

**Personalised Marketing
Demonstration Study
for Birkenhead, Auckland,
New Zealand**

Transfund New Zealand Research Report No. 246

Personalised Marketing Demonstration Study for Birkenhead, Auckland, New Zealand

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- Pinnacle Research, who provided survey methodology and evaluation inputs;
- Market Pulse, who carried out the monitoring surveys;
- Auckland Regional Council (ARC) and
- North Shore City Council (NSCC), who both provided financial and staff resources;
- Birkenhead Transport and Fullers Group, local public transport operators, who provided resources for the demonstration programme including making a free trial ticket available to participants.

Their contributions were vital to the success of the study.

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Executive Summary

Introduction

A study to facilitate and monitor the effects of a personalised marketing demonstration programme was undertaken by Booz Allen Hamilton (NZ) Ltd in Birkenhead, Auckland, New Zealand, in June 2002. The effects of the demonstration programme were monitored by way of a before-survey (May 2002) and an after-survey (October 2002).

This study was carried out in conjunction with Pinnacle Research¹, who provided survey methodology and evaluation inputs, and Market Pulse², who carried out the monitoring surveys. The Auckland Regional Council (ARC) and the North Shore City Council (NSCC) provided financial and staff resources. In addition, Birkenhead Transport and Fullers Group, local public transport operators, provided resources for the demonstration programme and made a free trial ticket available to participants.

The Study

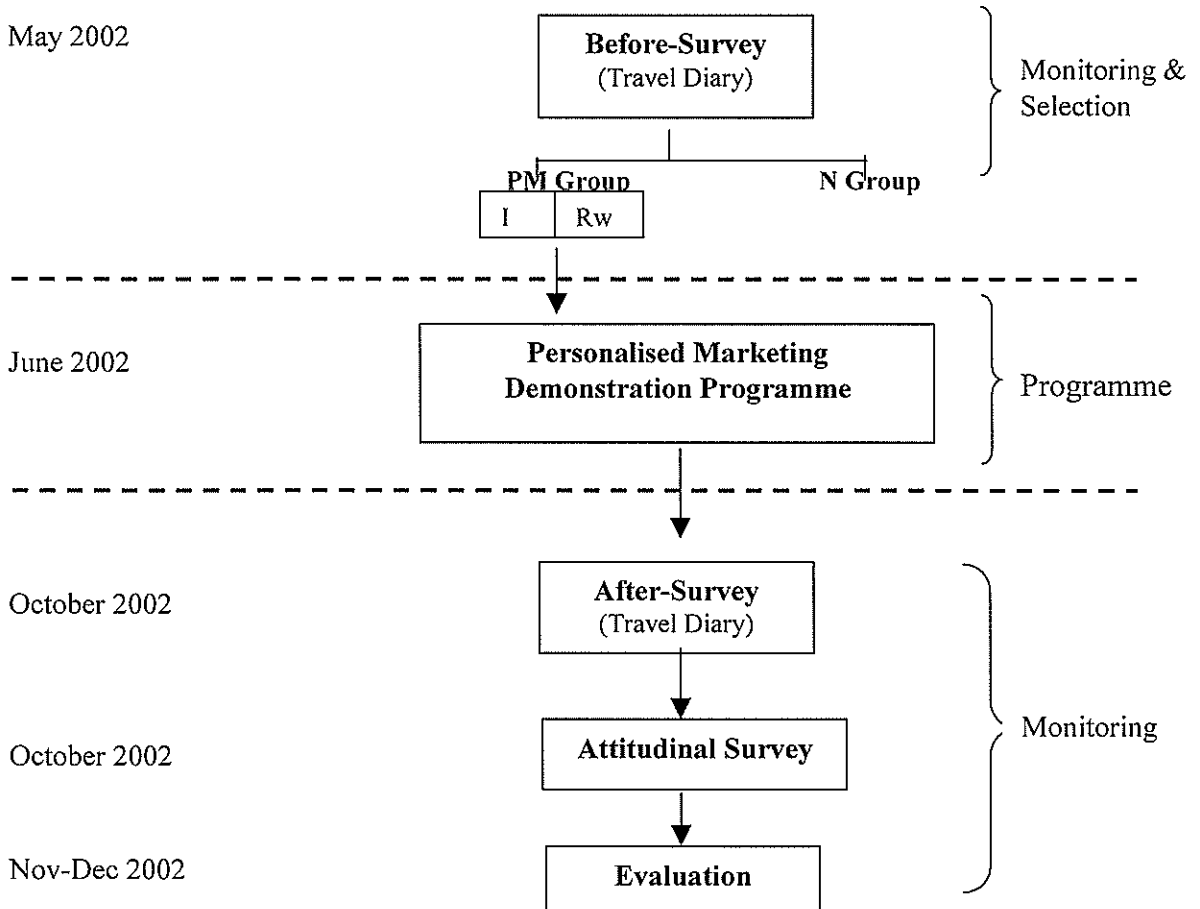


Figure 1 Overview of the Birkenhead Personalised Marketing Study.

The selection of participants for the Birkenhead PMP was undertaken in the before-survey stage.

¹ Pinnacle Research, PO Box 3058, Wellington, New Zealand.

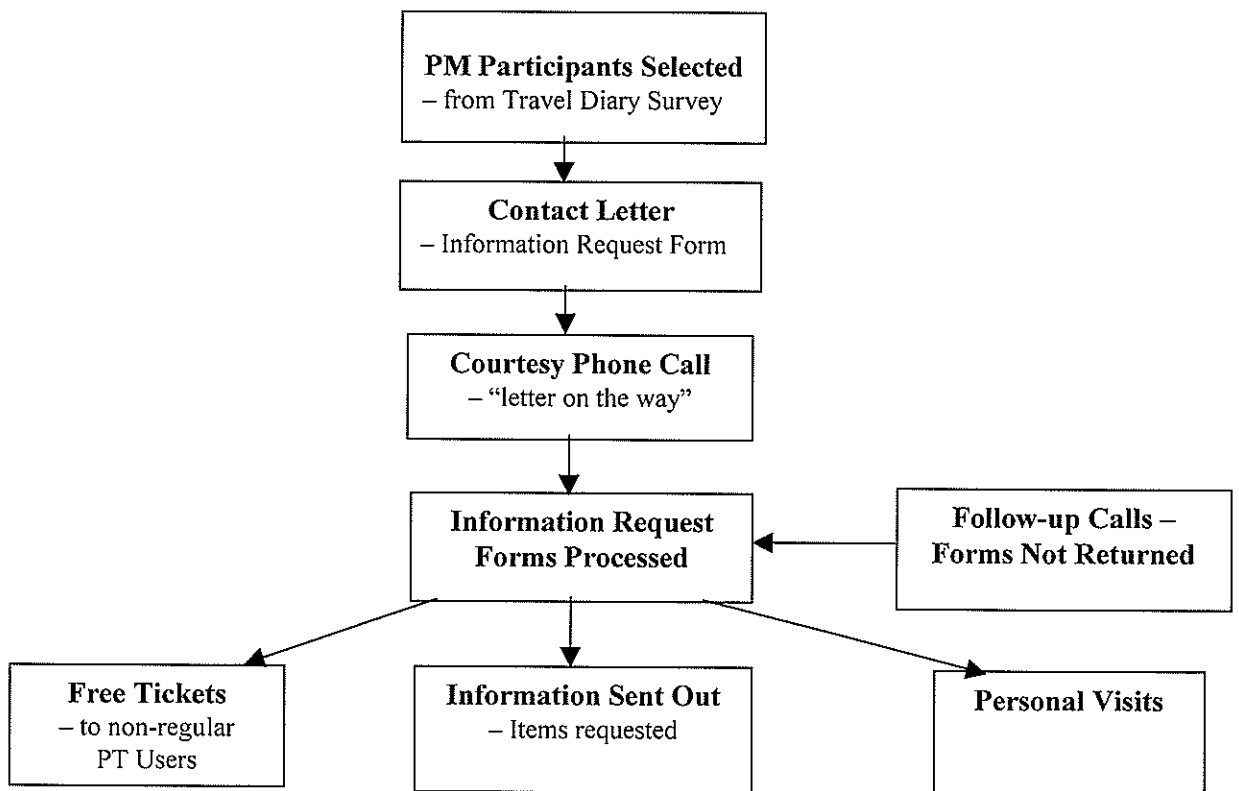
² Market Pulse Ltd, PO Box 8607, Auckland, New Zealand.

The Programme

The demonstration Birkenhead Personalised Marketing Programme (PMP) was based broadly on Socialdata’s IndiMark programme³. The main steps of the Birkenhead PMP are shown in Figure 2, and are outlined below :

1. Programme group selected from Before-Survey Respondents. This group consisted of all survey respondents who indicated they were interested in receiving more information on public transport (PT), walking or cycling.
2. Contact letter sent to Programme group. An Information Request Form was attached to the letter. This form set out the information material available, and also advised of the availability of a free PT ticket and cycling incentives, and the possibility of receiving a visit.
3. Phone call made to each Programme group household to advise that letter was on the way, and to encourage return of the form.
4. Completed Forms returned by participants who ticked the information items they wished to receive (including a free PT ticket and/or visit).
5. Information and tickets sent out to participants requesting these (where regular PT users requested a free PT ticket these were NOT provided).
6. Visits carried out for participants who requested these.
7. Follow-up phone calls to Programme group people who had not returned the Information Request Forms within 10 days.

Figure 2 Main steps of the Birkenhead Personalised Marketing Programme.



³ ‘IndiMark’ is a trademark of Socialdata, and the Birkenhead demonstration programme is not claimed to be an IndiMark programme.

Programme Results

The main results of the Birkenhead PMP are as follows:

- The Birkenhead PMP resulted in a decrease in weekday car driver trips for a random sample of study area residents of 4.5% and an increase in travel by several alternative modes: 29% increase in cycling; 6.5% in car passenger trips; 6.2% increase in bus trips; no change to walking and ferry trips.
- The results of the Birkenhead PMP are generally similar to those found in other personalised marketing experiments in that a reduction in car driver trips and an increase in travel by alternative modes has been achieved, except that the size of the travel changes has been smaller. This is most likely related to the relatively hilly nature of the Birkenhead area which does not encourage walking and cycling, and to the relatively low level of public transport service in the area.
- The PMP also had an impact on weekend travel, but the quantitative impact could not be identified from the survey travel data available.
- Provision of a free trial public transport ticket can encourage increased use of public transport, and may be more important than provision of information.
- Providing further information about alternative travel modes to people who had indicated an initial interest in receiving the information, but did not follow through on returning the Information Request Form, increased the reduction in car travel achieved.

Recommendations

As indicated above, the Birkenhead Personalised Marketing Programme has been successful in reducing car driver trips and in increasing the use of alternative travel modes.

The main recommendation is, therefore, that:

- Personalised Marketing be considered, along with other travel demand management measures, for application in other areas of Auckland, and throughout New Zealand.

The following recommendations are also made:

- Personalised Marketing will be most effective if applied in areas with a relatively good quality public transport service, and which are conducive to walking and cycling.
- Personalised Marketing will also be effective if used in tandem with improvements to the public transport service, or to walking and cycling facilities.

Abstract

A research study was undertaken, in 2002, to facilitate and monitor the effects of a personalised marketing demonstration programme in Birkenhead, Auckland, New Zealand.

The research project involved three main components:

- A review of international practice and experience with personalised marketing.
- A trial of the preferred personalised marketing approach with a selection of households in Birkenhead, Auckland.
- Monitoring and evaluation of the Birkenhead trial, based on the results of before- and after-surveys (using travel diaries).

The results achieved in the trial were similar to those obtained in other personalised marketing programmes.

1. Introduction

A study to facilitate and monitor the effects of a personalised marketing demonstration programme was undertaken by Booz Allen Hamilton in Birkenhead, Auckland, New Zealand, in June 2002. The effects of the demonstration programme were monitored by way of a before-survey (May 2002) and an after-survey (October 2002).

This study was carried out in conjunction with Pinnacle Research¹, who provided survey methodology and evaluation inputs, and Market Pulse Ltd², who carried out the monitoring surveys. The Auckland Regional Council (ARC) and the North Shore City Council (NSCC), provided financial and staff resources, and the contributions made by these councils were vital to the success of the study.

In addition, Birkenhead Transport and Fullers Group, local public transport operators, provided resources for the demonstration programme and made a free trial ticket available to participants.

1.1 Study Objectives and Scope

The overall objective of this study was to:

Develop and undertake a 'personalised marketing' demonstration programme in an urban area in New Zealand, in order to assess the effectiveness and potential of this approach to reduce private car travel and increase the use of public transport and other environmentally friendly modes in the New Zealand situation.

It was postulated that if the demonstration programme could achieve significant success, then it would:

- provide useful insights into methods of reducing car travel and increasing the use of environmentally friendly modes, including public transport;
- provide a model for its extension to other urban areas in New Zealand;
- indicate an enhanced role that public transport might play in the overall urban transport task in New Zealand urban centres;
- offer a contribution to improve the financial viability of public transport services in New Zealand (and hence reduce public funding).

As indicated in the study objective, the study scope was not only public transport but also 'other environmentally friendly modes' (EFMs). These were taken to be walking and cycling for this demonstration programme.

¹ Pinnacle Research, PO 3058, Wellington, NZ

² Market Pulse Ltd, PO Box 8607, Auckland, NZ

1.2 Study Components

The study consisted of three main components:

- **International Review** – a review of international practice and experience with personalised marketing was undertaken. The review was focused on:
 - identification of the different personalised marketing approaches which have been trialled, and reporting of trial results;
 - evaluation of the different personalised marketing approaches; and
 - identification of lessons learnt in application of different approaches.

The results of the international review were used to select a preferred approach for the New Zealand Demonstration Programme.

- **Demonstration Programme** – a trial of the preferred personalised marketing approach was undertaken with a selection of households in Birkenhead, Auckland.
- **Monitoring and Evaluation of Demonstration Programme** – the travel diary-based before-survey and after-survey provided a means of monitoring the travel behaviour effects of the demonstration project. The after-survey included questions about the approach used, and an attitudinal survey was also undertaken to provide further ‘qualitative’ information on the trial approach.

1.3 Report Structure

The remainder of the report is structured as follows:

- Chapter 2 - Summarises the findings of the review of international practice and experience with personalised marketing.
- Chapter 3 - provides an outline of the Demonstration Programme, including design issues and features, and methodology.
- Chapter 4 - outlines the evaluation framework and the survey issues and features.
- Chapter 5 - presents the evaluation results, both in terms of travel behaviour impacts and programme approach effectiveness.
- Chapter 6 - highlights key lessons from the Birkenhead Demonstration Programme for other personalised marketing projects.

- Appendix A - reviews international practice and experience with personalised marketing.
- Appendix B - lists the Information Materials sent to respondents.
- Appendix C - lists the adjustments for External Factors.

- Bibliography - lists all literature used for the research.

2. International Review & Selection of Approach

2.1 Personalised Marketing Overview

'Personalised Marketing'³ is used to describe a programme aimed at changing people's travel behaviour by a combination of education, persuasion and provision of personalised information. As noted by the recent European Commission project, INPHORMM⁴, personalised marketing is "*an information and publicity campaign aimed at the individual household or individual person*". The INPHORMM Final Report (1999) identified the following main types of information and publicity campaigns in use:

- Public awareness campaigns;
- Campaigns to targeted groups (in schools, businesses, etc.);
- Personalised Campaigns (e.g. household members, politicians, etc.);
- Transport Information Programmes;
- Health and environmental campaigns related to travel behaviour.

The INPHORMM Final Report noted that personalised marketing campaigns combine education, persuasion and the provision of personalised information and incentives to influence individual attitudes and motivate behaviour change, through one-to-one advice. They are often implemented as part of a wider awareness-raising campaign or linked to the introduction of new public transport routes and services. They focus on individuals who are interested and motivated to make changes, e.g. because they have moved to a new area, started a new job, want to be 'green' or get fit, or because new local services have been introduced which they are now able to access.

Appendix A supplies details of the review of international experience with personalised marketing that was undertaken in order to choose the most relevant and appropriate approach for this trial.

³ The literature generally uses the term 'individualised marketing' to describe personalised marketing approaches. However, because of the tendency for some writers to apply this term to IndiMark (a personalised marketing method developed by Socialdata) as well, we prefer to use 'personalised marketing' as the generic term for individualised marketing approaches. Another possible name which could be applied is 'dialogue marketing'.

⁴ INPHORMM stands for Information and Publicity Helping the Objective of Reducing Motorised Mobility. The INPHORMM project reviewed transport information and publicity campaigns from over 150 organisations in Austria, Germany, Scandinavia, Spain and the UK. This included information on over 120 campaigns and programmes and 30 case studies detailing a selection of campaigns with evaluation results. The case studies include the work of the INPHORMM project partners, plus other organisations from Australia, Austria, Denmark, Germany, Italy, Spain, Sweden, UK and USA. INPHORMM is the most comprehensive review of transport information and publicity campaigns that we are aware of.

