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Introduction

This report sets out the findings of a survey of households in the Greater Dublin Area (GDA) carried out on behalf of the Dublin Transportation Office (DTO) by Millward Brown IMS. Fieldwork on the survey was carried out from March to July 2006.

Research Objective

The primary objective of the research was to gather factual data on travel behaviour throughout the day in order to provide key inputs needed to develop an off-peak travel model. This objective was achieved by conducting face-to-face household interviews with adults aged 15+ years and by the placement of a seven day Travel Diary with household members aged 11+ years. Full details of the survey methodology are given in the next section.

Structure of the Report

Section A – The Household Survey

This section of the report reviews the main findings of the face-to-face household survey covering aspects such as:

- Licence and vehicle ownership
- Recent travel patterns covering transport modes used at all and used most frequently in the past seven days; normal method of travel to work or education and parking scenarios for each household member who drives to work.
- Reasons for rarely or never using various transport modes; factors that would encourage greater bus use
- Image of various transport types measured against a range of image dimensions
- Satisfaction with transport in local area

Section B – The Travel Diary

This section of the report summarises details of the trips made by household members over the seven day period of the Travel Diary. It covers aspects such as:

- Trips per person per week
- Trip rates by household demographics, such as age, gender, education/employment status
- Time of day trips made/weekday and weekend trips
- Trip purpose
- Modes of transport used
- Average trip length

Details of trips made on the first day of the Travel Diary placement are also included. On this day, respondents were requested to include all walks over 50m, whereas on days 2 - 7 walking trips were excluded if they were less than half a mile.

Household Survey Methodology

The survey comprised two elements – a face-to-face household interview with a selected individual aged 15+ years and placement of a seven day Travel Diary with household members aged 11+ years.

The Survey Area

The survey was carried out in the Greater Dublin Area, defined as Counties Dublin, Meath, Kildare and Wicklow. Preliminary Census data for 2006 shows the estimated population of these counties combined as 1,661,185, an increase of 8.2% since the last Census in 2002. The latest Census also shows that the fastest growing counties in Leinster in 2006 were Fingal (239,813 +22.1% on 2002), Meath (162,621 +21.4%) and Kildare (186,075 +13.5%). The population in Wicklow now stands at 126,330, an increase of 10.2% on 2002.

Based on 2002 Census data (the latest available to date) the average household size in these counties is 2.59 in Dublin, 3.19 in Kildare, 3.17 in Meath and 3.07 in Wicklow.

Sampling Methodology

The survey was designed to be representative of the population aged 15+ years in the Greater Dublin Area.

The survey design was a stratified quota controlled sample of 2,500 respondents and was carried out in 250 sampling points within the Greater Dublin Area. Small clusters of ten households were interviewed within each sampling point. The geographical stratification factors used to select the sampling points were the counties and the different county councils within Dublin, and community type (urban/rural) for the rest of the counties.

Demographic quota controls on gender, age and principal economic status were set at county level to ensure representation of the population. Census 2002 information at a District Electoral Division (DED) level (the most recent available at a DED level at the time of the survey) was used for stratification and quota setting.

Within strata, sampling points were selected using systematic random sampling with cumulative population applied to a frame of sampling points previously grouped by area.

In County Borough and urban areas, a start address for interviewers was randomly selected within the randomly selected sampling point to minimize interviewer bias.

Fieldwork took place from March to July 2006. Interviewing was spread by time of day and day of week to ensure comprehensive coverage.

Survey procedure involved a face-to-face interview with a selected household member aged 15+ years, face-to-face household recruitment, briefing and placement of a seven day Travel Diary among household members aged 11+ years, and collecting and checking of household diaries. Details of the achieved sample are shown below:

Household Interview:

Total household sample target	2,500
Number of effective interviews	2,493 (99.7%)

Diary Placement:

Diary placement with household members aged 11+ year	ars
Households completing valid Diary	2,287
Actual number of completed Diaries	2,630
Average no. of Diaries per household	1.15

After completion of fieldwork and analysis of quotas set versus achieved, corrective demographic weights were applied to the sample to ensure its representativeness based on CSO Population Census figures for 2002. Details of the unweighted and weighted sample are shown in the table overleaf.

Sample Details

Population C	Population Census figures.								
Region	Sample %	Weighted Sample %	Gender	Sample %	Weighted Sample %				
Dublin	74	74	Male	45	48				
Mid-East	26	26	Female	55	52				
			Age	%	%				
Location	%	%	15-17	6	5				
Dublin City	34	34	18-24	15	16				
South Dublin	15	12	25-34	20	21				
Fingal	12	12	35-49	29	29				
Dun Laoghaire/	40	45	50-64	18	16				
Rathdown	13	15	65+	11	12				
Kildare	10	10	Working Status		0/				
Meath	8	8	Working Status	5 70 50	%				
Wicklow	7	7	vvorking Nationalia	53	00				
		'	Not working	47	40				

Final sample data was weighted to representative proportions based on CSO

Analysis of the Survey

Editing, coding, data entry and analysis of the Household Survey was carried out by Millward Brown IMS. Following the initial editing of the Travel Diaries by Millward Brown IMS, all diaries were sent to Faber Maunsell for coding, data entry and analysis. (Full details of the analysis process for the Travel Diaries are given in Section 2 of this report, which outlines the findings from the Travel Diary study).

Data from the Household Survey was merged with data from the Travel Diary, enabling us to product personal and household information for every trip recorded in the Travel Diary. A single datafile of merged data has been provided to the DTO for their own modelling purposes.



Household Survey

- While respondents in the Greater Dublin Area had used a wide range of travel options in the past seven days, travelling by car was the most popular, with over half saying this was the mode they used most often, either as a driver or as a passenger. Use of the car (either driving or as a passenger) was higher in the Mid East (63%) than in the Dublin Region (49%), where wider choice in terms of public transport options can undoubtedly alleviate reliance on car transport.
- The reasons for the pre-eminence of car transport are clear. In terms of its practical advantages, the car outstrips all other modes for its convenience and comfort. For the personal image it conveys on the user, it also scores over other modes. Although it is acknowledged that there are downsides relative to other modes of transport in relation to the environment, health and price, the ability of these issues to significantly influence behavioural change remains questionable.
- The second most popular mode of transport is the bus, with almost one in five (18%) saying they use this mode most often, and Dubliners almost twice as likely as Mid East residents (20% versus 11%) to describe this as their main transport method. At an overall level, half of Dublin residents claimed to have used the bus at all in the past week, compared with just three in ten Mid East residents. Overall, almost half (45%) of all respondents claimed to have used the bus in the past week.
- In terms of its image profile relative to other forms of transport, the bus is seen as being reasonably priced and the mode for people with no other choice, or for old people. Aspects such as convenient for getting to work, or for going out socially gain higher credence among Dubliners in particular.

- Comparing results for both regions, Dublin residents were generally more satisfied with the various aspects of bus transport, such as access, cost, reliability and frequency of services than were Mid East residents.
- At a regional level, the proportion of Mid East residents rarely/never using the bus is significantly ahead of Dublin Region residents (51% versus 32%), no doubt reflecting the issue of availability.
- Comparing the reasons for not using the various methods of transport, it is the perceived shortcomings of bus services that most exercise respondents, causing them to reject it on such practical issues as unreliability, the amount of waiting time involved, poor connections and lack of shelter.
- When asked if changes to the bus service would encourage greater use, four in every ten respondents over the GDA as a whole said this would spur greater bus use, with improved frequency the biggest incentive.
- Other public transport methods, such as train/DART and Luas are used by about one in five and one in six respectively and are very much location driven. The Luas is seen as modern, clean and fast, and the train/DART is also seen as fast and safe.
- Two thirds of respondents had walked at least once in the past week for any trip made of over a quarter of a mile within the GDA. Sixteen percent claimed this to be the option they used most often, with no difference in this regard between Dublin and Mid East residents.
 Walking is seen to be healthy, good for the environment, for people with no other choice, clean, reasonably priced and for young people.
- Cycling is also seen as being good for the environment, healthy, clean, for young people and reasonably priced, but is mentioned by only 2% as the option used most often and by 13% as used at all in the past week. Cycling is even more limited in the Mid East than in Dublin and this more limited use undoubtedly owes something to the poorer

assessment of the local area in terms of facilities for cycling among Mid East than Dublin residents.

- Travel by motorbike is rarely or never used, with only 3% having travelled this way in the past week, with the perceived image of motorbikes relative to other transport modes as fast and for young people undoubtedly narrowing their appeal as a transport mode.
- A final but important point in relation to satisfaction with transport in the local area is the impact of traffic congestion. In the GDA as a whole, respondents are almost three times as likely to be dissatisfied (57%) as satisfied (20%) with this aspect of transport in their locality. Nor were there any significant differences in reactions overall between Dublin and Mid East residents, with around three in five in each region expressing dissatisfaction.
- With traffic congestion the most pervasive criticism, it is likely that this underpins some of the negativity expressed about the reliability of bus services. Thus, while infrequent or non-users of bus services theoretically envisage greater usage of the bus if frequency of the service were improved, against this would have to be weighed the impact of traffic congestion and the effect this would have on reliability of the service.

Management Summary

Household Survey



FABER MAUNSELL AECOM

1. Licence & Vehicle Ownership and Recent Travel Patterns

This section of the report provides background detail on vehicle licence and vehicle ownership and examines travel patterns for trips of over one quarter of a mile made in the Greater Dublin Area in the seven days preceding interview.

1.1 Licence Ownership

Within the Greater Dublin Area as a whole, approaching two in every three respondents (63%) claimed to hold a driving licence for a car, motorcycle or moped, with the vast majority (58%) for a car. Ownership of individual moped or motorcycle licences was extremely low, though a slightly higher proportion (4%) claimed to hold a licence for both car and motorcycle. There were predictable variations in licence ownership across the demographic cohorts, with AB's the most and DE's the least likely of the social class groups to hold any type of licence (80% and 44% respectively). Across the age groups, ownership peaked in the 25 - 49 year bracket (75%), tailed off to some extent amongst older respondents (59%) and was at its lowest level among the under 25's (38%).

Although there was no significant difference in licence ownership on a broad regional level between Dublin and the Mid East, a review of the individual Local Authority Areas reveals some variations. Licence ownership peaked in Dun Laoghaire/Rathdown (73%), with Fingal and Kildare the next highest, each at 69% and Dublin City the lowest at 52%.

In one in every five households in the Greater Dublin Area where there was a licence owner, only the respondent was licensed for any type of vehicle. Over two in five had one other licence owner, while one in three households had two or more. Proliferation of licences per household was more evident in Dublin than the Mid East (35% versus 28%).

The large majority of licence holding respondents (83%) held a full licence, with 17% holding a provisional licence, though incidence of the latter was above average for women (21%), the under 25's (45%) and, across the Local Authority Areas, those living in South Dublin (22%) and Fingal (20%).

1.2 Vehicle Ownership

One in every five households overall did not have a car or van. Almost two in every five (39%) had one car/van and an identical proportion (39%) had two or more. While the overall average for both Dublin and the Mid East regions was identical at 1.64 vehicles, this disguises some differences in the level of ownership between the two regions. Dublin residents were almost twice as likely as their Mid East counterparts not to own a car/van (23% versus 12%). Although the level of ownership of one car per household did not differ greatly between the two regions, multiple ownership did, with Mid East residents significantly more likely to have two or more cars per household.



Cars/Vans in Household

In vehicle owning households, just over one in every ten (11%) had a company car, with little variation in this level between Dublin and the Mid East.

1.3 Recent Travel Patterns

Walking was the most popular method of travel for trips of over one quarter of a mile made in the Greater Dublin Area in the seven days preceding interview, with seven in every ten respondents citing this as a method used at all. Focusing on the broad range of options **used at all** in the past seven days, car/van as driver followed quite closely on walking, with bus and car/van as passenger the next most widely mentioned. However, as the method used **most often**, car/van as driver was almost three times as likely to be mentioned (45% versus 16% for walking).



Modes of Travel Used in Past 7 Days – A Wide Range of Options, But Car/Van As Driver Most Often Used

As the chart below shows, some differences in overall usage of transport modes were apparent between Dublin and the Mid East.



