National Transport Authority:

Survey of commercial vehicle freight managers

Final report

October 2010

smartfreight

PricewaterhouseCoopers

Contents

Executive Summary

Background

1. Until relatively recently, transport authorities in both Ireland and the European Union had not considered the management and use of freight transport in any great detail.

2. Despite this, much more attention is now being paid at both the national and European level to the use of commercial vehicles, in terms of efficiency and load factors as well as their impact on the economy and wider environment.

3. As levels of interest from the perspective of Government and planners increase, so too does the need to gather as much reliable data as possible in order that impacts can be measured and that policies can be put in place to manage the use of freight vehicles efficiently.

Terms of reference summary

4. In January 2010, PricewaterhouseCoopers (PwC) was appointed by the National Transport Authority ("NTA") to carry out a face-to-face survey with fleet managers of companies operating in the Greater Dublin Area.

5. The survey was to include a small number of interviews with freight managers from outside the GDA, covering other parts of the country.

6. The purpose was to obtain an accurate description of the composition of fleets, types of road freight transport (covering both consignment and servicing trips) and determinants of freight travel behaviour across the Greater Dublin Area.

7. The survey was also conducted to help planners understand what is happening in urban centres as well as what drives supply chain decisions like "just in time" small and frequent deliveries and what impact policies may have on them.

Our Approach

8. Upon being appointed to this project PwC and the NTA Project Steering Group held a detailed project initiation meeting to discuss our approach and to gain a full appraisal of the issues which were to be explored in the survey questionnaire.

9. A detailed workshop was convened to finalise the questionnaire with key input from the NTA and the wider transport and haulage industry in addition to further input from the PwC industry experts.

10. In order to promote both levels of awareness and participation in the survey, we consulted with key stakeholders including the Freight Transport Association as well as placing an article in a leading industry journal published by the Construction Industry Federation (CIF) which significantly helped to bolster our response rate and increase awareness levels.

11. We then began to devise our sample of business/organisation contacts from which to choose appropriate respondents. This was devised to be broadly representative of respective business sectors and different account groups across the GDA.

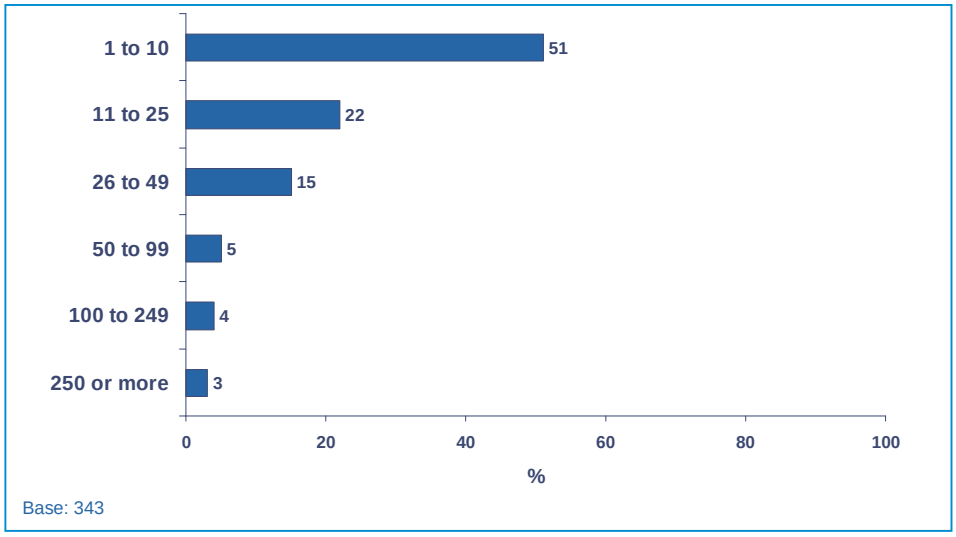
12. All interviews took place between the 9th February and 31st March 2010. All of the interviews were conducted face-to-face at the premises of the participating business/organisation with the

exception of a small sample of respondents located outside the Greater Dublin Area, which were duly completed by telephone.

Sample Profile

13. Just over half of the businesses/organisations that were interviewed employed between one and ten employees and were predominantly based in the Greater Dublin Counties of Dublin, Meath, Wicklow and Kildare.

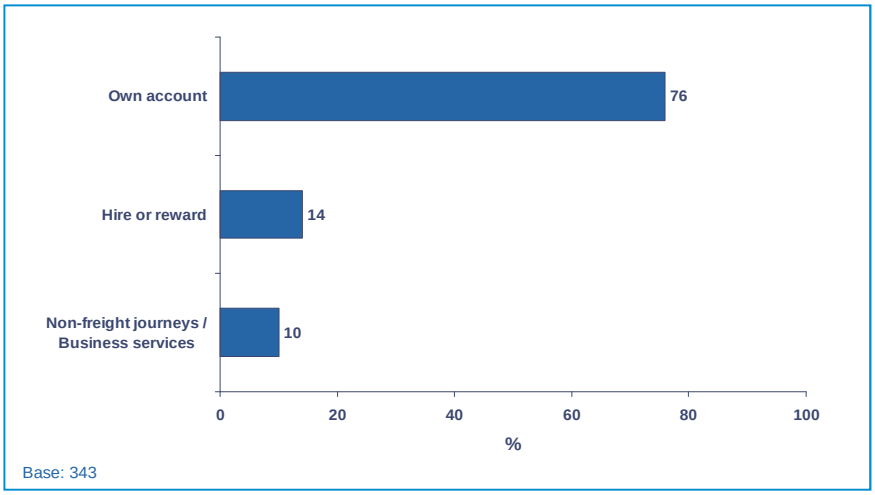
Sample Profile: How many full time employees does your organisation have?



14. There was a broad range of industry sectors represented in this survey with wholesale (24%), retail (13%) and private sector services (15%) amongst the most prominent. The profile of sector types is broadly consistent with the business population structure and can therefore be treated as a reasonable representation of the industry as a whole.

15. In terms of the account types of those who took part in the survey, the majority of respondents (76%) classified themselves as “own account” operators.

Sample profile: What is the main use of commercial vehicles in your organisation?

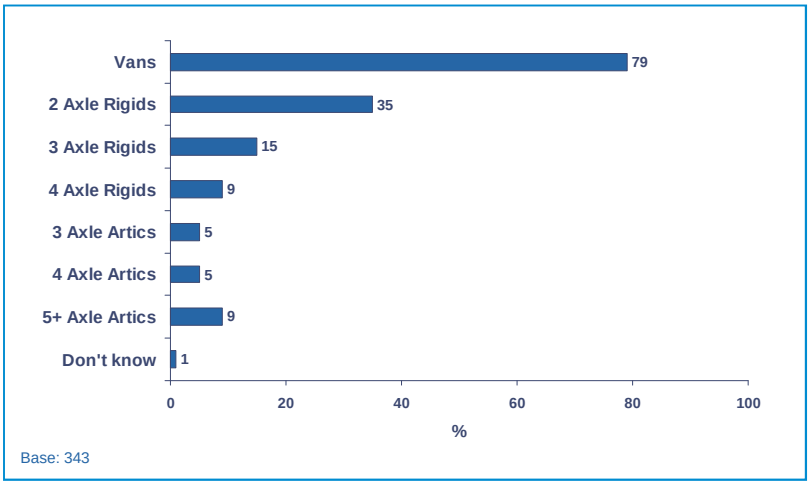


16. Of the 343 completed interviews there was a variety of goods carried both within the differing manufacturing sub-sectors as well as within the agriculture and public sectors with the dominant goods type being deliveries to retailers and the wider service industry (27%), followed by construction materials and the transportation of machinery / vehicles and equipment.

Company and Fleet Description

17. A significant proportion of our sample operated vans as part of their fleet, with the proportion of larger vehicle types decreasing as they increase in size.

Which of the following vehicles does your fleet consist of?



18. During the ten year period between 2000 and 2010 there was a marked increase in the total number of vehicles on the road – an increase of 56% over the ten year period.

19. Despite this, the relative total proportions of each vehicle types have remained consistent throughout this same period.

Which of the following vehicles does your fleet consist of?

Vehicle Type	Total (2010)	Total (2000)
Vans	1373 (51%)	747 (50%)
2 Axle Rigids	456 (17%)	244 (16%)
3 Axle Rigids	124 (5%)	83 (6%)
4 Axle Rigids	92 (3%)	76 (5%)
3 Axle Artics	90 (3%)	52 (3%)
4 Axle Artics	83 (3%)	24 (2%)
5+ Axle Artics	345 (14%)	220 (15%)
Tankers	114 (4%)	50 (3%)
Total	**2677**	**1496**
% increase 2000-2010	**56%**	

Usage of electric / hybrid vehicles

20. Of the 343 respondents who took part in the survey – 8 indicated that they currently use electric/hybrid vehicles with the majority of these operating in the services sector. However, of the remainder, just under half expressed an interest in using these types of vehicles in the future.

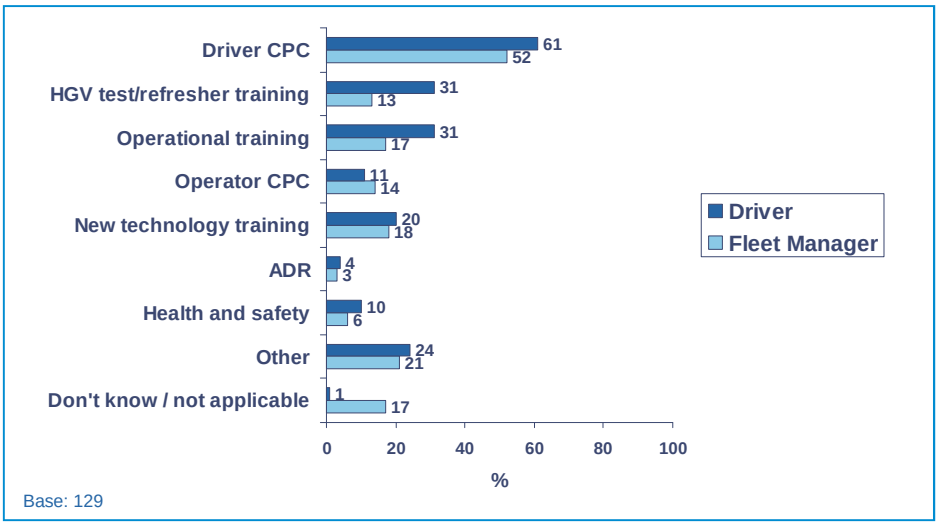
21. A third of the respondents interviewed told us that their company/organisation currently measures the performance of its fleet/vehicles with miles per gallon/km/litre the most popular measure currently in place.

Training, Management and Load Types

22. Just under a third of respondents indicated that their company or organisation currently undertakes either driver or fleet management training. Medium and large sized businesses undertake proportionally more fleet management training (39% and 70% respectively) compared with 28% of smaller businesses.

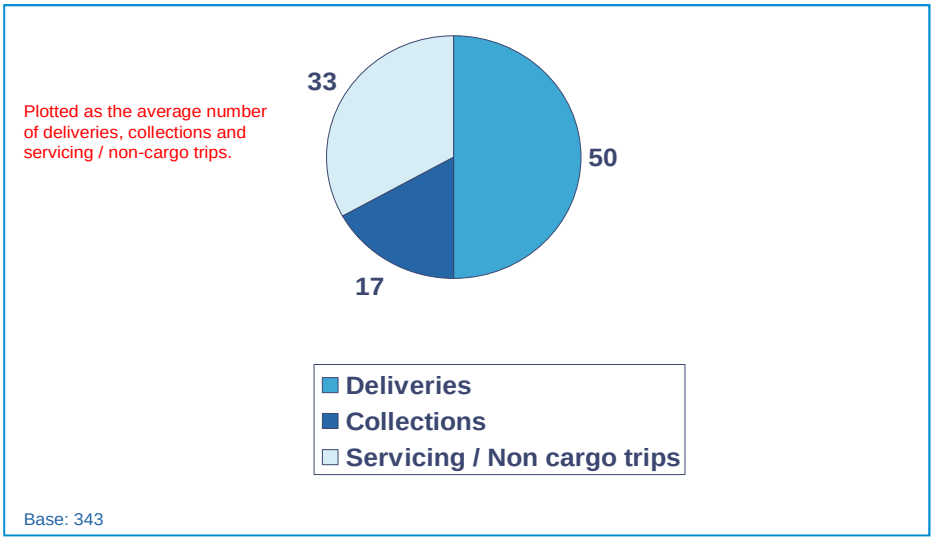
23. Only 129 respondents were in a position to answer the question regarding driver training, however, it is quite positive that those participating companies are beginning to consider the importance of on-going training for both drivers and fleet managers by providing a range of programmes that can support them in their roles and ongoing development.

Which of the following training programmes are delivered for (i) drivers and (ii) fleet managers?



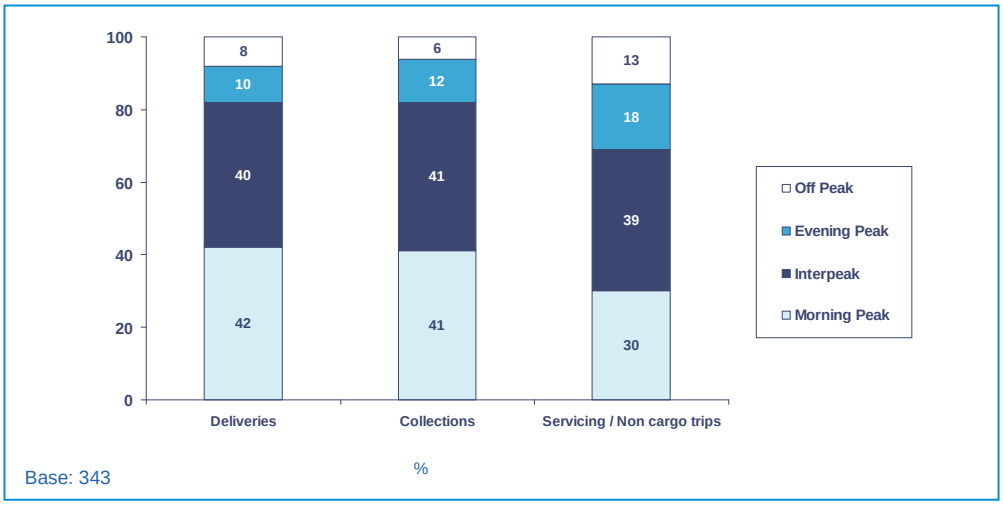
24. On average, 50% of the journeys made by commercial vehicles are undertaking deliveries, 17% undertaking collections, with 33% of journeys spent on servicing or non-cargo trips.

In terms of the commercial vehicle work of the company, what is the total proportion of work carried out in terms of deliveries, collections and servicing / non-cargo trips?



25. As detailed below, the majority of deliveries, collections and servicing trips take place, on average, in the morning and inter-peak periods, with smaller proportions respectively spent in the evening and off-peak periods.

In terms of the commercial vehicle work of the company, what proportion of work is carried out away from the base during the following times?



26. In terms of the respective proportions of the different fleets on the road, just under half of the total number of respondents indicated that between 91%-100% of their fleet is on the road on a typical day.

27. As expected, the larger fleets typically have more of their vehicles on the road, with 69% indicating that between 91%-100% of their fleet is on the road on a typical day compared with 30% of medium sized businesses.

28. When looking at the estimated proportion of multi drop trips – 40% told us that between 81%-100% of their activities involve multi drop trips. Of the various sectors represented in our sample of respondents, those within the services group carry out the most amount of multi-drop trips followed by those from the manufacturing sector.

29. In addition, medium and large sized businesses carry out more multi drop trips compared with smaller businesses with just over 63% of medium sized businesses carrying out multi drop trips in the 81%-100% bracket.

Return Loads

30. Just under a third (29%) of the total number of respondents indicated that their business/organisation look for return loads as part of their day to day activities.