2.2 Main Approaches

Two main Personalised Marketing approaches have been trialled to date: IndiMark, which was designed by Socialdata; and Travel Blending, designed by Steer Davies Gleave (SDG). In addition, variants of these two approaches have been trialled (for example, a simplified version of IndiMark in Sydney, and an innovative approach in Adelaide entitled *Switching to Public Transport* which involved free trial tickets and personal information). Personalised Journey Planning has also been developed as a variant of Travel Blending. Brief descriptions of IndiMark and Travel Blending are provided in the following sections.

2.2.1 IndiMark

IndiMark was developed by Socialdata, a German social research consultancy. The first trials of the IndiMark method were in Europe in the early 1990s. Since then it has been tested in over 50 applications in several European countries (including Germany, Austria, Switzerland and Sweden), and in several Australian cities.

IndiMark⁵ has the primary aim of increasing the amount of activities which are accessed by EFMs, walking, cycling and public transport, while decreasing the amount of private motor vehicle (PMV) travel (trips, distance, energy, emissions). It is built upon the view that there is a gap between public perception of public transport and the reality, with an increasing proportion of the population considering itself to be uninformed about the nature and operation of public transport (up from 48% in 1976 to 54% in 1995 in Germany) and believing it to be worse than it really is (Broeg & Schadler 1998). The proponents refer to the very limited success of general marketing of public transport in Perth and elsewhere.

IndiMark is based on individual contact with a significant segment of the target population which has shown an interest in changing travel behaviour towards more EFMs.

Key concepts of IndiMark are:

- It is most effective to select that proportion of the population which indicates a potential for mode change, rather than endeavouring to engage with the full population of the selected area, i.e. focus on people not using public transport (PT) for subjective reasons rather than on 'impossible trips' (trips for which there are constraints on using PT, e.g. use of car for business reasons; and trips for which there are no adequate PT connections).
- It is possible to achieve a change in choice of modes provided the right marketing approach is adopted. Traditional PT marketing has relied on making information available on request from the customer. A more effective approach is to create an individual dialogue by direct contact.
- The direct contact should include three stages: motivation for change, information about offer, and experience of the system. (This last phase is often facilitated by

⁵ This description is based on Perkins 2001a.

providing a free test ticket to give interested people the opportunity to try the PT system for themselves.)

- A key success factor is to provide people with customised information, i.e. information which addresses their concerns and problems.
- Rewarding those who are already substantial EFM users encourages them to further increase EFM use. (A free gift was often given to regular users; but free tickets were not provided to avoid ‘cannibalism’, i.e. reducing existing operator revenues.)
- The areas chosen for IndiMark trials have generally been areas with good PT service but lower than average demand.
- A small change (e.g. in two or three trips per month) produces a significant increase in the use of EFMs and a significant decrease in private motor vehicle use. Thus, it is not necessary to aim at large increases which involve everybody. Small increases in PT use by receptive people will have a significant impact.

The IndiMark method can be summarised as follows:

CONTACT	All households are contacted by mail and phone to determine if they are regular or extensive users of EFMs (R), are not at all interested in changing (N), or are interested (I).
MOTIVATION	Problems and requests from the R and I groups are responded to.
INFORMATION	Information (timetables, maps, etc.) are posted to the R and I participants. The R and I participants select the information they want, then it is (generally) hand-delivered to them within a couple of days.
CONVINCING	Consultation phone calls and home visits on request are made, with selected households in group I receiving tickets to use on public transport for a limited period.

Source: derived from Broeg & Schadler 1998.

2.2.2 Travel Blending

Travel Blending⁶ was developed by SDG. It was initially applied in Adelaide South Australia, to the workforce of Transport SA, a private company, and a high school. It has since been applied in two other Adelaide suburbs, and in several other cities. With its application to geographical areas, the concept was expanded to maximise participation and to build on the synergies of involving everyone in a neighbourhood. This approach has been named “Living Neighbourhood®”.

Travel Blending is designed to encourage participants to:

- Think about activities and travel in advance (in what order should activities be done, who should do them, where should they be done).
- Blend their travel by *blending modes*, *blending activities* (doing as many things as possible in the same place or on the same journey), or *blending over time* (making small sustainable changes on a weekly basis) (Ampt 1999).

⁶ This description is based on Perkins 2001a.

The aim of the approach is to “provide people with an achievable goal rather than a set of general possibilities”, meaning:

- Some change is possible for everyone in the short-term;
- The changes can be incorporated into people’s lifestyles without negative effects;
- All people can identify the possibilities for change over the long term;
- Changes are *sustainable* over the long-term (Ampt & Rooney 1998).

The method of Travel Blending involves participants completing 7-day travel diaries to gain an understanding of their personal and household travel patterns. The diaries are analysed and the participants are provided with suggestions on how they, individually and as a household, might reduce their motor vehicle travel and increase the overall efficiency of their travel. These suggestions are supported by customised information (bus timetables, maps, cycle hire, guides to local services, etc.) which will assist participants in implementing the suggestions. Participants are encouraged to complete a second 7-day travel diary approximately a month after starting to make these changes, so that changes can be measured and further feedback can be provided.

The Travel Blending approach can be summarised as follows (note: four Travel Blending kits are distributed to participants in the following sequence) :

Recruitment & Background Data	Individuals, preferably all members of a household, are recruited door-to-door, through schools and workplaces. Basic data on both participating and non-participating households is collected and Kit 1 is handed out.
Kit 1: Information and Diary 1 - <i>Getting Started</i> Kit	The <i>Getting Started</i> kit includes: a letter of introduction, a <i>Why</i> booklet explaining negatives associated with vehicle use, a <i>How</i> booklet which introduces the Travel Blending concept, and a <i>Before</i> travel diary for each household member plus aids to assist in its completion.
Kit 2: Customised Feedback – <i>Help Make a Difference</i> kit	The <i>Before</i> diaries are analysed and a feedback kit is provided which includes: the facts of each person’s week of travel; number of trips; trips by mode; time spent travelling; number of cold starts; and an indication of car emissions produced. Positive steps that people already make are highlighted and suggestions for reducing car travel are proposed (e.g. trip chaining for particular activities, change of mode for a particular destination). Kit 2 also includes a booklet <i>Thinking about Travel</i> and a Goal Card for the household to set out their travel blending goals.
Kit 3: Diary 2 – <i>Are You on Track?</i>	Kit 3 includes the <i>After</i> 7-day travel diary plus a booklet <i>Track Your Travel 2</i> explaining the importance of completing the second set of diaries.
Kit 4: <i>Continuing to Make a Difference</i>	The <i>After</i> diaries are analysed and a final kit is delivered summarising the travel revealed in the second diary, identifying the differences between the two, providing further tips, and including a log book to allow people to continue to monitor weekly car travel.
Neighbourhood Feedback	At the conclusion of the Travel Blending parts of the projects, a letter is sent to all residents/businesses/participants advising them of the changes in travel which have been measured (and other neighbourhood improvements).

2.2.3 Differences Between IndiMark and Travel Blending

Significant differences exist between Socialdata's IndiMark and SDG's Travel Blending. These have been summarised as follows⁷:

- **Focus on Change of Modes v Efficient Planning of all Trips**

IndiMark aims primarily at encouraging people to switch from motor vehicles to EFMs.

Travel Blending, on the other hand, aims to introduce people to the principles of travel blending and then allow them to determine how to achieve reductions in motor vehicle use. (Given the overwhelming use of private motor vehicles, this is more likely to be through efficient use of the car rather than through switching to EFMs.)

- **Marketing v Community Development**

IndiMark was developed in conjunction with European PT companies as a marketing tool to increase PT patronage. Its scope has been widened by Socialdata and the Western Australia Department of Transport to cover other EFMs (i.e. walking and cycling) as well. It is thus essentially a marketing programme aimed at encouraging people to switch travel modes.

Travel Blending was developed as a travel-demand management tool to encourage more efficient travel and thereby achieve reductions in car use. However, its emphasis on the inter-relationships between household members and integration of target groups within a neighbourhood has led to Travel Blending becoming a tool in the Living Neighbourhood projects, which can be integrated in urban regeneration programmes.

- **Different Pre-Selection Approach**

IndiMark screens out people who are not interested and focuses only in current PT users and those who are interested in being involved in the IndiMark project.

Travel Blending targets all households in the defined area, but excludes households without motor vehicles (although, as households have to agree to participate, the effect may be similar to IndiMark in practice).

2.2.4 Evaluation of Results of IndiMark and Travel Blending

The results of several Australian applications of IndiMark and Travel Blending have been compared. Key findings were:

- IndiMark achieved significant increases in the use of alternative modes. In one pilot study public transport use increased by 17%, walking by 24%, and bicycle by 96%. Car driver trips also decreased by 11%.
- Travel Blending also resulted in a decrease in car driver trips (by 10-15% in several pilot studies) and increased public transport use (by 15-23%). However, the impact of Travel Blending on walking and cycling was mixed with changes in walk trips reported as +1% and -2%, and cycle trip changes as -11% and +21%, in the two Adelaide trials.

⁷ Perkins 2001a.

- The reported impact on car travel distance was similar for each approach: a reduction of 14% for IndiMark and a reduction of 6-13% for Travel Blending.
- However, when comparing Travel Blending and IndiMark results, the Travel Blending results may need to be deflated by up to 40% when being compared with IndiMark results (given that Travel Blending results are only for participating households).
- Cost-benefit analyses have been undertaken for both IndiMark and Travel Blending. These analyses have resulted in relatively high Benefit-Cost Ratios (BCR) for both approaches: 5.0 to 39.8 for the 1997/98 Adelaide Travel Blending Pilot Project (although 5.0 to 8.4 for the most likely scenario), and -0.4 to 32.5 for the South Perth IndiMark Pilot Project (15.0 to 17.4 for Base Case). Both approaches therefore are 'good projects' in economic terms with comparable economic performance.
- Based on the studies assessed, the IndiMark approach would appear to be more cost-effective in terms of increasing use of alternative travel modes, and in reducing car kilometres travelled.
- However, Travel Blending has a greater impact than IndiMark on total travel, reducing total trips by 5-7%, whereas IndiMark does not affect total trips.

2.3 Preferred Approach

Choosing between IndiMark and Travel Blending is a somewhat arbitrary exercise and will be influenced to a high degree by the objectives of the sponsoring agency. Where the objective is primarily to encourage switching to alternative modes, IndiMark will tend to be favoured, whereas if the prime objective is to reduce total travel, Travel Blending may be favoured.

In this case the prime focus of the Transfund New Zealand Personalised Marketing study was to reduce private car travel by increasing the use of alternative travel modes. The IndiMark approach was therefore preferred for use in the Demonstration Project.

In addition we consider that the IndiMark approach should be selected in preference to Travel Blending given that :

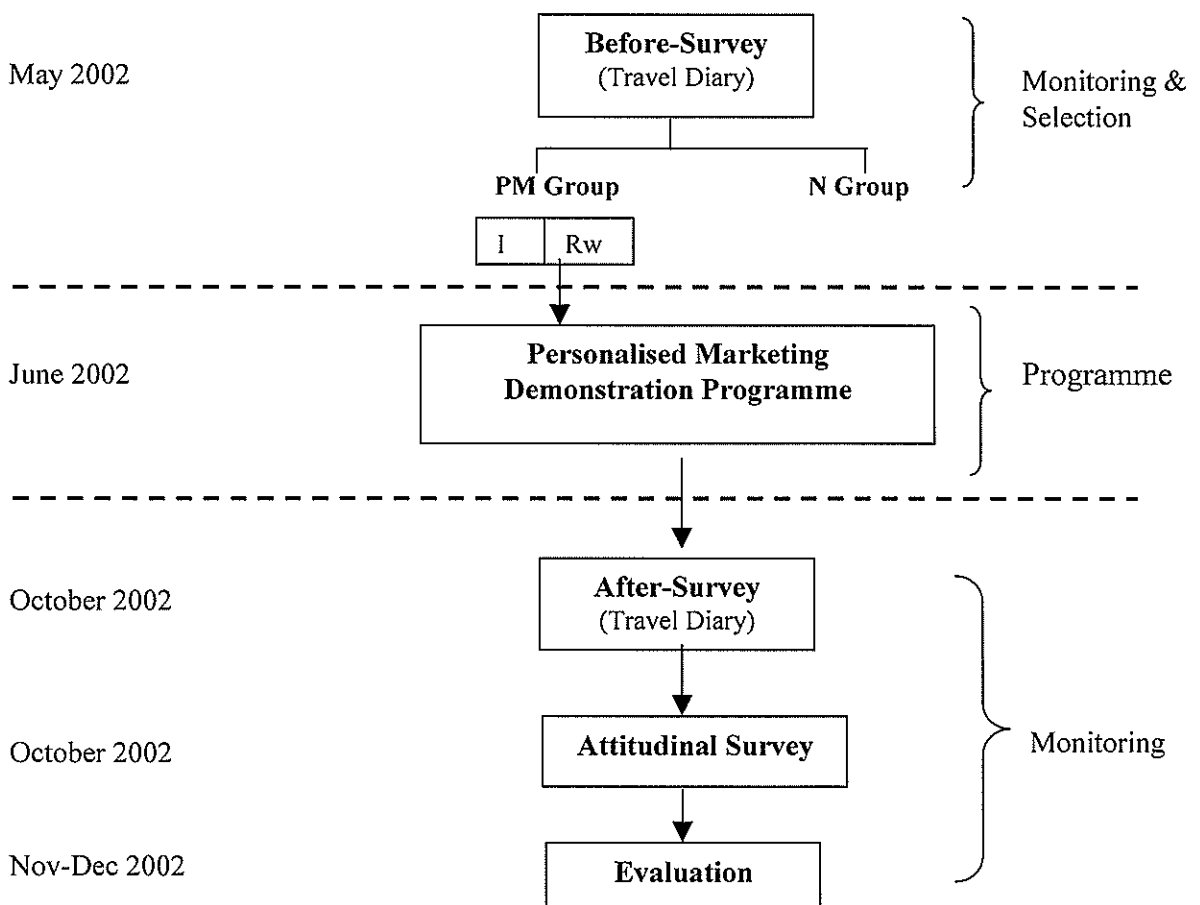
- The IndiMark approach is a more targeted approach than Travel Blending, and allows resources to be targeted on people/groups who are likely to be most willing to consider changing travel modes.
- The Travel Blending approach has a high risk of participant fatigue and drop-out given the requirement to complete several 7-day travel diaries.

3. Demonstration Programme

3.1 Overview

The Personalised Marketing Demonstration Programme was based broadly on the standard IndiMark approach described in Section 2.2.1. However, ‘IndiMark’ is a trademark of Socialdata and the Demonstration Programme is not claimed to be an IndiMark programme. Therefore the name adopted for the demonstration programme is the ‘Birkenhead Personalised Marketing Programme’ (PMP). Figure 3.1 provides an overview of the overall study.

Figure 3.1 Overview of the entire Birkenhead Personalised Marketing study.



As can be seen in Figure 3.1, the selection of participants for the Birkenhead PMP was undertaken in the before-survey stage. This chapter of the report focuses on the Birkenhead PMP itself. The survey and other stages of the overall project are covered in subsequent chapters of this report.