Walking as a mode of transport **used at all** was more prevalent in Dublin than in the Mid East, though as the main mode there was no difference between the regions. Usage of car/van as driver across both measures of frequency was higher in the Mid East, whereas bus transport was well ahead in the Dublin Region. As the method **used most often**, car/van as passenger was twice as likely to be mentioned by Mid East as Dublin residents. Unsurprisingly, usage of Luas was focused on Dublin residents, with almost one in five citing this as a method **used at all**. Dubliners were also slightly more likely to mention train/DART. The table below, which reviews modes of travel used by residents of the seven Local Authority Areas, shows the varying levels of dependence on public versus private transport methods.

	Dublin City (846) %	South Dublin (385) %	Fingal (298) %	Dun Laoghaire Rathdown (317) %	e Kildare (258) %	Meath (211) %	Wicklow (178) %
Walking	21	17	11	10	17	19	11
Car/Van as Driver	<u>34</u>	49	52	50	52	47	54
Bus	24	21	18	14	12	10	13
Car/Van as Passenger	5	4	7	8	10	15	10
Taxi/Hackney	1	*	*	*	2	2	*
Train/DART	2	-	6	7	2	-	8
LUAS	3	2	1	3	-	-	-
Bicycle	4	3	*	3	1	*	-
Motorbike/Scooter/Moped	2	1	-	2	*	-	-

Modes of Travel Used Most Often

Car driving as the main method of transport is particularly evident among working respondents, those aged 25 - 49 years, the middle class sector and those with younger children (0 – 10 years). In contrast, the bus as the main means of transport is more likely to be mentioned by the youngest age groups, working class respondents and those not in employment.

1.4 Travel to Work and Education

Respondents were asked how household members at work or in education normally travelled to work, school or college. Over the GDA as a whole, one in two household members travelled by car (either driving or as a passenger) – slightly higher than average in the Mid East (56%) and marginally below in Dublin (48%), where bus transport was more likely to be used. Across both regions one in five (19% in each case) normally walked. Respondents travelling by car to work were asked to describe the parking scenario at work. For the majority (65%) parking was free, with Mid East respondents more likely to enjoy this benefit than their Dublin counterparts (70% versus 63%). One in eight (12%) had a private parking space provided by their employer. The only other option of note was metered parking on-street paid for by the respondents themselves (5%).

1.5 Modes of Transport Rarely/Never Used

All respondents were asked whether there were any methods of transport they would rarely or never use. Inevitably their response to this question was heavily influenced by what is or is not available to them.

Approaching three in every ten respondents (29%) in the Dublin Region said they would rarely or never drive as a chosen method of transport, slightly ahead of those in the Mid East (23%), with lack of availability the primary reason for not doing so, particularly for Dubliners (73% versus 51% for their Mid East counterparts). For those who would rarely or never use Luas or the train/DART, apart from lack of availability, the only other reason of note was poor connections, mentioned by around one in ten overall, but by 15% of Dublin City residents in relation to Luas and 19% of Kildare residents in talking about the train.

At a broad regional level, the proportion of Mid East residents rarely/never using the bus is significantly ahead of Dublin Region residents (51% versus 32%), again reflecting the issue of availability.

The table below shows how residents of the seven Local Authority Areas responded.

	Dublin City (846) %	South Dublin (385) %	Fingal (298) %	Dun Laoghairo Rathdown (317) %	e Kildare (258) %	Meath (211) %	Wicklow (178) %
Motorbike/Scooter/Moped	78	88	87	80	80	76	73
LUAS	61	50	72	40	76	88	61
Train/DART	56	75	54	40	59	86	37
Bicycle	56	62	62	50	56	40	52
Taxi/Hackney	30	28	38	34	34	33	46
Car/Van as driver	38	28	20	19	23	25	23
Bus	29	27	48	30	53	59	38
Car/Van as passenger	20	16	19	16	16	9	24
Walking	6	2	9	7	4	6	8

Modes of Travel Rarely/Never Used

Of particular note is the extent to which residents of Fingal, Kildare and Meath report that they would rarely or never use the bus. Whereas for Kildare and Meath residents, unavailability is one of the primary reasons for not using the bus, this is less likely to be the case in Fingal, where the rationale is more likely to centre on the unreliability of the service, poor connections, a lack of information about public transport services, too much waiting time and exposure to the elements.

Indeed, in general, in examining the reasons for not using various methods of transport, it is the perceived shortcomings of bus services that most exercise respondents. Thus, the bus is most likely to be rejected because of its unreliability, the amount of waiting time involved, poor connections, lack of shelter and, on a more personal note, a general distaste for public transport, almost all of these factors more likely to be mentioned by those resident in the Dublin Region than in the Mid East.

	Bus (894) %	LUAS (1,541) %	Train/DART (1,453) %	Car/Van Driver (732) %
This method not available to me/not available in this area	11	68	59	68
Unreliable	32	1	2	1
Cost of using public transport	10	2	3	n/a
Cost of using car/motorbike/taxi	n/a	n/a	n/a	5
Poor information about public transport services	11	2	3	n/a
Poor connections	21	9	10	n/a
Personal disability	5	1	1	2
Concerns over personal safety	6	*	1	1
Traffic congestion	11	n/a	n/a	4
Finds public transport unpleasant	18	2	2	n/a
Too much waiting time for public transport	30	2	4	n/a
No shelter/exposed to weather	12	1	1	n/a
Not applicable/relevant/other	24	9	11	13

Reasons for Not Using/Rarely Using Main Transport Modes

Other factors militating against bus usage were poor information about public transport services, particularly noted by Fingal and Dun Laoghaire/ Rathdown residents, and traffic congestion which received above average mention from those living in South Dublin. South Dublin residents were also particularly likely to mention concerns over personal safety as a reason for not using the bus (16% versus 6% for all non-users).

1.6 What Would Encourage Greater Bus Use?

Having established their particular reasons for never or rarely using the bus, these respondents were then asked whether changes to the local bus service would encourage greater usage on their part. Over the GDA as a whole, approaching two in every five said that this would spur greater bus use, with improved frequency the biggest incentive, followed at some remove by accurate timetabling and proximity to destination.



Would Changes to Local Bus Service Encourage More Use?

At an overall level, taking this proposed espousal of an improved bus service at face value (39% encouraged to use), and based on an adult population aged 15+ of approximately 1.2 million over the GDA as a whole (Census 2002), in real terms this would mean in the region of 175,000 potential additional bus users – undoubtedly a significant challenge for the existing bus services! However, one would have to assume that the reported level of transfer to the bus from other modes of transport based on an improved service represents, at best, a pious aspiration and that the reality would be far more modest, particularly since the vast majority of transfers potentially would be from car users who would probably be the most reluctant to change their habits.

A review of the individual Local Authority Areas provides a much more variable picture of the extent to which those who rarely/never use the bus

would be encouraged to change their travel patterns in light of an improved bus service. The highest level of enthusiasm was noted in South Dublin, where three in every five current non-users claimed they would be encouraged to use the local bus service more. Fingal residents followed with one in every two envisaging greater bus use, but those reportedly least likely to change live in Dun Laoghaire/Rathdown.



Would Changes to Local Bus Service Encourage More Use?

Although over both broad regions, respondents were generally ad idem as to what changes could be made to the bus service to encourage greater use, some differences in emphasis were apparent between would-be bus users in Dublin and the Mid East, with the latter somewhat more likely than their Dublin counterparts to be compelled by a service that took them closer to their destinations or closer to home. Dubliners were much more likely to envisage cleaner buses as an incentive than were those resident in the Mid East. For both regions, however, the prospect of a more frequent service was by far the most enticing.

Base: All Who Would Use the Bus If Changes Were Made (n=362)							
	GDA Total (362) %	Dublin Region (241) %	Mid-East Region (121) %				
More frequent service	61	62	58				
Accurate timetables	38	39	36				
Closer to destinations	36	33	42				
Got to destination more quickly	21	24	17				
Closer to home	18	15	23				
Less exposed to weather	14	13	18				
Cleaner	12	16	4				
More comfortable	12	12	10				
Cost less	10	10	9				
Safer to wait at/walk to or from bus stop	9	8	10				
Safer on board	8	7	9				
Other	13	12	14				

What Changes Would Encourage Greater Bus Use?

Respondents' knowledge of the existing frequency of their local bus service puts some perspective on non-users' aspirations for a more frequent service. Approaching two in every five Dublin Region residents (38%) reported that their local bus goes at least once every quarter hour and a slightly smaller proportion (34%) report an at least half hourly service. In contrast, in the Mid East, a frequency of hourly or less is much more the norm (57%), with just over one in four (27%) citing a service that is at least half hourly.

Focusing on the Dublin Region, Fingal residents appear to be less well served in terms of high frequency (at least quarter hourly) service, with Dublin City and Dun Laoghaire/Rathdown the best served. In the Mid East Region, an hourly service appears to be the norm for Kildare residents, with almost three in five mentioning this frequency, whereas in Meath and Wicklow the pattern is more diverse, with around one in three in each location citing a frequency of at least every quarter or half hour and around one in five respectively mentioning an hourly or a once daily service.

1.7 Linking with Public Transport Services and Local Facilities

One of the factors affecting the use of various public transport services is their proximity to peoples' homes. Accordingly, respondents were asked a series of questions about the length of time taken to get to the nearest bus, train, DART or Luas.

In the Dublin Region, the great majority of residents (78%) were within six minutes or less of their nearest **bus** stop, with most others (16%) within 7 – 13 minutes of a stop. Average walking time varied from 4.13 minutes for Dublin City residents to a more substantial 6.24 minutes for those living in Fingal. In the Mid East, while over half were within six minutes of a bus stop, around one in four faced a much more substantial walk – in excess of fourteen minutes. The overall average walking time for residents to 12.76 for those living in the Wicklow area. Comparing the outcome for modes of transport used most often, eight in every ten regular bus users were within six minutes of a bus stop, compared with two in three car drivers and the average walking time for bus users was 5.12 minutes compared with 8.00 for car drivers.

Leaving aside the substantial proportion of respondents (ranging from around one-third to over a half) for whom walking to the train, DART or Luas was not an option because of lack of availability of the service in their locale, the average walking time to each of these services was just under half an hour (26.51 – 28.21 minutes).

	Bus %	Train %	DART %	LUAS %
6 minutes or less	72	7	6	5
7-13	17	14	9	6
14-26	7	16	13	12
27-43	1	12	10	11
44+	2	15	11	10
Not available	N/A	33	47	52
Average	6.70	27.43	26.51	28.21

Walking Time to Bus,	, Train, Dart, LUAS
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Across the Local Authority Areas, residents of South Dublin and Meath were the least likely to be within walking distance of a train and were joined by Kildare residents in terms of lack of proximity to the DART. Predictably, those in Dublin City, South Dublin and, to a lesser extent, Dun Laoghaire/ Rathdown were more likely to be within the ambit of the Luas, though the average walking time to their nearest Luas stop was still in the region of 24 to 27 minutes.

Finally, respondents were asked to estimate how long it would take to get to the railway station by bus (including the time spent walking to the bus, but not the actual wait for the bus). Excluding those who claimed that it would be quicker to walk (12% overall), the average journey time was 28.33 minutes, with almost four minutes in the average time between Dublin (27.54 minutes) and the Mid East (31.38 minutes). One in every four Mid East residents reported that there was no convenient bus service for their local railway station, compared with just one in ten Dublin Region residents. The most disadvantaged areas in terms of the length of time needed to travel by bus to the railway station were Dublin South (an average of 40.16 minutes) and Meath (38.95 minutes), though for the latter the lack of a convenient bus service was a further drawback.

Turning to a range of basic facilities that respondents would use, nine in every ten across both regions were within fifteen minutes walk of a shop for basic foodstuffs and the majority were also able to walk in this time span to the other facilities listed.

Base: All Respondents (n=2,493)							
	GDA Total (2,493) %	Dublin Region (1,846) %	Mid-East Region (647) %				
Shop for basic foodstuffs	94	96	89				
Pub or restaurant	90	93	81				
Chemist/pharmacy	87	92	72				
Post office	84	89	71				
Doctor's surgery	83	88	69				
None of these	3	1	8				

Facilities within 15 Minutes Walk

As would be expected residents of the Dublin Region had the edge on their Mid East counterparts in terms of walking proximity to all the listed services. At least seven in every ten Mid East residents were able to get to each within fifteen minutes walk, although there were slight variations between the different areas within the region.

