Session 5c

PASSENGER TRANSPORT - IMPROVING EFFICIENCY
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PUBLIC TRANSPORT: A VIEW TO THE FUTURE THROUGH MARKET RESEARCH
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ECONOMIC EVALUATION OF PASSENGER TRANSPORT TERMINALS AND TRANSFER FACILITIES
W J Pienaar

BARRIERS TO REFORM: INSTITUTIONAL AND POLITICAL BARRIERS TO THE IMPLEMENTATION OF ADVANCED TECHNOLOGY
Angus Witherby

Session Chair: Barry Mein
Public transport in Adelaide has entered a new era, as the right to operate services within each of a number of defined geographical regions is decided on the basis of a competitive tendering process, replacing the monopoly the government operator has held through TransAdelaide (formerly the State Transport Authority) for almost 20 years. In the first round of bus tenders, TransAdelaide was successful in the Outer South, but the tender for the Outer North area was awarded to a private operator.

As an organisation which is competing on an equal footing with private companies in the tender process, TransAdelaide faces the task of moving away from the historical public sector focus on basic service provision and social welfare towards a more efficient, product-based and customer-driven style of operation, theoretically the domain of the private sector.

This paper deals with the use of market research as a means of assisting TransAdelaide to meet the challenges of operating in a dramatically altered environment, and to emerge as a legitimate contender in a competitive marketplace.

With the new contractual arrangement having substantial incentive payments for passenger boardings, one of the main challenges is to arrest the underlying trend of declining patronage on public transport in Adelaide. This has involved market research at a regional level to critically assess trends in the use of public transport by market segment, passenger attitudes to system attributes and shifts in destination patterns. Important factors include the increasing demand for suburb to suburb travel at the expense of the traditional suburb to CBD travel, and the changing composition of the workforce and work hours.

The paper focuses on two recent market research projects undertaken to assist in the bidding for tenders, and outlines both the research methodology and the key outcomes and initiatives which have taken place as a result of this market research.

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1. INTRODUCTION

In January 1993 the South Australian Liberal Party (then in opposition) released its ‘Passenger Transport Strategy’ paper, outlining the party’s blueprint for a more efficient public transport network. The major objectives of the proposed changes to existing methods of service provision were to reduce operating costs, and to reverse the prevailing trend of patronage decline through a clear focus on the needs of customers.

Soon after winning government in South Australia in December 1993, the Liberals announced that, consistent with the published policy, public transport services in the Adelaide metropolitan area would be progressively put to competitive tender on the basis of a number of defined geographical regions. The new arrangement was to replace the monopoly that the government service provider, the State Transport Authority (the STA), had held since 1975 (‘Passenger Transport Strategy’, 1993).

Following the subsequent ratification of the Passenger Transport Act, effective 1 July 1994, the responsibility for issues relating to transport policy and planning became the domain of the newly formed Passenger Transport Board (the PTB). In the interim period prior to the letting of contracts the former STA, as TransAdelaide, continued to operate services, but as an independent provider funded by the PTB. Simultaneously, the organisation embarked on a process of cultural and structural change, which was deemed necessary in order to compete effectively against private sector interests for the right to operate services in Adelaide. (‘A Bias for Yes’, 1993). As part of the process, TransAdelaide adopted best practice principles across the organisation, and focussed on providing services which reflect actual customer needs.

February 1995 saw the first round of tenders commence, involving approximately 20% of the Adelaide bus network (the Outer North and Outer South regions). The tenders were awarded in September/October, for commencement of contracted operations in January 1996. TransAdelaide was successful in winning the Outer South contract, while the Outer North area was awarded to a British-owned private operator. Tenders for a further 25% of Adelaide’s bus services are currently being evaluated (Outer North East, Inner North and Northern Transit Link services).

It is against this background that the two studies discussed in this paper were undertaken. Market research which would enable TransAdelaide to better understand its customer base in terms of regional travel patterns (and reasons for changes to travel behaviour), current sources of customer satisfaction or concern, as well as identifying the potential for attracting new customers, was considered fundamental to putting together winning bids in the current tender round.

Patronage Trends in Adelaide - Are we fighting a losing battle?

The competitive tendering process, as it now applies in the Adelaide context, encourages contractors to take an entrepreneurial approach to the business of providing...
services. Government policy (via the PTB) controls the social justice issues which must be taken into account in providing an equitable public transport system, and ensures that service quality is maintained (Stanford, 1992). Remuneration for contractors takes the form of patronage-based incentive payments, encouraging operators to strive to increase patronage over the term of the contract, in turn creating an environment supportive of innovative service design and a superior level of customer service.