3.2 Programme Design Issues and Features

Table 3.1 sets out the issues which needed to be addressed in designing the Birkenhead PMP, and the particular features developed for it. Key features of the PMP were :

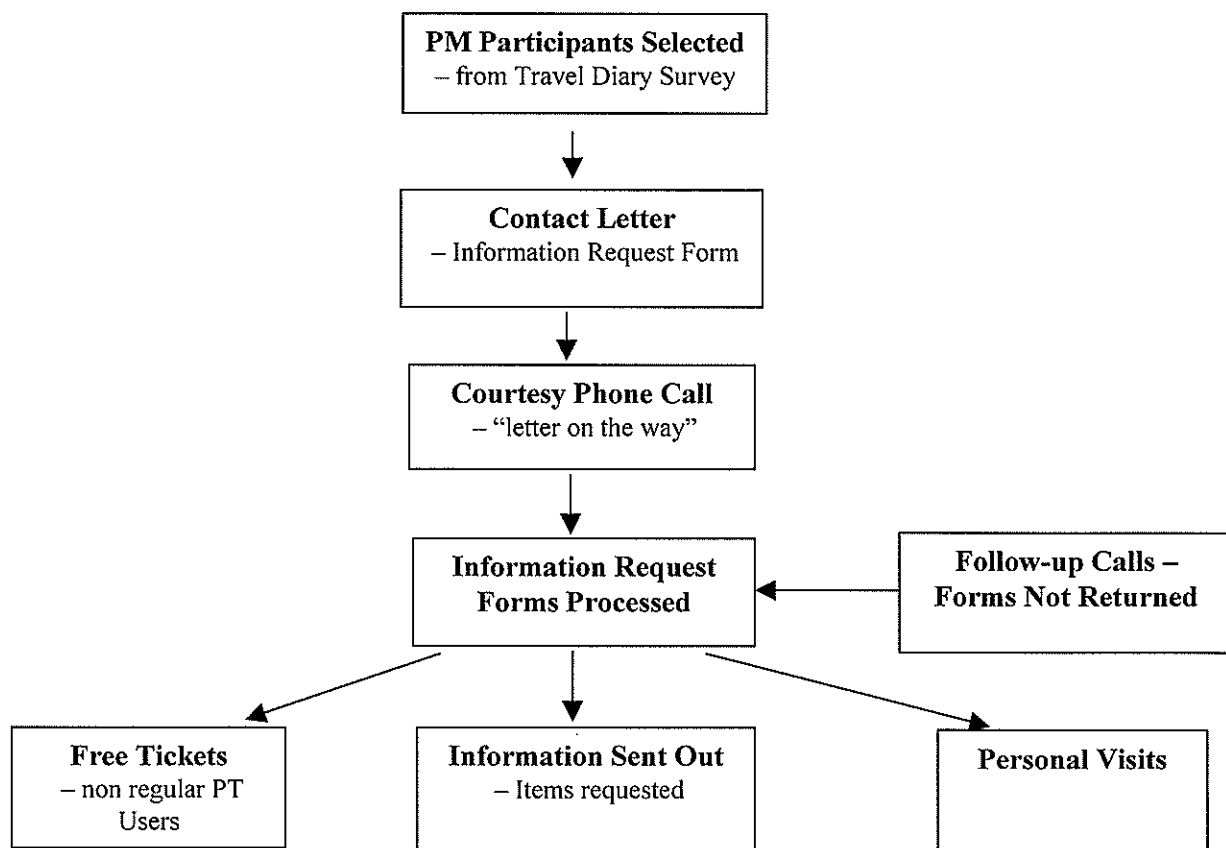
- A partnership approach with the local authorities (NSCC and ARC) and local public transport operators (Birkenhead Transport, Fullers Group) to managing and resourcing the overall study, and to developing the information materials.
- Development of 'local specific' information aimed to meet the particular information needs of people living in Birkenhead.
- An attempt to minimise participant drop-out by follow-up phone calls.
- Visits – maximising personal contact by providing the opportunity for 'telephone visits' or personal visits to discuss participants' queries about PT (public transport), walking and cycling.
- A dialogue approach whereby participants could request the information they specifically wanted, rather than receive unsolicited material. In addition, the visits gave people the opportunity for further dialogue if desired.
- Trial PT tickets – non-users were given the opportunity to try PT out for free for a month (July 2002).
- Incentives for cycling were provided (i.e. a free cycle and helmet check, and free trial use of a commuter cycle for a week).

3.3 Programme Methodology

The main steps of the Birkenhead PMP shown in Figure 3.2, are outlined below:

1. **Programme Participants selected** from Before-Survey respondents. This group consisted of all survey respondents who indicated they were interested in receiving more information on PT, walking or cycling.
2. **Contact letter** sent to Programme group. An **Information Request Form** was attached to the letter. This form set out the information material available, and also advised of the availability of a free PT ticket and cycling incentives, and the possibility of receiving a visit.
3. **Courtesy phone call** made to each Programme group household to advise that the letter was on the way, and to encourage return of the form.
4. **Information request forms processed**, to action completed forms returned by participants who ticked the information items they wished to receive (including a free PT ticket and/or visit).
5. **Information and Free Tickets sent out** to participants requesting these (where regular PT users requested a free PT ticket, these were NOT provided).
6. **Personal visits** carried out to participants who requested these.
7. **Follow-up phone calls** to Programme group people who had not returned the Information Request Forms within 10 days.

Figure 3.2 Birkenhead Personalised Marketing Programme.



3.4 Information Provided

A copy of the Information Request Form, which lists the information materials made available to Programme participants, is attached as Appendix B. The key features of the information materials developed for the Birkenhead PMP are shown below.

Public Transport

- (new) Local Birkenhead map showing public transport, walking and cycling routes in the area.
- Bus and ferry timetables.
- (new) Information on bus and ferry fares and ticket availability.
- (new) Instructions on how to use the Rideline Journey Planner.
- (new) Instructions on getting to key North Shore destinations by public transport.
- (new) Takapuna and Auckland CBD public transport connections guide.

Walking

- (new) Local Birkenhead map showing public transport, walking and cycling routes in the area.
- Walking trails brochures.
- (new) Walking Fact Sheet.
- Heart Foundation walking brochure.
- Advice for pedestrians on how to cross the road safely.

Table 3.1 Birkenhead Personalised Marketing Programme design issues and features.

Issue/Feature	Description	Approach adopted in Birkenhead PMP
<p>Choosing Programme Area</p>	<ul style="list-style-type: none"> Choosing the most appropriate programme area is very important if a significant degree of modal shift is desired. The programme area should have a fairly high level of Public Transport service to key destinations. The area should also be conducive to walking and cycling. This would exclude, for example, hilly areas with inadequate walkways and/or cycleways. 	<ul style="list-style-type: none"> North Shore City Council volunteered to be sponsoring local authority. The NSCC considered Birkenhead to be an area with a reasonable level of public transport (PT) service, and a good candidate for walking and cycling options (particularly walking, given the walking trails in the area). In addition, the local PT operators were considered likely to be supportive of the programme.
<p>Selecting Programme Group</p>	<ul style="list-style-type: none"> The selection questions must be carefully designed to ensure people initially contacted are placed in the correct category. 	<ul style="list-style-type: none"> A combination of travel behaviour questions (travel modes used now) and attitudinal questions (likelihood of using PT, walking, cycling; interested in receiving information on these modes now). Survey respondents were first split in 2 groups: <ul style="list-style-type: none"> Programme Group – those interested in receiving more information about PT, walking or cycling; and N – those not interested in receiving more information on the modes. The Programme group was then split into 2 groups: <ul style="list-style-type: none"> I – interested non-regular PT users; and R – interested regular PT users.
<p>Minimise Opportunities for Participant Dropout</p>	<ul style="list-style-type: none"> Every effort needs to be made to minimise participant dropout. This can occur (among other reasons) as a result of process complexity, process length and participant fatigue, and lack of time/focus by participants. 	<ul style="list-style-type: none"> The main technique used to attempt to minimise participant dropout was follow-up telephone calls to remind participants to fill in and send back the Information Request Form. In addition, the process itself was kept very simple for participants (they only had to complete and post back the Form in an addressed pre-paid envelope).
<p>Local Authority/ Public Transport Operator/ Consultant Partnership</p>	<ul style="list-style-type: none"> The success of the Programme could have been significantly affected by the degree of co-operation and participation of the local authorities and PT operators in the area. For example, the local authorities needed to provide walking and cycling materials (e.g. maps), and have resources available to assist with production of new resources. PT operators need to be willing to devote resources to information material development, and to make free trial tickets available. 	<ul style="list-style-type: none"> A 'team approach' was adopted with the ARC, NSCC, Birkenhead Transport (local bus operator), and Fullers Group (local ferry operator) working together to provide the resources required for the Programme.

3. *Demonstration Programme*

Table 3.1 Birkenhead Personalised Marketing Programme design issues and features.

Issue/Feature	Description	Approach adopted in Birkenhead PMP
Other Groups and Resources	<ul style="list-style-type: none"> It is important to involve key sector groups (e.g. Cycling groups) in the Programme development as these groups often have resources available, and are aware of local issues. Information produced for other reasons by, for example, health agencies, can also be useful, e.g. pamphlets on the health benefits of walking. 	<ul style="list-style-type: none"> Key sector groups were involved in the development of the Programme components and information materials. For example, Cycling Support NZ were instrumental in obtaining a bicycle which could be used for a trial cycle offer. In addition, information materials produced by other agencies (e.g. Hillary Commission, Heart Foundation) were used.
Provide Locally Focused Information	<ul style="list-style-type: none"> Most PT information is produced on a generic basis for all users in a wide area or region. The weakness of this approach is that, in trying to meet the needs of the largest group of people possible, it can neglect the needs of people at a local level. An important principle of personalised marketing is to provide, where possible, information specifically tailored to the target group. 	<ul style="list-style-type: none"> The main information needs of people in Birkenhead were determined, and 'information gaps' (local needs not being met by the information materials currently available) identified. New information materials were developed to meet these information gaps. This new material included: a map of Birkenhead showing bus stops, walkways and cycleways; a leaflet detailing how to get from Birkenhead to key destinations by PT; a map of bus stops in Takapuna. In addition, walking and cycling information specific to Birkenhead was assembled.
Personal Contact	<ul style="list-style-type: none"> The personal provision of information has been found to be a significant factor in the success of personalised marketing programmes. 	<ul style="list-style-type: none"> All households received at least one phone call in the Programme phase (they were also contacted by phone in the monitoring surveys). All participants had the opportunity to request a telephone or personal visit to discuss any queries they had about using public transport or walking/cycling in Birkenhead (and beyond).
Dialogue	<ul style="list-style-type: none"> Allied to the personal contact is giving people the opportunity to dialogue with a helpful person about their travel information needs. This personal dialoguing facility is not generally available with conventional information channels (e.g. timetables, web-based systems, etc.). 	<ul style="list-style-type: none"> The approach adopted was a 'dialogue' one in that participants were asked to identify the particular information items they desired (on the information form), and people participating in the Visits were able to 'dialogue' with a 'helpful person'. However, extensive verbal dialogue was not entered into with every participant (or participating household).

Table 3.1 Birkenhead Personalised Marketing Programme design issues and features.

Issue/Feature	Description	Approach adopted in Birkenhead PMP
Trial PT Tickets	<ul style="list-style-type: none"> Making trial PT tickets available gives non-users the opportunity to try out the PT service without any financial risk. It also can potentially facilitate a change in attitude towards PT in general and the local PT operator in particular (i.e. they are interested in obtaining my custom and are making an effort to reach me). However, a trial PT ticket will be of little lasting value if the PT service is inadequate, or the PT drivers/staff are unfriendly and unhelpful. 	<ul style="list-style-type: none"> The local bus and ferry operator made free one-month trial tickets available for participating non-regular PT users. The before-survey data facilitated targeting of these free tickets which ensured that 'revenue cannibalisation' did not occur.
Incentives for Cycling and Walking	<ul style="list-style-type: none"> Providing incentives to 'try out' cycling and walking can encourage switching to these modes. 	<ul style="list-style-type: none"> A free cycle and helmet check was offered by two North Shore cycle shops (in Birkenhead and in Takapuna). In addition, a free one-week trial of a special 'commuter' cycle designed for people wanting a cycle to get around, but not necessarily wanting a mountain-bike type, was made available.
Rewards for Regular PT Users	<ul style="list-style-type: none"> Some personalised marketing programmes have provided a small reward for regular PT users (other than free tickets). This is thought to encourage this group to keep using PT. 	<ul style="list-style-type: none"> We did not consider this to be an essential requirement for success of the Programme. Rather, we consider that programme incentives should be focused on encouraging participation by non-users in the programme, and encouraging these people to change modes. In addition, the local authorities did not have a suitable reward item available. No reward was therefore made available to regular PT users (however, they did receive the information they requested).
Communication Strategy	<ul style="list-style-type: none"> The INPHORMM project found that personalised marketing campaigns are more likely to be effective if the awareness of transport problems among the general public is already high, such as after a public awareness campaign has been run either nationally or locally. 	<ul style="list-style-type: none"> Information about the Birkenhead PMP was made available through a press release to the local newspaper. In addition, all households invited to participate in the programme received a letter from the NSCC and the ARC.

Cycling

- (new) Local Birkenhead map showing public transport, walking and cycling routes in the area.
- (new) Cycling Fact Sheet.
- Bikewise cycling brochure.
- Regional cycling guide.
- Cyclewise brochure.

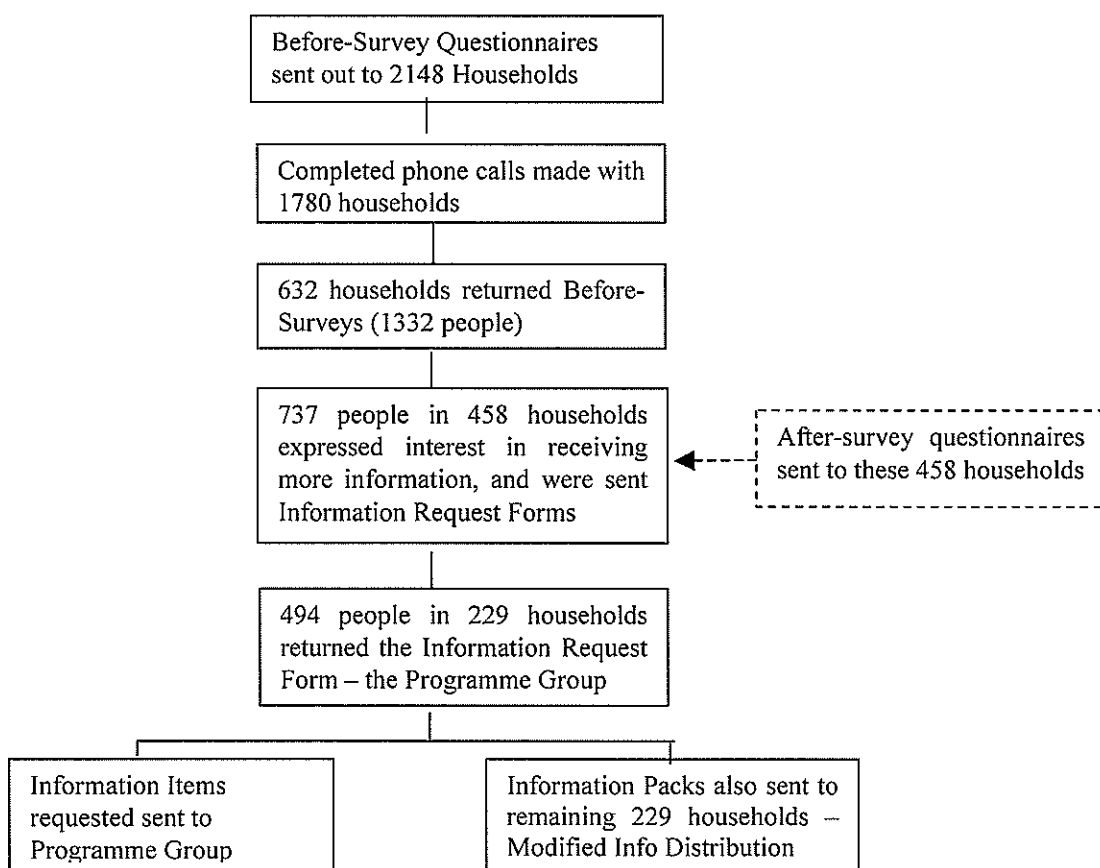
In addition, Programme participants were also advised that they could request a free bus or ferry ticket (but not if they were regular PT users). They were also advised of the availability of the Cycling Promotion.

Participants were also made aware of the option of receiving a phone call visit or a personal visit to discuss anything in regard to public transport, walking or cycling.

3.5 Personalised Marketing Programme Participation

The participation levels for the Birkenhead PMP are shown in Figure 3.3.

Figure 3.3 Levels of Programme participation by respondents.



The 632 households (1332 people) who returned the before-survey effectively constitutes the 'population' for the study. Of these, 737 people in 458 households (55% of people and 73% of households) indicated they were interested in receiving more information about PT, walking or cycling. These households were sent Information Request Forms, with 229 households (494 people) returning the forms. The households/people who returned the forms constitute the Programme Group, and constituted 36% of the study population households and 37% of study population people.

3.6 Modified Information Distribution

As shown in Figure 3.3, the 229 households interested in receiving further information but who did not return the Information Request Forms were also sent information.

Given that half of the households who had indicated some interest in receiving information had not returned their Information Request Form, it was decided to send these households full information packs. This provided an opportunity to make some (qualified) assessment of the impact of 'mass marketing' type information provision, relative to the more targeted and dialogue personalised marketing approach.

This group of households was separated out from the full Programme Group in the monitoring and evaluation. They are not considered to be part of the PMP Group.

4. Evaluation Framework

4.1 Evaluation Objectives and Scope

4.1.1 Travel Behaviour Evaluation

As stated in Section 1.2, a key objective of the study was to assess the potential of personalised marketing to reduce car travel and increase the use of public transport and walking and cycling (other EFMs). The focus of the evaluation is therefore on assessing change in travel behaviour resulting directly from the personalised marketing programme. The changes being assessed are:

- Change in car travel;
- Change in alternative mode travel (PT, walking and cycling).

The parameters which can be measured include Modal Share and Travel Volume in terms of:

Car Travel:

- Vehicle trips;
- Vehicle kilometres.

Alternative Mode Travel:

- Person trips;
- Person kilometres.

4.1.2 Approach Effectiveness

The study objective also includes assessing the effectiveness of the particular personalised marketing approach applied. This includes seeking to:

- Identify the relative effectiveness of different elements of the Programme in producing changes in travel behaviour.
- Identify areas where improvement in the Programme could be made and gains achieved.
- Assess the relative impact of the provision of information on an ‘untargeted’ basis as against the full Programme approach of providing only specifically requested information.