31. Almost half (46%) of those with a large fleet size look for return loads compared with well under a third of those with a small fleet size (27%).

Consolidation Centres

32. With respect to the use of consolidation centres, 6% of the respondents interviewed indicated that they or their businesses/organisations currently use consolidation centres.

33. Those businesses operating in the manufacturing and services sectors are more likely to use consolidation centres more than those in other sectors.

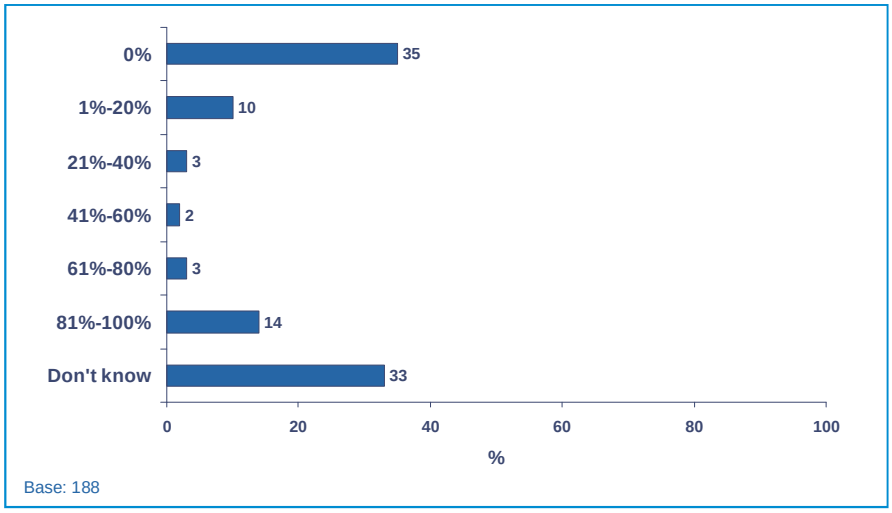
34. Of those who don't currently use consolidation centres – 11% indicated that they would be interested in using one if they were provided at the edge of the city in conjunction with vehicle or access restrictions. More medium and large sized fleet operators (22% and 19% respectively) would be inclined to use such centres on the edge of the city compared with those with smaller fleet sizes.

On-Street versus Off-Street

35. There was a relatively even response to those who visited on and off street areas, with 52% of trip destinations made to on-street areas compared with 48% of trips to off-street areas.

36. 35% of respondents told us that of the off-street stopping destinations that they visit, none of them have predetermined time slots. If this is considered within the context of a further 33% who indicated that they didn't know – then by implication it would appear that there are few off-street stopping places that have predetermined time slots.

What percentage of 'off-street' stopping places have predetermined time slots?

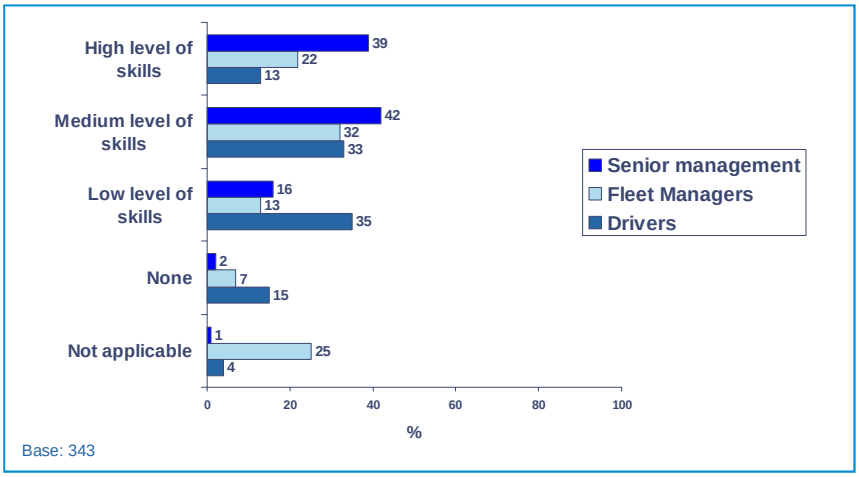


Description of Information and Technology Used

37. As the data below highlights, there was quite a mixed response in terms of the respective levels of Computer Information and Communication Technology (CICT) skills of senior management, fleet managers and drivers.

38. Senior management were perceived to have the most proficient skills set in this respect with 39% indicating that they have a high level of skills. In contrast, drivers were said to have a lower level of CICT skills with 15% of our sample indicating that they have no such skills. This is somewhat surprising in light of the fact that it is often drivers who operate the most common on-board CICT equipment including SATNAV and other electronic route information.

With regard to the Computer & Information Technology skills in your company, how would you rate that of (i) senior management, (ii) fleet managers and (iii) drivers?



39. Most respondents were able to accurately link the use of the technology with wider benefits to their business or travel methods. Half of the sample highlighted cost or time savings as a key benefit derived from using this technology – which was particularly important for the small business population, particularly in a climate of much tighter profit margins.

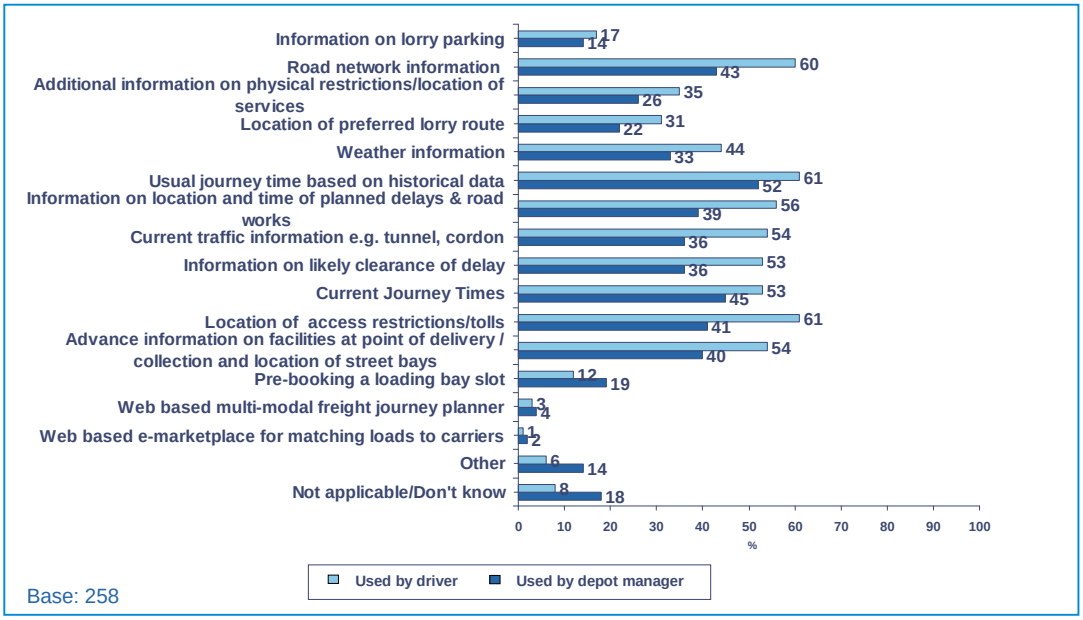
40. Other key benefits from the wider use of technology included improved levels of customer service (31%), greater security (16%) in addition to better and more accurate management statistics (10%).

41. In a similar way to the range of technology currently in use, the range of information used to plan journeys by both the depot manager and the driver is reasonably high and varied.

42. Of the information highlighted below, on average the drivers are using more of the available information than the depot managers; however, collectively it is very positive to note the breadth and depth of the advance information that is currently being used which is consistent across both fleet and business sizes as well as across the different sectors.

43. From the list provided only the web-based multi modal freight planner and 'e' market place have relatively low level of existing take up.

Which of the following information is currently used to plan journeys by (i) the depot manager and (ii) the driver?



44. 13% of the sample of respondents indicated that their company employ staff with specific responsibilities for obtaining traffic information, which was consistent across all aspects of our analysis.

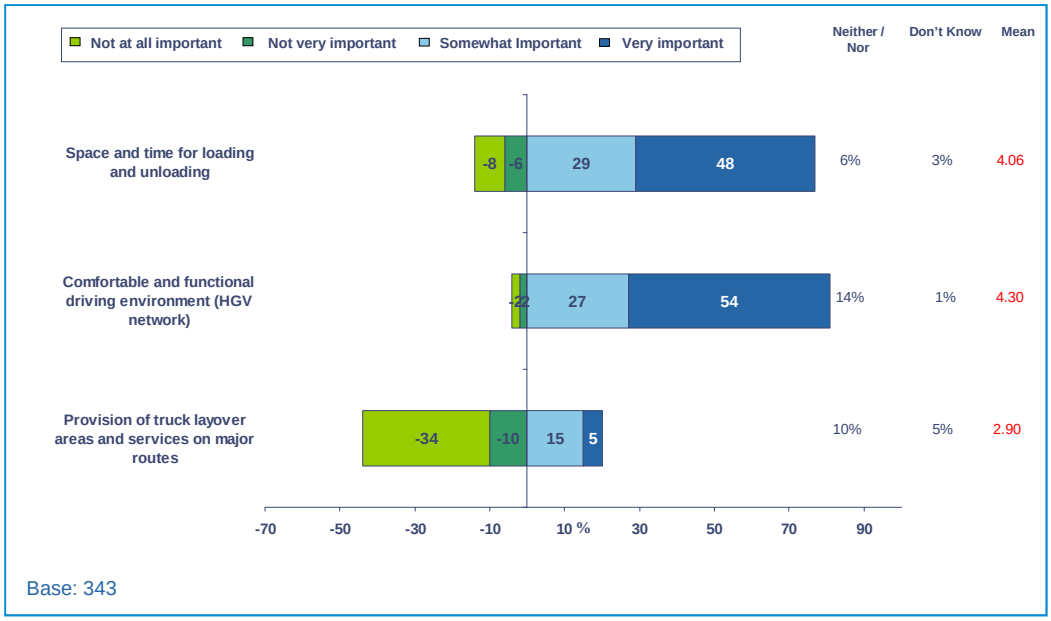
45. In addition to this, 14% of respondents currently obtain traffic information from a third party. Of those who hold subscriptions for such information large businesses are in the majority (27%) in comparison to the smaller and medium outfits. This is perhaps unsurprising, with resources the key determining factor.

Transport Issues that affect business

46. As the data below clearly illustrates, the necessary space for loading and unloading as well as the provision for a comfortable and functional driving environment are considered to be very important issues for the majority of respondents. These twin issues were said to be critical for both drivers and depot managers and particularly with respect to space for loading and unloading in terms of ensuring quick and efficient journey times.

47. Of less perceived importance however was the provision of truck layover areas and services on main routes. This may in part be explained as a consequence of the fact that the majority of our sample of respondents operated vans and other smaller commercial vehicles as opposed to trucks.

On a scale of 1-5, where 5 is very important and 1 not at all important, how important/unimportant do you consider the following issues?



Base: 343

Slow Journey Times

48. Slow or unpredictable journey times can often be a key frustration for any business involved in the transportation of goods and services. However, only 11% of our sample of respondents indicated that they 'always' find slow journey times an issue when moving goods in the Dublin, Meath, Wicklow and Kildare areas – while 15% indicated that this is never an issue.

49. Despite this relatively positive note, more needs to be done to ensure that the business population in the Greater Dublin Area can efficiently and quickly transport their goods, particularly in light of the 46% who 'sometimes' confront slow journey times in the course of their business activities.

50. In terms of the specific areas where the key delays occur, the town/city centre (68%) was said to be the main area where delays take place most often, with the outskirts of the town/city the second most common area (18%).

51. In terms of the time periods when journey times are most unpredictable, the majority (60%) felt that the morning peak (7am – 10am) was on average the most unpredictable time.

52. In contrast, only 13% highlighted the evening peak (4pm – 7pm) as the most unpredictable time – which may reinforce the view that the measures which have been implemented to ease traffic flow in the evening peak are beginning to have a discernable impact.

53. The morning peak period particularly affects those in the manufacturing (65%) and construction (67%) sectors.

54. There was a relatively muted response from those who took part in the interviews as to whether they use alternative modes of transport in order to transport their goods. Outside of the use of commercial vehicles – sea (10%), air freight (7%) and the use of couriers (7%) were the main alternatives put forward.

55. Many of the respondents were able to highlight specific examples of initiatives that they, or their business/organisation, have implemented with respect to noise and carbon emission reduction, parking/safety, improving efficiency and cutting costs.

56. Just under half of the respondents (46%) highlighted cutting costs as being very important, with the most common initiatives implemented to support this including; better route analysis/scheduling (23%) more detailed fuel consumption monitoring (14%) together with more attention being paid to price comparisons (11%).

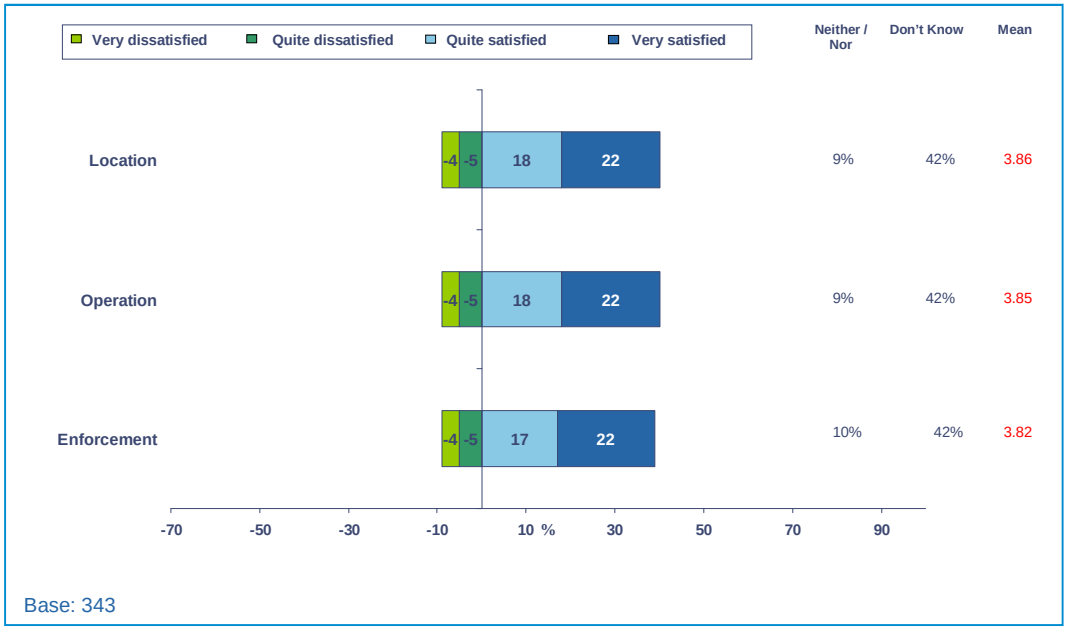
57. Further to this, 35% highlighted specific measures that have been adopted to help improve efficiency, including increasing loading levels (21%) and monitoring fuel consumption (17%).

58. This was very consistent across the participating sectors and business sizes, with the most significant degrees of satisfaction from those with medium sized fleets.

59. The most significant levels of dissatisfaction were with respect to the location of the 5 axle cordon, with those operating the largest fleet sizes voicing the most prominent issues (8%).

60. However, the data clearly illustrates that the measures that were adopted both prior to and post the introduction of the 5 axle cordon have been managed extremely well and that the majority of respondents have not been adversely affected or impacted.

How satisfied are you with the information provided regarding the location, operation and enforcement of the City Centre 5 Axle cordon?



Base: 343

1. Background and terms of reference

Background

1.1. Until relatively recently, transport authorities in both Ireland and the European Union had not considered the management and use of freight transport in any great detail.

1.2. Despite this, much more attention is now being paid at both the national and European level to the use of commercial vehicles, in terms of efficiency and load factors as well as their impact on the economy and wider environment.