In order to improve patronage levels in Adelaide operators must work against the historical decline, which over the past ten years has been in the order of 2% per annum (see Figure 1).

**Figure 1. A Decade of Patronage in Adelaide**

Increases in patronage have occurred in conjunction with major changes to service provision and fare structures. These include the introduction of free travel for school students and the elimination of distance-based zonal fares. Conversely, decreases in patronage are evident when these changes have been reversed. However, the decline in patronage is also strongly affected by external factors, over which the public transport provider has little or no control.

One of the most significant external factors contributing to the downward trend has been the steadily increasing level of car ownership in Adelaide, with the number of new driver's licences over the past 20 years rising at twice the rate of population growth (Bray, 1995). In fact, Adelaide has been identified as one of the most car dependent cities in the world (Radbone, 1992), with an affluent population, an extensive road network, relatively low levels of traffic congestion and ample low cost parking. The net effect of this is that of all passenger trips made in Adelaide, only 2% are made on public transport by persons who have the option of using a car (Bray, 1995).

Continuing trends of increasing suburb to suburb travel (Manning, 1984), and a corresponding decline in the number of journeys to the CBD also work against increasing public transport usage, as does the changing nature of workforce participation. More flexible working hours, increased trip complexity (as a result of factors such as the need for working parents to drop off children at various locations),
and developments in information technology are all to some extent contributing to a reduction in demand for traditional forms of mass transit to the Adelaide CBD.

Although these trends are by no means unique to the city (Moriarty, 1990), public transport operators in Adelaide face considerable challenges in order to arrest trends of declining usage, and to prosper under the competitive tendering system. One of the ways in which TransAdelaide has responded has been to formulate a market research program which will provide the building blocks to sustain a quality customer-driven focus for the future.

TransAdelaide’s market research now centres explicitly on understanding and meeting customer expectations. Figure 2 illustrates the objectives and environmental constraints in which this market research is conducted.

**Figure 2. Market Research Constraints and Objectives**

The ultimate goal of TransAdelaide’s research strategy is to increase market share and customer satisfaction through providing services which are both cost effective and appropriate to customer needs. However, this goal will have to be achieved, not in an environment as a monopoly provider of public transport services, where the customer was often taken for granted, but in a competitive tendering situation, with a stronger customer and revenue focus. While TransAdelaide is able to adapt its services to better
meet customer needs and expectations, the majority of the environmental constraints are out of the control of a public transport operator. On balance, TransAdelaide will have to achieve some significant gains in those areas where it is able to influence service quality and customer perceptions, to counteract the effects of an environment in which there is often little incentive for public transport use.

**Historical Approach to Market Research by STA/TransAdelaide**

As the sole public transport provider with the responsibility for network planning as well as service operation, TransAdelaide in the past has concentrated mainly on global market research, in the form of large studies relating to travel patterns or the collection of customer satisfaction and perception data. Both types of study have primarily been undertaken by means of on-board surveys, although some have involved either household or telephone interviews, with a small number of studies being conducted at major worksites or employment centres.

Market research information gathered previously has been influential in the establishment of many of the service standards and strategic policies of TransAdelaide. For example, the introduction of more frequent services on some routes, and a concentration on better adherence to timetables, are two areas which have been influenced by market research findings.

In terms of major projects undertaken prior to competitive tendering, the Adelaide Public Transport Survey (APTRANS) rates as the most comprehensive study of public transport travel patterns conducted in Adelaide to-date, with the data representing some 190,000 daily passenger journeys (Crouch et al. 1992). The study was carried out as a series of surveys between 1990 and 1992, across five geographically defined segments encompassing the whole of metropolitan Adelaide. Data was used as input into the STA's network modelling system for transport planning, but detailed market characteristics of passengers were also obtained. Trip pattern information from this study was used in service redesign and new service impact assessment, while the market characteristics were useful in providing global and route passenger profiles.

The STA also undertook a Performance and Image Tracking Study between June 1991 and June 1995. Data was collected through telephone interviews of 300 respondents per quarter, sampled from the whole of metropolitan Adelaide. This study tracked the image of public transport as seen through the eyes of the community. Although limited data was collected regarding trips made in the morning peak period, it was primarily intended as a perception study. The research provided a useful indicator of the success of initiatives such as graffiti removal efforts undertaken at particular points in time, while the study methodology was used as a basis for the regional market research studies discussed in this paper.