4.2 Monitoring Approach

To achieve the evaluation objective of assessing the impact of the PMP on travel behaviour, the ability to identify changes in travel behaviour directly resulting from the Programme is needed. Two main monitoring approaches are available for this:

- A before/after-survey approach; and
- An approach involving monitoring of key indicators such as public transport patronage.

The before/after-survey approach was deemed to be the most appropriate monitoring approach in this case. The main reason was that the PMP would involve only a relatively small proportion of the total population, and the monitoring data available is not able to pick up changes for this small group.

4.3 Monitoring Survey Issues and Features

Table 4.1 sets out the issues which needed to be addressed in designing the Birkenhead PM evaluation surveys, and the approach adopted for the surveys. Key features of the surveys were:

- A panel (longitudinal) before/after-survey approach.
- A travel diary-based survey approach to identify the travel changes directly attributable to the PMP. A 2-day travel diary was used, and only weekday travel was covered.
- Attitudinal questions were included in the after-survey to identify the reasons for changes in travel behaviour, with a view to assessing the degree of change attributable to the PMP.
- To estimate the impacts of the trial Programme, it was necessary to monitor, and hence adjust for, external trends and influences. This is ideally done through use of a control group(s) in the before/after-surveys, comprising households as similar as possible to those subject to the Programme. This is the most statistically reliable method. However, the study budget did not allow for a control group survey.

The primary approach adopted to monitor for external trends and influences therefore was to undertake a series of before and after traffic, cycling and walking counts, and to use public transport patronage data. This combination of counts and patronage data enabled determination of the factors by which the before/after-surveys needed to be adjusted to account for factors apart from the Programme.

- A separate Attitudinal after-survey was undertaken to further explore reasons for change in travel behaviour and the relative impact of different Programme elements. This survey also covered Programme effectiveness and possible improvements to the Programme process.
- The after-survey was carried out 3 months after the completion of the Programme. The results obtained are thus short-term results only.

Table 4.1 Birkenhead Personalised Marketing Programme monitoring survey design issues and approach.

Issue	Description	Approach Adopted In Birkenhead Evaluation Surveys
Independent Samples or Panel Approach	<ul style="list-style-type: none"> For a before/after-study such as this, two separate approaches to sampling are worth considering: selection of a random ‘after’ sample independent of the ‘before’ sample; or use of the same sample households in both cases (i.e. a panel or longitudinal approach). 	<ul style="list-style-type: none"> The panel/longitudinal approach was adopted, as being statistically considerably more efficient (particularly given the considerable variation between households in travel behaviour). This is particularly the case if further after-surveys are contemplated.
Target Population	<ul style="list-style-type: none"> The target population for the before-survey and after-surveys could be all persons/households in the programme area, or only those people who express interest in participating in the programme. 	<ul style="list-style-type: none"> A random sample of the whole population was used for the before-survey to facilitate expansion of the survey results up to the full population. Only the programme participants were covered in the after-survey as it was assumed that people not participating in the programme did not change their travel behaviour.
Sampling Unit	<ul style="list-style-type: none"> The basic sampling unit could be person or household. 	<ul style="list-style-type: none"> Households were used as the sampling unit given that travel interactions could occur between household members.
Survey Scope: Travel Behaviour – Quantitative Changes	<ul style="list-style-type: none"> To assess the quantum of travel behaviour change, the main approach available is use of individual travel diaries. Key issues relating to the scope/design of travel diaries include: <ul style="list-style-type: none"> Number of days covered (most likely 1, 2 or 3); Coverage of weekdays only, or also weekends; Level of detail on trips (e.g. origin-destination in detail, trip duration, main mode v all modes, etc.). 	<ul style="list-style-type: none"> Individual travel diaries were used in conjunction with a household questionnaire (to cover key demographic, etc., characteristics). A 2-day travel diary was used. Given the degree of variability between days in travel patterns, a 1-day travel diary was not considered to provide reliable results (unless very large sample sizes were to be used). Only weekdays were covered. Including weekends would have further reduced the reliability of the results given the large difference between weekdays and weekends, and the wide variability in weekend travel.
Survey Scope: Travel Behaviour – Reason for Changes	<ul style="list-style-type: none"> Previous studies have assumed that any travel behaviour changes are due to personalised marketing without examining in what way the Programme produced these changes. Attitudinal (qualitative) questions are required in addition to the quantitative travel diary approach. 	<ul style="list-style-type: none"> Attitudinal questions were included in the after-survey to assess the reasons for changes in travel behaviour. An additional Attitudinal after-survey was also carried out with a sub-set of the Programme participants involving face-to-face interviews to explore these reasons at a ‘deeper level’.
Survey Scope: Programme Effectiveness	<ul style="list-style-type: none"> To assess the effectiveness of different elements of the Programme, and possible improvements to the Programme approach, attitudinal questions are required. 	<ul style="list-style-type: none"> The after-survey attitudinal questions and the Attitudinal after-survey also covered programme effectiveness.

Table 4.1 Birkenhead Personalised Marketing Programme monitoring survey design issues and approach.

Issue	Description	Approach Adopted In Birkenhead Evaluation Surveys
<p>Monitoring of External Trends / Need for Control Group</p>	<ul style="list-style-type: none"> To estimate the impacts of the trial Programme, it is necessary to monitor, and hence adjust for, external trends and influences. This is ideally done through use of a control group(s) in the before/after-surveys, comprising households as similar as possible to those subject to the Programme. This does have cost implications. However it is the most statistically reliable approach and would be our preferred method. The alternative is to monitor external trends and influences by other means, e.g. through traffic counts and public transport patronage statistics. Such monitoring may not identify all significant trends (e.g. in extent of walking or cycling), and this may be a particular problem in identifying seasonal effects. 	<ul style="list-style-type: none"> The study budget did not allow for undertaking of a control group survey. The primary approach adopted to monitor for external trends and influences was therefore to undertake a series of before and after traffic, cycling and walking counts, and to use PT patronage data. This combination of counts and patronage data enabled determination of the factors by which the before/after-surveys needed to be adjusted to account for factors apart from the PMP. In addition, after-survey participants were asked to indicate what factors caused any changes in their travel behaviour. This enabled a further assessment of the extent to which travel behaviour changes were a direct result of the PMP.
<p>Longer-term Sustainability of Changes</p>	<ul style="list-style-type: none"> An important issue for programme evaluation (and justification) is the sustainability of the initial behaviour change over the medium/long term. Ideally at least two after-surveys would be undertaken, one after 3 months to assess the short-term impact; and another after 12 months to assess the medium-term impacts. A factor to bear in mind is that, if the panel approach is adopted for each survey wave, response rates will tend to progressively reduce over time. This has implications for initial sample sizes. 	<ul style="list-style-type: none"> One after-survey is included in this study, 3 months after the PMP. The results presented in this report are therefore short-term results. If funding is available, a further survey 12 months after the PMP would enable medium-term impacts to be assessed.
<p>Survey Delivery Methods</p>	<ul style="list-style-type: none"> Three distinct delivery methods are often used: personal (face-to-face) interview, mail out/mail back (MOMB) and computer-assisted telephone (CATI). Hybrid methods may also be appropriate. 	<ul style="list-style-type: none"> A MOMB approach was adopted with reminder telephone calls to encourage response. Budget restrictions did not allow for personal pick-up of survey questionnaires which would most likely have resulted in a higher survey response rate. A telephone approach would most likely have not been suitable for collection of travel diary data.
<p>Survey Sample Size</p>	<ul style="list-style-type: none"> In principle, required sample sizes are governed by three factors: <ul style="list-style-type: none"> The confidence interval required for the before v after change for the smallest individual cell for which comparisons are required (e.g. the average daily trip rate by bicycle). The underlying day-to-day variability in household/person travel behaviour. The proportion of total respondents approached who provide valid responses. 	<ul style="list-style-type: none"> A sample size in the order of 300 households was considered to be appropriate.

5. Evaluation Results for Travel Behaviour

5.1 Results

Table 5.1 shows the impact of the Birkenhead PMP on travel behaviour for those people who participated in the Programme (the Programme Group). This table presents the 'raw results', i.e. not adjusted for external factors. As can be seen, the unadjusted results show a decrease in car driver trips and an increase in all alternative travel modes ranging from a 1% increase in bus trips to an 80% increase in cycle trips. The modal share for car driver trips decreased from 64.7% to 61.4%.

Table 5.1 Birkenhead PMP results for travel changes of the Programme Group.

Travel Mode	Before Programme		After Programme		% Change in Trips
	Trips*	Modal Share %	Trips*	Modal Share %	
Walk	407	15.2	461	17.1	13
Cycle	11	0.4	20	0.7	80
Car Driver	1733	64.7	1655	61.4	-5
Car Passenger	299	11.2	345	12.8	15
Bus	180	6.7	183	6.8	1
Ferry	18	0.7	20	0.7	10
Other	29	1.1	13	0.5	-56
Total	2677	100.0	2697	100.0	1

* Trips represent a journey with the 'main mode' taken as the Travel Mode. The 'main mode' was determined using a mode hierarchy. For example, the Travel Mode for a journey involving a bus trip, with a walk trip to and from the bus, would be bus.

Table 5.2 shows the impact of the PMP on travel behaviour for the 'full population', i.e. the Programme group plus people who did not participate in the PMP. It was assumed that non-participants did not change their travel behaviour.

As can be seen, the results for the full population continue to show a decrease in car driver trips and an increase in all alternative travel modes. However, the size of the changes is smaller (2% decrease in car trips, and increases in alternative mode use ranging from 1% for bus to 52% for cycle).

Table 5.2 Birkenhead PMP results for the full population.

Travel Mode	Before Programme		After Programme		% Change in Trips
	Trips	Modal Share %	Trips	Modal Share %	
Walk	928	14.2	982	15.0	6
Cycle	17	0.3	26	0.4	52
Car Driver	4388	67.1	4310	65.7	-2
Car Passenger	713	10.9	759	11.5	6
Bus	383	5.9	385	5.9	1
Ferry	43	0.6	45	0.7	4
Other	69	1.0	53	0.8	-23
Total	6541	100.0	6560	100.0	0

In addition to an analysis of the change in trips by mode, the change in the number of minutes travelled by each mode was also estimated. This found that total minutes travelled for the full population increased by 2.8%, with car driver minutes increasing by 0.4% and walk, car passenger and bus minutes increasing (by 15%, 6%, and 7% respectively) and cycle minutes decreasing by 8%. However, as this result was based on travel diary-survey estimates made by respondents of the time spent travelling by each mode on each journey, it will not be as reliable as the figures for change in trips.

As indicated in Section 3.6, half of the households indicated interest in receiving further information about alternative travel modes but did not return their Information Request Form. These households were subsequently sent full information packs. Table 5.3 shows the travel behaviour results for the full population when the travel changes made by these households over the study period are included. (These changes were excluded from Tables 5.1 and 5.2.) As can be seen, the result is to increase the reduction in car driver trips achieved. The effect on other modes is, however, mixed, with ferry use showing a much higher increase and bus use showing a small decrease.

Table 5.3 Birkenhead PMP results, includes travel changes by the group receiving modified information.

Travel Mode	Before Programme		After Programme		% Change in Trips
	Trips	Modal Share %	Trips	Modal Share %	
Walk	928	14.2	1005	15.4	8
Cycle	17	0.3	26	0.4	52
Car Driver	4388	67.1	4197	64.5	-4
Car Passenger	713	10.9	759	11.7	6
Bus	383	5.9	377	5.8	-2
Ferry	43	0.6	115	1.8	167
Other	69	1.0	32	0.4	-53
Total	6541	100.00	6511	100.00	0

5.2 Reasons for Travel Behaviour Change

In the after-survey, 42% of PMP respondents indicated that they changed their frequency of travel by at least one mode between the before- and after-surveys. For example, 18% indicated that they walked more, while 6% indicated they walked less. To help understand the reasons for these changes in travel behaviour, after-survey respondents were asked to indicate the reasons behind their changes.

Table 5.4 shows the results for this question (respondents were able to provide three reasons). This table shows that the improved weather in October and the longer days had an impact on travel behaviour when compared to May. This is also most likely correlated with a desire to become fitter by walking and cycling more. (Altogether, improved weather, longer days, and a desire to get fitter accounted for around 50% of the reasons given for changes in travel behaviour.)

Table 5.4 also shows that 10% of the reasons given for travel behaviour change relate to receiving information about alternative travel modes, and 8% to receiving a free ticket. Thus, in total, 18% of the reasons given for travel behaviour change relate to the PMP.

Table 5.4 Reasons for change in travel behaviour.

Reason	Frequency	% of Reasons
I no longer own / drive a car	4	2.6
I now own a car	2	1.3
I stopped working / studying	4	2.6
I started working / studying	7	4.5
I decided to try to become fitter & so walk / cycle more	28	18.2
I changed where I work or study & now its easier to travel this way	3	1.9
Weather is better now	33	21.4
Weather is worse now	2	1.3
Lighter in the mornings / late afternoons now	14	9.1
I received information about walking or cycling & this encouraged me to try it	7	4.5
I received information about / using the bus or ferry & this encouraged me to try it	8	5.2
I had a free bus or ferry ticket in July & now take the bus or ferry more often	13	8.4
Other	29	18.8
Total	154	100.0

5.3 Results Adjusted for External Factors

As indicated in Section 4.3 of this report, traffic counts, and walking and cycling counts were undertaken in the Birkenhead area before and after the PMP to account for external trends and influences. These counts were timed to coincide with the before and after travel diary surveys. The average changes⁸ found in travel by each mode from the before-counts to the after-counts are:

- Walking + 11.7%
- Cycling + 22.8%
- Car Traffic + 2.5%

Counts of bus and ferry passengers were not carried out. However, patronage data has been obtained from the public transport operators involved in the study on use in May 2002 and October 2002. These two sets of data showed that bus patronage decreased by 5.2% from May 2002 to October 2002, and ferry patronage increased by 4.3% during this period.

The 'raw results' in Table 5.2 for the 'full population' have been adjusted to allow for the changes found in overall travel by different modes, over the study period, as shown above. The adjusted results, shown in Table 5.5 (and in Appendix C), allow for factors external to the PMP. The adjusted results presented in Table 5.5 are significantly different from the raw results (Table 5.1).

⁸ The changes in walking, cycle and car driver count trips are the averages over all counts.

Table 5.5 Birkenhead PMP results adjusted for external factors.

Travel Mode	Before Programme		After Programme		% Change in Trips
	Trips	Modal Share %	Trips	Modal Share %	
Walk	928	14.2	928	14.5	0.0
Cycle	17	0.3	22	0.3	29.2
Car Driver	4388	67.1	4191	65.7	-4.5
Car Passenger	713	10.9	759	11.9	6.5
Bus	383	5.9	407	6.4	6.2
Ferry	43	0.6	43	0.7	0.0
Other	69	1.0	32	0.5	-53.6
Total	6541	100.0	6382	100.0	-2.4

- Walk trips show no growth. The increase in walk trips noted in the raw results apparently was totally attributable to seasonal factors, e.g. improved weather for walking and the commencement of daylight saving.
- Cycle trips still show a significant growth, 29%, although less than the 52% in the raw results. Thus, the increase in cycle trips is partly related to seasonal factors, but is also related to the PMP.
- Car driver trips showed a significant decrease, 4.5%, which is higher than the 2% decrease found in the raw results.
- Car passenger trips increased by 6.5%.
- When the seasonal decrease in bus trips was accounted for, bus trips were found to increase by 6.2% (rather than 1% as in the raw results).
- Ferry trips showed no growth, once the seasonal increase was allowed for.

5.4 Weekend Travel Behaviour Impacts

A high proportion of after-survey respondents indicated that they had changed their weekend travel behaviour in the period since the before-survey, and 4% of all respondents indicated that this change was directly related to the PMP. However, as the travel diaries did not cover weekend travel, we are not able to quantify this change.

5.5 Impact of Programme Components on Travel Behaviour Change

As indicated in Section 5.2, after-survey respondents were asked to give the reasons why they changed their travel behaviour. A number of respondents indicated that their travel changes were related to the PMP, either as a result of receiving information about alternative travel modes or as a result of receiving a free trial public transport ticket (or both). Further analysis was carried out to ascertain the extent to which public transport travel changes were a result of receiving the free ticket or of receiving the information. This analysis found that of the additional public transport trips made by PMP participants, 43% were due to receiving the free ticket alone, 29% were due to receiving both the free ticket and information, and the remaining 28% were due to information alone. Provision of a free trial ticket was therefore very important in fostering increased public transport use.

6. Effectiveness of Programme Approach

6.1 Overview

The effectiveness of different elements of the Personalised Marketing Programme was mainly assessed in terms of the attitudes of PMP participants, and their ratings of the usefulness of these elements. Also included is a comparison with other programmes such as IndiMark.

The Programme elements assessed are:

- Free trial Public Transport (PT) Ticket;
- Cycle Offer;
- Personal Visits;
- Information Materials.

In addition, areas in the PMP approach where participants suggested improvements could be made are identified, and the effect of sending information to households who did not request it is also assessed.