2. How Various Transport Types Are Viewed

In order to build up a picture of how various methods of transport are viewed (including those not necessarily available to them in their area), respondents were asked which of a series of dimensions applied across a range of transport methods, including bus, car, Luas, DART/train, walking, motorcycle and bicycle.

2.1 Image of Various Transport Types

The following chart maps image statements to various transport modes using an analytical technique called Correspondence Mapping (see explanation in Appendices). This indicates very clearly where the particular modes are scored and demonstrates those attributes that discriminate most strongly between these modes; for example, convenience and comfort at one end of the spectrum, as opposed to concerns about being healthy and good for the environment on the other hand.



As this map demonstrates, in terms of its practical travel advantages, the car outstrips all other modes for its convenience for a range of functions and its comfort and reliability. In terms of the personal image it conveys on the user, it also scores over other modes. Aspects such as modernity, safety and speed tend to be matched with the Luas and the train/DART and,

unsurprisingly, features such as clean, good for the environment and healthy correspond most closely with walking and cycling.

Looking at reactions across both regions, it will come as no surprise that Dubliners tend to have a more rounded picture of the Luas than do their counterparts in the Mid East, and are therefore likely to attribute dimensions such as modern, safe, clean, comfortable, fast, reliable, and good for the environment to the service. When it comes to bus transport, Dubliners again are more likely than Mid East residents to attribute aspects such as convenient way to get to work, convenient for going out socially and for shopping, and reasonably priced to the bus. Mid East residents are slightly more likely to see the bus as comfortable and reliable.

2.2 Comparative Image Profiles for Various Modes of Transport

Using Brand Image Profiling, a statistical technique to establish the relative strengths and associations between brands/products and image statements, we can determine which statements are most or least characteristic of a product. In particular, brand image profiles provide unique insights into consumer choice of transport mode. The technique allows us to see the true relative strengths and weaknesses of each mode – particularly useful because some modes are more often used and thus more likely to be endorsed across all attributes. (See Appendices for more detailed explanation of Image Profiling).

The charts overleaf show the relative strengths and weaknesses of various transport modes. Thus, it is evident from this analysis that while public transport can sometimes be a quicker and cheaper option, many car drivers are nonetheless resistant to using it, primarily for reasons of convenience and comfort.

Image Profiles for Car, Bus, LUAS & DART/Train (Relative differences across all transport modes - charts 7&8)



The study showed that some transport modes suffer from poor brand image. For example, while people acknowledged that walking was good for the environment and healthy, and that buses were good value for money, they were not happy for their friends to see them walking or taking the bus. The car was much more likely to named as a mode of transport that people would be happy for their friends to see them using, even though it is seen as expensive and bad for the environment. However, public transport methods – the Luas and train/DART in particular – certainly outstrip the car in terms of safety and also have an edge on speed. Focusing on the Luas, strong positive attributes relative to other transport modes were its modernity, cleanliness, safety and speed.

(Relative differences across all transport modes - charts 7&8) Base: All Respondents (n=2,493) Walking Motorbike Bicvcle % % % Convenient for shopping -31 ln -1 -21 Convenient way to take children to school 14 Comfortable -1 -4 🛙 -12 Convenient for going out socially -1 -4 🛙 Convenient way to get to work -2 -10 🚺 More relaxing -31 Happy for my friends to see me using -11 Reliable -9 -4 🚺 For old people -10 Fast 18 -41 -21 🗖 12 -4 🛛 Modern -17 -31 Safe -2 Clean 21 10 16 For young people 0 Healthy For people with no other choice 0 13 Reasonably priced 11 9 Good for the environment 0 36

Image Profiles for Motorbike, Bicycle & Walking Relative differences across all transport modes - charts 7&8)

2.3 Satisfaction with Transport in Local Area

Respondents were asked how satisfied or dissatisfied they were (using a five point scale ranging from *very satisfied* to *very dissatisfied*) with various aspects of transport services in their own local area, covering issues such as reliability, frequency and cost of buses, access to DART, rail and Luas services, traffic congestion, facilities for walking and cycling and so forth. The proportions expressing satisfaction with each aspect are shown in the following chart.



Satisfaction with Various Aspects of Transport in Local Area – % Satisfied

Comparing results for both regions, those resident in the Dublin Region were generally more content with the various aspects of bus transport, such as access, cost, reliability and frequency of the services than were Mid East residents. Within the individual Local Authority Areas in each region opinion differed to some extent. Access to bus services was above the region average for residents of Dun Laoghaire/Rathdown, but well below for Fingal residents who also were almost as likely to be dissatisfied as satisfied with aspects such as reliability and frequency of local buses. In the Mid East Region, those living in Meath appeared the most disadvantaged regarding access to bus services, with just 39% satisfied, compared with 62% of Wicklow and 65% of Kildare residents. In general, Kildare residents tended to be more satisfied with the various aspects of bus transport than their counterparts in Meath and Wicklow.

	Dublin Citv	South Dublin	Dun Laoghaire Fingal /Rathdown Kildare		Meath	Wicklow	
	(846)	(385)	(298)	(317)	(258)	(211)	(178)
	%	%	%	%	%	%	%
Access to bus services	73	71	56	83	65	39	62
Cost of local buses	61	54	48	57	51	43	44
Reliability of local buses	62	49	38	53	54	44	42
Frequency of local buses	59	45	37	53	52	43	32
Conditions for walking locally	71	72	46	78	63	42	61
Quality and upkeep of roads	37	50	28	49	26	18	49
Facilities for cycling locally	39	48	24	46	35	15	27
Access to DART and rail services	30	12	41	49	25	2	43
Traffic congestion	18	27	15	19	17	12	41
Access to LUAS services	23	30	4	38	4	1	7

Satisfaction with Various Aspects of Transport in Local Area - % Satisfied

For several of the aspects measured, dissatisfaction outweighed satisfaction. Traffic congestion is the most obvious case in point, with respondents in the GDA as a whole almost three times as likely to be dissatisfied (57%) as satisfied (20%) with this aspect of transport in their locality. Nor was there any significant difference in reactions overall between Dublin and Mid East residents, with around three in five in each region expressing dissatisfaction, though a review of the individual Local Authority Areas does reveal some variation in the extent of dissatisfaction. In the Mid East, dissatisfaction was marked in Kildare and Meath, signalling the difficulty for residents of the burgeoning 'commuter towns' in these counties which, in the case of Meath in particular, is compounded by a lack of access to rail/DART services. Interestingly, residents of Wicklow were the least critical of traffic congestion, perhaps reflecting the benefits of the opening up of the M50 in their direction and recent road improvements on the N11. In the Dublin Region, dissatisfaction with traffic congestion was highest among Dun Laoghaire/Rathdown residents (62%) and lowest, though still extensive among South Dublin dwellers (51%).

On a different note, with traffic congestion the most pervasive criticism, this problem could perhaps underpin some of the negativity expressed about the reliability of local buses.

Aspects such as conditions for walking locally, quality and upkeep of roads and facilities for cycling locally garnered higher satisfaction levels among Dublin Region than Mid East Region residents. In the Dublin Region, Fingal was again the exception, showing the lowest level of satisfaction on each of these aspects compared to other Dublin areas. In the Mid East, Meath residents were the least complimentary.

Predictably, satisfaction with access to Luas services was highest in Dun Laoghaire/Rathdown (38%) and South Dublin (30%). Access to DART and Rail services achieved the highest satisfaction scores in Dun Laoghaire/ Rathdown (49%), Wicklow (43%) and Fingal (41%).

Management Summary

Travel Diary



FABER MAUNSELL AECOM

Section B: The Travel Diary

Introduction

This section of the report presents the findings of the Seven Day Travel Diary completed in the Greater Dublin Area from March to July 2006, as part of the GDA Household Travel Survey.

The primary objective of the Travel Diary was to gather factual data on travel behaviour throughout the day in order to provide key inputs needed to develop an off-peak travel model.

The Travel Diary took the format of a seven day record of all trips made, recording the following information:

- Purpose of making the journey
- Time of day and day of week travelled
- Trip origin and trip destination
- Journey time
- Modes of transport used, including;
 - -Whether driver or passenger, if car
 - -Whether parking was free at their destination if driver; and
 - -How the journey was paid for if public transport was used.
- Distance travelled
- Number of people travelling together

On Day 1 of the Travel Diary all walks over 50 yards/metres were recorded, whereas for Days 2 to 7 walking trips of less than half a mile were excluded.

Travel Diary Methodology

Data Collection and Processing

Travel Diaries were placed in approximately 2,500 households in the GDA for completion by household members aged 11+ years. A total of 2,630 Travel Diaries were completed in 2,287 households, representing an average of 1.15 diaries per household.

Diaries were collected after one week. On collection, the interviewer checked the data for completeness and clarified any areas where the data was unclear. Diaries were then delivered to Faber Maunsell for entry onto computer using a specialist data entry programme. The addresses of the trip origin and destination were recorded onto computer. Using the Irish Transverse Mercator Grid Reference System, each place was geocoded, thus allowing the data to be plotted using GIS mapping software MAPINFO.

Prior to analysis, all data was checked in order to eliminate any remaining anomalies in trips recorded (e.g. where journey time, or mode for return journey, or destination for return journey might have been omitted).

In some cases, destinations could not be located because of respondent use of descriptions such as 'work', 'pub', or because the written information was unintelligible, or the destination given could not be found to exist on any map. From other information, such as the distance, it has been possible to allocate an approximate reference to a local area. However, for a number of trips the origin or destination could not be identified and these are excluded from the mapping analysis. Overall, approximately 1.4% of outward trips could not be assigned a coordinate. The trip origins of the outwards trips have been zoned to one of the seven Greater Dublin Areas and the spread of home addresses in these Local Authority Areas is mapped below.





Using MAPINFO the destinations can be grouped into any zoning pattern.

Data Analysis

The data was analysed using MAPINFO and SPSS. The basis of the analysis was to split the data into the seven Greater Dublin Areas and two broader areas – Dublin and Mid-East – and map the destinations of trips made from each, to show the distribution of trips by purpose, mode and other variables. The sample profile for the data collected for all trips over one mile is shown in the table overleaf.

At the analysis stage, trips over one mile were used to compare the findings from these GDA Travel Diaries against the Luas Before Study Diaries (from the 2004 Study) in order to validate the results. The Key Findings for the Travel Diaries show data for trips over one mile. Day 1 trip analysis is shown separately and includes all trips over 50 metres.

		All Trips Over 1 Mile					
Survey Area	From Home	Inter- mediate	Returning Home	Total	Number of diaries (people)	Trips per person per week	
Dublin CC	5162	798	5216	11176	942	11.9	
Dun Laoghaire/							
Rathdown	2596	553	2628	5777	390	14.8	
Fingal	1820	202	1835	3857	311	12.4	
South Dublin	2463	247	2484	5194	414	12.5	
Kildare	1689	204	1689	3582	250	14.3	
Meath	967	127	969	2063	186	11.1	
Wicklow	766	166	776	1708	137	12.5	
ALL	15463	2297	15597	33357	2630	12.7	

Sample Profile – All Trips Over One Mile

Note: Outward trips are those with the trip origin 'home', return trips have 'home' as the destination, and intermediate trips have neither origin nor destination as 'home'

In addition to the trips over one mile shown in the table, trips less than one mile were recorded on Day 1 of the Travel Diary. These are shown below:

Day 1 Trips less than	one mile	All trips including Day 1 Trips			
Outward Trips	3,099	18,562			
Intermediate Trips	528	2,825			
Return Trips	2,984	18,581			
All Trips	6,611	39,968			

Age and gender demographics of respondents to the Travel Diary by each of the seven locations in the Greater Dublin Area are shown in the following table.

	Number of	Gender (%)		Age Group (%)			
Survey Area	diaries (people)	Male	Female	Under 15	15-34	35-64	65+
Dublin CC	942	46	54	7	35	44	13
Dun Laoghaire/ Rathdown	390	45	55	9	27	48	14
Fingal	311	46	54	7	36	49	7
South Dublin	414	43	57	7	38	47	7
Kildare	250	45	55	11	25	50	12
Meath	186	46	54	10	28	51	10
Wicklow	137	39	61	7	32	51	10
ALL	2630	45	55	8	33	47	11

Summary Demographics of Survey Sample
B.1 Travel Diary – Trips Over One Mile

1.1 Total Trips Over 1 Mile

A total of 33,357 trips over one mile were made by 2,630 respondents. Of these, 15,463 trips originated from home and 15,597 were trips returning home. Intermediate trips where home was neither the origin or the destination amounted to 2,297. Details of these trips by Region and time period are shown in Table 1 below.