A third major study looked at customer preferences, and was conducted via a combination of focus groups, household interviews and on-board surveys to determine customer satisfaction ratings on a number of service features. This data has been useful
in creating benchmarks in the area of customer satisfaction (Droll, 1995), but is limited as it cannot be disseminated into regional parcels.

Although useful in their time, clearly this type of global research is no longer appropriate under the system of regional service contracts in which TransAdelaide strives to be a major player in the future. Accordingly, a regional customer-orientated approach to market research was developed, involving data collection from both users and non-users; the onus is now on the PTB to explore general trends in urban transport through global market research studies.

2. STUDY METHODOLOGY

The two studies discussed in this paper were carried out by means of separate telephone surveys of residents in the Outer North East and Inner North regions of Adelaide respectively. The selected areas corresponded as closely as possible to the contract areas as specified by the PTB (illustrated in Appendix 1) for the second round of the competitive tendering process. Quite a large proportion of the Outer North East region consists of new housing development, and is served by Adelaide’s O-Bahn guided busway system. The Inner North on the other hand, consists of more well established suburbs, served by a traditional radial bus network.

In order to assure independence, the telephone interviews themselves were conducted by external market research consultants. All aspects of the survey design, and the subsequent analysis, interpretation and reporting of results were carried out by the co-authors of this paper.

The major objectives of the research were:

• to examine regular weekday trip patterns and travel needs of residents, in both the peak and inter-peak periods, and to identify factors affecting travel behaviour and modal choice;
• to determine the nature and extent of changes in travel patterns which may have occurred over the 12 months prior to the surveys, looking in particular at shifts towards and away from public transport usage and CBD travel;
• to provide an insight into the types of services which would be most appropriate for residents of the respective areas, and to highlight specific improvements which may need to be made to existing service delivery;
• to examine general perceptions held by residents regarding TransAdelaide services, (both users and non-users), and to probe the major determinants of community attitudes towards public transport;
• to provide data to assist in the development of the marketing and service plans for the Outer North East and Inner North tender areas;
• to assess reasons for use and non-use of public transport, and to highlight potential strategies for retaining existing customers and attracting new users.
Unlike most studies previously conducted, the methodology combined elements of both customer satisfaction and travel pattern studies, allowing market segmentation on both criteria.

Samples of 1,000 residents from each of the two regions were obtained (ie., a total of 2,000 respondents overall), with participating households selected at random from live household phone numbers specific to the study areas. Interviews were limited to one respondent per selected household.

In order to approximate the population age distribution as closely as possible, the sample was also subject to age quotas, so that 12% of respondents were of primary school age, and 8% aged between 13 and 17 years. For respondents under 13 years of age, the interviews were conducted by an adult on behalf of the child. For those in the 13 to 17 years age bracket, the consent of a parent or guardian was obtained prior to the interview. The two survey questionnaires were consistent in regard to major indicators such as travel pattern data and demographics, but included variations which reflected differences in regional characteristics.

Respondents were asked only about trips made on a regular or consistent basis; data relating to spontaneous or ad hoc travel was not recorded. The primary focus of the research was to assess features of public transport’s major, and most readily quantifiable market, rather than to examine all trips made by the population within each study region. The peak period was defined as between the hours of 7.30 and 9.00am, while the inter-peak covers the period between 9.00am and 3.00pm.

3. SURVEY FINDINGS

Demographic information gathered from ABS sources (CDATA-91) showed that there were considerable differences between the profiles of the two regions, which are reflected in many of the survey results. In the Outer North East, there is a large workforce participation rate, low unemployment and high levels of car ownership. In comparison, the Inner North has a significantly older age profile and a higher than average level of unemployment. These demographic characteristics, coupled with the attractiveness of the O-Bahn system, resulted in both regions having above average levels of public transport usage.