6.2 Usefulness of Trial Public Transport Ticket

Around 200 free PT monthly tickets (half bus/half ferry) were requested and sent out (to people who were not regular PT users, i.e. used PT less than once a week). Around 1/3rd of the survey respondents indicated they had received a free PT ticket (bus or ferry). These people were asked a number of questions about their use of the free ticket, and the main findings were:

- 44% of those who received the free ticket actually used it.
- The most frequent reason for not using the free ticket was that the PT service did not meet their needs and that other travel modes were more convenient.

The next most frequent reason was that their situation during the period of ticket validity precluded them from using it, e.g. sick, poor weather, too busy, etc.

- Of those who used the ticket, 50% used it for 1-2 trips a week, 31% used it for 3 trips a week, and 19% for 4-5 trips a week.
- Of those who used the ticket, 52% have used PT since the free ticket expired.
- Of those who have carried on using PT, 75% are using it 1-2 times a week and 25% are using PT 3 times a week.
- The most frequent reason for not continuing to use PT was that other travel modes were more convenient. PT is apparently considered to be a suitable mode for trips to the Auckland city centre but not very convenient for short local trips and trips to Takapuna and other parts of the North Shore.

Our overall conclusion regarding the usefulness of providing free trial PT tickets is that this does encourage a substantial proportion of PMP participants to 'try out' PT,

with the result that a significant proportion of them did continue to use PT after expiry of the trial ticket.

6.3 Cycling Incentives

As indicated in Section 3.2, incentives for cycling were made available to PMP participants (free cycle and helmet check, and free trial use of a commuter cycle for a week). But none of these free cycling incentives were taken up by PMP participants.

The Attitudinal after-survey asked respondents why they did not take up the offer of a free cycle for a week. Of the respondents answering this question, 55% claimed that they did not see the offer, while 18% said it was too dangerous to cycle, and the remaining 27% stated that they wouldn't use the cycle.

6.4 Personal Visits

Requests were received for 'telephone visits' as follows:

- Walking 8
- Cycling 3
- Public Transport 5

Only one person requested a visit covering more than one mode.

The visits concerning **walking** were mostly with people looking for a walking 'buddy' to keep them motivated to 'get out there' and actually start walking. Many of these people had walked previously but had dropped off over time. These people, who were generally in their 50s–60s, were mostly walking for health and pleasure and were most interested in the walkway information. The walking 'visitor' generally referred them to the local walking groups for further information and additional support. The people receiving the visits generally appreciated the call.

The **public transport** visits were not generally related to the information provided but rather to specific concerns the individuals involved had with their local PT service. Issues raised included: the need for better integration between cycling and PT, the need for timetable information at bus stops, and the availability of wheelchair accessible vehicles in the local bus fleet. The PT 'visitor' was able to discuss these issues with the people involved and in one case (about wheelchair accessibility) arranged a meeting between the local bus operator and the person involved.

Our conclusion in regard to the usefulness of the Personal Visits is that, although they may only be taken up by a small proportion of Programme participants, they can identify issues which need to be addressed to encourage alternative mode use and to provide a means for putting people in contact with key resource people. In this demonstration programme, participants seemed to have little difficulty in understanding the information received and the visits were not used to explain the information materials sent out.

6.5 Usefulness of Information Materials

6.5.1 After-Survey Response

After-survey respondents were asked whether they found the information sent out to them very useful, quite useful, or not useful. The responses showed that 35% found it very useful, 61% found it useful, and only 4% found it not useful.

Survey respondents were also asked if they were satisfied with the format and style of the information sent to them. These responses showed that 32% indicated they were very satisfied with it, 67% were satisfied, and only 1% were not satisfied.

Respondents were also asked for suggestions how to improve the information materials. Only a few suggestions were received. These mainly related to the need to show how different services were linked together (e.g. bus and ferry), and the need for a map showing all the routes. It was also noted that the information was difficult for language students to understand. One person made the comment that *“the materials were fine, it’s the level of service that needs improving”*.

6.5.2 Attitudinal Survey Response

As indicated in Section 3.2, an attitudinal survey was undertaken with a sample (33) of the PMP participants. This survey asked respondents if their knowledge of public transport, walking and cycling had increased. Of the respondents 75% indicated that their knowledge of public transport had increased, 64% of respondents said their walking knowledge had increased, and 24% said their cycling knowledge had increased. However, of those respondents who indicated an increase in knowledge, around 66% indicated they now had only ‘a little more’ knowledge (as distinct from ‘much more’).

Nearly all attitudinal survey respondents indicated that the public transport and walking information was useful, whereas the cycling information was useful to around half the respondents. This is an illuminating result: although PMP participants may have considered the information provided to be useful, it only resulted in a small ‘knowledge increase’ for most participants.

6.5.3 Conclusion

It appears therefore that, for people who requested and received information, the information materials provided were useful. However, for most people the result was only a small ‘knowledge increase’. In addition, a key limiting factor for use of public transport is the level and quality of service actually provided.

6.6 Attitudes to the Modified Information Distribution

The people who initially indicated they were interested in receiving more information but did not return the Information Request Form, and who were nevertheless sent a full information pack, were also surveyed to gauge their attitude to receiving the information even though they had not specifically requested it. Of

this group, 34% indicated that they found the information useful, 15% indicated that some of it was useful, and 51% did not find it useful.

In addition, this group was queried in regard to their attitudes at receiving this 'unsolicited' (direct) information. Of these responses, 8% were very pleased to receive this information, 36% were pleased to receive it, and 52% were 'neutral'. Only 3% were annoyed at receiving the information.

This group was also asked why they had not returned their form. A number simply forgot or didn't get around to it. However the main reasons appeared to be that they felt they already knew everything they needed to know about PT, walking or cycling; or that they did not consider these modes very suitable for their travel needs.

6.7 Comparison of PMP with IndiMark Programmes

6.7.1 Methodology

The main differences in methodology between the Birkenhead PMP and the IndiMark programmes run in Perth and Brisbane were:

- Different survey approach in recruiting people for the pre-survey and the Programme itself.

The main difference here was use of 2-day travel diaries in the Birkenhead PMP, whereas 1-day travel diaries were used in Perth. As detailed earlier, 2-day travel diaries were used for the Birkenhead trial to increase the robustness of the results obtained (given the large variability in travel patterns from one day to the next, and the reduced statistical reliability of a 1-day travel diary approach).

However, one result of using 2-day travel diaries was a much lower response rate for the Birkenhead pre-survey compared to that achieved in the Perth programmes.

The result of this was a significantly lower proportion of the total population being exposed to the Programme in the Birkenhead trial.

- New timetables were installed at bus stops in Birkenhead before the Programme began. However, bus stop-specific timetables, which are generally used in IndiMark programmes, were not used.

Bus stop-specific timetables provide the times at which the bus will pass a particular stop for different destinations, whereas standard timetables, which were used in Birkenhead, provide the times for the main timing points along the route.

The main reasons for not using bus stop-specific timetables were:

1. the substantial work required to compile bus stop-specific timetables;
2. the difficulty for the operator by introducing additional 'timing points' (i.e. each bus would need to be running exactly to time at every stop); and
3. the uncertainty about the additional effect on patronage of bus stop-specific timetables over and above standard timetables.

6.7.2 Results

The results of the Birkenhead PMP are generally similar to those found in other personalised marketing⁹ experiments in that both a reduction in car driver trips and an increase in travel by alternative modes have been achieved. However, the size of the travel changes has been smaller in the Birkenhead Programme than that reported in other experiments (e.g. typically a 10% reduction in car driver trips).

This is most likely related to:

- The lower response rate in the before-survey which resulted in a significantly lower proportion of the population being exposed to the Programme.
- The relatively hilly nature of the Birkenhead area which would not have encouraged walking and cycling, particularly for weekday travel to work and school as against weekend leisure travel. (Changes in weekend travel were not assessed in this project.)
- The relatively low level of public transport service in the area (as an example, bus feeder services are not provided to the ferry service at non-peak times). Other personalised marketing experiments have generally been undertaken in areas with relatively high public transport service levels. Thus, achieving higher travel behaviour changes would be expected in areas more conducive to walking and cycling, and with higher public transport service levels.

6.8 Possible Improvements in the Methodology

The Attitudinal survey respondents were asked to suggest any ways in which the personalised marketing process could be improved. Of the respondents, 77% considered that the process was very good and could not be improved upon. One person said *“Worked well. Impressed with it – pack very useful and easy to follow, good phone calls, letter was simple and direct. All good”*. Another person said *“Efficient – Enjoyed the bus, helpful reminders, no hassle, had the time to spare”*. However, although these people thought the personalised marketing process was good, in many cases they indicated that the public transport service did not meet their travel needs. One person, for example, stated that *“... the public transport routes do not go anywhere near my work so they are not useful”*, while another said that we should *“improve the bus service, then try to market it”*.

The main suggestion for improving the process was to make it simpler by providing less information, and having less evaluation surveys. In contrast, however, several people were very happy with the ‘comprehensive’ nature of the information provided.

⁹ Reported generally in the literature as ‘Individualised Marketing’ experiments.

7. Conclusions & Recommendations

7.1 Conclusions

Our main conclusions have been grouped into those relating to: programme results, programme methodology, and evaluation approach.

Programme Results

- The Birkenhead PMP resulted in a decrease in car driver trips of 4.5% and an increase in travel by several of the alternative modes: 29% increase in cycling; 6.5% in car passenger trips; 6.2% increase in bus trips; no change to walking and ferry trips. (Table 7.1 summarises the results presented in Tables 5.1, 5.2, 5.3 of this report.)
- The results of the Birkenhead PMP are similar to those found in other personalised marketing experiments in that a reduction in car driver trips and an increase in travel by alternative modes has been achieved. However, the size of the travel changes has been smaller in the Birkenhead Programme than that reported in other experiments. This is most likely related to the relatively hilly nature of the Birkenhead area which does not encourage walking and cycling, and to the relatively low level of public transport service in the area.
- In addition to these weekday impacts, the PMP also had an impact on weekend travel. However, the quantitative impact could not be identified using the survey travel data available.
- Provision of a free trial public transport ticket can encourage increased use of public transport, and may be more important than provision of information.
- Providing further information about alternative travel modes to people who had indicated an initial interest in receiving the information, but did not follow through on returning the Information Request Form, achieved an increased reduction in car travel.

Table 7.1 Impact of PMP on travel behaviour.

Travel Mode	Type of Impact	% Change in Trips			
		Full Population – Adjusted ¹	Full Population – Unadjusted ²	Modified Information Distribution ³	Programme Group only
Walk	No impact	0.0	6	8	13
Cycle	Increased trips	29.2	52	52	80
Car Driver	Decreased trips	-4.5	-2	-4	-5
Car Passenger	Increased trips	6.5	6	6	15
Bus	Increased Trips	6.2	1	-2	1
Ferry	No impact	0.0	4	167	10
Other	Decreased trips	-53.6	-23	-53	-56
Total		-2.4	0	0	1

1 Adjusted for external factors.

2 Not adjusted for external factors.

3 Full population group.

Programme Methodology

- The process used for the PMP appears to have worked well. Ensuring that the process is simple and easy to follow is clearly important.
- Providing free trial public transport tickets encourages a substantial proportion of Programme participants to 'try out' public transport, with the result that a significant proportion of these continued to use it after the trial ticket expired.
- The cycling incentives provided in this trial were not taken up. This may relate more to the relative unattractiveness of cycling in the area, than the usefulness of providing incentives for cycling.
- Providing the opportunity for personal visits can enable the identification and addressing of issues which need to be addressed to encourage alternative mode use, and can provide a means for putting people in contact with key resource people.
- The type of information provided in the Birkenhead PMP was found to be useful to participants. However, for most people the result was only a small 'knowledge increase'.
- A key limiting factor for the use of public transport is the level and quality of service actually provided. A number of participants suggested that service improvements rather than marketing were required.
- Running a PMP in conjunction with infrastructure and/or service improvements to public transport, walking and cycling most likely would be very effective, given that participants would have little knowledge of the new services (with consequent large potential knowledge gains). Thus they would respond positively to information about service improvements.
- Providing information to people who initially indicated they were interested in receiving information, but did not subsequently return the Information Request Form, does not necessarily result in negative attitudes towards alternative modes or to the Programme. This approach also increased the travel behaviour change impact of the Programme, although at a lower marginal impact than for the Programme itself. If information materials are available, and resources are not constrained, sending the materials out to all households who have shown some interest in receiving information about alternative modes, would appear to be advantageous.
- The low response rates achieved in the Birkenhead trial, which affected the programme results, would not be likely to occur in a wide-scale personalised marketing programme, given that only a sample of the population would be surveyed. The results of such a wide-scale programme therefore would likely be similar to those achieved by similar programmes in other locations.

Evaluation Approach

- The before/after-survey approach worked well in terms of identifying changes in travel behaviour by Programme participants.

- The travel-diary approach used was effective for identifying changes in trips. However, it did not provide a good basis for estimating changes in distance travelled. The best way to do this would be to ask travel diary respondents to provide the street address for the start and finish of each trip.
- If funding is adequate, a control group would be the most effective way of accounting for external factors and influences. The approach used in this present evaluation is a second-best approach.
- The attitudinal after-survey provided useful additional data on participant attitudes. However, 'survey-fatigue' significantly affected response rates for this additional survey.

7.2 Recommendations

As indicated above, the Birkenhead Personalised Marketing Programme has been successful in reducing car driver trips and in increasing the use of alternative travel modes.

Our main recommendation is, therefore, that

- Personalised Marketing be considered, along with other travel demand management measures, for application to other areas of Auckland, and throughout New Zealand.

The following recommendations are also made:

- Personalised Marketing will be most effective if applied in areas with a relatively good quality public transport service, and which are conducive to walking and cycling.
- Personalised Marketing will also be effective if used in tandem with improvements to the public transport service, or to walking and cycling facilities.

Appendices

Appendix A Review of International Experience with Personalised Marketing

A1. Introduction

Booz Allen Hamilton was engaged by Transfund New Zealand in 2001 to develop and undertake an ‘personalised marketing’ demonstration project in an urban area in New Zealand, in order to assess the effectiveness and potential of this approach to reduce private car travel and increase the use of public transport and other environmentally friendly modes (EFMs) in the New Zealand situation. One of the main tasks of this project was to undertake a review of international practice and experience with Personalised Marketing. The review focused on:

- Identification of the different Personalised Marketing approaches which have been trialled, and reporting of trial results;
- Evaluation of the different Personalised Marketing approaches;
- Selection of a preferred approach for the New Zealand Demonstration Project;
- Identification of lessons learnt in application of the preferred Personalised Marketing approach.

This Appendix sets out the results of this review as follows:

- Section 2 - provides an overview of the different Personalised Marketing approaches which have been trialled internationally.
- Section 3 - sets out the results of an evaluation of the different Personalised Marketing approaches, and identifies a preferred approach for the demonstration project.
- Section 4 - summarises lessons learnt in regard to Personalised Marketing.
- Bibliography - lists the international literature researched for Personalised Marketing experience.

A2. Personalised Marketing

A2.1 Information and Publicity Campaigns

Personalised Marketing is a programme aimed at changing people’s travel behaviour by a combination of education, persuasion and provision of personalised information. This section provides an overview of transport information and publicity campaigns in general, before looking at personalised marketing in particular.

A2.1.1 Overview

A recent European Commission project, INPHORMM¹, investigated how transport information and publicity campaigns can influence people's awareness, attitudes and travel behaviour, and encourage cycling, walking and the use of public transport. The INPHORMM Final Report (1999) identified the following main types of information and publicity campaigns in use:

- Public Awareness Campaigns – multi-modal or single mode (promoting cycling, walking, car-pooling, public transport)
- Campaigns to targeted groups (in schools, businesses, etc.)
- Personalised Campaigns (e.g. household members, politicians, etc.)
- Transport Information Programmes
- Health and Environmental Campaigns related to travel behaviour

These different types of information and publicity campaigns are briefly summarised below:

- **Public awareness campaigns**

These include both one-off campaigns and on-going programmes aiming to raise the general public's awareness of the effects of traffic growth, influence their attitudes and ultimately, to contribute to changing their travel behaviour. The methods used in these campaigns include both 'top-down' mass media channels, such as roadside advertising and TV, radio and newspaper advertising; and 'bottom-up' community development methods such as workshops and discussion forums.

- **Campaigns to targeted groups**

Key settings include schools, local businesses and large employers, hospitals and sites generating large volumes of traffic. These programmes combine information provision, education and community involvement to change the norms and culture of the organisation, as well as the attitudes and travel behaviour of the individuals within the settings. As 'culture change' takes time, these programmes may require a person placed within the organisation for a time, or an in-house champion, to drive change.

- **Personalised campaigns**

These campaigns combine some or all of the following elements: education, persuasion and the provision of personalised information and incentives to influence individual attitudes and motivate behaviour change, through one-to-one advice. They may be implemented as part of a wider awareness-raising campaign or linked to the introduction of new public transport routes and services. They focus on individuals who are interested and motivated to make changes, e.g. because they have moved to a new area, started a new job, want to be 'green' or get fit, or because new local services have been introduced which they are now able to access.