	Dub	lin	Mid I	Total	
	March-May	June-July	March-May	June-July	
From Home	7575	4466	2470	952	15463
Intermediate	1130	670	337	160	2297
Returning Home	7634	4529	2470	964	15597
All	16339	9665	5277	2076	33357

Table 1 - Sample Frame

Base: All respondents (2630) Trips over 1 mile

1.2 Trip Rates

For the whole database the number of trips made over 1 mile per person per week was 12.7 + -0.3 at the 95% Confidence Level (CL). Over the survey period, more trips were recorded during school term-time (21,616) than during the school holiday period (11,741). Trip rates for trips over 1 mile differed significantly at the 95% CL between school periods (13.3 +/-0.4) and school holidays (11.7 +/-0.5).

	inps over i	nine per	person per wee	N		
			Trips per person per week			
	Number					
	of Trips	%	Mean	N		
March/April/May	21616	65	13.3 +/- 0.4	1628		
June/July	11741	35	11.7 +/- 0.5	1002		
ALL	33357		12.7 +/-0.3	2630		

Table 2 - Number of Trips over 1 mile per person per week

Base: All trips over a mile

While the overall average of 12.7 shown above represents the 'Benchmark' for the survey, the actual average is higher when trips under 1 mile are included. On this basis the overall average is **15.2 trips**. The table overleaf shows the average number of trips per person per week by location, again based on all trips over 1 mile.

V							
	March/Ap	oril/May	June/	July	Tot	Total	
	Mean	Ν	Mean	Ν	Mean	Ν	
Dublin CC	12.7	564	10.7	378	11.9	942	
Dun							
Laoghaire/Rathdown	16.6	194	13.0	196	14.8	390	
Fingal	12.6	178	12.2	133	12.4	311	
South Dublin	12.6	296	12.3	118	12.5	414	
ALL DUBLIN	13.3	1232	11.7	825	12.6	2057	
Kildare	14.4	190	14.1	60	14.3	250	
Meath	12.5	124	8.4	62	11.1	186	
Wicklow	12.2	82	12.9	55	12.5	137	
ALL MID EAST	13.3	396	11.7	177	12.8	573	
ALL	13.3	1628	11.7	1002	12.7	2630	
Deces All things such a maile							

Table 3 - Average Trips per Person per Week by Location

Base: All trips over a mile

There were no significant differences at 95% CL between the Dublin and Mid East regions in trip rates. Looking at the individual locations within region, Dun Laoghaire/Rathdown had a significantly higher trip rate in school term (at the 95% CL) than other Dublin locations and this can be seen in Figure 1 below.



Figure 1 – Average Trips per Person per Week by Location

While there were no significant differences at the 95% CL in trip rates between genders, as the table below shows households with children had significantly higher trip rates than those without children.

Households without children made significantly more trips during March/April/May than during June/July.

				-			
	March/April/May		June/Jul	у	Total		
	Mean	N	Mean	Ν	Mean	Valid N	
With Children	15.1+/- 0.9	457	14.3 +/- 1.1	248	14.8 +/- 0.7	705	
No Children	12.6 +/- 0.4	1171	10.9 +/- 0.5	754	11.9 +/- 0.3	1925	
ALL	13.3	1628	11.7	1002	12.7	2630	
Page: All trips of	or a mila						

Table 4 -	Average	Trips	per Person	per Week b	v Children	in Household
	/ tronugo				y onnaron	III IIO doolloid

Base: All trips over a mile

Looking at respondent age, those aged 35–49 years made significantly more trips than other respondents. Older (50+ years) and younger (15-18 years) respondents made fewer trips than other age groups, as shown in Figure 2 below.



Figure 2 - Average Trips per Person per Week by Age

Employment status also had an impact on trip rates, with those in employment making significantly more trips per week than those not at work (14.2 versus 11.0 trips). Respondents in both groups made, on average, more trips per week during school term time than during the school holiday period.





1.3 Time of Trips

Predictably, the peak hour for trips made from home on weekdays (Monday – Friday) was between 08.00 and 09.00. The peak hour for trips returning home during the week was between 17.00 and 18.00. In terms of the spread of the AM and PM peak periods, the morning peak was more pronounced and the evening peak was broader.

At the weekend, most trips from home were made midway through the day, peaking around late morning/lunchtime. For trips returning home, most were made later in the day.

Details of trip times by weekday and weekend are shown in Figure 4.

Figure 4 – Time of Day Trips Made



A review of trip times by month shows that during school term time (March – May) the AM peak is more pronounced than during the school holiday period (June/July).

On a regional basis, as Figure 5 below shows, morning peaks are more pronounced in the Dublin area than in the Mid East.







1.4 Trip Purpose

Just under one third of all trips over 1 mile from home (all days) were journeys to work (commuting). Shopping was the next most common reason for making trips. The breakdown of journey purpose is shown in Figure 6 below.



Figure 6 – Journey Purpose

While there were no significant differences in trip purposes between school term-time and holiday time, it is important to note that excluding trips of less than 1 mile impacts on the proportion of education trips and reduces the differences in travel patterns between school term and holiday periods.

Leisure/other purposes which account for around one in every four trips made include a wide range of activities.

An analysis of trip purpose by region shows that the Mid East Region has a smaller proportion of work trips than Dublin. During school term-time respondents in the Dublin Region made significantly more trips commuting to work than those in the Mid East Region (34% versus 26%). The proportion of respondents in the Mid East Region making shopping trips was ahead of the Dublin Region during term time (19% versus 15%), but

this difference was less noted during June/July. In both regions, the proportion of leisure trips was higher in June/July than during school term time. In general, though, the differences in journey purpose between regions during the school holiday period were slight.

Figure 7 below illustrates journey propose by region over both time periods.



Figure 7 - Journey Purpose by Region

1.5 Mode Used

As Figure 8 below shows, for all trips over one mile just over three in every five respondents (62%) used a car as their main mode of transport (51% as a car driver and 11% as a car passenger).

Walking was the second most popular mode of transport, used by 14% of respondents.

Bus transport, used by 14% of respondents, was the most popular mode of public transport.

Figure 8 – Main Mode of Transport Used

(all trips over one mile)



1.6 Mode Share

Trips to Work

Focusing on modes of transport for trips to work, respondents living in the Mid East Region were significantly more likely to use car as their main mode of transport, particularly during school term-time, than were those living in Dublin (84% versus 57%). Conversely, in the March – May period, public transport was significantly more widely used in the Dublin Region than in the Mid East (29% versus 5%). In both regions, the proportion of walk trips increased in the June/July period.



Figure 9 – Mode Share: Trips to Work by Region

Trips to Education

One in three trips to education of 1 mile or more were by bus, with an almost similar proportion by car, either as driver or passenger. Just over one in five trips were on foot.

The base of trips over 1 mile to education is relatively low (1,318 trips), and this is reflected in the number of trips across the survey periods by mode of transport. During March/April/May use of the bus in both regions was higher than during June/July and, as would be expected, the proportion of walk trips was higher during June/July than in the earlier months.

From analysis of Day 1 trips which include all trips of over 50 metres (see Section B2), the average education trip as a pupil or student is 3.7 miles and 2.3 miles where a pupil is escorted. For these purposes, trips under 1 mile represent 16.3% of 'Education as pupil/student' trips and 26.0% of 'Escort – education' trips.



Figure 10 – Mode Share: Trips to Education by Region (Base: All trips over 1 mile)

Shopping Trips

In both regions the majority of respondents used car (either as driver or passenger) for shopping trips. During both survey periods, a higher proportion in the Mid East Region than in Dublin used car. For example, in the March/April/May period, 79% of respondents in the Mid East used a car for shopping trips compared to 56% of Dublin residents.

In the Dublin Region, the proportion of walk trips increased during the summer months, mostly at the expense of bus trips. For example, 21% used the bus and 17% walked from March to May, compared to 14% who used the bus and 24% who walked in June/July.



Figure 11 – Mode Share: Shopping Trips by Region

1.7 Trip Length

As the following table shows, average trip lengths (for journeys over 1 mile) were significantly higher in the Mid East Region than in Dublin (10.4 versus 5.7 miles). Within the Mid East there was also a variation in average trip length by time period, with a higher average trip length during June/July (12.2) than during March/April/May (9.7). However, this variation by time was not evident in Dublin, where average trip length was 5.7 miles in both time spans.

	March/April/May		June	/July	Total	
	Mean	N	Mean	N	Mean	N
Dublin	5.7	15037	5.7	8929	5.7	23966
Mid East	9.7	4920	12.2	1763	10.4	6683
Valid Total	6.7	19957	6.8	10692	6.7	30649
Missing		1659		1049		2708
ALL		21616		11741		33357

Table 5 - Average Trip Length (miles) by Region

Base: All trips over 1 mile

The table below shows average trip length by the individual locations.

	March/A	April/May	June	e/July	Total	
	Mean	Ν	Mean	N	Mean	N
Dublin CC	5.2	6777	5.1	3774	5.1	10551
Dun Laoghaire/Rathdown	5.6	2918	6.0	2300	5.8	5218
Fingal	6.8	2054	7.1	1538	6.9	3592
South Dublin	6.4	3288	5.2	1317	6.0	4605
Kildare	10.3	2590	12.2	746	10.7	3336
Meath	8.0	1402	15.5	405	9.7	1807
Wicklow	10.5	928	10.1	612	10.3	1540
Valid Total	6.7	19957	6.7	10692	6.7	30649
Missing		1659		1049		2708
ALL		21616		11741		33357

Table 6 - Average Trip Length (miles) by Location

Base: All trips over 1 mile

The longest trips were made by commercial vehicles such as trucks and vans, with an average trip length of over 14 miles, but these are relatively few in number. Trips made as a car passenger averaged almost 10 miles, but were somewhat lower at almost 8 miles for a car driver. Trips by DART/train/Luas averaged almost 9 miles, while bus journeys averaged just over 6 miles. Walking trips over 1 mile averaged 1.6 miles.



Figure 12 - Average Trip Length (miles) by Mode

Focusing on average trip length by journey purpose, the longest trips were those made on business during the course of work, although these are relatively few in number. The average commuting distance to work was 7.7 miles and average trip length to visit friends or relatives was just under 10 miles. The shortest average trip length was for escorting to education at 2.9 miles.

Figure 13 - Average Trip Length (miles) by Purpose



B2. Day One Trips

This section of the report outlines details of trips made on the first day of the Travel Diary placement. On this day, respondents were requested to include all walks over 50 yards/metres, whereas for days 2 to 7 walking trips of less than half a mile were excluded. Data for start days was weighted in order to ensure even representation of Day 1 trips over all days of the week.

2.1 Total Day One Trips

Overall, a total of 6,611 trips were made on Day 1 by 2,630 respondents. The breakdown of these trips in terms of the number originating from and returning home, together with intermediate trips, is shown in the following table.

	Dub	lin	Mid B	Total	
All Days	March-May June-July M		March-May	June-July	
From Home	1407	992	507	191	3099
Intermediate	280	150	64	35	528
Returning Home	1356	955	493	180	2984
All	3043	2097	1064	406	6611

Table 1 - Total Day 1 Trips

Base: Weighted Day 1 Trips

2.2 Trip Rates

Across the days of the week, the average number of trips per person on Day 1 was 2.51, with very little difference between the two time periods – March/April/ May (2.52) and June/July (2.49).

Trip rates also varied very little between Dublin and the Mid East. Though there were some differences between individual regions, notably in Dublin, as Table 2 overleaf shows, these were not significant at the 95%CL.