1.3. As levels of interest from the perspective of Government and Planners increases, so too does the need to gather as much reliable data as possible in order that impacts can be measured and that policies can be put in place to manage the use of freight vehicles efficiently.

1.4. As the Irish Minister for Transport noted in the recent "Smarter Travel" policy document, *"Current transport trends are unsustainable"*[1] and that the Government must respond to this by increasing and promoting the use of sustainable public transport, but also that the use and management of *freight vehicles* has an important role to play in delivering the wider vision and objectives.

1.5. '*2030 Vision*' is the name given to the Strategic Transport Plan being developed by the National Transport Authority (NTA) for the Greater Dublin Area (GDA). It will be at the heart of all transport planning in the region from 2010 until 2030.[2]

1.6. This vision requires policy developments with respect to both the movement of people and goods with the following '2030 Vision' objectives having been identified as affecting the freight sector:

- Improve journey time reliability for business travel and the movement of goods;
- Reduce overall journey times for business travel and the movement of goods;
- Improve access to GDA Ports and Dublin Airport;
- Provide efficient goods distribution, servicing and access to materials;
- Minimise the impact of transport on air quality, greenhouse gases, noise and vibration; and,
- Improve travel information.

1.7. An initial list of seven possible freight transport measures have also been considered (as detailed below), some of the relevant issues from which will be reflected upon later in this report.

- Consolidation depots;
- Transfer of freight to rail;
- Better access to ports and airports;
- Access control for HGV's;
- Freight road user charging;
- Priority freight lanes, with HOV or buses; and,
- Freight Quality Partnerships.

[1] Smarter Travel – "A Sustainable Transport Future": A new transport policy for Ireland 2009-2020.

[2] '2030 Vision for Transportation in Greater Dublin': www.2030vision.ie

1.8. The data gathered for the preparation of this report will be used to supplement the work being undertaken as part of the SMARTFREIGHT European Union Project which aims to automatically collect data from goods vehicles as well as reporting back real time traffic information, route advice, access, information regarding loading bays and priority levels.

Terms of reference

1.9. In January 2010, PricewaterhouseCoopers (PwC) was appointed by the National Transport Authority ("NTA") to carry out a face-to-face survey with fleet managers of companies operating in the Greater Dublin Area.

1.10. The survey was to include a small number of interviews with freight managers from outside the GDA, covering other parts of the country.

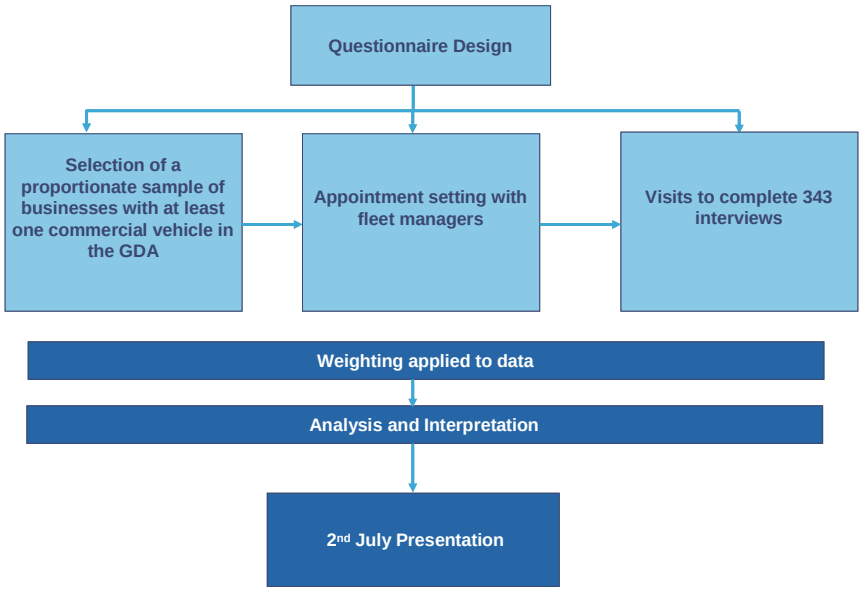
1.11. The purpose was to obtain an accurate description of the composition of fleets, types of road freight transport (covering both consignment and servicing trips) and determinants of freight travel behaviour across the Greater Dublin Area.

1.12. The survey was also conducted to help planners understand what is happening in urban centres as well as what drives supply chain decisions like "just in time" small and frequent deliveries and what impact policies may have on them.

2. Overview of our approach

2.1. In order to address the terms of reference an extensive programme of quantitative research was undertaken. The key stages of this programme are illustrated in Figure 2.1.

Figure 2.1: Overview of apparoach



2.2. Upon being appointed to this project PwC and the NTA project steering group held a detailed project initiation meeting with the key personnel at the NTA to discuss our approach and to gain a full appraisal of the issues which were to be explored in the survey questionnaire.

2.3. A detailed workshop was convened to finalise the questionnaire with key input from the NTA and the wider transport and haulage industry in addition to further input from the PwC industry experts.

2.4. In order to promote both levels of awareness and participation in the survey, we consulted with key stakeholders including the Freight Transport Association as well as placing an article in a leading industry journal published by the Construction Industry Federation (CIF) which significantly helped to bolster our response rate and increase awareness levels.

2.5. We then began to devise our sample of business/organisation contacts from which to choose appropriate respondents. This was devised to be broadly representative of respective business sectors and different account groups across the GDA.

2.6. All interviews took place between the 9th February and 31st March 2010. All of the interviews were conducted face-to-face at the premises of the participating business/organisation with the exception of a small sample of respondents which have located outside the Greater Dublin Area, which were duly completed by telephone.

2.7. All prospective respondents received a letter from PwC on behalf of NTA introducing the survey and requesting their cooperation by taking part in an interview.

2.8. This report is based on **343 completed interviews** with commercial vehicle fleet managers, and in smaller organisations the owner/manager.

2.9. All of the completed questionnaires were coded and analysed by our in-house team of data analysts and cross-tabulations were run to ensure that the data was as meaningful and enlightening as possible.

2.10. An overview of the top-line broad findings and key issues was presented to the project steering group at NTA on 2nd July 2010 at their Dublin offices.

2.11. PwC is a Market Research Society (MRS) company partner, and this programme of research was conducted in accordance with the MRS Code of Conduct which guarantees anonymity and confidentiality.

2.12. The questionnaire which formed the basis of the all of the interviews which took place ban be found at Appendix A of this report..

3. Sample Profile

3.1. As Figures 3.1 and 3.2 illustrate, the majority of the businesses/organisations that were interviewed were relatively small with 73% employing less than 25 employees. 95% were predominantly based in the Greater Dublin Counties of Dublin, Meath, Wicklow and Kildare.

Figure 3.1: Sample Profile: How many full time employees does your organisation have?

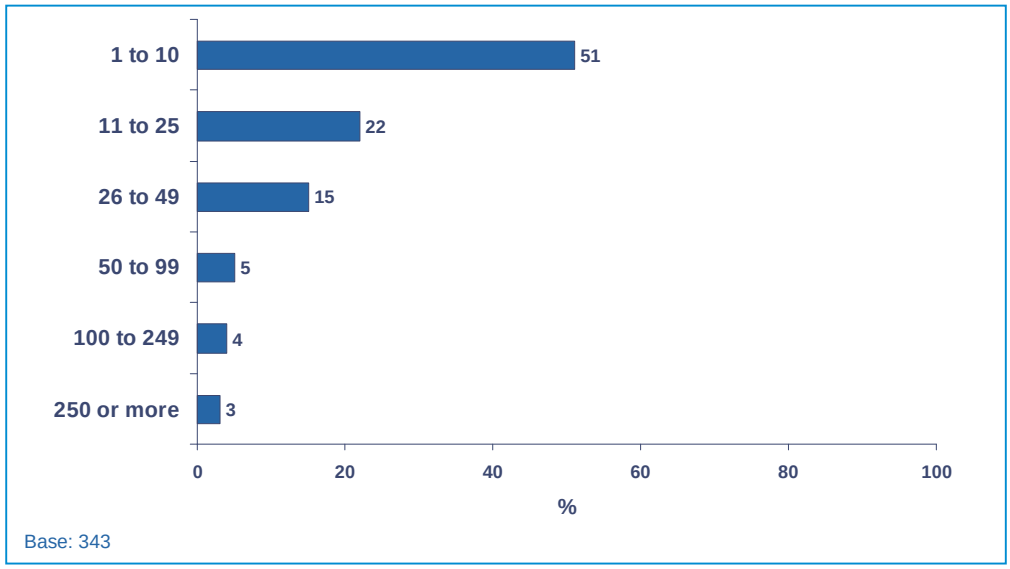
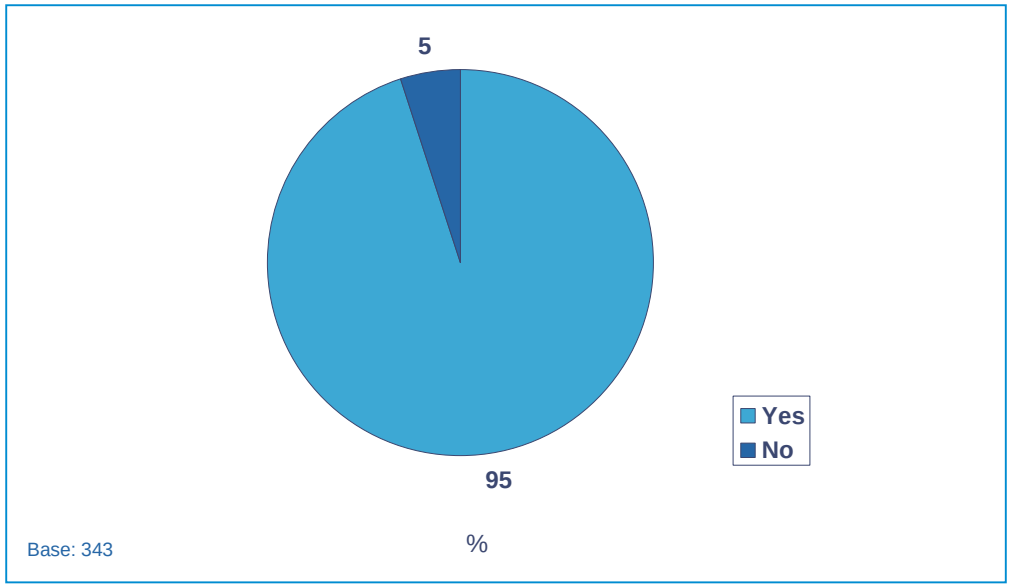


Figure 3.2: Sample Profile: Is your business based in the Greater Dublin Area? (Dublin, Meath, Wicklow and Kildare)



3.2. A weighting matrix was applied to all of the data that was gathered to ensure that the results were representative of the business population structure of the Greater Dublin Area. This matrix was devised, working closely with NTA, drawing on previous PwC research as well as statistics from the NUTS 2 business profiles.

3.3. The data was 'weighted' so that the proportions of small, medium and large businesses within each sector were representative of the overall population.

3.4. As illustrated in Appendix B, we, working closely with the NTA steering group, used a number of sources to devise the most appropriate weighting matrix. This was completed using population figures from the NUTS 2 region together with the percentage of the population based on the IDS profile and applying this to the data that we had gathered.

3.5. Figure 3.3 and 3.4 respectively illustrate both the un-weighted and weighted profiles of the sectors represented in this survey. The weighted profile is broadly representative of the profile of commercial vehicle users in the south and east of Ireland.

Figure 3.3: Un-weighted sector profile: How would you describe the sector in which your organisation operates?

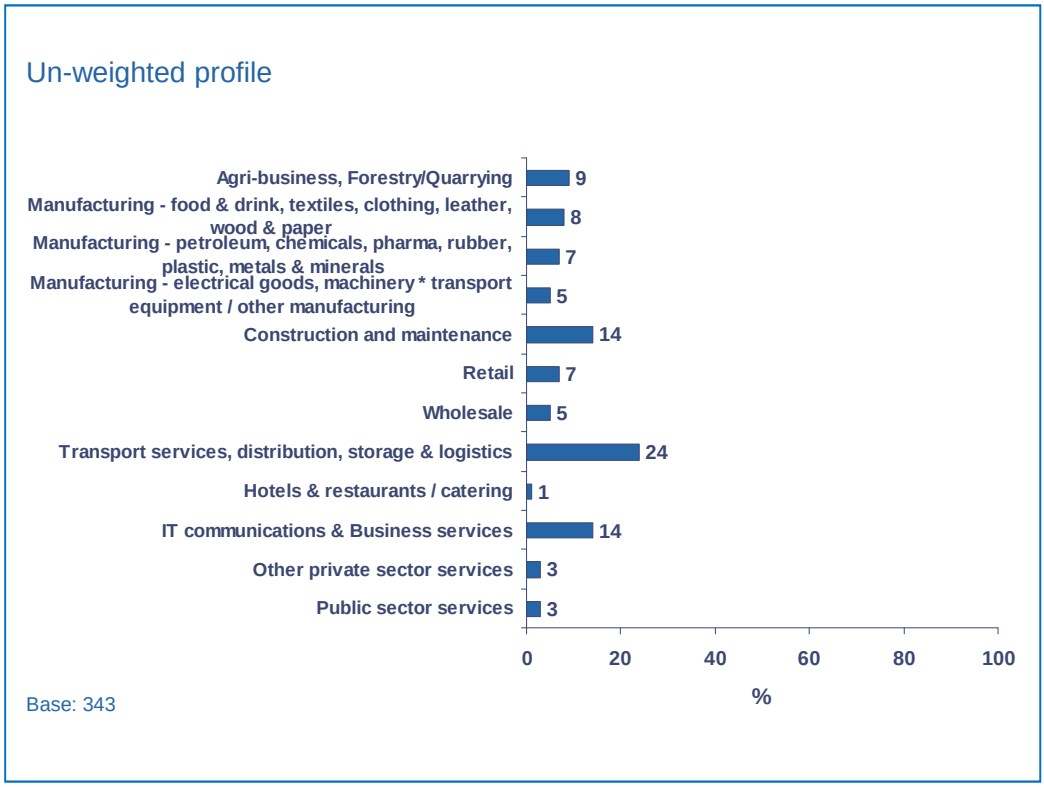
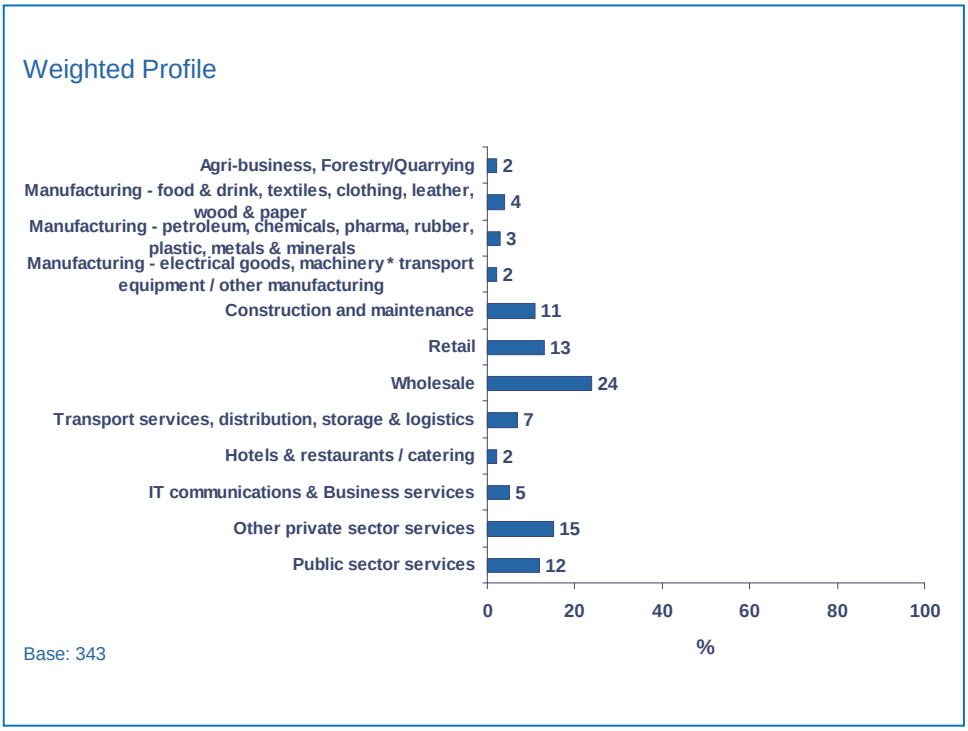
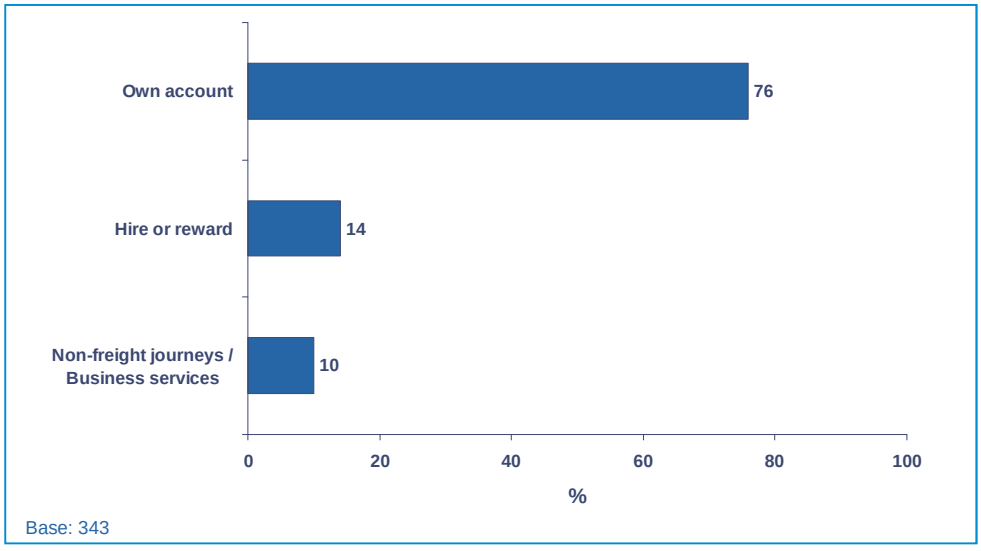