¹ INPHORMM – see p.11 of this report.

- **Transport information programmes**

The range of different types of transport information available to the general public is growing. New technology offers opportunities to use innovative methods for providing both static and dynamic transport information. Accurate, up-to-date and accessible information about passenger transport services, routes and timetables, needs to be provided in parallel to the implementation of awareness campaigns to change behaviour.

- **Health and environmental campaigns related to travel behaviour**

Health promotion initiatives linked to travel behaviour aim to increase the levels of physical activity among the general population, by promoting cycling and walking; or to reduce road accidents. These may also lead to a reduction in car use. Campaigns run by environmental organisations related to air pollution and energy saving also aim to reduce car use. Their impacts can contribute to increasing public knowledge, attitudes and behaviour in favour of cycling and walking and of sustainable transport issues more widely.

A2.1.2 INPHORMM Findings

The INPHORMM project found that Personalised Marketing campaigns are effective as part of a co-ordinated information and publicity programme. A model for instituting a communications programme in a city was proposed, as shown in Figure A1². Other key overall findings of INPHORMM were:

- Using information, marketing and community education, as part of an integrated transport plan, can significantly increase levels of public awareness, influence public attitudes and enable people to make changes to their travel behaviour, to reduce car use and increase cycling, walking, car sharing, and the use of public transport.
- Increasing the public's awareness of the problems caused by motorised mobility and creating an 'environmentally friendly transport climate' among a community are essential for widespread, sustained behaviour change.
- Campaigns with individual travellers and 'personalised marketing' are effective tools for combining transport information and publicity, and produce results in terms of individual behaviour change.
- Target events or times of change for individuals, organisations and communities, can be used as a trigger for encouraging travel behaviour change. This is a promising area for future programmes, such as targeting individual life events (moving house, having children, changing jobs); changes in institutions and businesses (re-developments, moving sites and personnel changes); and community changes such as the development of new housing areas, changes in public transport provision, and the regeneration of an area.
- 'New ideas for travel' are often not accepted immediately through simple promotions. Where new transport plans, new services, facilities or modes (such as car-pooling or park-and-ride) are introduced, a dialogue needs to be established

² Information campaigns vary in how they fit into this model. Some personalised marketing programmes actually start in the middle, i.e. at the Attitudes stage.

with individuals and communities to explain the perceived costs and benefits of 'making the change'.

Figure A1. Extract from INPHORMM final report.

A co-ordinated programme

Targeted campaigns are run in phases across an area, according to a population or community's readiness to consider changing their travel behaviour

- Campaigns to raise public awareness
 - Campaigns to targeted groups and settings (schools, workplaces, leisure sites)
 - Campaigns with individuals and households
-

Ongoing Action

- Public relations and lobbying to community leaders, politicians and the media
 - Internal campaigns within organisations to build staff support for the programme
 - Improving public transport information systems
 - Marketing sustainable transport modes: cycling, walking, car-sharing, public transport
 - Developing community networks and partnerships
 - Promotions linked to new infrastructure
-

Stages of Change

Awareness

(of the problems of traffic growth)

Acceptance

(of the need for change)

Attitudes

(towards alternative modes)

Action

(reducing car use)

Assimilation

(maintaining the change)

A2.2 Personalised Marketing

The following outline of the aims, strategy and implementation of Personalised Marketing Campaigns is taken from the INPHORMM Final Report.

Aims of Personalised Marketing

Personalised campaigns aim to change the behaviour of individuals, in order to reduce their car use or increase their use of other modes by:

- providing direct, personalised information about the present transport systems/services relevant to their needs;
- developing a support network or advisory service for their future transport information needs.

The specific aims are to:

- Increase peoples' knowledge of alternative modes and reduce misunderstanding /inaccurate perceptions of cycling, walking, car-sharing and public transport;
- Develop a system of customised transport information provision;
- Actively promote information to people about alternatives for specific trips they make;
- Motivate and support individuals to try out alternative modes and then to integrate small behaviour changes into their daily routines.

Context for Application

Campaign which are customised for individuals are best used:

- at the start of a new programme, when targeting 'individual champions';
- as part of a marketing strategy for individual modes or the promotion of new infrastructure (in a particular area);
- to reach individuals at times of change, such as when starting a new job/school, moving house etc. (when they can be combined with campaigns in targeted settings);
- as a final stage to encourage behaviour change among motivated individuals, who have been identified through previous public awareness campaigns.

These campaigns are more likely to be effective if the awareness of transport problems among the general public is already high, such as after a public awareness campaign has been run either nationally or locally.

Messages and Themes

The messages and themes for personalised campaigns need to concentrate on:

- the practical benefits that behaviour change can bring for that individual, such as time savings, costs savings, improved quality time with the family, health benefits, etc.;
- the fact that small travel behaviour changes made by an individual can have a big impact on overall traffic problems;
- the ways in which people can make the easy changes first, one step at a time, such as cycling or walking to work once a week, making one less short journey by car a week, combining two trips into one, and so on.

Strategy

The target audiences for Personalised Campaigns are motivated individuals:

- in households in a particular area (contacted through direct marketing);
- identified among targeted groups or in settings (schools, workplaces, etc.);
- who are making other life changes (identified when moving house, trying to get fit, changing jobs/schools, seeking 'greener' lifestyles, etc.).

Campaigns promoting public transport directly to individual households are more likely to be successful in areas which have a high potential for travel behaviour change, e.g. where public transport provision is good, but current use is low. They are also likely to succeed when introduced in conjunction with the opening of an expansion to the public transport network.

Personalised campaigns can also be implemented to promote cycling and walking in areas with high potential for these modes.

Implementation

Personalised campaigns to households:

- Recruit motivated household members through telephone contact, a letter and possibly an initial visit. This may be led by a local authority, a public transport operator, or a partnership of these and other local organisations. The area may be selected because there are new public transport, cycling or walking routes/services to promote or because there is an identified transport problem which people want to solve.
- May record the current mobility behaviour and patterns in the household using travel diaries or questionnaires³. Identify the 'readiness to change' among motivated individuals, and the types of information they require to help them (for example, are they contemplating, actively planning or actually making changes?).
- Regular users of sustainable transport can be provided with further encouragement (such as a gift) to reinforce their current behaviour. Some of this group may also need additional or updated information about routes and services.
- Provide the specific information required, such as:
 - standard timetables, maps and leaflets, sent individually;
 - more detailed information such as personal timetables for particular routes and times, timetables for specific stops or stations, cycling/walking routes to/from particular places, sent or delivered in person;
 - customised advice and support, through a telephone advice service, home visit or other face-to-face contacts: this may include planning a weekly travel diary, exploring barriers to change and finding practical solutions.
- If appropriate, 'trials' can be offered to people who have little or no experience of using EFMs (e.g. free public transport tickets for a limited period or cycling lessons/leasing). Individuals can also be put into contact with other people who

³ This is not an essential element of personalised campaigns.

- will act as a regular support to them (using local volunteers or ‘buddies’ from cycling or walking groups).
- Individuals need to be re-contacted at regular intervals following the initial assessment (e.g. monthly for 3-6 months, with a pre-arranged follow-up) to build a positive ‘customer’ relationship and to support people as they try to integrate changes into their routines. Further incentives may be offered if they can increase their use of EFMs further (such as high profile media coverage, the provision of cycling or walking equipment, etc.).
 - Campaigns to households should be repeated regularly for several reasons:
 - Information about public transport quickly goes out of date.
 - A local population is in constant flux as people move in and out of an area. New residents/employees may also be more receptive to trying a new mode.
 - New services and facilities may have been introduced which can act as a trigger for people to try a new mode.
 - Personalised Campaigns can be used in a setting or institution, such as in a school, workplace, leisure centre, etc. Individuals can be identified during a site-wide campaign and then contacted personally, to assess their individual needs. Customised information can also be used as part of an ‘information package’ for new residents (identified by housing associations or estate agents), new employees/students/pupils, new members of leisure and recreation centres (identified by the site managers or employers), and so on.

Market Research and Evaluation

The monitoring and evaluation of Personalised Campaigns is an integral part of the campaign process as the details of an individual’s travel behaviour patterns are recorded from the start. An evaluation of this type of campaign includes:

- A survey of an individual’s knowledge of alternative modes, attitudes towards them and their travel behaviour at the start and end of a campaign (and their attitudes towards the campaign organisers) using face-to-face interviews, travel diaries and records of the distances travelled by car.
- Recording the type and range of information required by individuals and their views on its usefulness during the campaign.
- Follow-up surveys at the end of the campaign and then one to two years afterwards, to measure the longer term effects on attitudes and behaviour.
- The option of surveying a control group of people in the same area or setting who are motivated to make changes but are not provided with the information and support. This can allow the effects of the campaign to be distinguished more clearly from other factors influencing the individuals’ behaviour.

A3. Personalised Marketing Approaches

The main Personalised Marketing approaches which have been trialled are:

- IndiMark
- Simplified Version of IndiMark (Sydney)
- Switching to Public Transport (Adelaide)
- Travel Blending
- Global Action Plan UK (Action at Home)

A3.1 IndiMark

IndiMark was developed by Socialdata, a German social research consultancy. The first trials of the IndiMark method were in Europe in the early 1990s. Since then it has been tested in over 50 applications in several European countries (including Germany, Austria, Switzerland, Sweden and the UK), and in several Australian cities.

IndiMark⁴ has the primary aim of increasing the amount of activities which are accessed by EFMs, walking, cycling and public transport, while decreasing the amount of private motor vehicle (PMV) travel (with corresponding decrease in trips, distance, energy, emissions). It is built upon the view that there is a gap between public perception of public transport and the reality. An increasing proportion of the population considers itself to be uninformed about the nature and operation of public transport (up from 48% in 1976 to 54% in 1995 in Germany), and believe it to be worse than it really is (Broeg & Schadler 1998). The proponents refer to the very limited success of general marketing of public transport in Perth and elsewhere.

IndiMark is based on individual contact with a significant segment of the target population which has shown an interest in changing travel behaviour towards more EFMs.

Key concepts of IndiMark are:

- It is most effective to select that proportion of the population which indicates a potential for mode change rather than attempt to engage with the full population of the selected area. That is to focus on people not using public transport (PT) for subjective reasons rather than 'impossible trips' (trips for which there are constraints on using PT, such as use of car for business reasons; and trips for which there are no adequate PT connections).
- It is possible to achieve a change in choice of modes provided the right marketing approach is adopted. Traditional PT marketing has relied on making information available on request from the customer. A more effective approach is to create an individual dialogue by direct contact.

⁴ This description is based on Perkins 2001a.

- The direct contact should include three stages: motivation for change, information about offer, and experience of the system. (This last phase is often facilitated by providing a free test ticket to give interested people the opportunity to try the PT system for themselves.)
- A key success factor is to provide people with customised information, i.e. information which addresses their concerns and problems.
- Rewarding those who are already substantial EFM users encourages them to further increase EFM use. (A free gift was often given to regular users. However, free tickets were not provided to avoid ‘cannibalism’, i.e. reducing existing operator revenues.)
- The areas chosen for IndiMark trials have generally been areas with good PT service but lower than average demand.
- A small change (e.g. in two or three trips per month) produces a significant increase in the use of EFMs and a significant decrease in private motor vehicle use. Thus, it is not necessary to aim for large increases which involve everybody. Small increases in PT use, and in walking and cycling, by receptive people will have a significant impact.

The IndiMark method can be summarised as follows.

CONTACT	All households are contacted by mail and phone to determine if they are regular/extensive users of EFMs (R), are not at all interested in changing (N), or are interested (I). (Note: low level ‘awareness advertising’ may also be carried out prior to initial contact to increase response rate.)
MOTIVATION	Problems and requests from the R and I groups are responded to.
INFORMATION	Information (timetables, maps, etc.) are posted to the R and I participants. The R and I participants select the information they want, then they receive it by hand-delivery (generally) within a couple of days.
CONVINCING	Consultation phone calls and home visits on request are made, with selected households in group I receiving tickets to use on public transport for a limited period.

Source: derived from Broeg & Schadler 1998

A3.2 Simplified Version of IndiMark (Sydney)

A simplified version of Socialdata’s IndiMark was trialled in Sydenham, an area of Sydney, in 1996. Sydenham was selected as an area with good access to PT but with a lower than expected use of PT.

The methodology used involved the following⁵:

- Specially tailored Information Package: package developed which included identification of bus stops and timetable information summarised in a more

⁵ Kearns 1998.

concise form than usually available. Package was branded “*Try it, you just might like it!*”

- Recruitment (with age and sex quotas) by face-to-face interviews: 200 persons were recruited in this way; regular PT users were excluded.
- Survey: participants answered questions on current travel patterns.
- Free ticket: participants were provided with a two-week travel pass. Depending on numbers of persons in a household, travel passes could also be given to another adult and a child, thereby allowing family outings.
- Information package: participants were given an information package.
- Follow-up Surveys: two follow-up telephone surveys were carried out.

First survey, at end of the period of free travel, covered use of travel pass, adequacy of information package and experience of PT system.

Second survey repeated Recruitment Survey with respect to travel patterns.

Of the original 200 study participants 178 responded to the first follow-up survey and 143 of these to the second.

This ‘simplified IndiMark’ trial differed from the Socialdata IndiMark methodology in the following ways:

- No actions were made towards regular PT users;
- All participants were provided with the same information package rather than receiving a more targeted information pack;
- No household visits or follow-up phone calls were made;
- All participants received a free ticket, whereas only selected individuals are offered this under IndiMark.

A3.3 Switching to Public Transport (Adelaide)

In 1996-1997 an personalised marketing trial was undertaken by the South Australian Passenger Transport Board. The main parts of this study were⁶:

- Recruitment of 180 non-users of PT.
- Provision of free unlimited travel on PT for 3.5 months, followed up by 20 free trips in the next month and 10 free trips in the following month.
- Monthly delivery (for 7 months) of personalised letters, PT publicity, timetables, PT trip detail sheets, ticket wallets, environmental information, address lists of ticket vendors in their area, and a note pad (all enclosed in an attractive re-useable satchel).
- Seven waves of monthly telephone surveys gauging use, satisfaction, purpose of trips, modes used, whether they were accompanied, and when they travelled.
- Follow-up survey 7 months after last contact to gauge participants’ PT use over the intervening period.

⁶ Boisvert 1998.

The main differences from Socialdata's IndiMark were:

- Longer period of free travel provided. This was on the belief that the one month free travel incentive offered by Socialdata was too short.
- Continuous flow of information over a much longer period.
- Use of existing information media rather than development of new 'customised' media.
- Surveys of participants focused on PT use on basis that 'the data collection of all household trips (was) so onerous as to risk high attrition rates we could not afford within our budget'.

A3.4 Travel Blending

Travel Blending⁷ was developed by Steer Davies Gleave (SDG). It was originally developed and tested in NSW as part of the NRMA⁸ Sydney Clean Air Campaign. It was then applied in Adelaide, South Australia, to the workforce of Transport SA, a private company and a high school. It has since been applied in two other Adelaide suburbs, and in several other cities. With its application to geographical areas, the concept was expanded to maximise participation and build on the synergies of involving everyone in a neighbourhood. This approach has been named "Living Neighbourhood@".

Travel Blending is designed to encourage participants to:

- Think about activities and travel in advance (in what order should activities be done, who should do them, where should they be done).
- Blend their travel by *blending modes*, *blending activities* (doing as many things as possible in the same place or on the same journey), or *blending over time* (making small sustainable changes on a weekly basis) (Ampt 1999).

The aim of the approach is to "*provide people with an achievable goal rather than a set of general possibilities*", meaning:

- *Some* change is possible for everyone in the short-term;
- The changes can be incorporated into people's lifestyles without negative effects;
- All people *can* identify the possibilities for change over the long-term;
- Changes are *sustainable* over the long-term (Ampt & Rooney 1998).

The method of Travel Blending involves participants completing 7-day travel diaries to gain an understanding of their personal and household travel patterns. The diaries are analysed and the participants are provided with suggestions on how they individually and as a household might reduce their motor vehicle travel and increase the overall efficiency of their travel. These suggestions are supported by customised information (bus timetables, maps, cycle hire, guides to local services, etc.) which will assist participants in implementing the suggestions. Participants are encouraged to complete a second 7-day travel diary approximately a month after starting to make

⁷ This description is based on Perkins 2001a.

⁸ NRMA – National Roads and Motorists Association, Sydney.

the changes, so that their changes can be measured and further feedback can be provided.