	March/Ap	March/April/May		/July	Total	
	Mean	Ν	Mean	Ν	Mean	Ν
Dublin CC	2.6	564	2.5	378	2.6	942
Dun Laoghaire/Rathdown	3.6	194	2.8	196	3.2	390
Fingal	1.9	178	2.7	133	2.2	311
South Dublin	1.8	296	2.1	118	1.9	414
ALL DUBLIN	2.5	1232	2.5	825	2.5	2057
Kildare	3.1	190	2.3	60	2.9	250
Meath	2.6	124	1.8	62	2.3	186
Wicklow	2.0	82	2.8	55	2.3	137
ALL MID EAST	2.7	396	2.3	177	2.6	573
ALL	2.5	1628	2.5	1002	2.5	2630

Table 2 - Average Trips per Person per Day by Location

Base: Weighted Day 1 Trips

While trip rates did not vary significantly between men and women, the presence of children in the household obviously had some bearing on trip taking. As Table 3 below illustrates, households with children showed significantly higher trip rates on Day 1 than those without children.

Table 3 - Ave	erage Trips per Perso	n per Day by Childrer	n in Household
	March/April/May	June/July	Total

	March/April/May		June/Ju	ly	Total		
	Mean	Ν	Mean	Ν	Mean	Valid N	
With Children	6.1	457	7.3	248	6.5	705	
No Children	1.1	1171	0.9	754	1.0	1925	
ALL	2.5	1628	2.5	1002	2.5	2630	

Base: Weighted Day 1 Trips

In terms of respondent age, the highest Day 1 trip rates were recorded for those aged 35 - 49 years (2.8 trips) and the lowest for those over retirement age (2.0). Employment status also had an impact on trip rates, with a significantly higher trip rate for those in employment (2.7) compared to those not at work (2.3).

2.3 Journey Purpose

Tables 4 and 5 overleaf show the purpose of outward journeys made from home. Data is shown separately for weekdays and the weekend. On weekdays, approaching one in every three trips (30%) were for commuting purposes and over one in five (22%) were in connection with education. Predictably, the proportion of trips for education purposes was significantly higher in the March/April/May period (24%) than in June/July (19%). Shopping was the next most widely mentioned purpose in both time periods and over the survey period as a whole (19%).

, , , , , , , , , , , , , , , , , , ,	March/	April/May	Jun	e/July	To	tal
	Ν	%	N	%	Ν	%
Business/In the course of work	10	0.7%	17	1.9%	28	1.2%
Commuting/Work - usual place of work	431	29.3%	285	32.0%	715	30.3%
Education -(as pupil/student)	188	12.8%	78	8.7%	265	11.2%
Escort - education	160	10.9%	91	10.3%	251	10.6%
Leisure	171	11.6%	99	11.1%	270	11.4%
Visit Friends/Relatives	112	7.6%	64	7.2%	176	7.4%
Shopping	267	18.2%	186	20.9%	453	19.2%
Other	133	9.0%	70	7.9%	203	8.6%
Valid Total	1471	100.0%	890	100.0%	2361	100.0%
Missing	16		13		29	
ALL	1487		903	100	2390	101

Table 4 - Journey Purpose (Outward Journey) Weekdays

Base: Weighted Day 1 Trips from home

As would be expected, journey purposes were quite different at the weekend, with the emphasis primarily on leisure and shopping, each accounting for around 30% of trips. Visits to friends/relatives were also important (18%), but commuting trips for work purposes were obviously much less in evidence.

March/April/May June/July **Total** % Ν % Ν % Ν Business/In the course of work 2 0.5% 2 0.7% 4 0.6% Commuting/Work - usual place of work 29 6.8% 24 8.6% 52 7.5% Education (as pupil/student) 0.9% 0.0% 0.6% 4 0 4 Escort - education 2 0.5% 0 0.0% 2 0.3% 71 25.7% 209 29.9% Leisure 138 32.6% 41 15.0% 127 18.2% Visit Friends/Relatives 86 20.3% 100 208 Shopping 109 25.6% 36.1% 29.8% Other 54 12.8% 39 13.9% 93 13.3% Valid Total 423.77 100.0% 276.54 100.0% 700.31 100.0% Missing 4 4 8 ALL 428 280 708

Table 5 - Journey Purpose (Outward Journey) Weekends

Base: Weighted Day 1 Trips from home

2.3 Mode Share

On Day 1 over half of respondents used a car as their main mode of transport (44% as car driver and 9% as car passenger). Walking was the second main mode of transport, used by just over one quarter of respondents overall (26%), with a slightly higher proportion adopting this mode during the summer months than in the March – May period (28% versus 25%). Of the various modes of public transport, bus was the most widely used (12%).

Some differences in mode share were noted between weekdays and the weekend. For instance, at the weekends, people were more likely to walk and car share for their trips than during the week. Likewise, the proportion using car as driver was lower than during the week and bus trips were also less in evidence.

	Wee	kday	Wee	kend	То	otal
Main Mode Used	Count	Col %	Count	Col %	Count	Col %
Car as driver	1090	45.7%	270	38.1%	1359	43.9%
Car as passenger	174	7.3%	120	16.9%	294	9.5%
Walk	611	25.6%	204	28.9%	816	26.4%
Bus	314	13.2%	65	9.2%	379	12.3%
DART/Train/LUAS	96	4.0%	38	5.3%	133	4.3%
Cycle	40	1.7%	6	0.8%	46	1.5%
Taxi	21	0.9%	6	0.8%	27	0.9%
Motorbike	13	0.5%	0	0.0%	13	0.4%
Truck/Van	16	0.7%	0	0.0%	16	0.5%
Other	12	0.5%	0	0.0%	12	0.4%
Valid Total	2387	100.0%	708	100.0%	3095	100.0%
Missing	4		0		4	
Total	2390		708		3099	

Table 6 - Main Mode of Transport Used – Outward Trips

Base: Weighted Day 1 Trips from home

Table 7 overleaf sets out the main mode of transport used by journey purpose on Day 1. This shows that car as driver is used for over half of commuting trips to work (56%) and for over seven in ten trips escorting children to school (71%). A third of those going to education walk and almost three in ten (29%) use the bus (covering all age groups in education). For weekday shopping trips, walking is slightly ahead of car as driver (40% versus 37%) but at the weekends use of the car, either as driver or passenger, for shopping trips is considerably ahead of walking (57% versus 32%).

					Monario	Durnoco					
			Commuting/			2000					
		Business/ In		Education	Escort –		Visit				
		the course of work	usual place of work	 – as pupil/ student 	educatio	Leisure	Friends /Relatives	Shoppin g	Other	Missing	Total
Weekdé	Υ. Υ										
Main	Car as driver	68.7%	56.4%	15.9%	71.2%	40.6%	27.8%	37.0%	54.8%	37.5%	45.7%
Mode	Car as passenger	0.0%	3.4%	13.9%	0.6%	11.7%	15.0%	7.9%	7.1%	12.7%	7.3%
Used	Walk	10.2%	12.3%	33.5%	27.1%	34.3%	20.5%	39.9%	23.1%	26.9%	25.6%
	Bus	6.6%	16.9%	29.1%	0.3%	5.2%	20.7%	10.0%	5.9%	18.7%	13.2%
	DART/Train/LUAS	8.8%	5.0%	5.5%	0.1%	4.0%	7.5%	2.9%	2.8%	0.0%	4.0%
	Cycle	0.0%	2.8%	1.7%	0.0%	1.6%	3.6%	0.6%	0.5%	4.1%	1.7%
	Тахі	0.0%	0.0%	0.0%	0.0%	1.4%	4.9%	0.4%	3.4%	0.0%	0.9%
	Motorbike	0.0%	1.0%	0.4%	0.0%	0.6%	0.0%	0.3%	0.7%	0.0%	0.5%
	Truck/Van	4.4%	1.6%	0.0%	0.0%	0.1%	0.0%	0.6%	0.0%	0.0%	0.7%
	Other	1.3%	0.5%	0.0%	0.6%	0.5%	0.0%	0.4%	1.6%	0.0%	0.5%
	Valid Total	28	715	265	249	270	176	453	203	29	2387
	Missing	0	-		3				0		4
Total		28	715	265	251	270	176	453	203	29	2390
Weeker	pr										
Main	Car as driver	100.0%	47.2%	20.0%	100.0%	25.5%	42.6%	37.9%	45.7%	100.0%	38.1%
Mode	Car as passenger	0.0%	3.8%	0.0%	0.0%	14.6%	22.5%	19.0%	20.2%	0.0%	16.9%
Used	Walk	0.0%	18.9%	0.0%	0.0%	42.0%	14.0%	31.8%	24.5%	0.0%	28.9%
	Bus	0.0%	18.9%	0.0%	0.0%	9.9%	14.0%	7.1%	2.1%	0.0%	9.2%
	DART/Train/LUAS	0.0%	7.5%	0.0%	0.0%	6.1%	7.0%	3.3%	5.3%	0.0%	5.3%
	Cycle	0.0%	3.8%	50.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.8%
	Тахі	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	2.1%	0.0%	0.8%
	Valid Total	4	52	4	2	209	127	208	93	8	708
	Missing	0	0	0	0	0	0	0	0	0	0
Total		4	52	4	2	209	127	208	93	8	708

Table 7 – Main Mode of Transport Used by Journey Purpose– Outward Trips

Base: Weighted Day 1 Trips from home

42.

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As Table 8 below shows, those living in the Mid East Region were significantly more likely than those living in Dublin to use car as their main mode of transport for Day 1 work trips (78% versus 54%). In contrast, public transport was much more widely used in Dublin than in the Mid East for commuting trips (26% versus 5%).

	Du	blin	Mid	East	Tot	tal
	N	%	Ν	%	N	%
Car as driver	316	51.6%	112	72.5%	428	55.8%
Car as passenger	17	2.8%	9	5.9%	26	3.4%
Walk	81	13.1%	17	11.2%	98	12.8%
Bus	125	20.3%	6	4.1%	131	17.1%
DART/Train/LUAS	38	6.2%	2	1.0%	39	5.1%
Cycle	20	3.3%	2	1.2%	22	2.9%
Taxi	0	0.0%	0	0.0%	0	0.0%
Motorbike	7	1.1%	0	0.2%	7	1.0%
Truck/Van	8	1.3%	4	2.6%	12	1.5%
Other	2	0.3%	2	1.2%	4	0.5%
Valid Total	613	100.0%	154	100.0%	767	100.0%
Missing	0		0		1	
ALL	613		154		768	

Table 8 - Mode Share: Trips to Work by Region

Base: Weighted Day 1 Commuting Trips to Work from home

2.4 Trip Length

On Day 1, the overall average trip length was 5.4 miles, but this varied substantially between the two regions, with the Mid East average much higher than Dublin (8.2 versus 4.6 miles).

	March/	April/May	Jun	e/July	T	otal
	Mean	N	Mean	N	Mean	N
Dublin CC	4.3	N=1428	3.0	N=887	3.8	N=2315
Dun Laoghaire/Rathdown	4.6	N=645	4.1	N=514	4.3	N=1159
Fingal	5.8	N=302	10.6	N=344	8.3	N=646
South Dublin	4.4	N=489	3.8	N=238	4.2	N=727
Dublin Region	4.5	2864	4.7	1983	4.6	4847
Kildare	8.3	N=551	11.8	N=117	8.9	N=668
Meath	5.4	N=304	15.8	N=102	8.0	N=406
Wicklow	7.2	N=145	6.8	N=134	7.0	N=280
Mid East Region	7.3	1000	11.1	353	8.2	1354
Valid Total	5.2	N=3864	5.6	N=2337	5.4	N=6201
Missing		244		166		410
ALL		4108		2503		6611

Table 9 - Average Trip Length (miles) by Location

Base: Weighted Day 1 Trips

Across the various locations, the highest average trip length was recorded for Fingal (8.3 miles) in the Dublin Region, while Kildare residents clocked up the highest average (8.9 miles) in the Mid East Region.

Focusing on Day 1 average trip length by mode used and by day type (Table 10 overleaf), trips at the weekend were typically 2 – 3 miles longer than those on weekdays, a pattern which was evident over both time periods in the survey. Journeys by car as driver averaged around 7 miles, while car as passenger was somewhat longer at almost 10 miles. The overall average for walk trips was 1 mile, with no variation in this length between weekdays and the weekend. The overall average length for bus trips was almost 6 miles while trips by train/DART/Luas were somewhat longer at almost 8 miles.

Table 11 overleaf shows average trip lengths by journey purpose. The average length of commuting trips was almost 7 miles. Those escorting to education average around 2 miles, while those travelling themselves to education had a somewhat longer average trip length at almost 4 miles. The average shopping trip was 3.8 miles. Trips for the purpose of visiting friends/relatives were amongst the longest with an average length of 8.6 miles.