Figure 3.4: Weighted sector profile: How would you describe the sector in which your organisation operates?



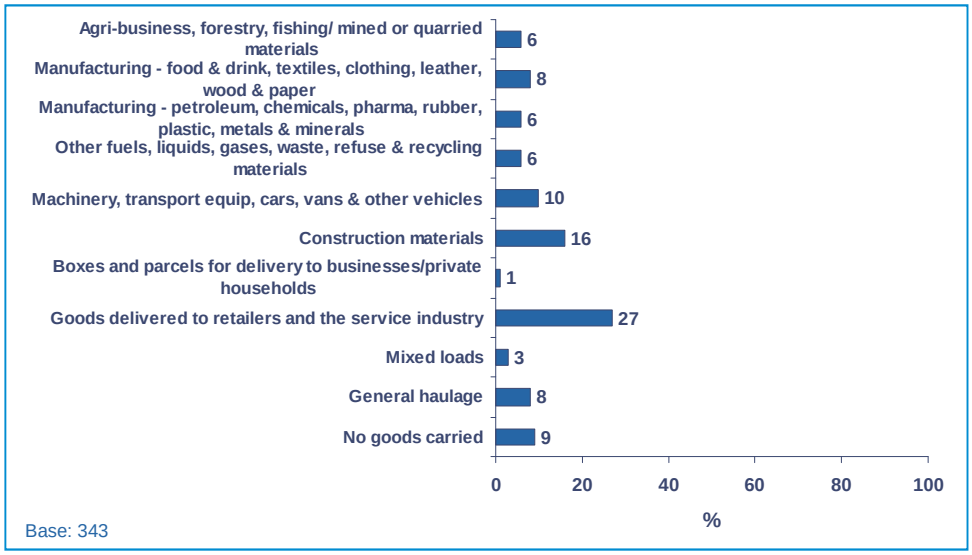
3.6. In terms of the account types of those who took part in the survey, as Figure 3.5 indicates, the majority of respondents (76%) classified themselves as own account operators.

Figure 3.5: Sample profile: What is the main use of commercial vehicles in your organisation?



3.7. Of the 343 completed interviews there was a variety of goods carried both within the differing manufacturing sub-sectors as well as within the agriculture and public sectors with the dominant goods types being deliveries to retailers and the wider service industry (27%), followed by construction materials and machinery / vehicles and transportation of equipment.

Figure 3.6: Sample profile: What is the main type of goods carried?



3.8. When queried further about the main type of goods carried, 21% of respondents indicated that they carry dangerous goods that require ADR certification – which is an international agreement stipulating that detailed technical requirements have to be met before a certificate allowing the carriage of dangerous goods is issued to a vehicle. A further 85% indicated that they did not carry any dangerous goods whatsoever.

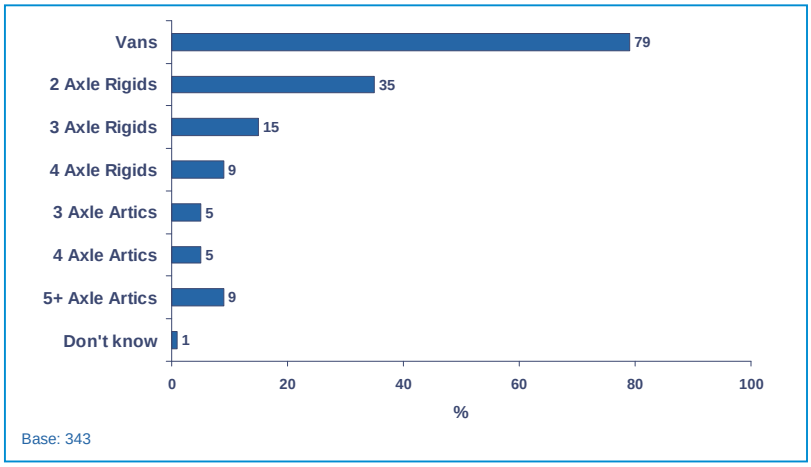
3.9. Of the dangerous goods highlighted, gases (9%) and flammable liquids (6%) were the most common with those who classed themselves as hire or reward operators most likely to carry such goods.

4. Company and Fleet Description

4.1. This section outlines the types of vehicles that each of the businesses/organisations operate on a daily basis, whilst also reflecting the range of views with respect to a potential appetite for the use of electric or hybrid vehicles together with an assessment of existing measures that monitor the performance of different fleet types.

Profile of the fleets

Figure 4.1: Which of the following vehicles does your fleet consist of?



4.2. As the data above illustrates, quite a sizeable proportion of our sample operate vans as part of their fleet, with the proportion of larger vehicle types decreasing as they increase in size. This may in part be explained by the fact that our sample was largely comprised of small and medium sized businesses with the majority being in the service sector.

4.3. It is also interesting to note that 80% of those businesses that are based within the GDA indicated that they operate vans as part of their fleet compared with 60% of those outside of the GDA.

4.4. This is perhaps a reflection of a greater number of short vehicle journeys with smaller loads within the urban areas of the GDA compared with those based in other areas that may travel longer distances with heavier loads.

4.5. In addition, and as expected, those businesses interviewed who had large fleets also had a greater proportion of larger vehicles, with 18% and 28% running at least one 4 Axle and 5 Axle Artic respectively.

4.6. As Table 4.1 illustrates, the survey also assessed the total number of vehicles (in absolute terms) in addition to measuring the change across the different vehicle types between 2000 and 2010.

Table 4.1: Which of the following vehicles does your fleet consist of?

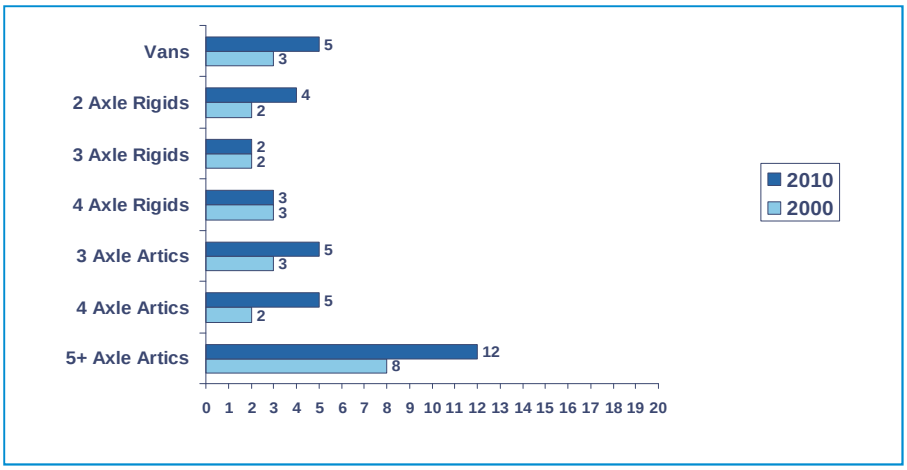
Vehicle Type	Total (2010)	Total (2000)
Vans	1373 (51%)	747 (50%)
2 Axle Rigids	456 (17%)	244 (16%)
3 Axle Rigids	124 (5%)	83 (6%)
4 Axle Rigids	92 (3%)	76 (5%)
3 Axle Artics	90 (3%)	52 (3%)
4 Axle Artics	83 (3%)	24 (2%)
5+ Axle Artics	345 (14%)	220 (15%)
Tankers	114 (4%)	50 (3%)
Total	**2677**	**1496**
% increase 2000-2010	**56%**	

4.7. As the table above highlights, there has been a marked increase (56%) in the total number of vehicles on the road between 2000 and 2010.

4.8. However, despite quite a sizeable increase in the total number of vehicles, there were relatively consistent proportions of the different vehicle types over the same period. Therefore, whilst the volume of vehicles on the road has increased quite significantly over this period – the proportions of the different vehicle types has remained relatively consistent.

4.9. As Figure 4.2 illustrates, the average number of vehicles that the sample operate has generally increased over the same 10 year period with only the average number of 3 and 4 Axle Rigids remaining static.

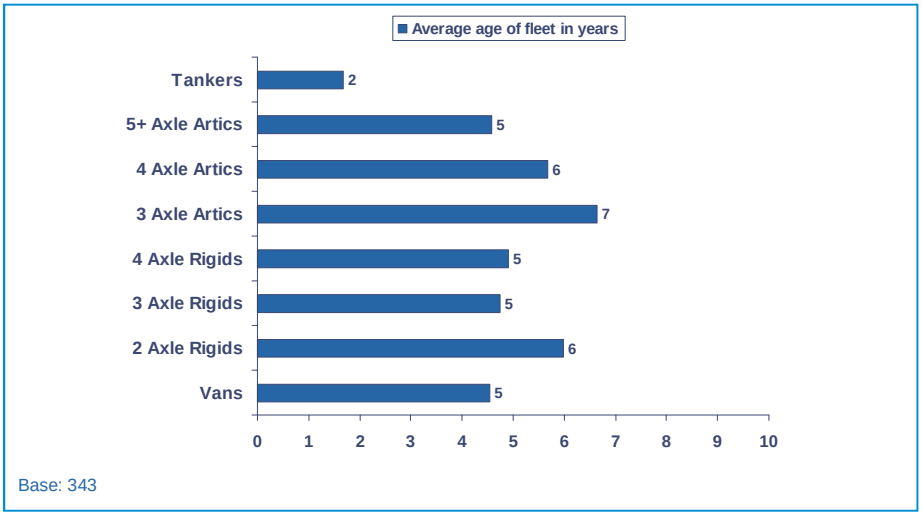
Figure 4.2: Change in average fleet size per organisation / business between 2000 and 2010.



4.10. The data detailed above is interesting in that the average number of 5+ Axle Artics has increased to an average of 12 over the past 10 years, which has occurred in spite of the recent 5 Axle ban in the City Centre. This should however be treated within the context of a relatively small base of businesses.

4.11. In terms of the respective age of the fleets, the highest average age was for the 3 Axle Artics (7 years) with the youngest vehicle type being tankers at an average of 2 years old. These results are illustrated in Figure 4.3 overleaf.

Figure 4.3: What is the average age of your fleet in years?



4.12. As Table 4.2 details, the average mileage of the different vehicles increases as the size of the vehicle increases. For example, the average mileage per annum of the 5 Axle Artics is just less than 87,000 miles, although as noted previously, there are fewer respondents who actually operate such vehicles.

4.13. Table 4.2 also provides both the maximum and minimum mileage estimates across the respective vehicle types. This illustrates the extremities at both ends of the spectrum and provides an insight into those who both considerably exceed as well as fall below the average for the particular vehicle type. For example, some respondents who operate vans indicated that they reach 150,000 miles per annum, whilst the average was 37,000.

Table 4.2: What is your estimated mileage per annum?

Vehicle Type	Average	Maximum	Minimum
Vans	36,650	150,000	10,000
2 Axle Rigids	57,458	300,000	10,000
3 Axle Rigids	48,346	180,000	15,000
4 Axle Rigids	55,216	130,000	10,000
3 Axle Artics	65,577	250,000	10,000
4 Axle Artics	76,527	200,000	12,000
5+ Axle Artics	86,648	350,000	10,000

Usage of electric or hybrid vehicles

4.14. Of the 343 respondents who took part in this survey, only 8 indicated that they currently use electric or hybrid vehicles. The majority of these operate within the service sector (7 of 8).

4.15. The main advantages of using these types of vehicles was said to be that they are environmentally friendly, that they are easy to use and that they are reasonably cost-efficient.

"'*They're Green and very cheap - 70 miles for less than a euro!*"

"*No road tax and environmentally friendly*"

Quotes from survey citing advantages of electric vehicles

4.16. However, perhaps more interestingly and as detailed at Figure 4.4, of those who do not currently use electric/hybrid vehicles just under half (48%) indicated that they would be interested in potentially using these in future.

Figure 4.4: If you don't currently use electric or hybrid vehicles, would you have any interest in using these type of vehicles in the future?