The Travel Blending approach can be summarised as follows (Note: four Travel Blending kits are distributed in the following sequence):

Recruitment & Background Data	Individuals, preferably all members of a household, are recruited door-to-door, through schools and workplaces. Basic data on both participating and non-participating households are collected, and Kit 1 is handed out.
Kit 1: Information and Diary 1 – Getting Started kit	The Getting Started kit includes: a letter of introduction, a <i>Why</i> booklet explaining negatives associated with vehicle use, a <i>How</i> booklet which introduces the Travel Blending concept, and a <i>Before</i> travel diary for each household member, plus aids to assist in its completion.
Kit 2: Customised Feedback – Help Make a Difference kit	The <i>Before</i> diaries are analysed and a feedback kit is provided which includes: the facts of each person’s week of travel, i.e. number of trips, trips by mode, time spent travelling, number of cold starts, and an indication of car emissions produced. Positive steps that people make already are highlighted and suggestions for reducing car travel are proposed (e.g. trip chaining for particular activities, change of mode for a particular destination). Kit 2 also includes a booklet <i>Thinking about Travel</i> and a Goal Card for the household to set out their travel blending goals.
Kit 3: Diary 2 – Are You on Track?	Kit 3 includes the <i>After</i> 7-day travel diary, plus a booklet <i>Track Your Travel 2</i> to explain the importance of completing the second set of diaries.
Kit 4: Continuing to Make a Difference	The <i>After</i> diaries are analysed and a final kit 4 is delivered summarising the travel revealed in the second diary, identifying the differences between the two, providing further tips, and including a log book to allow people to continue to monitor weekly car travel.
Neighbourhood Feedback	At the conclusion of the Travel Blending parts of the projects, a letter is sent to all residents/businesses/participants advising them of the changes in travel which have been measured (and other neighbourhood improvements).

There are significant differences between Socialdata’s IndiMark and SDG’s Travel Blending and these are summarised as follows⁹:

- **Focus on Change of Modes v Efficient Planning of all Trips**

IndiMark aims primarily at encouraging people to switch from motor vehicles to EFMs.

Travel Blending aims to introduce people to the principles of travel blending and then allow them to determine how to achieve reductions in motor vehicle use. (Given the overwhelming use of private motor vehicles, this is more likely to be through efficient use of the car rather than through switching to EFMs.)

⁹ Perkins 2001a.

- **Education v Information**

Travel Blending aims to ‘educate’ participants as to more efficient and effective ways of travelling, whereas

IndiMark aims to provide information specifically requested by participants.

Travel Blending thus contains an element of persuasion whereas IndiMark does not.

- **Different Levels of Participant Effort**

Travel Blending requires participants to complete several travel diaries, whereas

IndiMark programme does not involve the use of travel diaries (these are only used for evaluation purposes).

This results in quite different degrees of participant effort in the two approaches.

- **Marketing v Community Development**

IndiMark was developed in conjunction with European PT companies as a marketing tool to increase PT patronage. Its scope has been widened by Socialdata and the Western Australia DOT to cover other EFMs also (i.e. walking and cycling). It is thus essentially a marketing programme aimed at encouraging people to switch travel modes.

Travel Blending was developed as a travel demand management tool to encourage more efficient travel and thereby achieve reductions in car use. However, its emphasis on the inter-relationships between household members and integration of target groups within a neighbourhood has led to Travel Blending becoming a tool in the Living Neighbourhood projects, which can be integrated in urban regeneration programmes.

- **Different Pre-Selection Approach**

IndiMark screens out people who are not interested and focuses only in current PT users and those who are interested in being involved in the IndiMark project.

Travel Blending targets all households in the defined area, but excludes households without motor vehicles. (Although, as households have to agree to participate, the effect may be similar to IndiMark in practice.)

A3.5 Global Action Plan UK (Action at Home)

Global Action Plan UK’s *Action at Home* programme¹⁰ aims to change households’ environmental behaviour in five areas including transport. This is a broad ranging programme which involves a range of groups in the recruitment process (including local authorities, companies, community leaders, etc.). Once a household is recruited they receive the Action at Home materials as shown below.

A key element in the programme is providing five Action Packs that households work through. These Action Packs have evolved steadily, and now contain materials designed to appeal to an entire family. The implementation process has been developed over the past four years and is constantly evolving, based on experience.

¹⁰ INPHORMM Deliverable 3 1998.

An important development has been to link *Action at Home* to the work of other organisations, campaigns and legislation.

Action at Home materials for participants

Timing	Item	Purpose	Feedback
Month 1	Welcome questionnaire	To ask questions about existing behaviour patterns	On returning the questionnaire, households receive a letter giving them a GreenScore out of 100, explaining how this score compares with others and how it has been calculated.
Months 2-6	5 Action Packs: topics cover water, transport, waste, energy, shopping	To give practical advice for ways to improve their GreenScore and save money	Action Packs contain questionnaires asking households what external factors make it difficult for them to take action.
Month 7	Farewell questionnaire	To ask participants about behaviour patterns on finishing the programme	Households are given their new GreenScore. They can measure their progress and compare results with other participants.

A4. Evaluation & Results

A4.1 Evaluation Approaches

A4.1.1 INPHORMM

INPHORMM made the following points about evaluation approaches for transport information and publicity campaigns¹¹ :

- *Evaluation strategies are in their infancy in this field, and most organisations are in the early stages of monitoring their activities.*
- *Among the organisations who have attempted to measure their success, many do not monitor or evaluate their activities in terms of the effects on peoples' travel behaviour.*
- *The success criteria used by different organisations depend on their original aims, and for many, changing travel behaviour is a long-term goal.*
- *Change in public transport use is the most common behavioural measure used to evaluate public transport marketing campaigns.*
- *The impact of a campaign/programme can be judged by the extent to which its planned outputs and outcomes are achieved.*

INPHORMM identifies six categories in which transport information and publicity campaigns have been evaluated:

- Political Change
- Social and Institutional Change
- Increased Knowledge and Awareness
- Changes in Public Attitudes/Acceptance
- Environmental/Health Improvement
- Changes in Individual Behaviour

Of these categories, the first two are not particularly relevant for personalised marketing campaigns. INPHORMM identified the following types of indicators and changes which have been monitored in the remaining four categories.

Increased Knowledge and Awareness

- Awareness of campaigns – slogans, logos and images
- Awareness of public transport services, cycling/walking/car-sharing programmes
- Knowledge of the sources of transport information (e.g. information services)
- Knowledge of the benefits of other modes and the choices available
- Knowledge of the effects of traffic growth (on health, the environment, the economy, etc.)
- Understanding of campaign messages in favour of traffic reduction

¹¹ INPHORMM Deliverable 3 1998.

Changes in Public Attitudes/Acceptance

- To a more positive perception of public transport operators/public transport as a travel mode
- In favour of cycling/walking/car-sharing
- In support of traffic reduction, either at local level or in terms of transport policies
- Supporting the idea that individuals can ‘make a difference’ to transport problems

Environmental/Health Improvement

- Improvements in individuals’ physical/mental health (self-reported or physiological)
- Reduction in traffic congestion at key sites, on certain routes (such as schools, entrances to sites), or at peak times in city areas
- Reduction in cycle/pedestrian accidents involving motor vehicles
- Improved perception of urban environments or quality of life in city areas

Changes in Individual Behaviour

- ‘Greener’ motoring behaviour, both in driving techniques and in reductions in shorter trips/car-sharing/combining trips, etc.
- Increase in enquiries for transport information (from helplines, info desks or the Internet)
- Increased cycling/walking (e.g. city/area-wide, to school or work) or membership of cycling/walking groups
- Increased membership of car-sharing schemes and increased car-sharing/use of HOV¹² lanes
- Increased use of public transport, increased use of specific services, tickets or for certain journeys, trials/offers
- Participation in programmes to promote sustainable transport (numbers of participants in one-off events, self-help programmes, rallies, workshops, etc.)
- Individuals voting for sustainable transport policies and plans, or becoming politically active to support them
- Reduction in kilometres travelled by car or the reduction in the number of trips by car (by individuals/households)

A4.1.2 IndiMark

As IndiMark is aimed at producing switching from car to alternative travel modes, the focus in evaluation has been the change in travel by each mode (trips made by each mode), and the changes in modal share (percentage of all trips made by each mode). Early evaluations also focused on PT revenues and the expected ‘pay back’ period for PT operators. (For example, IndiMark began primarily as a means of increasing PT patronage and revenues.) Changes in vehicle kilometres travelled have also been estimated; however, these estimates have been based on survey respondents self-reporting in terms of distances between centres. Notwithstanding this latter point, full cost-benefit evaluations have been carried out on IndiMark trials

¹² HOV High occupancy vehicles.

in Perth. These cost-benefit evaluations have covered the full range of user, non-user, and environmental costs and benefits generally included in such evaluations.

A4.1.3 Travel Blending

Travel Blending involves the maintaining of travel diaries by participants, which provides a good basis for evaluating the impact of the programme on travel behaviour. The data collected enables an analysis of the effectiveness of Travel Blending in facilitating switching from car to alternative modes, as for IndiMark. However, the main emphasis of Travel Blending is not mode-switching but facilitating ‘blending’ of activities, modes, etc. This is particularly enabled by trip-chaining which can be discerned from the travel diaries.

The prime indicators measured are thus car travel distance and total trips made. Travel Blending typically reduces the total number of trips made (by increased trip chaining) while IndiMark has a neutral effect. Again, a cost-benefit evaluation has also been carried out for a Travel Blending project.

A4.2 Results

4.2.1 Indimark

Europe

The *Switching to Public Transport* project undertaken by Socialdata in conjunction with UITP¹³ involved more than 40 PT companies in 13 European countries. The main reported results from the trial IndiMark projects undertaken were:

- On average an increase in the share of PT by 4%, from 17 to 21%;
- An increase in average PT trips per year for targeted persons of 19%, from 164 to 196 trips per year;
- The main increase in ridership took place in off-peak hours as the additional trips are mainly made for shopping/services and leisure;
- In areas with system improvements, the increase of patronage is twice as high as without Personalised Marketing;
- All the trials resulted in some increase in degree of satisfaction with PT, with more than half having medium or high increases in satisfaction (this increase in satisfaction results from people feeling the operator ‘cares about them’ and from being able to express their needs);
- The patronage effects of the IndiMark action were largely retained (as measured in two of the pilot projects) one year after the action;
- Revenue calculations show that the IndiMark ‘investment’ should be repaid in the first year with a revenue surplus from the second year.

Western Australia

Subsequent to its success in Europe, IndiMark was trialled in Perth, Western Australia. These trials took the same form as the European trials except that the scope was widened to also cover walking and cycling (rather than just PT). Thus,

¹³ UITP – International Union of Public Transport.

IndiMark, as applied in Perth, has become a Travel Demand Management (TDM) measure rather than simply a PT marketing measure.

The results of the Perth trials have been similar to those obtained in Europe except that significant increases in EFMs have been obtained. The results of the Perth trials are summarised in Table A1.

A4.2.2 Travel Blending

Application of Travel Blending in Australia has resulted in substantial increases in PT trips and reductions in car driver trips, with varying results for cycling and walking. The results for two Adelaide applications are shown in Table A1. However, as Perkins (2001a) points out,

The Travel Blending and IndiMark results as reported cannot be directly compared. The Travel Blending results are not proportions of the persons/households approached, but of the sample of the participants who completed both diaries. Also, in the Travel Blending results, households with a variation of $\pm 5\%$ were designated as "No Change", thus recognising that there is likely to be a natural variability between travel weeks and only the more pronounced changes should be accepted as indications of change.

Perkins attempted to allow for the above points as follows:

Assuming that the change measured from the 2-diary sample is representative of the change amongst all of the households which completed Diary 1, excluding the sample loss (mainly people whose travel is already predominantly by EFMs), and allowing for an under-representation of change in the results due to the use of a $\pm 5\%$ threshold, the changes presented [in Table A1] may be proportional to around 60% of the households approached (i.e. multiply the percentages in Table A1 by 0.6 for a guesstimate of the effect as a proportion of all households approached).

Applying Perkin's deflator of 0.6 would give an increase in PT trips of 9.2% and 13.7% for the Dulwich and Christies Beach trials respectively.

4.2.3 Simplified Version of IndiMark (Sydney)

The main reported results were¹⁴ :

- The Information Package was considered 'helpful' or better by 92% of respondents;
- While TravelPass and Pensioner Excursion users were not recruited, they now made up 23% of the respondents;
- Users of rail periodicals increased 8% points with a corresponding increase for equivalent Sydney Buses/Sydney Ferries products of 13% points;
- One third of study participants indicated that their PT usage had increased;
- Around 5% of respondents found PT 'bad'.

Note: the research was not structured to allow for modal share analysis.

¹⁴ Kearns 1998.

The recruitment costs were around \$30 per household (excludes cost to ‘screen out’ a household), and the cost of a ‘personalised glossy information pack’ could cost around \$5.

A4.2.4 Switching to Public Transport (Adelaide)

The main reported results were¹⁵:

- One month after the end of the free travel period, 84% of infrequent PT users and 47% of non-users indicated they intended to use PT in the future;
- Five months later these percentages had fallen to 55% of infrequent users and 42% of non-users.

A4.2.5 Action at Home (Global Action Plan UK)

It has been noted that, although households have increased their ‘Green scores’ in all aspects of the programme, reflecting real behaviour changes, households have found changing their travel behaviour the most difficult area. However, the transport results do show increased car-sharing, greener motoring behaviour and a reduction in short trips by car¹⁶.

A4.3 Evaluation of Indimark and Travel Blending

As indicated above, Table A1 provides results of several Australian applications of IndiMark and Travel Blending. In addition, this table compares the evaluation approaches used and the evaluation results reported.

As shown in Table A1, IndiMark achieved significant increases in the use of alternative modes, with public transport use increasing by 17%, walking by 24%, and bicycle by 96%. Car driver trips decreased by 11%.

Travel Blending also resulted in a decrease in car driver trips (by 10-15%) and increased public transport use (by 15-23%). However, the impact of Travel Blending on walking and cycling was mixed with changes in walk trips reported as +1% and -2%, and cycle trip changes as -11% and +21%, in the two Adelaide trials.

The reported impact on car travel distance was similar for each approach: a reduction of 14% for IndiMark and a reduction of 6% to 13% for Travel Blending. However, when comparing Travel Blending and IndiMark results that, as noted in Section A4.2.2, the Travel Blending results may need to be deflated by up to 40% when being compared with IndiMark results.

Cost-benefit analyses have been undertaken for both IndiMark and Travel Blending. As seen in Table A2, these analyses have resulted in relatively high Benefit-Cost Ratios (BCR) for both approaches: 5.0 to 39.8 for the 1997/98 Adelaide Travel Blending Pilot Project (although 5.0 to 8.4 for most likely scenario), and -0.4 to 32.5 for the South Perth IndiMark Pilot Project (15.0 to 17.4 for Base Case).

¹⁵ Boisvert 1998.

¹⁶ INPHORMM Deliverable 3 1998.

Both approaches therefore are 'good projects' in economic terms with comparable economic performance.

Based on the data reported in Table A1, the IndiMark approach would appear to be more cost-effective in terms of increasing use of alternative travel modes, and in reducing car km travelled.

However, Travel Blending has a greater impact than IndiMark on total travel, reducing total trips by 5-7% whereas IndiMark does not affect total trips.

Choosing between IndiMark and Travel Blending is therefore a somewhat arbitrary exercise and will be influenced to a high degree by the objectives of the sponsoring agency. Where the objective is primarily to encourage switching to alternative modes IndiMark will tend to be favoured, whereas if the prime objective is to reduce total travel Travel Blending may be favoured.

In this case, the prime focus of the Transfund Personalised Marketing study is to reduce private car travel by increasing the use of alternative travel modes. The IndiMark approach is therefore preferred for the demonstration study.

Table A1 Comparison of evaluation approaches used for IndiMark and Travel Blending.

Category	IndiMark – Western Australia	Travel Blending – South Australia
A – Programme Overview		
Methodology	Households contacted to determine if they are regular/extensive users of EFMs (R), are not at all interested in changing (N), or are interested (I). Information (timetables, maps, etc.) are posted to R and I participants. The R and I participants select the information they want, which is (generally) hand-delivered to them within a couple of days. Consultation phone calls and home visits on request are made, with selected households in group I receiving tickets to use on public transport for a limited period.	Individuals, preferably all members of a household, are recruited door-to-door, through schools and workplaces. Basic data on both participating and non-participating households is collected and Kit 1 ‘Getting Started’ is handed out. This kit includes a <i>Before</i> travel diary for each household member plus aids to assist in its completion. The <i>Before</i> diaries are analysed and a feedback kit is provided. Positive steps people already make are highlighted and suggestions for reducing car travel are proposed. An <i>After 7 day</i> travel diary is evaluated with further tips given to participants.
Size and Location	Two trials: <ul style="list-style-type: none"> • First pilot in City of South Perth Sept – Oct 97. 383 households (hhds) (865 persons) in initial survey, 46% (176 hhds) participated in IndiMark. • Second pilot – entire population of City of South Perth, Feb-June 2000. 15,267 hhds contacted, 56% (8,465 hhds) participated in IndiMark. Of these, 40% were non-EFM users interested in changing modes. 	All following studies in Adelaide: <ul style="list-style-type: none"> • Pilot study of 100 hhds. • Larger pilot study of 329 hhds. • Dulwich, Adelaide (98/99) 881 hhds, 49% recruited with 43% completing Diary 1, and only 15% completing Diary 2 (132 hhds). • Christies Beach, Adelaide (99/00): 1,160 hhds, 29% recruited with 28% completing Diary 1 and 14% completing Diary 2 (162 hhds). • Holland Park, Brisbane (00).
Sponsoring Agency	WA Department for Planning and Infrastructure	Transport SA
Researcher	Socialdata	Steer Davies Gleave
B – Evaluation		
Methodology	Before- and after-travel surveys using 1-day travel diaries completed by participants and a non-participating control group.	Based on before and after week-long (i.e. 7 day) self-completed travel diaries by participants.
Longitudinal	First pilot – first follow-up survey in Nov 97. Two additional follow-up surveys carried out after the First pilot, one after 12 months (Sept 98) and the second after 2 years (Feb 2000). The same hhds from the before-survey were not used in the after-survey because of sample loss.	No follow-up surveys after the After-survey.
Controls	Control group for surveys. In first pilot, non-participating hhds from initial pre-survey (carried out prior to IndiMark experiment) were used as the control group, the 12-month survey had 207 hhds for the control group and 206 hhds for the IndiMark group. The control group was from an adjacent neighbourhood to the area of the IndiMark action. The IndiMark group results were not adjusted to account for control group factors as the control group results were constant.	No control groups.
Criteria	Focus on travel behaviour changes. Measured change in activities per person/day, travel time, trips by mode and total trips, and distance (km).	Focus on travel behaviour changes. Measured change in trips by mode and total trips, car travel distance, travel time in car, time spent walking.
Evaluator	Socialdata Australia	Steer Davies Gleave

Table A2 Comparison of evaluation approaches used for IndiMark and Travel Blending.