Data in relation to travel patterns shows that around 70% of residents in the Outer North East region make regular trips in the morning peak period compared to 58% for the Inner North (McRostie, 1996, Anlezark, 1996). In contrast, slightly less Outer North East residents travel regularly in the inter-peak (51%) than in the Inner North (57%). These figures give an indication as to the overall size of the trip market in each region in the respective time periods. Figure 3 illustrates public transport’s current market share of these trips for both peak and inter-peak travel, relative to other modes.
As would be expected, the distribution of data relating to trip purpose varied considerably between time periods, with almost 90% of peak trips in the Outer North East, and 85% in the Inner North being made in connection with either work or school. In the inter-peak, 52% of trips in the Outer North East were for shopping or personal business/recreation, but there was still a significant proportion (30%) for work purposes in this region, compared to only 17% in the Inner North.

Results relating to travel destinations (see Figure 4) showed that a significant number of trips in the Outer North East are concentrated around district and major regional centres, while in the Inner North, a slightly greater percentage of trips are made to the CBD. This may be largely attributed to the proximity of the latter zone to the city and the comparative lack of large retail and commercial development in the region.

In the Outer North East, TransAdelaide performs strongly in terms of market share of peak CBD trips, with approximately 53% of those who travel to the city normally doing so by bus, compared to 44% of peak commuters in the Inner North. However, for the
large number of local trips, public transport caters for only around 5% of peak journeys made in the Outer North East and 10% in the Inner North.

In total, just over 20% of all respondents indicated that they had changed their usual travel patterns at some stage during the 12 months prior to the survey, with residents of the Inner North slightly more likely to have done so than residents of the Outer North East. Changes to travel patterns were most commonly in response to alterations in employment or education status. Although those fitting this category were slightly less likely to be public transport users at the time of the survey than they had been 12 months previously, this did not appear to be associated with dissatisfaction with public transport services. This group of respondents showed a slight trend towards local and inter-peak travel and away from peak or CBD travel. Although such changes were small in magnitude, this would explain their reduction in public transport usage.

Respondents in the surveys were asked what their impressions of public transport were mainly based upon; results varied only marginally between the two regions and so have been combined in the pie-chart below. Figure 5 shows that personal experience, either recent or past, was by far the most telling factor in forming attitudes towards public transport. General observation was another important determinant, while the opinions of others with whom they came into contact also had a significant affect. The media, either in the form of feature stories or designated TransAdelaide advertising, was not particularly important as a factor in forming impressions of public transport.

Figure 5. Basis for Impressions of Public Transport

![Pie chart showing the basis for impressions of public transport]

Those surveyed were asked to rate a number of attributes of current public transport services in their area on a scale from 1 ‘Poor’ to 10 ‘Excellent’. Figure 6 shows the mean ratings obtained from public transport users in the sample. These were fairly consistent across both regions, which is perhaps somewhat surprising, given that the O-Bahn system is generally considered the ‘jewel in the crown’ of the Adelaide public transport network.
The high rating of most service attributes by Inner North residents may be influenced by the greater proportion of dependent and concessional passengers in this region, who generally rate features more favourably. Just over half (51%) of all respondents in the Inner North sample were eligible for concessional travel, compared to only 32% of residents surveyed in the Outer North East region.

In general, higher ratings on all service features were recorded by females than males, while respondents aged 13-17 years or 60+ years gave more favourable ratings, on average, than did their counterparts in the middle age stratum. These results can be attributed to a higher dependence on public transport by people in these age categories.

Mean ratings obtained from the public transport users in each sample were compared with those given by non-users. In the Inner North, current users rated each of the items significantly higher than did non-users (t-test, p<.05). The same was true for respondents in the Outer North East, except that the differences on 'Services at Suitable times' and 'Service Frequency', although in the same direction, did not reach statistical significance.

In the questionnaire used for residents of the Outer North East, an additional attribute was included relating to perceptions of security at the two major interchanges located along the O-Bahn busway. For this item, the obtained mean rating was only 5.2 (the lowest average score for any attribute), with means of 6.0 and 5.0 for users and non-users respectively. These results suggest that poor perceptions of security at these locations act as a deterrent to public transport usage for some people.

The above is a summary of some of the main research findings; results are reported in full by McRostie (1996) and Anlezark (1996).
4. KEY OUTCOMES AND INITIATIVES

To date, results from the market research studies conducted in the Outer North East and Inner North regions of Adelaide have been used to formulate more appropriate service options for residents, for inclusion in the respective tender documents. Should one or both of TransAdelaide’s bids be successful, the recommendations made regarding options for service provision and marketing will be implemented, either at initial operation (October 1996), or within the first six months of the contract term.

The specific recommendations made in the tender bids are detailed below. Some have come about as a direct result of the market research findings, while others are concepts which have received significant input, or undergone additional development as a consequence of the research outcomes.