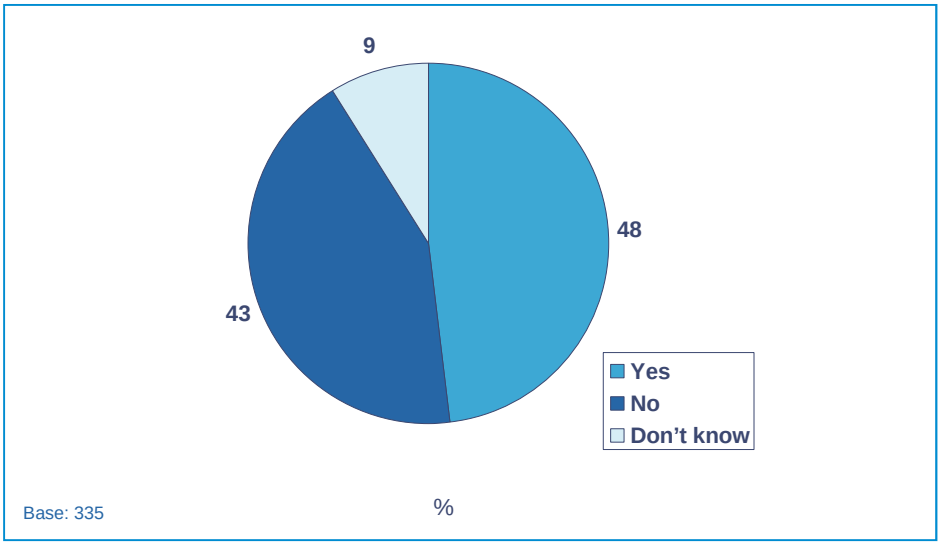
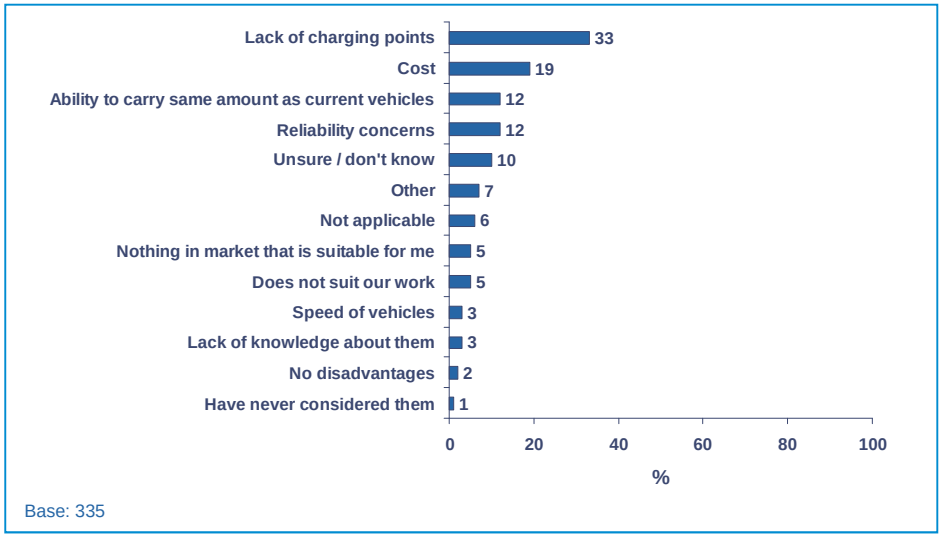


Figure 4.4: What do you see as the disadvantages to you of using electric / hybrid vehicles?



4.17. The biggest disadvantage for the small businesses interviewed was the perceived lack of charging points available (39%).

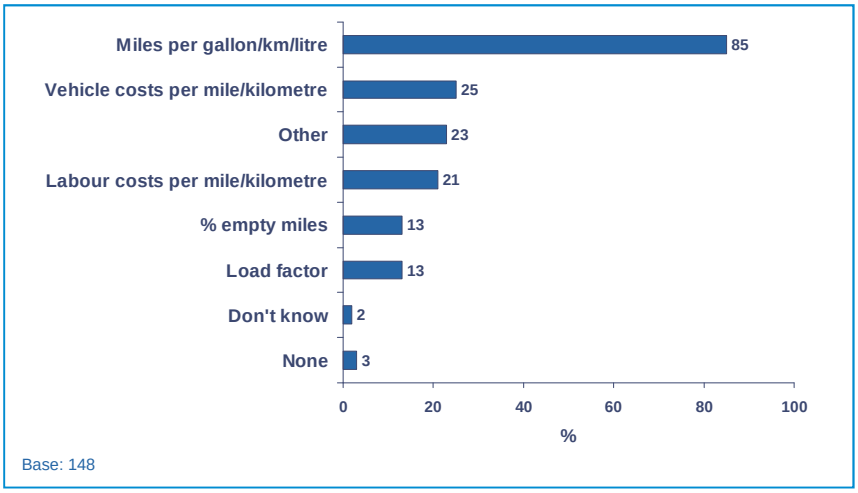
4.18. From the perspective of the medium and large businesses interviewed, the dominant disadvantage cited was with respect to cost, with 19% and 46% respectively indicating this.

Fleet performance management

4.19. A third of the respondents who took part in this survey indicated that their company currently measures the performance of its fleet/vehicles. As expected, those organisations with large fleet sizes are more likely to measure the performance of their fleet (71%) compared with 29% of those with smaller fleets.

4.20. Figure 4.6 details the most common Key Performance Indicators (KPIs) that these companies use in order to measure the performance of their fleets – with Km/litre (miles per gallon).

Figure 4.6: Which key performance indicators (KPIs) does your company use?



Summary

4.21. 8 in 10 businesses or organisations that own commercial vehicles operate vans as part of their fleet, with the proportion of larger vehicle types decreasing as they increase in size.

4.22. During the ten year period between 2000 and 2010 there was a marked increase in the total number of vehicles on the road – with an increase of 56% over the ten year period. Despite this, the relative proportion of each vehicle type has remained consistent throughout this period.

4.23. Of the 343 respondents who took part in the survey – 8 indicated that they currently use electric/hybrid vehicles with the majority of these operating in the services sector. Of the remainder, just under half expressed an interest in using these types of vehicles in the future.

4.24. A third of the respondents interviewed told us that their company/organisation currently measures the performance of its fleet/vehicles with km/litre (miles per gallon) the most popular measure in place.

5. Training, Management and Load Types

5.1. This section highlights the key views expressed in terms of the types of training and work activities carried out by the participating companies/organisations.

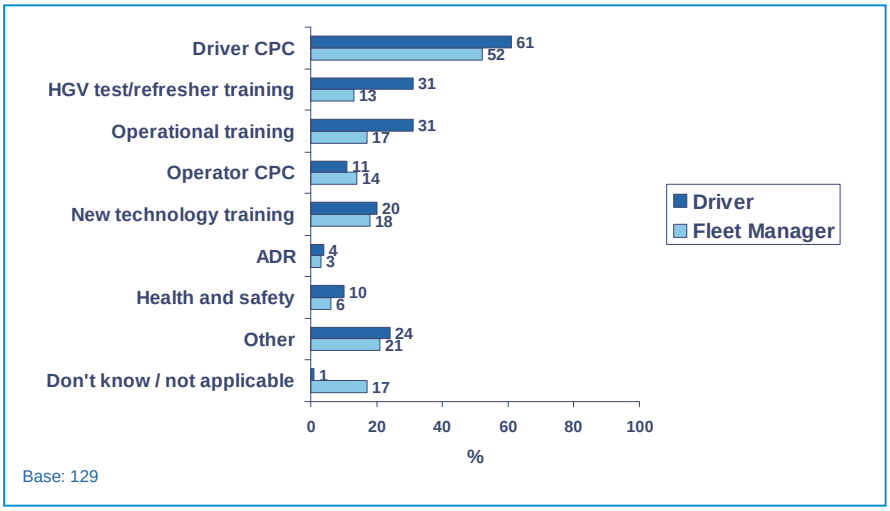
5.2. This section will also reflect upon the key trends emerging with respect to the proportions of respective fleets on the road, the frequency and type of trips made, together with an assessment of views expressed concerning the use and viability of consolidation centres.

Training

5.3. Just under a third of respondents indicated that their company or organisation currently undertakes either driver or fleet management training. Medium and large sized businesses undertake proportionally more fleet management training (39% and 70% respectively) compared with 28% of smaller businesses.

5.4. Our sample of respondents highlighted quite a broad range of training programmes that are currently being provided for both drivers and fleet managers – with the driver CPC and HGV test/refresher the most common programmes noted.

Figure 5.1: Which of the following training programmes are delivered for (i) drivers and (ii) fleet managers?

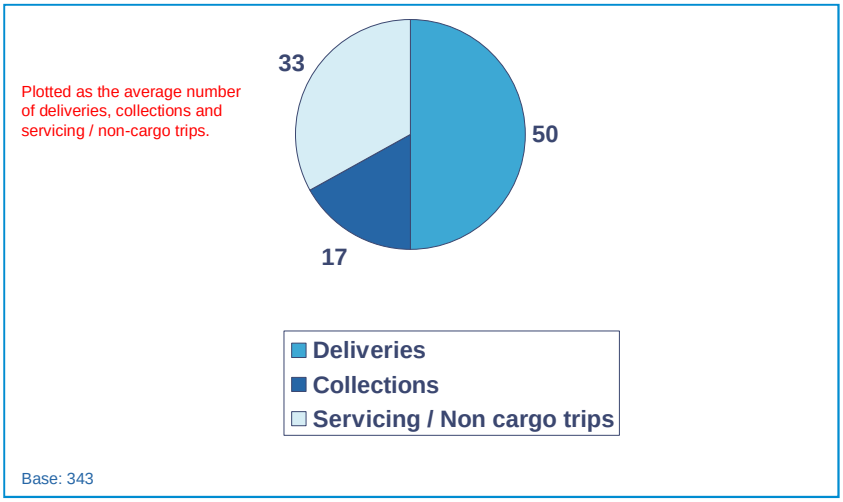


5.5. Only 129 respondents were in a position to answer the question regarding driver training, however, it is quite positive that those participating companies are beginning to consider the importance of on-going training for both drivers and fleet managers by providing a range of programmes that can support them in their roles and on-going development.

Type of journeys made

5.6. Respondents were also asked to estimate the total proportion of their work carried out across the deliveries, collections and servicing trip activities. Figure 5.2 illustrates the average percentage of work spent on each activity type across our sample.

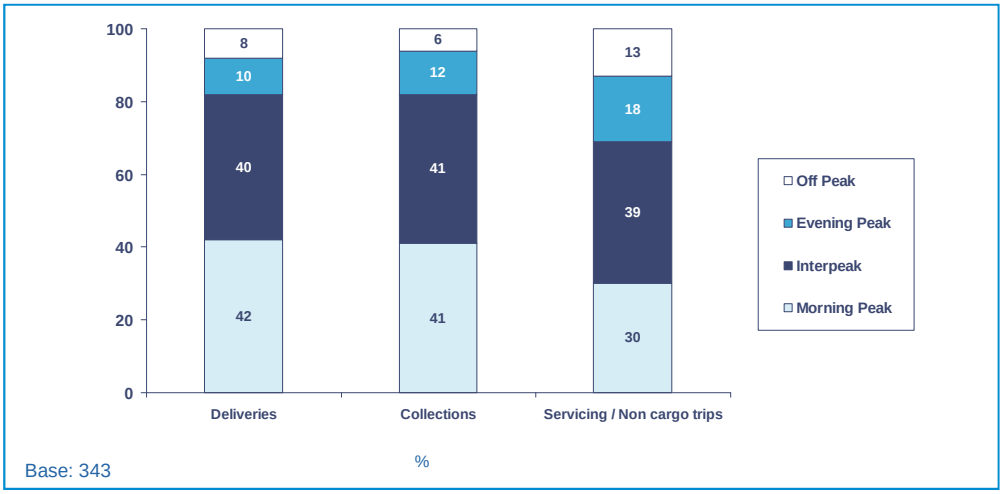
Figure 5.2: In terms of the commercial vehicle work of the company, what is the total proportion of work carried out in terms of deliveries, collections and servicing / non-cargo trips?



5.7. On average, 50% of the journeys made by commercial vehicles are undertaking deliveries, 17% undertaking collections with 33% of journeys spent on servicing or non-cargo trips.

5.8. As detailed in Figure 5.3, the majority of deliveries, collections and servicing trips take place, on average, in the morning and inter-peak periods, with smaller proportions respectively spent in the evening and off-peak periods.

Figure 5.3: In terms of the commercial vehicle work of the company, what proportion of work is carried out away from the base during the following times?

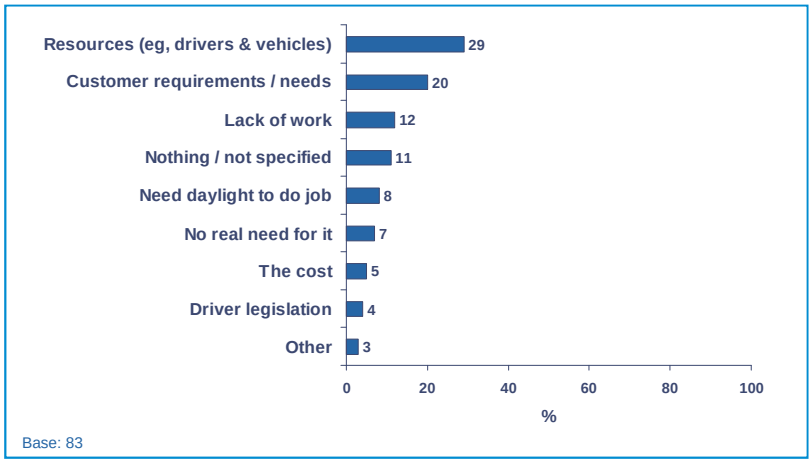


5.9. As Figure 5.3 illustrates, the majority of the respondents interviewed spent significantly less time proportionately on deliveries, collections and servicing in the evening and off-peak periods. However, just under a quarter of the full sample of respondents indicated that they could do more work outside of the two peak periods than they do currently.

5.10. Despite this and as detailed in Figure 5.4, the key issues that are preventing these organisations from doing more work during this time includes resources (29%) and fitting within customer requirements and needs (20%).

5.11. Other issues raised included a lack of work (12%) and the necessity for daylight (8%), however, it would appear from the data analysed that that the availability of resources and customer needs are largely influencing existing trends and that any changes would need to consider these twin issues.

Figure 5.4: What is preventing you from currently working outside the two peak periods?



5.12. In terms of the respective proportions of the different fleets on the road, just under half of the total number of respondents indicated that between 91%-100% of their fleet is on the road on a typical day.

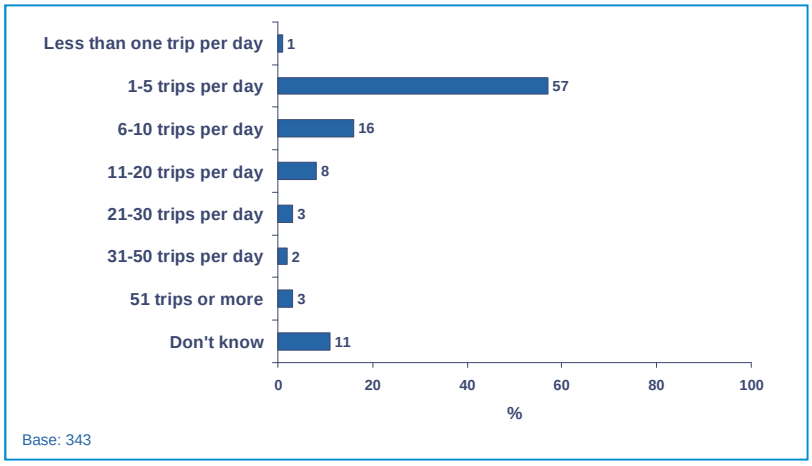
5.13. As expected, the larger fleets have more of their vehicles on the road, with 69% indicating that between 91%-100% of their fleet are on the road on a typical day compared with 30% of medium sized businesses.

5.14. When assessing responses from the perspective of the different account classifications, those grouped within the non-freight/services sectors have the highest proportion of their fleet on the road on a typical day (60% indicating that between 91%-100% of their fleet on the road on a typical day).

5.15. As Figure 5.5 highlights, 57% of the total sample of respondents told us that that they make between 1 and 5 trips per day on average.

5.16. Small businesses make the most trips within this bracket at 60%, with only a small number (3%) making 51 trips or more on a typical day – the majority of which is undertaken by the larger businesses and fleet sizes.

Figure 5.5: What is the average total number of trips from your base location each day?



5.17. Following on from the data described overleaf, when looking at the estimated proportion of multi drop trips – 40% told us that between 81%-100% of their activities involve multi drop trips. Of the various sectors represented in our sample of respondents, those within the services group

carry out the highest proportion of multi-drop trips followed by those from the manufacturing sector.

5.18. In addition, medium and large sized businesses carry out more multi drop trips compared with smaller businesses with just over 63% of medium sized businesses carrying out multi drop trips in the 81%-100% bracket.