Category	IndiMark – Western Australia	Travel Blending – South Australia																																								
C – Outcomes																																										
Objectives	Travel Smart – which provides strategic context for IndiMark aims to re-allocate 24.5% of car driver trips forecast for Perth in 2029 under Business as Usual (BAU) to more EFMs. IndiMark Aim – to increase use of EFMs, while decreasing the amount of private motor vehicle travel.	Travel Blending aims to reduce car travel by encouraging households to think about their activities and travel in advance, and ‘blend’ modes and activities, and blend over time.																																								
Performance Measures	Focus on mode share (trips by mode). Km by mode also collected.	Primary focus on car travel usage (car km).																																								
Direct Outputs – Results	Mode change impacts from first pilot after 1 year (trips/person/year). Reported results are for all people in initial sample, i.e. include those who did not do IndiMark.	Note: Travel Blending results are only for people who completed travel diaries. Figures below may need to be reduced by 40% to be comparable to IndiMark results.																																								
	<table border="1"> <thead> <tr> <th>Without IndiMark</th> <th>With IndiMark</th> <th>After 1 year</th> <th>% Change in trips after 1 year</th> </tr> </thead> <tbody> <tr> <td>139</td> <td>161</td> <td>173</td> <td>+24%</td> </tr> <tr> <td>23</td> <td>44</td> <td>45</td> <td>+96%</td> </tr> <tr> <td>5</td> <td>5</td> <td>4</td> <td>-20%</td> </tr> <tr> <td>696</td> <td>629</td> <td>619</td> <td>-11%</td> </tr> <tr> <td>232</td> <td>241</td> <td>242</td> <td>+4%</td> </tr> <tr> <td>70</td> <td>85</td> <td>82</td> <td>+17%</td> </tr> </tbody> </table>	Without IndiMark	With IndiMark	After 1 year	% Change in trips after 1 year	139	161	173	+24%	23	44	45	+96%	5	5	4	-20%	696	629	619	-11%	232	241	242	+4%	70	85	82	+17%	<table border="1"> <thead> <tr> <th>Dulwich (% change in trips/psn/yr)</th> <th>Christies Beach (% change in trips/psn/yr)</th> </tr> </thead> <tbody> <tr> <td>+1%</td> <td>-2%</td> </tr> <tr> <td>-11%</td> <td>+20.9%</td> </tr> <tr> <td>-10.2%</td> <td>-14.6%</td> </tr> <tr> <td>-9.4%</td> <td>-8.6%</td> </tr> <tr> <td>+15.4%</td> <td>+22.9%</td> </tr> </tbody> </table>	Dulwich (% change in trips/psn/yr)	Christies Beach (% change in trips/psn/yr)	+1%	-2%	-11%	+20.9%	-10.2%	-14.6%	-9.4%	-8.6%	+15.4%	+22.9%
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Direct Outputs – Results																																										
Activities	No change in total activities(2/day/person) & no significant change in activity make-up (ie split between work, shopping, etc.).																																									
Trips	No change (3.4 trips per day per person)																																									
Total Travel Time	No change (58 minutes)																																									
Travel Time in Car	(fleet average was collected)																																									
Distance/psn/day	3.7% decrease (from 27 to 26 km/psn/day)	-6.7%																																								
Car Travel Distance	14% decrease (First pilot) Note: details for other modes not available.	-6.3% Note: details for other modes not available.																																								
Time of Day	First pilot: Only 14% of decrease in car drivers 5-9am, 52% in 3-7pm, 25% in 9am-3pm. PT increases spread evenly throughout day.																																									
Indirect Outcomes																																										
Sustainability	The gains in EFM use and reductions in car driver use resulting from the IndiMark application were maintained in the Feb 2000 survey.	10% reduction in Greenhouse Gas emissions (analysis of combined data set from Dulwich, Christies Beach & Holland Park actions). No evidence available.																																								

Table A2 Comparison of evaluation approaches used for IndiMark and Travel Blending.

Category	IndiMark – Western Australia	Travel Blending – South Australia
D – Costs	Estimated cost for application of IndiMark to half of Perth’s population (644,000 persons) is \$40 per person, or \$90 per hhd.	If Travel Blending was applied to the same size population as for the proposed IndiMark application in Perth (i.e. 644,000 persons), cost is \$54 per person, or \$122 per hhd. Cost components: Design cost = \$50,000 per survey Printing cost = \$16,515 + \$24.24 * hhd Field & analysis cost = \$92.50 * hhd Annual follow-up cost = \$5 *hhd
E – Cost-Benefit Analysis		
Prepared by:	Ker, I., James, B. 1999. Evaluating behavioural change in transport – a case study of personalised marketing in South Perth, Western Australia. 23 rd ATRF.	Tisato, P., Robinson, T. 1999. Cost Benefit Analysis of Travel Blending. ATRF.
Main Components		
Costs		
Application	One-off application costs (see above).	Scenarios range from one-off application to annual promotion plus 5-yearly re-application with updated kit. Assumed not to occur.
Additional PT Capacity	New buses for peak in Low Benefit scenario.	Relating to time spent doing Travel Blending, time required for better trip planning, delays due to shared travel, trip chaining, etc.
Private household costs		
Benefits		
Household travel time savings	Zero in high and central benefit scenarios, negative in low benefit scenario. Unit rate = \$.3.94/hour	Savings based on Travel Blending results showing time savings. Unit rate = \$.9.75/hour
Reduced private vehicle operating costs	Based on the reported reduction in car travel. Unit rate = 17.2 c/km	Based on the reported reduction in car travel. Unit rates: Fuel: fuel cost/litre = 35.4c/litre, fuel consumption/km = 0.115 litres/km; Other vehicle op costs = 11.9c/km
Reduced PT operating costs	As a result of revenue from increased patronage.	Assumed not to occur.
Accident cost reductions	Based on reduction in accidents involving motorists, increase in accidents involving cyclists extrapolated from IndiMark results. Car trauma: uses average fatality/hospitality rates over 5 years (92-96), with road trauma costs of \$778,000/fatality & \$138,000/hospitalisation. Cycle trauma – central evaln assumes cycle trauma increases at around 1/3 rd of the increase in cycle use, low benefit evaln assumes increase in direct proportion.	Based on reduction in vehicle travel extrapolated from Travel Blending results. Unit rate: \$0.053 per veh-km

Table A2 Comparison of evaluation approaches used for IndiMark and Travel Blending.

Category	IndiMark – Western Australia	Travel Blending – South Australia
Network travel time savings	Set as zero in central and low benefit evaluation. In high benefit evaluation, unit rate = 12.3 c/km	Expected only to occur with metropolitan-wide application – scenarios with and without travel time savings are presented. Unit rate - \$12.85 /h
Health and fitness benefit from additional walking & cycling	Included in the more optimistic scenarios. Based on Hillman (1997) who found that for every life year lost as a result of increased cycling (accidents), 20 life years are gained through improved health & fitness. The 20:1 ratio applied to fatality component (4%) of road trauma resulting from increased cycle use.	Treated as a non-quantifiable benefit.
Environmental Gains (same values used, Bray & Tisato 1997)	Traffic noise: range used = 0.1c to 0.5 c/km (low to high benefit) Greenhouse gas emissions = 1.0c to 2.9c/km Local air pollution = 0.6c to 3.6c/km Water pollution = 0.1c to 0.3c/km	Traffic noise = 0.3 cents/veh km Greenhouse gas emissions = 2 cents/veh km Local air pollution = 2 cents/veh km Water pollution = 0.2 cents/veh km
Sustainability of Benefits	Tested 3 different rates of decline in behavioural change. Base case assumed a reduction to 15% effectiveness by year 10.	No decline in behavioural change tested; but four scenarios of actions required to maintain initial behavioural change (see costs).
Notes on evaluation basis	Results varied according to three scenarios (low benefit, central value, high benefit) which differed mainly in terms of the sustainability of the intervention, the need for additional bus services, the benefits of reduced pollution and the value of time.	<ul style="list-style-type: none"> • Results highly sensitive to time cost benefits. If no time cost benefits attributed to hhds, the benefit-cost ratio reduced dramatically. • Penetration rate for Travel Blending varied at either 40% or 60%. Subsequent experience suggests that 40% rate most realistic. • Evaluation based on Adelaide Pilot project which showed greater car trip and distance reductions than subsequent applications.
Results	The Base Case BCR ranged from 15.0 to 17.4 (without and with health/fitness-mortality benefits). Sensitivity testing was undertaken for a 'Low Benefit' scenario (combination of all the individual 'low benefit' parameter values) and a 'High Benefit' scenario (combination of all the individual 'high benefit' parameter values). The values obtained ranged from -0.4 (Low Benefit scenario incl health/fitness, congestion, time value) to 32.5 (High benefit scenario incl health/fitness, congestion, time value).	Results range significantly depending on: the assumed penetration rate (40% or 60%), the survey cost scenario used, and whether network travel time benefits are included or not. The BCR values achieved ranged from 39.8 for survey cost scenario 1 at 60% penetration, and with network benefits to 5.0 for survey cost scenario 4 at 40% penetration rate and without network benefits. Given that SDG considered survey cost scenario 4 the most realistic, and a 40% penetration rate was achieved in the later Travel Blending applications, the most likely BCR is 5.0 – 8.4 (without and with network benefits).

Table A2 Comparison of evaluation approaches used for IndiMark and Travel Blending.

Category	IndiMark – Western Australia		Travel Blending – South Australia	
	Central Value	No network benefits	With network benefits	
Results – % of benefits				
Hhd travel time savings	0%	47%	36%	
Reduced private vehicle operating costs	54.6%	33%	25%	
Reduced public transport operating costs	0%	0%	0%	
Accident cost reductions	9.6%	11%	8%	
Network travel time savings	0%	0%	24%	
Health and fitness benefit	13.9%	0%	0%	
Environmental Gains	21.9%	9%	7%	

A5. Lessons Learnt from Review

A number of key lessons derived from the international experience with personalised marketing programmes can be drawn out:

- *Part of a Wider Campaign* – personalised marketing programmes are particularly effective when carried out within the context of a wider campaign promoting use of EFMs, or when an environmentally friendly transport climate exists. However, this is not necessarily a prerequisite for success as the Perth IndiMark trials show.
- *Customised Information* – the more customised the information is to the participant(s), the (apparently) greater the effect. Where standard information has been provided the impacts have not been as great.
- *Ability to Influence Behaviour* – the Travel Blending results show that a certain proportion of the population are responsive to receiving guidance on how they can make changes to their travel behaviour to attain personal benefits and make community/environment gains as well.
- *Key Messages* – advising participants of the practical benefits travel behaviour change can bring for them is a key message in stimulating change. In addition, emphasising the value of small changes, and encouraging making the easy changes first, help participants to begin changing their travel behaviour.
- *Targeted Approach* – certain target events or times of change for individuals, organisations and communities can be used as a trigger for encouraging travel behaviour change (e.g. moving house, having children, changing jobs for individuals; change in public transport provision for a community, etc.).
- *High Potential Areas* – areas with good PT provision and relatively low use, and areas with high potential for walking and cycling, are high potential areas for personalised marketing.
- *Ability to try PT helps* – providing non-PT users with the ability to try PT for free for a period of time appears to be important in helping non-users change from their car-based travel pattern. A one-month trial period appears adequate. (The Adelaide ‘Switching to PT’ experiment with a longer free trial period did not produce markedly better results.)
- *Personal Contact (face-to-face) not essential* – although face-to-face contact does help a certain proportion of participants, it does not appear essential in achieving travel behaviour changes. (In the IndiMark approach only a relatively small proportion of participants receive a personal visit; and the Adelaide experiment found that personal contact did not affect the take-up rate of the use of PT.)

Appendix B List of Information Materials

INFORMATION REQUEST FORM			
Item No	Information Item	Please tick if you want this	
Public Transport Information			
1	Getting around in Birkenhead Public Transport, Walking & Cycling Map		
2	Information on Bus and Ferry Fares and Ticket Availability		
3	North Shore Cross-town Bus Route Guide		
4	North Shore to Auckland CBD Public Transport Guide		
5	N2 Glenfield, Bayview & Greenhithe (Glenfield Rd) Timetable		
6	N3 Beach Haven & Birkenhead Timetable		
7	N8 Albany & Massey University Timetable		
8	Birkenhead Nightrider Timetable (late night bus)		
9	Fullers Ferry Timetable (Birkenhead & other areas to Auckland CBD)		
10	Takapuna & Auckland CBD Public Transport Connections Guide		
11	Instructions on how to use the Rideline Journey Planner		
12	Instructions on how to get to Key Destinations in the North Shore by Public Transport		
	Complete Public Transport Pack – all of the items above		
Free Trial Public Transport Ticket			
13	Birkenhead Transport 1 Month Bus Trial Ticket		
14	Fullers Ferry 1 Month Ferry Trial Ticket		
Walking Information			
1	Getting around in Birkenhead Public Transport, Walking & Cycling Map		
15	ARC Walking Fact Sheet		
16	Heart Foundation 'I'm Walking' Brochure		
17	North Shore Kiwi Walks Brochure		
18	Harbourside Coastal Highlights Walk Booklet		
19	Harbourside Bush Walk Trail Booklet		
20	Advice for Pedestrians (how to safely cross the road)		
	Complete Walking Pack – all of the items above		
Cycling Information			
1	Getting around in Birkenhead Public Transport, Walking & Cycling Map		
21	ARC Cycling Fact Sheet		
22	Bikewise Cycling Brochure		
23	Regional Cycling Guide		
24	Cyclewise Brochure (safety tips for cyclists)		
25	Cycling Promotion for people over 30		
	Complete Cycling Pack – all of the items above		
Visits		Phone Call	Personal Visit
	Public Transport in Auckland		
	Walking in Birkenhead & the Shore		
	Cycling in Birkenhead & the Shore		

Appendix C Adjustment for External Factors

Raw Results	Before Programme After Programme				External Factors	
	Trips	Modal Share	Trips	Modal Share	% Change in Trips	% Change
Walk	928	14.20%	982	15.00%	6%	11.7%
Cycle	17	0.30%	26	0.40%	52%	22.8%
Car Driver	4388	67.10%	4310	65.70%	-2%	2.5%
Car Passenger	713	10.90%	759	11.50%	6%	
Bus	383	5.90%	385	5.90%	1%	-5.2%
Ferry	43	0.60%	45	0.70%	4%	4.3%
Other	69	1.00%	53	0.80%	-23%	
Total	6541	100.00%	6561	100.00%	0%	

Modified Results

	Before Programme After Programme				% Change in Trips	
	Trips	Modal Share	Trips	Modal Share		
Walk	928	14.20%	928	14.54%	0.0%	
Cycle	17	0.30%	22	0.34%	29.2%	
Car Driver	4388	67.10%	4191	65.67%	-4.5%	
Car Passenger	713	10.90%	759	11.89%	6.5%	
Bus	383	5.90%	407	6.37%	6.2%	
Ferry	43	0.60%	43	0.67%	-0.3%	
Other	69	1.00%	32	0.50%	-53.6%	
Total	6541	100.00%	6381	100.00%	-2.4%	

Adjustment Method:

1. the Raw Results % change in trips was adjusted by the external factor % change.
2. the Before Programme Trips was then adjusted by the adjusted % change in trips, giving a new After-Programme Trips (in Modified Results table).
3. the % Change in Trips was then recalculated, as shown in the Modified Results table.
4. the only exception to this method was for walk trips. The external factors % change was greater than the % change in trips found in the raw results. It is considered very unlikely that the programme actually reduced walk trips.

Therefore, walk trips are assumed to show no change as a result of the programme.

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