Several of the recommendations apply to both study regions, although their implementations are often regionally specific. As well as the regional focus, some of the outcomes have, or will in the future be implemented at a more corporate level, such as the marketing of public transport services to defined market segments.

Community Consultation

One of the main recommendations made in both studies involved the facilitation of more intensive community consultation. This was identified as being of major importance to foster a stronger regional identity in the study areas, which in turn should lead to an increased sense of community ownership of public transport services and facilities. It is envisaged that engendering this sense of ownership could have a significant impact on graffiti, vandalism and general use of public transport by the community.

In both the Outer North East and the Inner North areas, a program of regional customer forums has been under way for some time, and are held six times per year. The forum members represent a diverse cross-section of community groups with a common interest in public transport. These forums have, and will continue to provide an important two-way communication and feedback mechanism by conveying user views, and have been responsible for generating suggestions which resulted in service changes. Issues highlighted by the regional market research surveys will be placed on the agenda for further discussion at these customer forums.

Consultation with local councils continues to be at the forefront of TransAdelaide’s community liaison strategy, and is an important element of the tender bids. Existing local government relationships will be broadened to cover a stronger community service focus, a feature of which will be improved dissemination of information about public transport services to a range of groups. To reach as many areas of the community as possible, a program of visits to local libraries, community centres and schools is proposed in both tender areas. Once again this process is being further enhanced in line with recommendations in the regional market research studies.
In conjunction with local governments TransAdelaide is introducing public transport kits for new residents, which promote the benefits of public transport use in addition to providing Metroticket, route and local depot information.

**Regional Marketing**

TransAdelaide proposes to provide a more localised approach to the dissemination of information. In the Outer North East, an information facility is proposed for one of the O-Bahn Interchange platforms. Customer service facilities inside the local shopping complex will be improved in partnership with Westfield Tea Tree Plaza Management. In the Inner North, strategies include improving route, timetable and Help desk information, as well as signage at key bus stops. Shopping centres, the local press and letter box drops will be used to promote regional public transport, while CBD-specific promotions are planned in association with City groups such as the Rundle Mall Traders Association.

TransAdelaide has facilitated the tourism potential of the O-Bahn, both locally and at a corporate level, such that it is recognised as the third largest tourist attraction for interstate and international visitors to South Australia. TransAdelaide plans to sustain the spotlight on the O-Bahn by producing 20,000 full colour leaflets, targeting tourists and visitors, highlighting the Adelaide O-Bahn and its unique attributes. The recent O-Bahn 10 year Anniversary celebrations, held in March 1996 also highlight the worth of this unique transport service. Again, the above marketing strategies have been formulated using input from the regional market research studies in addition to other sources, and are consistent with recommendations made in the relevant reports.

**Linking Local Transport Services with Traditional Fixed Route Public Transport**

A proposed option for the Outer North East is to link the fast O-Bahn services with more flexible demand responsive services, utilising smaller capacity buses. This will provide access to local regional centres by a cross-suburban bi-directional looping service. The routes for the demand responsive services are heavily based on the local trip patterns identified in the regional market research.

To broaden the local transport network in the Inner North region, TransAdelaide proposes to link existing local community transport with the more traditional public transport fixed route services. One such initiative is the provision of TransAdelaide maps inside community buses with clearly marked connection points. A program to increase the number of bus shelters is also being undertaken with the local councils of Enfield and Prospect.

**Improved CBD Travel**

Public transport has a high market share of CBD trips, and therefore as the CBD's attractiveness declines, so potentially does public transport's patronage. To inhibit the shrinkage of this market, increased CBD service frequency was recommended for both
regions, but for very different target markets. In the Outer North East study, the focus was on peak commuters through the recommended introduction of additional express services, while for the Inner North study, the focus was on the inter-peak recreation/shopping market.

In the Outer North East, a selective introduction of new express services is planned, resulting in an increase in the number of peak services of this type to the CBD, providing an average travel time saving of 10% on some routes. In the Inner North, an increase in inter-peak CBD service frequency by up to 25% on some services is proposed, at a relatively low marginal cost.

Safety

TransAdelaide regards the safety of its customers, particularly women and the elderly travelling at vulnerable times, as being one of its highest priorities. The regional market research identified poor security at the O-Bahn interchanges as major issue in the Outer North East. Although security was not as important to residents in the Inner North region, the higher proportion of elderly public transport users lends itself to enhanced security measures.