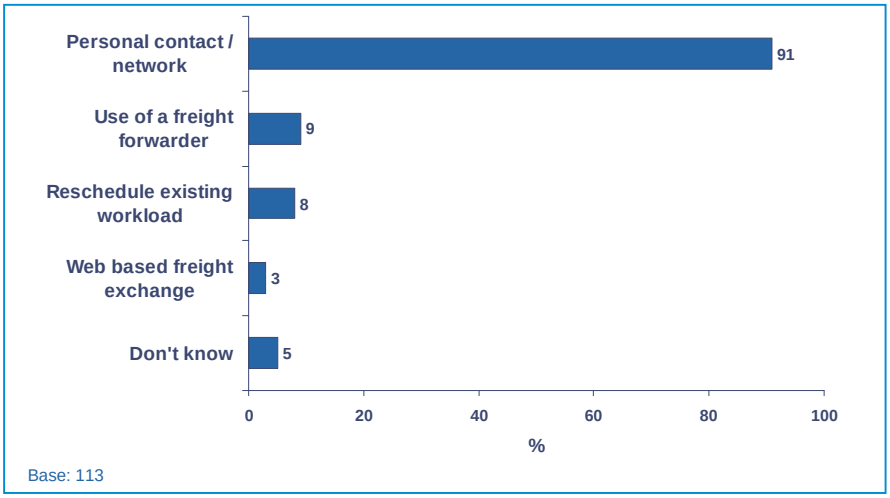
Return Loads

5.19. Just under a third (29%) of the total number of respondents indicated that their business/organisation look for return loads as part of their day to day activities.

5.20. Almost half (46%) of those with a large fleet size look for return loads compared with well under a third of those with a small fleet size (27%).

5.21. As detailed in Figure 5.6, the dominant method employed to seek return loads is via a personal network or contact (90%) with smaller numbers using a freight forwarder (9%) or by rescheduling existing workloads (8%).

Figure 5.6: How does your company look for return loads?



Consolidation Centres

5.22. The use of consolidation centres is limited with 6% of the respondents indicating that they, or their businesses/organisations, currently use consolidation centres.

5.23. Those businesses operating in the manufacturing and services sectors are more likely to use consolidation centres more than those in other sectors.

5.24. Of those who don't currently use consolidation centres – 11% indicated that they would be interested in using one if they were provided at the edge of the city in conjunction with vehicle or access restrictions. More medium and large sized fleet operators (22% and 19% respectively) would be inclined to use such centres on the edge of the city compared with those with smaller fleet sizes.

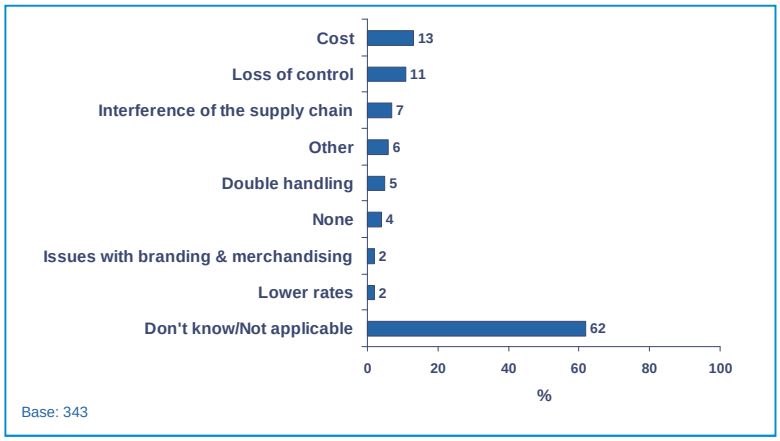
5.25. When looking at this issue from the perspective of the competing account groups, 28% of those operating within the hire or reward group would be in favour of edge of city consolidation centres compared with smaller proportions within the own account and non-freight account types.

5.26. As Figure 5.7 illustrates, the main disadvantages cited with respect to the use of consolidation centres included cost (13%) and a perceived loss of control (11%). However, for two thirds of

the sample the use of the consolidation centres was not considered appropriate for their business.

5.27. This issue was particularly prevalent amongst the small business group, with the implication that the use of consolidation centres is not appropriate nor needed when transporting low volume goods over short distances within urban areas.

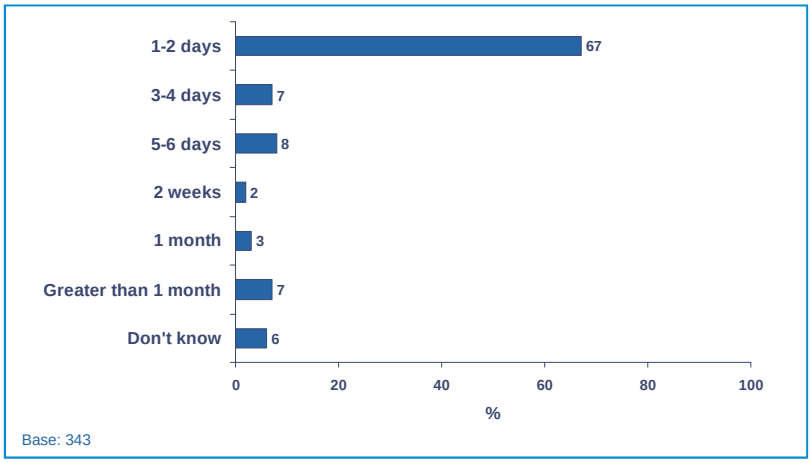
Figure 5.7: What are the disadvantages of using consolidation centres?



Advance notice of journeys

5.28. As Figure 5.8 details, 67% of respondents are aware of the need for commercial vehicle journeys between 1-2 days in advance. As expected, larger businesses appear to have a longer forecast range of their forthcoming journeys with a quarter aware of pending journeys at more than one month's notice, compared with 6% of small businesses.

Figure 5.8: On average, how long in advance do you know about the need for commercial vehicle journeys?



Destinations

5.29. In terms of destinations visited by the vehicles of those interviewed, the most popular places visited included the Greater Dublin Area (91%) and within the M50 Ring (85%).

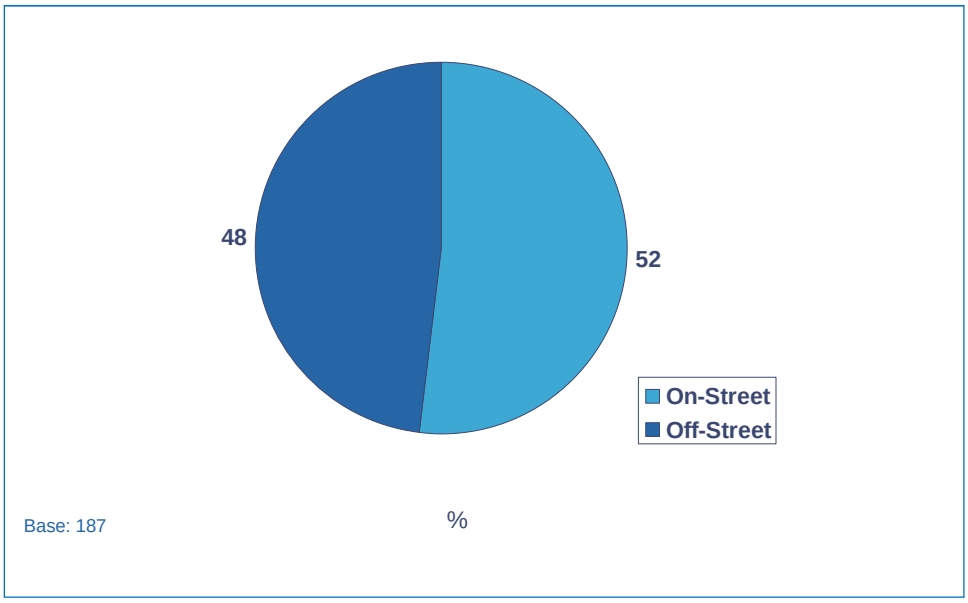
On-Street versus Off-Street

5.30. As Figure 5.9 illustrates, there was a reasonably even response in terms of the percentage of trip destinations to both on and off street areas.

5.31. Looking at this on the basis of an average, 52% of trip destinations are made to on-street areas compared with 48% of trips to off-street areas.

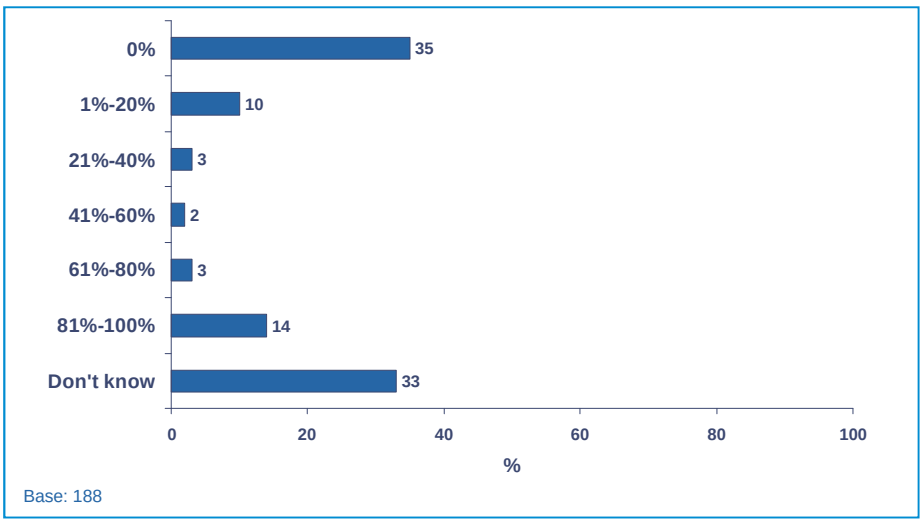
5.32. Businesses operating in the construction sector were more inclined to visit on-street areas, with those working within the manufacturing sectors more likely to visit off-street areas.

Figure 5.9: What percentage of your trip destinations in the City Centre are to (i) on street areas and (ii) off street areas?



5.33. Further to the above, 35% of respondents told us that of the off-street stopping destinations that they visit none of them have predetermined time slots. If this is considered within the context of a further 33% who indicated that they didn't know – then by implication it would appear that there are few off-street stopping places that have predetermined time slots.

Figure 5.10: What percentage of off-street stopping places have predetermined time slots?



6. Description of Information and Technology Used

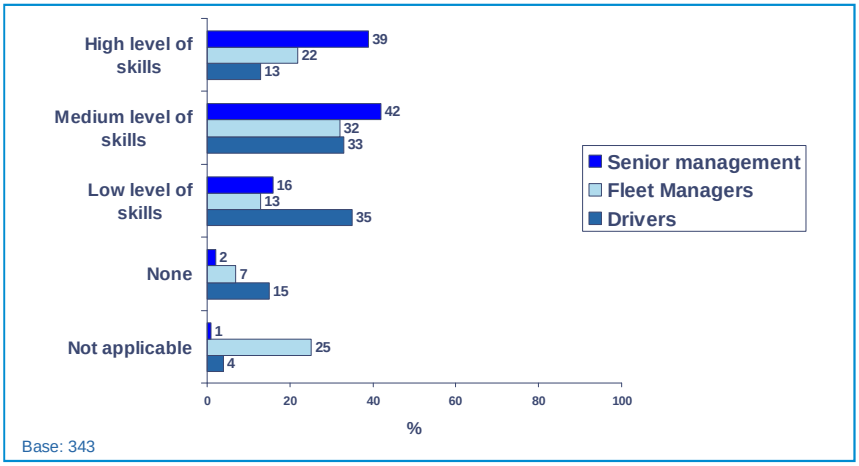
6.1. The following section details the key findings from the interviews conducted with respect to the existing technology skills of drivers and fleet managers together with the range of technology and information systems that are currently used. This section will also reflect on the extent to which specific technologies can assist with journey and route planning.

Computer Information and Communication Technology Skills

6.2. As Figure 6.1 highlights, there was quite a mixed response in terms of the respective levels of Computer Information and Communication Technology (CICT) skills of senior management, fleet managers and drivers.

6.3. Senior management were perceived to have the most proficient skills set in this respect with 39% indicating that they have a high level of skills. In contrast, drivers were said to have a lower level of CICT skills with 15% of our sample indicating that they have no such skills. This is somewhat surprising in light of the fact that it is often drivers who operate the most common on-board CICT equipment including SATNAV and other electronic route information.

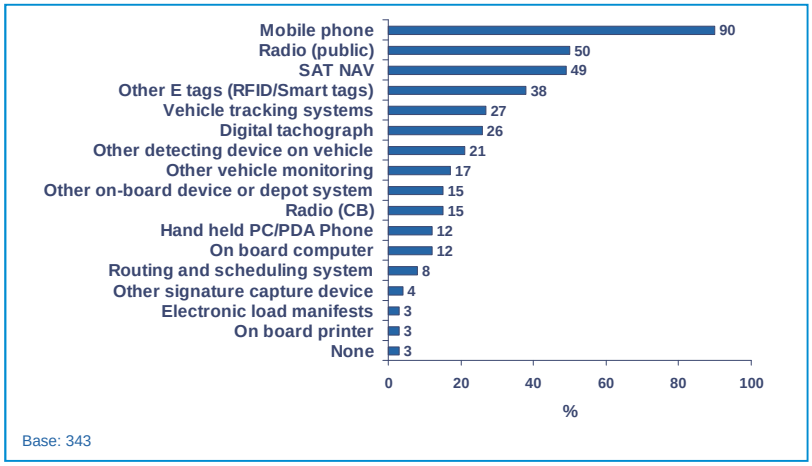
Figure 6.1: With regard to the Computer & Information Technology skills in your company, how would you rate that of (i) senior management, (ii) fleet managers and (iii) drivers?



6.4. As Figure 6.2 illustrates, there is a wide range of CICT currently being used by those who took part in the survey. Mobile phones (90%), public radios (50%) and SAT NAV's (49%) are the most commonly used amongst our sample of respondents.

6.5. However, it is also interesting to note that there are also a range of more technically specific forms of technology currently in use including Digital tachographs (26%) and vehicle tracking systems (27%).

Figure 6.2: Which of the following information and communications technology, if any, do you use?



6.6. Most respondents were able to accurately link the use of the technology with wider benefits to their business or travel methods. Half of the sample highlighted cost or time savings as a key benefit from using this technology – which was particularly important for the small business population, particularly in a climate of much tighter profit margins.

6.7. Other key benefits from the wider use of technology included improved levels of customer service (31%), greater security (16%) in addition to better and more accurate management statistics (10%).

6.8. In addition to this, the key issues cited with respect to preventing organisations from using further technology were dominated by the costs concerned (33%) and how appropriate specific technology is to the businesses concerned (30%).

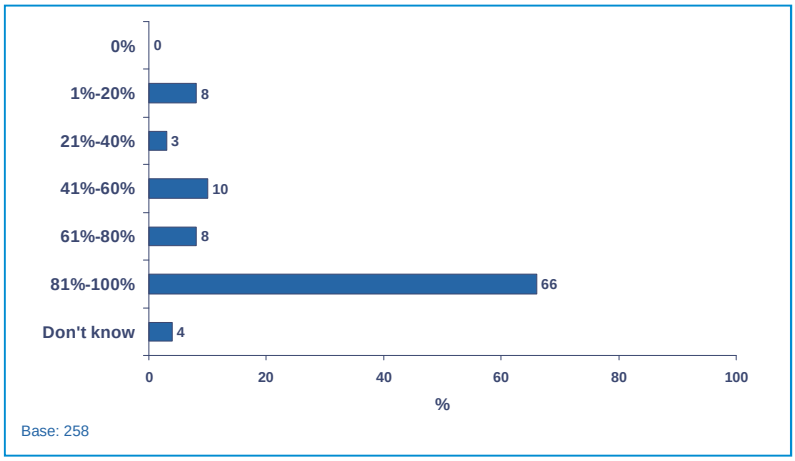
Journey Planning

6.9. In terms of planning advance journeys, 73% of our sample indicated that either they or their business/organisation currently plan their journeys in advance.

6.10. This was reasonably high across both business and fleet size types, however less journeys are planned in advance within the construction sector at 64% compared with both manufacturing (77%) and services (73%).