		March	-May			June-	July		Ţ	otal
	Wee	kday	Wee	kend	Wee	ekday	Wee	kend		
	Trip N	Aileage	Trip N	lileage	Trip N	Aileage	Trip N	lileage		
	Mean	Valid N	Mean	Valid N	Mean	Valid N	Mean	Valid N	Mean	Valid N
Car as driver	5.9	N=1376	9.2	N=340	6.2	N=857	12.7	N=197	6.8	N=2769
Car as passenger	5.2	N=244	12.2	N=194	13.0	N=98	15.9	N=51	9.8	N=586
Walk	1.0	N=773	1.0	N=222	1.0	N=488	1.0	N=207	1.0	N=1691
Bus	6.1	N=374	3.2	N=64	5.7	N=214	4.8	N=47	5.7	N=700
DART/Train/LUAS	8.6	N=101	4.2	N=28	8.2	N=66	7.8	N=33	7.8	N=228
Cycle	2.4	N=40	2.8	N=8	3.2	N=33	4.0	N=4	2.8	N=85
Taxi	4.6	N=27	5.6	N=7	3.5	N=15	13.3	N=8	5.6	N=57
Motorbike	4.6	N=19			5.9	N=7			4.9	N=26
Truck/Van	12.6	N=20			4.7	N=11			9.8	N=32
Other	10.5	N=22				0=N	-		10.5	N=22
Total	4.7	N=3001	7.0	N=862	5.1	N=1790	7.5	N=547	5.4	N=6201
Base: Weighted Day 1 Trips										

Table 10 – Average Trip Length (miles) by Mode

eigilleu Day I Ilips

45.

		March	-May			June-	July		To	tal
	Wee	kday	Wee	kend	Wee	kday	Wee	kend		
	Trip N	lileage	Trip M	lileage	Trip N	lileage	Trip N	lileage		
	Mean	Valid N	Mean	Valid N						
Business/In the course of work	12.0	N=22	7.0	N=2	13.7	N=25	20.0	N=2	12.9	N=52
Commuting/Work – usual place of work	7.0	N=473	8.5	N=34	6.7	N=302	6.9	N=24	6.9	N=832
Education – as pupil/student	3.5	N=204	17.5	N=4	3.5	N=74	-		3.7	N=283
Escort – education	2.0	N=180	4.0	N=4	2.6	N=103			2.3	N=287
Leisure	4.1	N=193	2.5	N=155	6.9	N=111	4.3	N=77	4.2	N=536
Visit Friends/Relatives	5.7	N=128	16.3	N=111	4.3	N=78	5.6	N=47	8.6	N=364
Shopping	2.9	N=320	7.7	N=124	3.2	N=203	3.4	N=110	3.8	N=757
Other	5.3	N=158	3.8	N=64	4.3	N=98	11.0	N=38	5.3	N=357
Returning Home	4.7	N=1296	6.3	N=363	4.7	N=776	10.3	N=242	5.4	N=2677
Missing	4.4	N=27	6.0	N=2	19.5	N=20	3.3	N=8	9.7	N=57
Total	4.7	N=3001	7.0	N=862	5.1	N=1790	7.5	N=547	5.4	N=6201
3ase: Weighted Day 1 Trips										

Table 11 – Average Trip Length (miles) by Journey Purpose

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46.

Appendices



Household Questionnaire Greater Dublin Area Transport Survey © Millward Brown IMS : February 2006

Questionnaire No.

(1-8) Good morning/afternoon. I a We are carrying out a surve Kildare, Meath and Wicklow a	emey abou and I we	from 1 t transport issues ould be grateful f	Millward Brown in the Greater for your help in	n Irish N Dublin answer	Marketing Surveys. Area i.e. Dublin, (9) (10) (1 ing some questions	1) (12)
FULL NAME: Mr./Mrs/Ms (Block Capitals)		Pre Intervie	w Informatio	<u>n</u>		CARD 1 Col 13/(1)
• PHONE IN HOUSEHOLD: No No Yes (Code & Specify -Tel. No.) Yes (Code & Specify -Tel. No.)	(14) 1 2 (15) 1 2 (16) 1 2 3 4 (17) 1 2 3 4 5 6 7 (18) 1 2 2 3 4 5 6 7 (18) 1 2 3 4 5 6 7 (18) 1 2 3 4 5 6 6 7 8 (19) 1 2 3 4 5 6 6 7 8 (19) 1 2 3 4 5 6 6 7 8 (19) 1 2 3 4 5 6 6 7 8 (19) 1 2 3 4 5 6 6 7 7 8 (19) 1 2 3 (19) 1 2 3 (19) 1 2 3 (19) 1 2 (19) 1 1 (19) 1 2 (1	 AGE: (State exact and cod 15	le) (20) (21)	(20-21) (22) 1 2 3 4 5 6 7 8 9 (23) 1 2 3 4 (24) (25) (26) (27) (28) (29) (30)	 DATE OF INTERVIEW: e.g. 5th of April 0 5 0 4 DATE (31) (32) (33) (34) LENGTH OF INTERVIEW: (35) (36) WRITE IN MINUTES RESPONDENT WILLING TO BE RE-INTERVIEWED: Yes. No. HOUSEHOLD TENURE Rented. Owner Living with parents Other. How long have you lived at this address? e.g. 4 years (39) (40) Home Type: Detached house Semi Detached house Terraced House Apartment/flat Other (Note: 'house' includes bungalows) 	(31-34) (35-36) (37) 1 2 (38) 1 2 3 4 (39-40) (41) 1 2 3 4 5
* CHIEF INCOME EARNER QUESTIO Which member of your household would you say is the the person with the largest income whether from en benefits, investments or any other source. If "EQUAL	ne Chief Ind ployment, INCOME"	come Earner - that is pensions, state relate to OLDEST.	Checked by Inte Edited/Coded:	erviewer:	Initials:	
* SIGNATURE OF INTERVIEWER OUO - Quality Control: Phone	2 F	Personal		* ASSI (43) /ER NO	GNMENT NUMBER (44) (45) (46) (47) (48) (49) (50)	

41105033

Checked by:

Section A: Licences and Ownership

Q.1 Do you hold a driv licence valid in Ireland either to d a car or to drive a motorcycle, scoot or moped?

Q.2a Is this a.....

Q.2b How many people in the household **other** than yourself hold a driving licence valid in Ireland either to drive a car or to drive a motorcycle, scooter or moped?

ASK ALL

Q.3 How many cars/vans are available for this household? **RECORD NUMBER** IF NONE RECORD 0 AND GO TO **SECTION B. Q.5**

Q.4 How many of those are company owned cars/vans? **RECORD NUMBER IF NONE RECORD 0**

CONTINUE TO SECTION B – Q.5

		One1	(16)
n	•	Two2	
	•	Three	
	•	Four	
	•	Five +	
	•	None	
			(17)
			. ,

Full licence 1



ving	 Mopeds (M)	Go to.Q.2	(14)
er,	• None of these	- Go to Q.3	

CARD TWO Col 13/(2)

(15)

Section B: Attitudinal Section – To be completed by all respondents

NOW I WOULD LIKE TO ASK YOU ABOUT VARIOUS METHODS OF TRANSPORT IN GENERAL. NOT ALL OF THESE ARE CURRENTLY AVAILABLE IN YOUR AREA BUT I AM INTERESTED IN YOUR PERCEPTIONS OF THESE METHODS OF TRAVEL.

SHOWCARD "A": Bus, Car, Luas, DART, Train, Walking, Motorbike, Bicycle. Q.5 Which of these, if any is.....? Any others? CODE ALL THAT APPLY

N.B. READ OUT				Dart/				None of
<u>TICK START & ROTATE ↓</u>	Bus	Car	Luas	Train	Walking	Motorbike	Bicycle	these
Reasonably priced	1	2		4	5	6	7	8
Good for the environment	1	2		4	5	6	7	8
Clean	1	2	3	4	5	6	7	8
□ For young people	1	2		4	5	6	7	8
□ For old people	1	2		4	5	6	7	8
□ For people with no other choice	1	2		4	5	6	7	8
□ Healthy	1	2		4	5	6	7	8
Comfortable	1	2		4	5	6	7	8
Gast	1	2		4	5	6	7	8
Reliable	1	2		4	5	6	7	8
\Box Happy for my friends to see me								
using	1	2		4	5	6	7	8
Modern	1	2		4	5	6	7	8
□ Safe	1	2		4	5	6	7	8
□ Convenient way to get to work	1	2		4	5	6	7	8
Convenient way to take children to school	1	2		4	5	6	7	8
□ Convenient for going out socially								
at the weekends or in the evenings	1	2		4	5	6	7	8
□ Convenient for shopping	1	2		4	5	6	7	8
□ More relaxing	1	2	3	4	5	6	7	8

Section C: Current use of Transport Methods – To be completed by all respondents

SHOWCARD "B"

Q.6a Thinking about any trips you made in the Greater Dublin Area (i.e. Dublin, Kildare, Meath or Wicklow) over the past week that were ¹/₄ mile or over in distance, which of these methods of travel did you use? **MULTICODE**

SHOWCARD "B"

Q.6b And which did you use **most often**? **SINGLE CODE**

SHOWCARD "B"

Q.6c Are there any methods of transport on this list that you would rarely or never use? MULTICODE

		use
(37)	(38)	(39)
1	1	
2	2	2
	3	
4	4	4
5	5	5
6	6	6
7	7	7
	8	
9	9	9
0	0	∎
v		
		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$

ASK FOR EACH CODED <u>'RARELY OR NEVER USE'</u> AT Q.6C Why would you **not use/rarely use**.....? **DO NOT PROMPT. DO NOT READ OUT** Q.7

	Tick (✓) those rarely or never use from Q.6c →									
		Bus	Car/ Van driver	Car/ Van passenger	Taxi/ Hackney	Luas	Train/ Dart	Motor- bike/ Scooter /Moped	Bicycle	Walking
		(40)	(42)	(44)	(46)	(48)	(50)	(52)	(54)	(56)
•	This method not available to me/not available in this area	1	1	1	1	1	1	1	1	1
•	Unreliable	2	2	2	2	2	2	2	■	
•	Cost of using Car/Motorbike/Taxi		3	3	3	∎	■	3	■	
•	Cost of using public transport	4	∎		∎	4	4	∎	∎	■
•	Lack of parking facilities	∎	5	5	∎	5	5	5	5	■
•	Poor information about public transport services	6	∎	■	■	6	6	■	∎	
•	Poor connections	7	∎			7	7	∎	∎	
•	Personal disability	8	8	8	8	8	8	8	8	8
•	Concerns over personal safety	9	9	9	9	9	9	9	9	9
•	Traffic congestion	V	V	V	V	∎		V	V	
•	Finds public transport unpleasant	X		■	■	X	X	■	■	
•	Too much waiting time for public transport	0		■	■	0	0	■	■	
		(41)	(43)	(45)	(47)	(49)	(51)	(53)	(55)	(57)
•	No Shelter/exposed to weather	1	■		■	1	1	1	1	1
•	Other answer (State & code)									
		2	2	2	2	2	2	2	2	2

IF RARELY OR NEVER USE BUS AT Q.6C ASK:

If changes were made to the local bus service Q.8 would this encourage you to use it more?

 Yes

IF YES ASK: OTHERS GO TO Q.10

Q.9 What changes could be made to the local bus service that would cause you to use it more often? PROBE FOR ALL RELEVANT ANSWERS BUT <u>DO NOT READ OUT</u> PRECODES.

 More accurate timetables	(59)
• If stop was closer to home	
• If local buses went closer to destinations I want to go to	
• If local buses got to destination more quickly	
• If buses cleaner	
 If buses more comfortable	
 If sofer to wait at/walk to or from bus stop 	
• If cost less	
 If bus stop less exposed to weather X 	
• Other (specify)0	

ASK ALL SHOW CARD "C"

Q.10 About how long would it take me to walk from here to the nearest bus stop or place where I could get a bus? I am interested in the nearest one even if it isn't the one you use.

IF TOO FAR TO WALK SAY:

"If I did walk how long would it take"?