A two-level security program has been adopted by TransAdelaide, at both a regional and corporate level. At the corporate level, TransAdelaide is expanding its security camera program (both on-board and at interchanges) and is continuing to work productively with the Transit Police.

For both regional study areas, mobile phones will be introduced on buses after 7pm, enabling passengers to phone ahead to arrange safe pick-up after alighting from the bus. In addition, the negotiated ride option is proposed, allowing passengers to be dropped off at 'safe points' along the route in addition to designated bus stops.

In the Outer North East, specific measures are planned to address security at the O-Bahn interchanges. These include a joint venture with a car parking company to provide secure parking at one of the major interchanges, and a staffed information booth at another. However, coordination of interchange security is a complex issue, as different organisations are involved in ownership, (Department of Transport), control (PTB) and the operation of services using these interchanges (TransAdelaide).

Tertiary Students

Tertiary students were identified in both studies as an important user group, making more than 50% of their trips on public transport. TransAdelaide is developing a general program to promote and improve public transport information and services for tertiary students. Potential initiatives include better publicity for TransAdelaide at tertiary institutions and improved information on public transport for students.
5. CONCLUSIONS

The legislative and policy framework for the provision of public transport services in Adelaide has changed dramatically over the past two years, with the introduction of area-based competitive tendering. TransAdelaide holds the firm view (which has been endorsed by frontline staff through depot Best Practice committees), that it has the necessary mix of skills and experience to be the preferred provider of public transport services in Adelaide. Consequently, it has participated energetically in the new competitive tendering process, determined to put together the best bids possible.

TransAdelaide regards market research as an essential component in providing services with a focus on quality and customer needs. In-depth regional surveys, coupled with the analysis of secondary data sources (ranging from patronage to concerns and commendation data), enhance TransAdelaide's position in the tendering process through providing quality input for submissions. They also provide the building blocks for a sustained approach to the delivery of services which are appropriate and responsive to local needs.

The methodology used in the Outer North East and Inner North regional studies, which combines the collection of customer satisfaction and travel behaviour data from the same group of respondents, is considered to be a cost effective way of obtaining vital information about customers. It allows analysis of attitudinal data by major market segment, based on both demographic and travel pattern criteria. The regional focus allows questionnaires to be tailored to suit the area on specific points, while major indicators remain consistent for each study, allowing data comparison.

The shift from global to regional service provision will be strengthened by gathering data based on the type of methodology used in the two studies discussed in this paper, and by following through on recommendations, such as the broadening of local government relationships in the regions involved. This in turn will enhance the community service focus of TransAdelaide as an operator, leading to better services and improved dissemination of information about public transport to a range of groups within the community.

Most importantly, the studies have allowed TransAdelaide to communicate with existing and potential customers, while the direct input of results into the tender bids has meant that market research is being used more effectively than ever before to set up a solid framework for public transport in the future. In keeping with Best Practice principles, the research has enabled TransAdelaide to identify opportunities for improvement to current methods of the operation and marketing of services in particular regions. It has also provided the foundation for ongoing customer satisfaction monitoring and performance evaluation, and will be used as a benchmark for measuring customer related Key Performance Indicators in contract areas operated by TransAdelaide.
Future Market Research

In addition to quantitative monitoring, the Outer North East and Inner North studies recommended that qualitative methods, such as focus groups, be used in addition to regular customer forums to explore specific areas of customer concern. It is anticipated that this type of research will play an important role in the early stages of contracted operations. Future surveys of large worksites or employer groups (e.g. Westfield Tea Tree Plaza) will help TransAdelaide to keep track of changing local public transport needs.

Market research along the lines of the Outer North East and Inner North studies will continue to be carried out to enable TransAdelaide to monitor and review service provision, and to adapt and supply appropriate services. The challenge for public transport in Adelaide in the future is for operators to respond appropriately to regional trends, through having the flexibility to meet the diverse transport needs of both users and potential users in a changing environment.

6. ACKNOWLEDGMENTS

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REFERENCES


Appendix 1

P.T.B Contract Areas

Legend

1. Outer North
2. Outer North East
3. Hills
4. Outer South
5. Le Fevre Peninsula
6. — 560,—  TL3,—  TL10
7. Inner North
8. East
9. North West
10. South West
11. Inner South
12. — Circle Line
13. — Port Adelaide - Marino