6.11. In addition to this, and as detailed in Figure 6.3, 66% of respondents pre-plan their trips between 81%-100% of the time, representing a significantly high number of pre-planned trips.

Figure 6.3: what percentages of trips are pre-planned in terms of approximate routing and time?

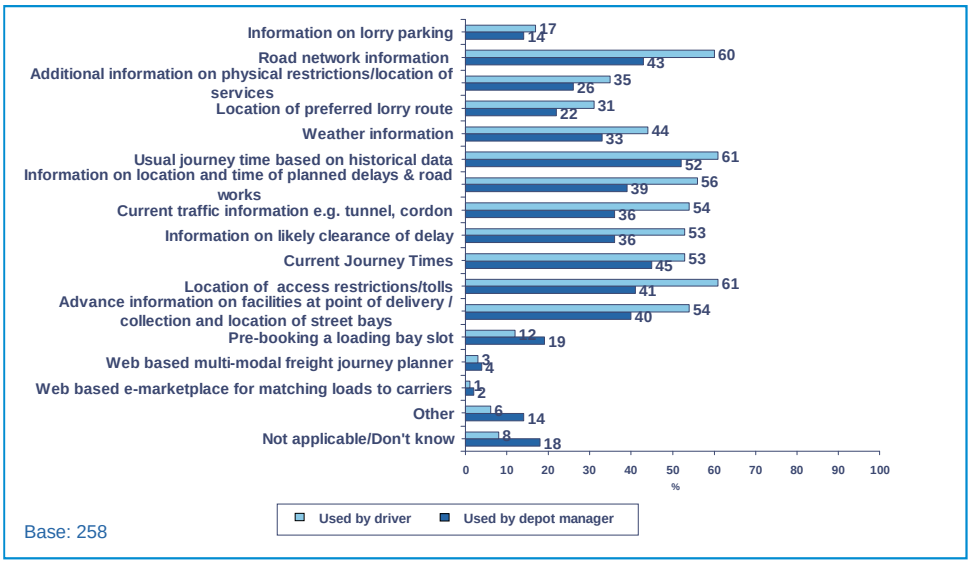


6.12. In a similar way to the range of technology currently in use, as Figure 6.4 illustrates, the range of information used to plan journeys by both the depot manager and the driver is reasonably high and varied.

6.13. Of the information highlighted below, on average the drivers are using more of the available information than the depot managers; however, collectively it is very positive to note the breadth and depth of the advance information that is currently being used which is consistent across both fleet and business sizes as well as across the different sectors.

6.14. From the list provided only the web-based multi modal freight planner and 'e' market place have relatively low level of existing take up.

Figure 6.4: Which of the following information is currently used to plan journeys by (i) the depot manager and (ii) the driver?



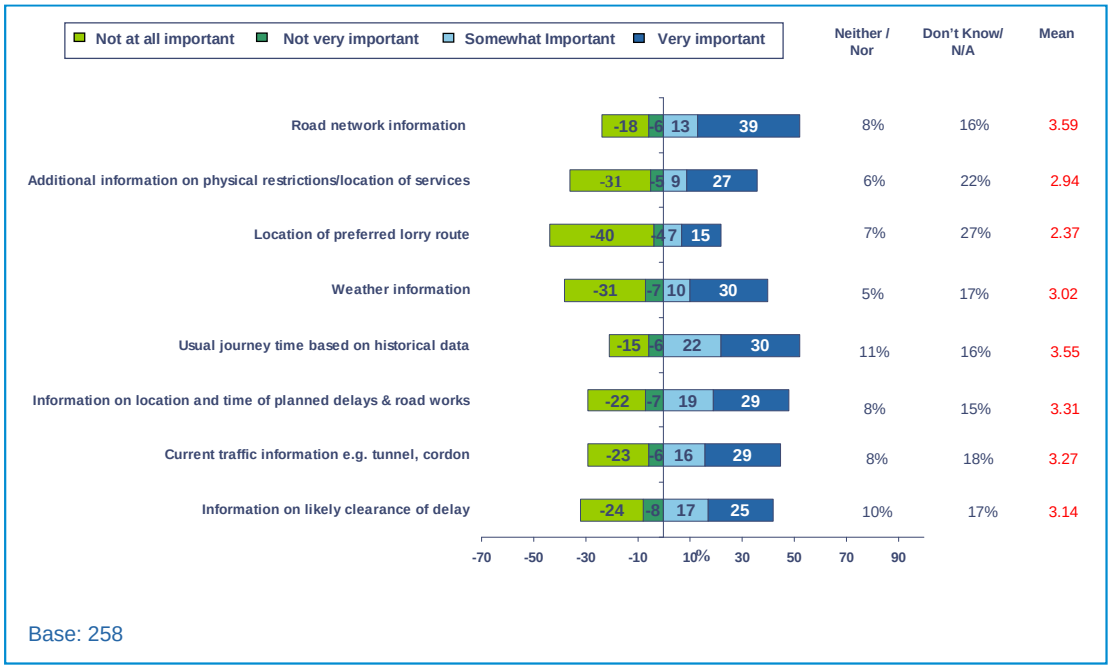
6.15. Further to the above, and as the two charts at Figure 6.5 highlight, the majority of the sample indicated that they perceive most of the information as important to their company or organisation.

6.16. The most important information highlighted included road network information, usual journey times based on historical data in addition to information on location and time of planned delays and road works. This was also reasonably consistent across both the different business sectors as well as fleet and business sizes.

6.17. Those sources of information which were viewed to be unimportant included information on lorry parking, web-based multi modal freight journey planner and the web-based e marketplace for matching loads to carriers.

6.18. The response to the web-based information sources is largely consistent with previous questions however it is interesting to note the low level of importance attached to pre-booking loading bay slots as well as information on lorry parking. This may in part be explained by the fact that these did not apply to a large proportion of our sample and that the low levels of perceived importance could possibly be a reflection of this.

Figure 6.5: How important is, or would, this information be to your company?



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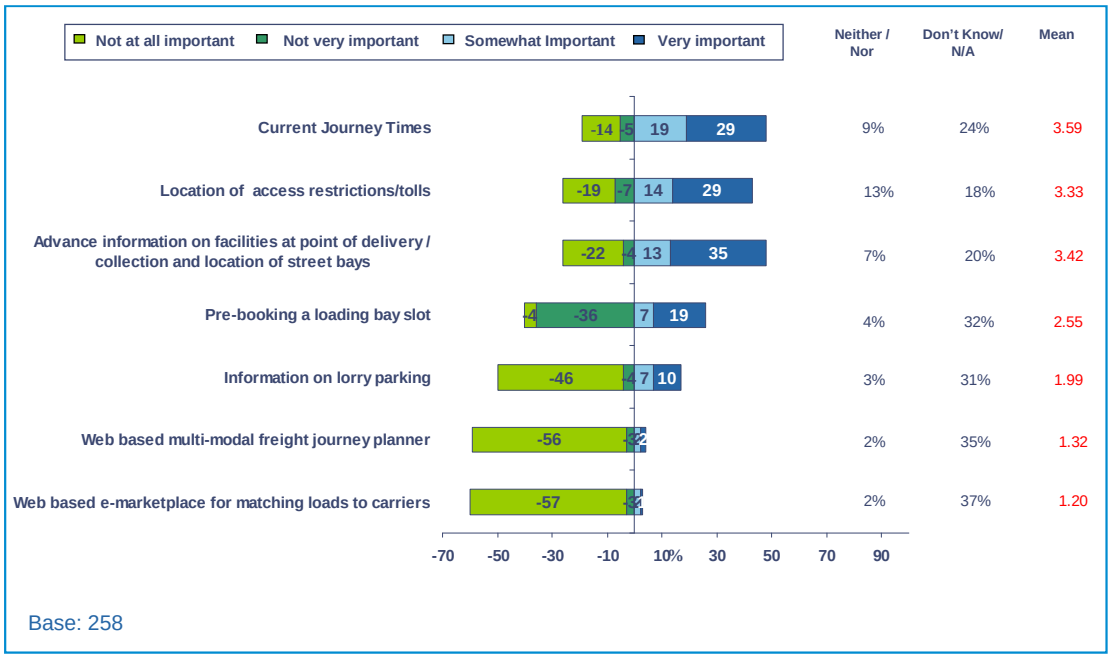

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6.19. 13% of the sample of respondents indicated that their company employ staff with specific responsibilities for obtaining traffic information, which was consistent across all aspects of our analysis.

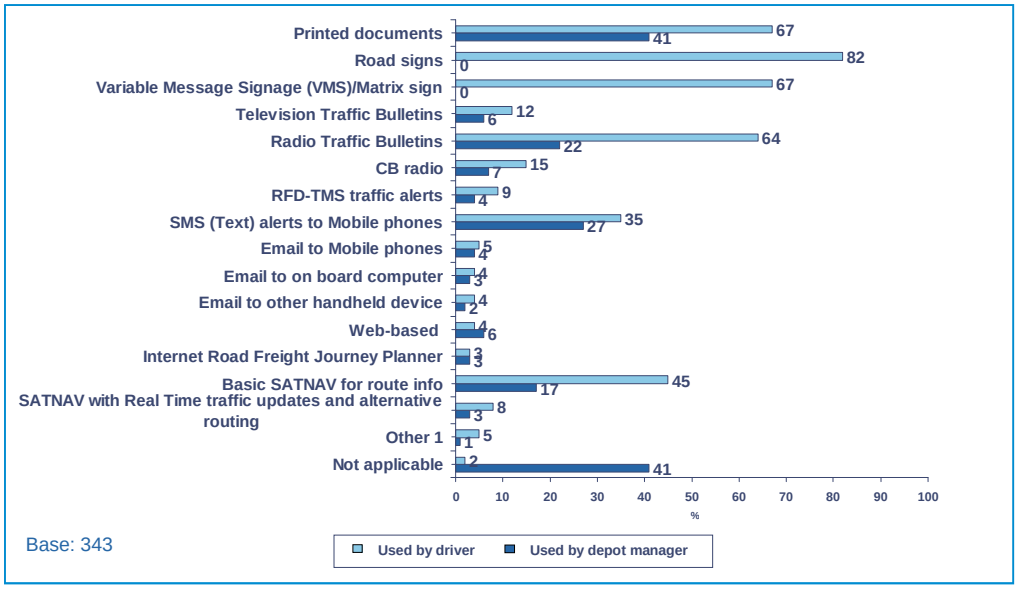
6.20. In addition to this, 14% of respondents currently obtain traffic information from a third party. Of those who hold subscriptions for such information, large businesses are in the majority (27%) in comparison to the smaller (13%) and medium outfits (12%). This is perhaps unsurprising, with resources the key determining factor.

6.21. Within this same group, the main method for recording trip data that was highlighted was through tachograph readings (15%), however 61% indicated that they do not record any trip data whatsoever and despite being on the basis of a small base this is a reasonably concrete finding.

6.22. As Figure 6.6 highlights, there is a range of information channels currently in use to support journey planning. This is particularly the case for the drivers with printed documents (67%), road signs (82%), variable message signage (67%) and radio traffic bulletins (64%) amongst the most popular.

6.23. The depot managers appear to use less of the listed information channels with 41% deeming all of the channels as not applicable, which is perhaps somewhat surprising as many of the channels concern advance journey planning from a central location.

Figure 6.6: Which information channels / methods are currently used by the depot managers and drivers for journey planning?



6.24. However, perhaps more importantly and as detailed in Figure 5.7, there was strong preference for the use of printed documents, road signs, variable message signage as well as road traffic bulletins.

6.25. This is largely consistent with views expressed with respect to information channels that are currently in use with the levels of preference weighted in favour of those information channels that both drivers and depot managers are reasonably familiar with.

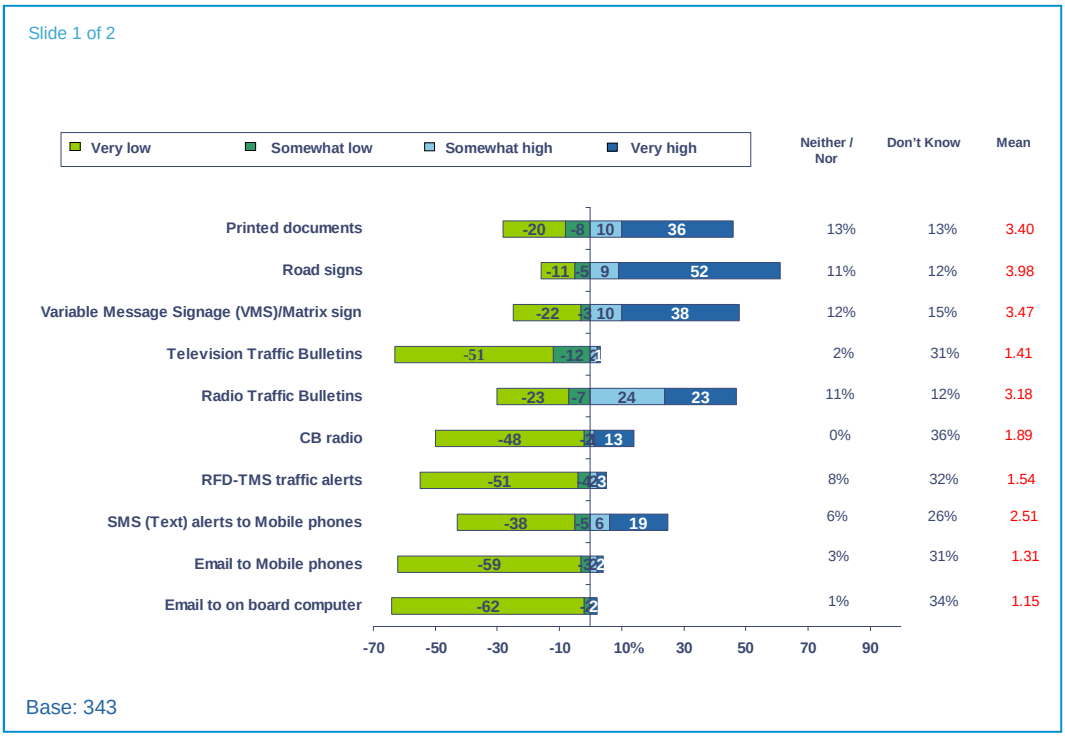
6.26. The green colours on the left hand side of the two charts illustrate those information channels which are viewed to have lower levels of preference including RFD-TMS traffic alerts, email to mobile phones and on-board computers together with road freight journey planners.

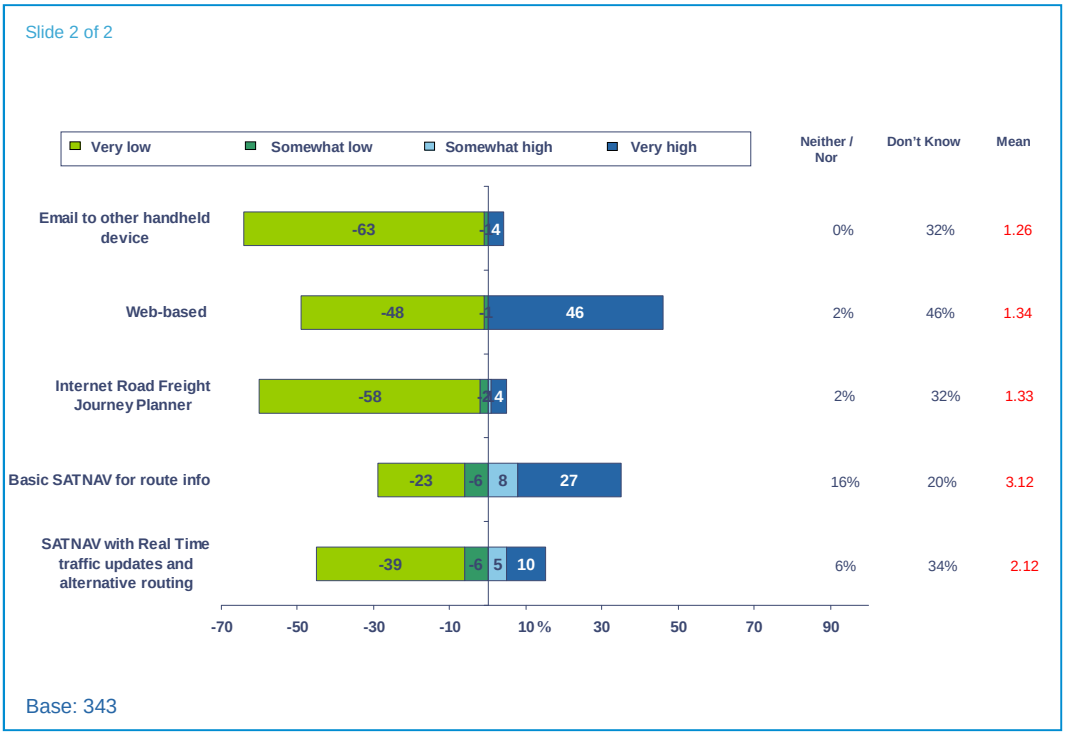
6.27. However, despite this it is clear that there is some appetite for the use of these more technologically advanced information sources from larger businesses and those with large fleets compared with the smaller businesses. This disparity is largely a consequence of both the resources that are required to support the use and installation of such devices together with the need and applicability to different businesses and account types.