Q.11 How frequent are the buses from that bus stop during the day. Are they **READ OUT →**

•	6 minutes or less1	(60)
•	7-13 minutes2	
•	14-26 minutes	
•	27-43 minutes	
•	44 minutes or longer5	
	-	

Т

•	Less than once a day	1	(61)
•	At least once a day	2	
•	At least once an hour	3	
•	At least once every half hour	4	
•	At least once every quarter of an hour	5	
•	Don't know	6	

ASK SEPARATELY FOR TRAIN, DART & LUAS

SHOW CARD "C"

Q.12 Now thinking about the nearest ______ (train, DART or LUAS) station. I am interested in the nearest one even if it isn't the main one you use.

FOR EACH ASK:

How long would it take me to walk there?

IF TOO FAR TO WALK ASK:

If I did walk how long would it take?

	TRAIN	DART	LUAS
	(62)	(63)	(64)
• 6 minutes or less		1	1
• 7-13 minutes			2
• 14-26 minutes			
• 27-43 minutes			4
• 44 minutes or longer			5
• Not available in this region	6		6
e			

SHOW CARD "D"

Q.13 Now I would like you to tell me how satisfied or dissatisfied you are with various aspects of transport and activities in your area. I am interested in your views generally even if you do not use these regularly. **Please use the scale on this card when answering:**

<u>N.B. READ OUT</u> <u>& TICK START ↓</u>	Very Satisfied	Fairly Satisfied	Neither Satisfied nor Dissatisfied	Fairly dissatisfied	Very dissatisfied	Not Applicable	
□ Reliability of local buses		2	3	4	5	6	(65)
□ Frequency of local buses	1	2	3	4	5	6	(66
Cost of local buses	1	2	3	4	5	6	. (67)
Provision of facilities for cycling locally	1	2	3	4	5	∎	. (68)
Conditions for walking locally		2	3	4	5		(69
□ Access to DART and rail services		2	3	4	5		(70
Access to Luas services		2	3	4	5		(71
Access to bus services		2	3	4	5		(72
□ Traffic congestion in your area		2	3	4	5		(73
Quality and upkeep of roads in your area	1	2	3	4	5	∎	. (74)

Cols (75-80) not used

CARD THREE COL 13/(3)

SHOW CARD "C" AGAIN

Q.14 How long would it take me to get to the railway station by bus? Please indicate time spent walking to bus but not waiting time for bus.

6 minutes or less	(14)
Quicker to walk6 No convenient bus service7	

Q.15 Which of the following would I be able to WALK to from here in 15 minutes or less? **READ OUT CODE ALL THAT APPLY**

 Shop or store where I could buy basic foodstuffs such as bread and milk Post office 	1	(15)
Pub or restaurant		
 Doctor's surgery 	4	
Chemist/pharmacy	5	
• None of these	6	

LIST HOUSEHOLD MEMBERS AGED 4+ ON GRID BELOW (INCLUDING RESPONDENT) AND ASK FOR EACH (IF MORE THAN SIX PEOPLE AGED 4+ IN HOUSEHOLD THEN INCLUDE SIX YOUNGEST AGED 4+):

Q.16 What age is _____? USE LEADING ZEROS E.G. age 6 = 06

Q.17 Does he/she work or attend school or college or other?

IF ATTEND SCHOOL OR COLLEGE

Q.18 Is that primary, secondary or third level?

ASK FOR EACH WHO WORKS/IS IN EDUCATION

Q.19 How does he/she normally travel to school/work/college?

ASK FOR ANY HOUSEHOLD MEMBER WHO DRIVES TO WORK

Q.20 Which of the following scenarios best describes the parking you/he/she has at work?

			Resp 1	Resp 2	Resp 3	Resp 4	Resp 5	Resp 6	
		Name: Write in >							
	Q.1	6 What age is? Write in ᢣ	(16) (17)	(18) (19)	(20) (21)	(22) (23)	(24) 25)	(26) (27)	
	Q.1 oth	7 Work/Attend school or college or er? Work Attend School Attend College Other	(28) 1 2 3	(29) 1 2 3 4	(30) 1 2 3 4	(31) 	(32) 	(33) 1 2 3 4	
-	•	Q.18IF SCHOOL OR COLLEGE PROBE FOR LEVEL? Primary/National Secondary Third level	(34) 1 2 3	(35) 1 2 3	(36) 2	(37) 1 2 3	(38) 1 2 3	(39) 1 2 3	
_		Q.19How normally travel? Car as driver Car as passenger Taxi/hackney Bus DART/Train Luas Walking Bicycle Motorbike/scooter/moped	(40) 	(41) 1 23 4 56 7 8 9.	(42) 1 23 4 5 6 7 8 9	(43) 1 2 3 4 5 6 7 8 9.	(44) 	(45) 1 23 4 56 	
*	•	Q.20Parking scenario at work? Free parking (not paid for by employer or self) Meter on street parking paid by self Private parking space paid for by self Private parking space provided by company Other (specify)	(46) 	(47) 1 3 4 5 6	(48) 1 3 4 5 6	(49) 1 2 3 4 5 6	(50) 1 3 4 5 6	(51) 1 3 4 5 6	

THANK YOU

Correspondence Mapping Explanation

Correspondence Mapping is used to illustrate graphically the most salient relationships in a data set. It can be applied to any two way table to show the relationship between rows and columns (attributes and modes).

The layout of the map is determined by measuring the similarity between modes and the similarity between attributes. A 'relative' measure of similarity is used in preference to an 'absolute' measure. This focuses more on the pattern of scoring than on the absolute numbers themselves.

Reading the Map

- Modes with similar image profiles will be situated in the same quadrant
- Attributes with similar profiles across modes will be situated in the same quadrant
- In general, if an attribute is located close to a mode, then it is highly associated with that mode
- The more discriminating an attribute is, the further it will lie from the centre of the map

Explaining the Axes

These axes represent the attribute factors which discriminate most strongly between these modes of transport. The percentage scores on the axes are the variance accounted for by each axis, so in the map shown on page 14 the variance on axis 1 (58%) + the variance on axis 2 (18%) gives an overall variance of 76%. Therefore 76% of the variation from the original raw data is adequately explained by the two-dimensional model that we have created.

Image Profile Explanation





DUBLIN SAMPLING POINTS



AREA	DED/WARDS	AREA	DED/WARDS
ARRAN QUAY	A & B		South
 ARRAN QUAY 			South
 CABRA WEST 	A	 BALLYMUN 	E
CABRA WEST	С	BOTANIC	В
KILMORE	A		A & B
 KILMORE 	C	 RATHFARNHAM 	St. Enda's.
	A	BALLYGALL	B
KIMMAGE	С	BALLYGALL	D
RATHMINES EAST	С	CLONTARF EAST	D
RATHMINES WEST	А	 CLONTARF WEST 	А
 CLONDALKIN 	Dunawley.	PRIORSWOOD	В
 CLONDALKIN 	Dunawley.	PRIORSWOOD	D
LUCAN	St. Helen's.	MERCHANT'S QUAY	A & B
LUCAN	St. Helen's.	MERCHANT'S QUAY	С
TALLAGHT	Springfield.	ROYAL EXCHANGE	A & B
TALLAGHT	Springfield.	 ST. KEVIN'S 	
BLANCHARDSTOWN	Coolmine.	 CLONDALKIN 	Rowlagh.
BLANCHARDSTOWN	Corduff.	 CLONDALKIN 	Village.
 SKERRIES 		RATHFARNHAM	Ballyroan.
 SUTTON 		RATHFARNHAM	Hermitage.
 CABINTEELY 	Kilgobbet & Loughlinstown.	 TERENURE 	Cherryfield.
 CABINTEELY 	Pottery.	 TERENURE 	St. James.
 DUNDRUM 	Sandyford	 CASTLEKNOCK 	Knockmaroon.
 DUNDRUM 	Sandyford	 CASTLEKNOCK 	Knockmaroon.
 AYRFIELD 		 SWORDS 	Glasmore.
 BALLYBOUGH 	В	 SWORDS 	Lissenhall.
 CHERRY ORCHARD 	A & B	 CLONSKEAGH 	Farranboley.
 DRUMFINN 		 DALKEY 	Bullock.
 ASHTOWN 	A	 SHANKILL 	Rathsallagh.
 ASHTOWN 	В	 SHANKILL 	Shanganagh.
 CLONTARF EAST 	A	 DRUMCONDRA SOUTH 	В
 CLONTARF EAST 	В	 EDENMORE 	
 NORTH CITY 		 TEMPLEOGUE 	Orwell.
 NORTH DOCK 	В	 Airport, Turnapin, Balgriffin. 	
 KIMMAGE 	E	 BALLYMUN 	В
 MANSION HOUSE 		 BALLYMUN 	C
 RATHMINES WEST 	С	 CLONTARF WEST 	C
 RATHMINES WEST 	E	 CLONTARF WEST 	E
	Monastery.	 RAHENY 	Foxfield
	Moorfield.	RAHENY	St. Assam.
PALMERSTOWN	Village.	MERCHANT'S QUAY	E&F
PALMERSTOWN	West		В
	Cypress.		P
			D
			Pollyoullop
	Forrost		
	Forrest		Avuilley. Fettercairn
	Nutarove		i elleroann. Ilrhan
	Woodlawn		Urban
		 DONABATE 	Gibun.

DUBLIN SAMPLING POINTS

AREA			
	Broadford		Fast
	Balally		West
	Kilmacud		Booterstown
STILLORGAN	Kilmacud	Dubber The Ward Kilsallaghan	Bootorotown
STILLORGAN	Merville		Seatown
	R		Carvsfort
GRACE PARK	D		Monkstown Farm
	Templehill		Sallynoggin South
	Sandycove.		A
 BEAUMONT 	A	PHOENIX PARK	
 BEAUMONT 	В	CABRA EAST	А
FINGLAS SOUTH	А	CABRA EAST	В
FINGLAS SOUTH	С	GRANGE	С
 WHITEHALL 	В	 GRANGE 	E
 WHITEHALL 	D	CRUMLIN	D
PEMBROKE EAST	С	CRUMLIN	F
PEMBROKE EAST	E	RATHMINES EAST	Α
 USHERS 	A & B	RATHMINES EAST	В
 USHERS 	D	BALLYBODEN	
 FIRHOUSE 	Knocklyon.	CLONDALKIN	Ballymount.
 FIRHOUSE 	Village.	- LUCAN	Esker.
 TALLAGHT 	Jobstown.	• LUCAN	Esker.
 TALLAGHT 	Jobstown.	 TALLAGHT 	Kingswood.
 BALDOYLE 		 TALLAGHT 	Millbrook
BLANCHARDSTOWN	Abbotstown.	BLANCHARDSTOWN	Blakestown.
 HOWTH 		BLANCHARDSTOWN	Coolmine.
 HOWTH 		PORTMARNOCK	North.
 BALLINTEER 	Marley.	■ RUSH	
 BALLINTEER 	Woodpark.	 BLACKROCK 	Glenomena.
	Sweetmount.	 BLACKROCK 	Newpark.
 DUN LAOGHAIRE 	East Central.	 FOXROCK 	Carrickmines.
 HARMONSTOWN 	В	 FOXROCK 	Deans Grange & Torquay.
INNS QUAY	В	 ROTUNDA 	A & B
LUSK	_	CHAPELIZOD	
BEAUMONT	D		
	F		
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	Esker		
	Killinarden		
	Kiltinner		
	Riakestown		
	Blakestown		
BEANONANDOTOWN	DIARCOLUWII.		
MID EAST REGION SAMPLING POINTS

DED/WARDS

- Cloncurry, Killinthomas, Rathangan, Thomastown.
- Carbury, Windmill Cross, Kilpatrick, Lullymore.
- Ardcath, Duleek, Mellifont.
- St. Marys(pt), Julianstown.
- Ballymore Eustace, Newtown, Killashee, Usk, Carnalway, Gilltown.
- Bodenstown, Oughterard, Kilteel, Rathmore, Naas Rural.
- Ardmulchan, Tara, Kentstown.
- Painestown, Slane, Stackallan.
- Ballinguile, Eadestown, Hartstown, Humewood, Rathdangan, Stratford, Talbotstown, The Grange, Tuckmill, Baltinglass.
- Donaghmore, Dunlavin, Imael North & South, Rathsallagh.
- Carragh, Donore, Downings, Timahoe North & South.
- Kilmeage North & South, Robertstown, Rathernan.
- Athboy, Rathmore, Grennanstown.
- Castlerickard, Killyon, Innfield.
- Enniskerry, Kilmacanoge(pt), Powerscourt.
- Arklow Rural, Ballyarthur, Cronebane, Dunganstown East, South & West, Kilbride, Ennereilly.
- Aughrim, Avoca, Ballinaclash, Knockrath, Ballinacor, Brockagh, Ballinderry, Trooperstown.
- Glenealy, Rathdrum.
- Drumcondra, Grangegeeth, Killary.
- Killeagh, Oldcastle.
- Athy Rural, Churchtown, Kilberry, Bert, Burtown, Grangemellon.
- Ballybrackan, Harristown, Kildangan, Lackagh, Quinsborough.
- Ratoath.
- Killeen, Kilmessan.
- Aghowle, Ballingate, Carnew, Killinure, Money, Rath.
- Cloncurry, Balraheen, Donadea.
- Straffan, Donaghcumper.
- Balrathboyne, Martry, Girley, Teltown, Burry.
- Loughan, Maperath, Moynalty.
- Naas Urban.
- Naas Urban.
- Kilcoole Urban.
- Newcastle Upper & Lower Urban.
- Celbridge.
- Celbridge.
- Athy East Urban, Athy West Urban, Athy Rural (part).
- Maynooth.
- Kildare Town.
- Monasterevin.
- Navan Urban, Navan Rural(pt).
- Navan Rural(pt).
- Donaghmore Urban.
- Dunboyne Urban.
- Bray, Rathmichael, Kilmacanoge(pt).
- Bray, Rathmichael, Kilmacanoge(pt).
- Clane Urban.
- Kill Urban.
- Navan Rural(pt).

