy role at this point, using some limited empirical facts, and seeking to persuade the Minister and his office that the busway option was preferable. Officers from the IRTP planning team and others made it clear to the Minister that though a busway could eventually carry 18,000 people an hour across both lanes, a general traffic lane may only add capacity for around 1,500. Importantly, the planners used the (then) new technology of presentation slideshows was used creatively to allow the decision-makers to envision the system, to understand its potential, and win their support. The Transport Minister soon became an advocate for the system himself.

“Even though they were on different sides of politics Maureen Hayes and Vaughan Johnson were in agreeance and were political champions for the Busway” (PC1 1, 2012)

Despite their efforts and support from others such as Labor MP Craig Emerson, one of our informants suggested it took three separate cabinet submissions to get the Busway signed off by the Queensland Government. Perhaps this was due to the lack of a sound technical case, of the type commonly used for justifying most major transport investments.

Once committed to, the South East Busway project swiftly moved into the consultation, design and construction stages. A director was appointed to manage the project who “*didn’t know what a Busway station looked like*” (PC1, 2013) but the team involved did perform, undeniably in hindsight, a stellar job in a short timeframe. Around ten studies were commissioned on issues such as lane widths, station design standards, station locations and surrounding land use policies. An Impact Management Plan (IMP) followed, with the public consultation proceeding in 1997. The issue of rezoning land uses around the busway stations to generate transit oriented development (TOD) was shelved, however, until after construction. No consultation on firm proposals for rezoning to allow medium density or mix uses near busway stations in suburban locations was conducted.

An expedited section between the city and Woolloongabba was opened as a shuttle service in August 2000 in time for the 2000 Olympic Games for events held at the Gabba sporting stadium. The full 16.5km SE Busway from Brisbane CBD to Eight Mile Plains opened in October 2000. It’s been a patronage success with an evaluation by Bitzios (2009) finding it carried 12,400 passengers per hour one-way in peak periods by 2007-08, with travel time savings of over \$130million per annum, despite a low benefit-cost ratio being estimated for the project as a whole.

In the years immediately after opening, an attempt was made to rezone the area around Holland Park busway station some eight kilometres from the city centre, to create a small TOD. But this attempt proved a terrible planning failure, meeting fierce local community opposition from a community who had received the benefits of the busway station but did not wish to give up any of their perceived local amenity. In addition, the lack of investment in rail capacity has now caught up with Brisbane, with the city today confronted by a crisis if it cannot secure funding and provide additional cross-river capacity in the near future, for which little Commonwealth funding is likely (see Ironside 2013).

5.3. Participant reflections on the planning process

Reflecting on the transport planning processes used, the informants were clear that the technical analysis was often only employed to back up the gut feeling of a political champion such as BCC's Traffic and Transport Chair, and the judgement of the senior decision-makers, after key decisions had been taken. One informant succinctly described the planning process as *"ex-post facto rationalisation on a decision already made"* (TA1, 2012). The 'enormous battery of transport investment evaluatory techniques' that has long been available to transport planners (Truelove 1992:4) was not harnessed to compare the BRT option meaningfully with LRT, nor a bus-rail interchange plan that made better use of the existing large CityRail network.

Reflecting on this, one of the state government officials at the time suggested *"I think it's very rare that the technician gets to make the best transport policy decisions"* (SGE1), a theme that many of the engineer/planners involved repeated in their interviews, suggesting they had preferences for more technical-rational planning activity, or at least for a style that used a combination of significant technical assessment within the overall framework. This technical role of transport planners remains important to them, and they see it as also important to the outcomes produced by their work. They also felt that the voice of the technician was an important one in the debate, to justify a project. One participant noted, political championing was "certainly" influential in the busway planning process, but some technical proficiency was still required:

"no politician can stand alone without the support and backing of the technical experts i.e. the transportation planners, civil engineers, the urban and community planners along with a plethora of other experts such as architects, communication experts and project managers." (PC3, 2013)

The short timeframe of the planning process was identified as an issue. Whilst most of the participants were satisfied with the busway outcome, some mused about the problems the city now faced in terms of passenger rail capacity and felt that more should have been done earlier planning and investing in new rail capacity. One also noted the lack of TOD planning which had led to a less than ideal land use arrangement to support the busway.

6. Discussion

The personal accounts provided in this study show how important having political champions were to Brisbane building busways. The research found that as opposed to the traditional role of the transport planner, there was a distinct lack of technical/rational analysis in the key busway mode choice decision. Their role was quite different, either supporting BCC's position, as advocated by Council's Traffic and Transport Chair, or providing limited technical and bureaucratic support for the busway option to help BCC co-opt first the relevant state government department and then the Transport Minister towards their vision, including through a change of government. The planners helped support the deal-making, and participated in those deals as advocates, rather than being analysts providing a technical case for the busway scheme.

The research shows that transport planners are taking on a variety of planning styles, with their capacity to engage in political, policy and advocacy spheres at the fore in the busway case. Brisbane sits more alongside Curitiba and Bogota as a city that invested in BRT on the basis of the gut feel and drive of political champions/entrepreneurs than it did technical expertise and analysis (Pulichino and Coughlin 2005).

The study highlights that many decision makers tend to make decisions intuitively, often aided by a first-hand or visual experience. After the visit to Ottawa, the Traffic and Transport Chair at BCC made an instinctive decision to commission a report for a Brisbane BRT plan, and moved to co-opt others to her vision. And it was only after a visual presentation that the Transport Minister was won over to the busway option. The study also highlights how transport and land use decisions should be taken together. The case of the aborted Holland

Park West station rezoning suggests if planners do not consult with communities and get agreement on TOD proposals ahead of transit construction, then they may not achieve preferred transport/land use arrangements.

The major findings of this study indicate that transport planning depends heavily on political influence and co-option in the development of major projects. Technical analysis does not contribute significantly as it once did, and as a result planners must now learn to work within a political framework, as it has been shown that this is critical in mode choice decisions in transport planning.

The limitations of this study include the focus on only one case in one Australian city, and this work should be expanded to consider other transport projects to gain a richer understanding of the planning styles being used by transport planners, including in other jurisdictions, in areas such as freight planning and in situations where planners have helped underpin much longer gestations for transport projects, such as the Gold Coast light rail scheme. Research is also needed into how decision-makers view planning within the transport field, and how best to communicate ideas such as new technological solutions to them. These are avenues for further research.

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