MID EAST REGION SAMPLING POINTS (contd.)

DED/WARDS

- Navan Rural(pt).
- Bray, Rathmichael, Kilmacanoge(pt).
- Bray, Rathmichael, Kilmacanoge(pt).
- Dunshaughlin Urban
- Leixlip.
- Leixlip.
- Greystones, Delgany.
- Greystones, Delgany.
- Trim Rural(pt).
- Kells Urban, Kells Rural(pt).
- Blessington Urban
- Newbridge Urban.
- Morristownbiller.
- Kilcullen.
- Naas Urban.
- Arklow No.1 & 2 Urban.
- Wicklow Urban.

	Grade "A" (cont'd)	 People living in comfort on Investments or Private Income People (retired) where H/H would have been Grade "A" before retirement Fhysician Physician Physician
SOCIAL CLASS DEFINITIONS	Grade "A" (cont'd)	 County Planning Officer (Principal/Senior Official; Local Government) Dentist - Own practice or Partner/Principal in practice Doctor - Own practice or Partner/Principal in practice Editor - National Newspaper or Magazine Engineer - Senior (qualified with University degree) - own practice or Partner/ Principal in practice with 12+ employees Fire Officer (Chief) Fire Officer (Chief) Garda (Chief Superintendent) General - Lieutenant or Major - Army Government Member (T.D) Headmaster/mistress - large secondary school Insurance underwriter Journalist (Senior) - own column in National Newspaper/Magazine Librarian - qualified, in charge of large library Lieutenant Colonel - Army/Air Corps Manager of large Factory/Business/Hotel/ Department etc. responsible for 12+ employees Matron of large Teaching Hospital
	Guide to Grade "A" Households Upper Middle Class	 Accountant (chartered) - Own practice or Partner/Principal in practice with 12+ employees Actor Actor Advertising Executive - Director/Partner/ Principal in Agency with 12+ employees Auchineer - Own practice or Partner/Principal in practice with 12+ employees Auctioneer - Own business or Director/ Partner/Principal in business or Director (with 12+ employees) Connander - Irish Naval Service/Large merchant vessel Connander - Irish Naval Service Company Director (in firm with 12+ employees) Company Director (in firm with 12+ employees) Company Secretary (in firm with 12+ employees) Company Secretary (in firm with 12+ employees)

	SUCIAL CLASS DEFINITIONS	
Guide to Grade "B" Households		Guide to Grade "C1" Households
Middle Class	Grade "B" (cont'd)	Lower Middle Class
 Accountant - Qualified; no practice; employed as Executive Architect - Qualified: no practice: employed as 	 Librarian - Senior, Qualified; in charge of small branch library Lientenant First - Army 	Bank ClerkBuyer (except Senior Buyer)
Executive - Quantiticu, no practice, emproyed as Doub Monocor (small brouch office and 10	 Licutenant, Tust - Auny Licutenant - Commander - Irish Naval Service Local Government Officer - Senior 	 Civil Servant - (H.E.O./Junior Executive Officer/Staff Officer/Clerical Officer/Clerical
 Business Proprietor (with 3-12 employees) 	 Manager of Factory/Business/Hotel/ Department responsible for 6-12 persons Matron - Non-Teaching Hospital 	 Clerical Employees - supervisory grades; non- manual workers Clerk (Articled)
 Captaın - Army/Aır Corps Civil Servant (Principal Officer/Assistant 	 Parish Priest (or equivalent in any denomination) 	 Clerk (Despatch) Clerk (Receptionist)
 Principal Officer) Commandant - Army/Air Corps Computer Consultant (with 3 – 12 Employees) 	 People, with smaller private incomes than Grade "A" living less luxuriously People (retired); H/H before retirement would 	 Clerk (1ypist) Clerk (National/Local Government) Clerk (Insurance)
 Engineer (Qualified - University degree) - no mactice: employed as Executive: not Grade "A" 	 have been Grade "B" Pharmacists - Qualified (University degree); own business with 3-12 employees 	 Commercial Traveller/Company Representative Curate (or equivalent in any denomination)
Ensign - Irish Naval Service	 Professional people - not yet established; qualified less than 3 years 	 Draughtsman Driving Instructor
 Fire Officer (Assistant Chief) 		
 Garda - Superintendent/Inspector 	 Sales Manager (Area) responsible for 6-12 persons Sister/Tutor in large hourital 	 Entertainer (Actor/Musician etc main occupation but not well known or established)
 Headmaster/mistress in primary or Secondary smaller school 	 Solicitor - Qualified; no practice; employed as Executive, not Grade "A" 	 Garda Sergeant
 Insurance Company Manager (small branch 	 Surveyor - Qualified; no practice; employed as Executive, not Grade "A" 	 Insurance Agent - door to door
office - up to 12 employees)	 Teacher - Senior Secondary; in charge of Dependence 	 Laboratory Assistant Leading Seaman - Irish Naval Service Longer Trainserity
 Journaust - not scinor chough for Orace A I echnical College 	 Technician - with degrees in Electronics/ Commuters/Aircraft/Chemicals/Nuclear Energy 	 Library Assistant - not fully qualified Librarian Libutenant - School/Cadet - Army
		 Lieutenant - Sub - Irish Naval Service
	-	

	SOCIAL CLASS DEFINITIONS	
	Guide to Grade "C2" Households	
Grade "C1" (cont'd)	Skilled Working Class	Grade "C2" cont'd)
 Machine (Office) Operator (Punch Card, Calculating, Accounting only) Manager of Factory/Business/Hotel/Office/ 	AA PatrolmanAmbulance Driver	ForemanFurnace Man
Department - responsible for 1-5 persons	 Baker Barber Barman - Head - in charge of others 	 Ganger Garda - ordinary Gardener/Groundsman - Head - in charge of other
 Nun - any denomination; but not those with special responsibilities 	 Blacksmith Brewer 	employees Glazier
 Nurse - Student, Staff, Sister - all State Registered 	 Bricklayer Butcher 	 Grinder Guard - Goods and Passenger
been Grade "C1"; who belore retirement would have been Grade "C1"; who have pensions rather than State or very modest private means	Cabinet Maker Carpenter	HewerHousekeeper - in charge of others
Physiotherapist	Chef	 Joiner
 Proprietor - Shop or Business - with 1-2 paid employees 	 Coach Builder Cobbler (Shoemaker) Commonitor 	 Knitter - skilled in Hosiery/knitted goods
RadiographerReceptionist	 Composition Coppersmith Corporal - Army 	Linesman (ESB)Linotype Operator
 Secretary Sergeant - Army Secretary 	 Dental Mechanic/Technician Driver - Bus 	 Machine Man Maltster
 Student in any unit level institution Teacher - Primary, Secondary, Vocational - without special responsibilities 	Driver - Long Distance Heavy Lorry Driver and Shunter (Engine) Driver - Taxi, Who owns his own taxi Dressmaker	 Manager - small snop; does most of work; not in charge of anyone Mason Millwright
 Technician/Engineer - (no degree but Technical/Professional qualification) Teleoranhist 	 Electrician Electrician 	 Miner Motor Mechanic Moulder
Telephonist	 Engraver (Process) Excavator (Crane Driver) 	Nylon (skilled in production)
 Typist Warrant Officer - Irish Naval Service 	 Filler Finisher - Paper and Board Manufacturer Fireman - not loading 	OverlookerOverseer (mainly manual work)
	Fitter - Mechanical	Panel BeaterPainterPastry Cook

Millward Brown IMS Limited/ Faber Maunsell Aecom

		SOCIAL CLASS DEFINITIONS	
		GUIDE TO GRADE "D" HOUSEHOLDS	
9	Trade "C2" (cont'd)	Other Working Class	-
	People (retired) who before retirement would have been Grade "C2"; very modest private means; small pensions other than state	Apprentices (those apprenticed to skilled trade)AssemblerAttendant in hospital	 Labourer Laundry Worker Lorry Driver (Local)
	Plasterer Plater Plumber Prison Officer	 Barman (no special training/responsibilities) Blender Boilerman 	 Machinist (Tailoring) Mate (to those of "C2" occupation category) Meter Reader Milkman
	rroprietor - sman snop, no para emproyees Putter	Bouter Breadman	OpenerOven-man
•	Riveter	 Carder Caretaker 	 Park-keeper
• •	Seaman - Able - Irish Naval Service Security Officer (e.g. Securicor etc.)	 Chinney Sweep Cleaner 	 People (retired) who before retirement would have been Grade "D"; have small pensions other
•	Self-employed - Skilled; no paid employees - unskilled: 1-4 employees	 Comber Conductor (Bus) 	than State; very modest private means Porter - Railwav/Hosnital
	Setter Shinwrioht	Cook	 Postman Presser
	Shop Assistant - Head - in charge of others	 Docker (Dock Worker) 	Processor
	Signalman Sorter - Post Office	 Domestic Servant Dough Mixer 	 Private or equivalent - Army
	Smelter	Doubler	 Roundsman
	oprayer Stereotyper Storedore	 Dustbin man/refuse collector Dust 	 Seaman - Ordinary - Irish Naval Service Shon Assistant - no sensial training/
- C		- Dyci 1	e suop resistante - no spectat u annug responsibilities
	Lailor - Cutter and fitter Telephone installer Foolmaker	 Fisherman Forestry Worker 	 Spinner Storeman/Storekeeper - no special training/ reconsibilities
•	Turner	Gardener/Groundsman (not in charge of others)	
	l ypesetter	 Gardener (Market) - no employees 	 Taxi Driver (who does not own cab) Textile Printer
•	Upholsterer	 Housekeeper (Not in charge of others) 	 Ticket Collector Tractor Driver
•	Vehicle Builder		 Twister
	Waiter - Head - in charge of others Weaver Welder		

	SOCIAL CLASS DEFINITIONS	
	Guide to Grade "E" Households	Grade "F"
Grade "D" (cont'd)	Lowest Level of Subsistence	Guide to Grade "F50+" Households
 Underground worker - unskilled 	 Casual/Part-time or lowest grade workers 	Large Farmers
 Van Driver/Van Salesman Waitress/Waiter (unless Head Waiter) Warehouseman 	 Pensioner - Old age, disability, Widows Pension who are dependent on State Aid or Pensions only, with no other source of income 	 Farmers or Farm Managers of holdings of 50 acres or more
 Watchman Window Cleaner Woolsorter Workers in general who are unskilled or semi- skilled 	 People who are unable to take their place in the higher grades owing to periods of sickness/unemployment or lack of opportunity and are dependent on Social Security or whose private means are so modest as to be no more than basic Society Security payments Respondents will only be graded "E" if the Head of the Household is "E" and no other member of family is the Chief Wage Earner 	 Guide to Grade "F50-" Households Small Farmers Farmers or Farm Managers with holdings of less than 50 acres Farm Workers/Labourers