6.28. The relationship between the demand for such information sources and the nature of the business/organisation is evident, in that although there were relatively small proportions indicating a preference for the use of RFD-TMS traffic alerts, some 11% of those within the construction sector expressed a ‘very high’ preference for the use of this information.

6.29. This is compared with minimal levels of demand across the remaining sectors, but clearly illustrates that size of business and fleet size as well as the nature of the business and work undertaken will often dictate the extent and usage of such information channels.

Figure 6.7: What is your level of preference for using the following? (In Ireland or abroad).





6.30. In addition to this, there was a rather mixed response to levels of preference in terms of on-board vehicle specific or roadside general traffic information. However, the majority of respondents (42%) preferred a combination of both types of information.

7. Transport issues that affect business

7.1. This section provides an overview of the key views expressed with regard to the transport issues that impact upon the wider business or organisations. This includes the extent to which slow journey times can be an issue and the geographical areas where congestion is most problematic.

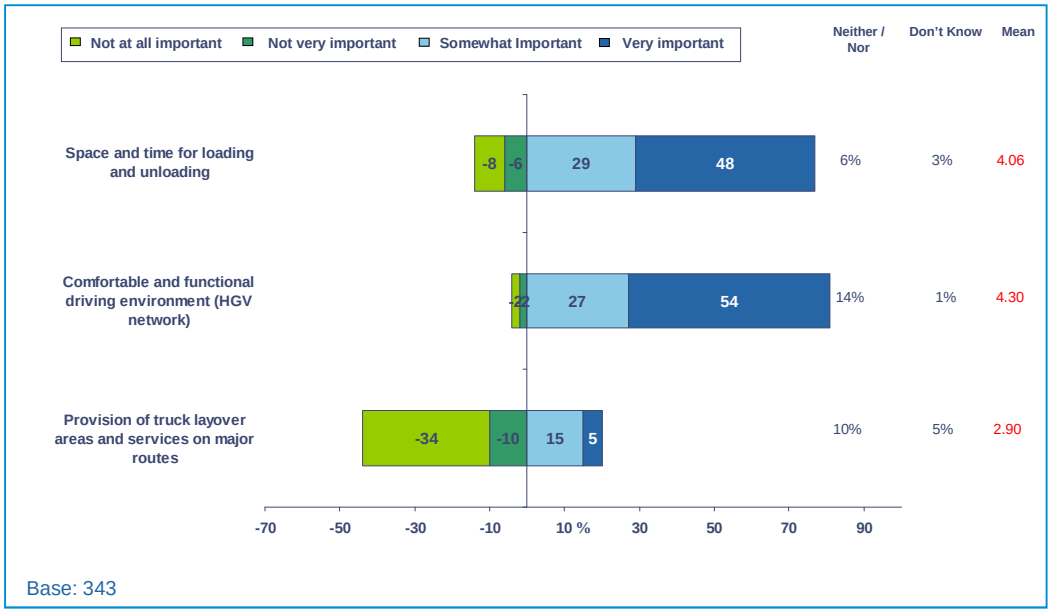
7.2. This section will also reflect upon the potential appetite for the use of alternative modes of transport and of how Government initiatives and policies can support this, together with an analysis of wider measures that could potentially be implemented to support the businesses of those who took part in this survey.

7.3. As Figure 7.1 clearly illustrates, the necessary space for loading and unloading as well as the provision for a comfortable and functional driving environment are considered to be very important issues for the majority of respondents. These twin issues were said to be critical for both drivers and depot managers and particularly with respect to space for loading and unloading in terms of ensuring quick and efficient journey times.

7.4. Of less perceived importance however was the provision of truck layover areas and services on main routes. This may in part be explained by the fact that the majority of our sample of respondents operated vans and other smaller commercial vehicles as opposed to trucks.

7.5. Therefore, this may suggest that the provision of truck layovers was not relevant to many of the respondents.

Figure 7.1: On a scale of 1-5, where 5 is very important and 1 not at all important, how important/unimportant do you consider the following issues?



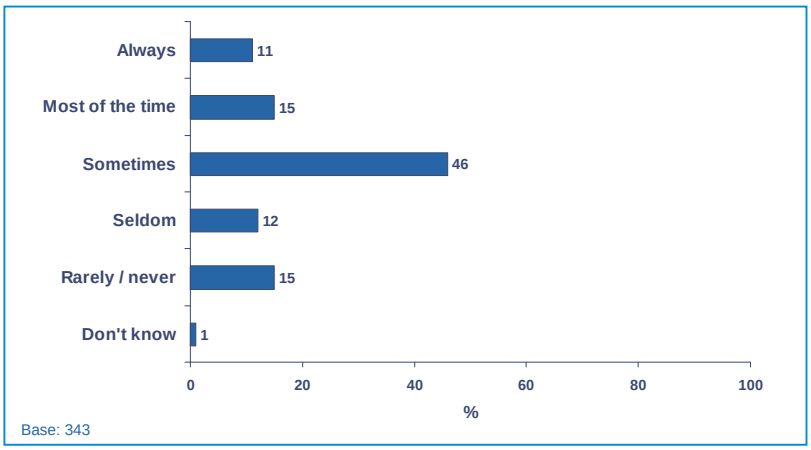
Slow Journey Times

7.6. Slow or unpredictable journey times can often be a key frustration for any business involved in the transportation of goods and services. However, as Figure 7.2 illustrates, only 11% of our sample of respondents indicated that they 'always' find slow journey times an issue when moving goods in the Dublin, Meath, Wicklow and Kildare areas – while 15% indicated that this is never an issue.

7.7. Despite this relatively positive note, more needs to be done to ensure that the business population in the Greater Dublin Area can efficiently and quickly transport their goods, particularly in light of the 46% who 'sometimes' confront slow journey times in the course of their business activities.

7.8. This issue is also more problematic for those businesses based in the Greater Dublin Area with 11% 'always' finding slow journey times compared with 4% of those based outside of the GDA, which is perhaps as a consequence of the higher proportion of urban areas within the GDA in comparison to the rest of the country.

Figure 7.2: How often do you find slow journey times an issue in moving goods in Dublin, Meath, Wicklow or Kildare?



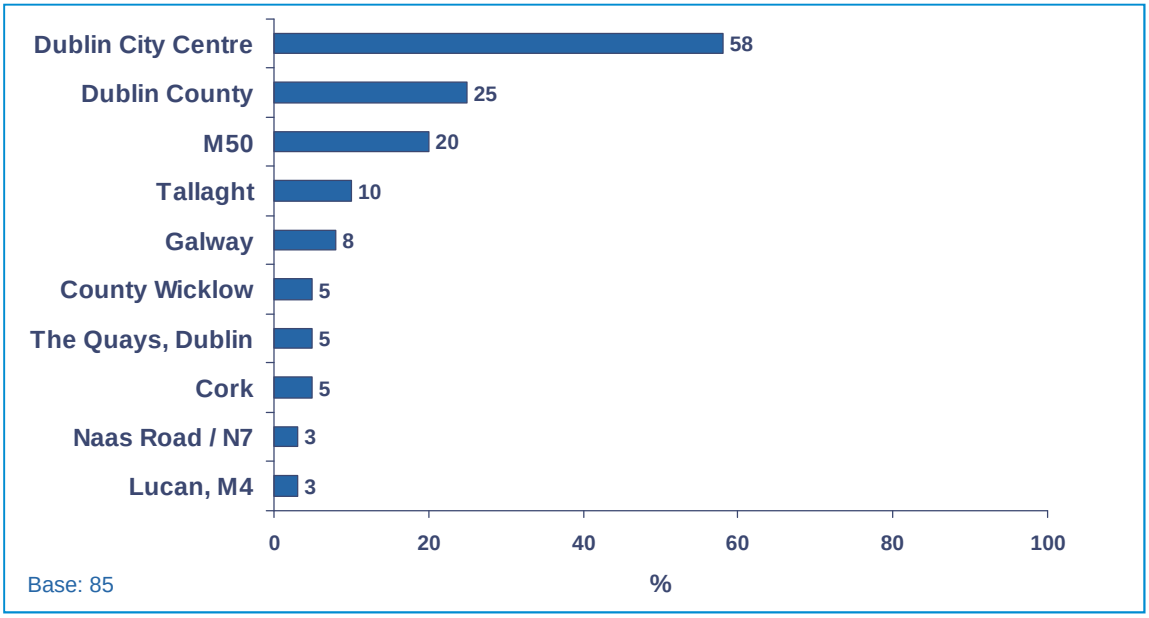
7.9. In terms of the specific areas where the key delays occur, the town/city centre (68%) was said to be the main area where delays take place most often, with the outskirts of the town/city the second most popular area (18%).

7.10. As noted previously, those businesses resident in the GDA experience delays in the town/city centre (68%) compared with just 5% of those businesses from outside of the GDA.

7.11. As Figure 7.3 details, the main areas where these delays were most profound were within Dublin City Centre (58%), the wider Dublin County (25%) and the M50 (20%).

7.12. Consistent with previous questions, those businesses operating within the GDA found the most significant delays within the urban areas of Dublin City Centre and the wider Dublin area.

Figure 7.3: What are the top three geographical areas where you experience these delays?

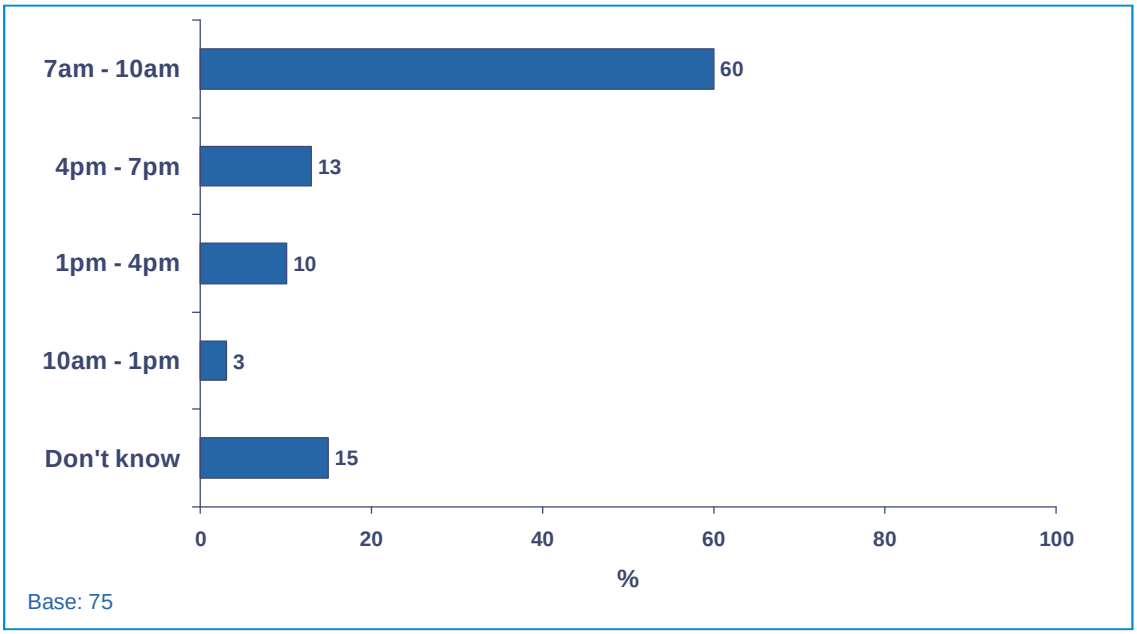


7.13. In terms of the time periods when journey times are most unpredictable, the majority (60%) felt that the morning peak (7am – 10am) was on average the most unpredictable time.

7.14. In contrast, only 13% highlighted the evening peak (4pm – 7pm) as the most unpredictable time – which may reinforce the view that measures which have been implemented to ease traffic flow in the evening peak are beginning to have a discernable impact.

7.15. The morning peak period particularly affects those in the manufacturing (65%) and construction (67%) sectors.

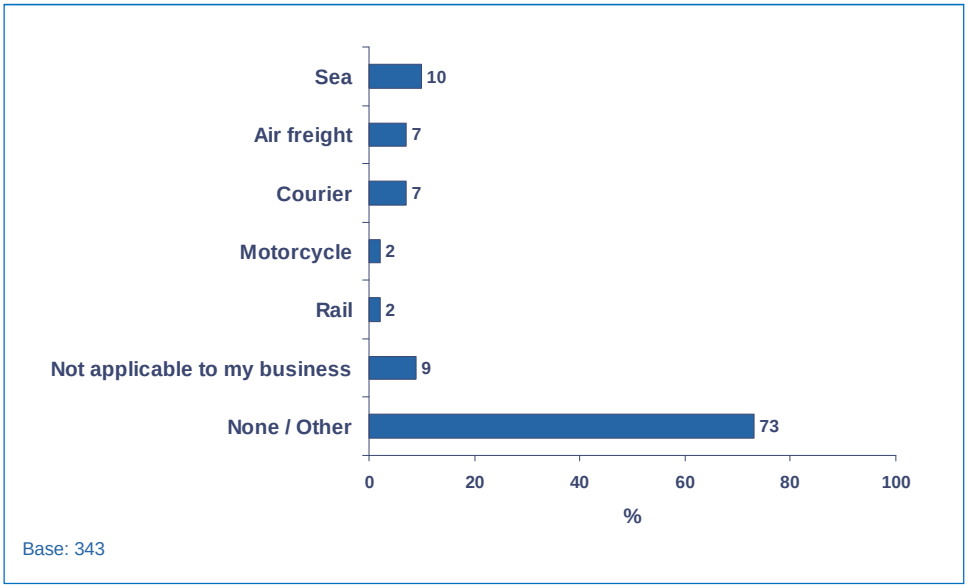
Figure 7.4: When does this unpredictability affect you most?



7.16. There was a relatively muted response from those who took part in the interviews as to whether they use alternative modes of transport in order to transport their goods, with 68% reporting that they use no alternative modes of transport. Outside of the use of commercial vehicles - sea (10%), air freight (7%) and the use of couriers (7%) were the main alternatives put forward.

7.17. However, despite this, and as detailed at Figure 7.5, the majority response was that none (68%) of the alternative modes of transport apply.

Figure 7.5: What other modes of transport do you use for the transportation of goods and services?



7.18. The main barriers that were put forward to the further use of the suggested alternative modes of transport included cost and issues concerning relative impacts on time, however, the perceived difficulties concerning accessibility was the key issue for most respondents.

> *"For what we are doing they are not appropriate - these modes of transport are not going to take us where we need to go"*
>
> Interview Quote

7.19. As Figure 7.6 illustrates, of the vast majority of respondents who do not currently use rail to transport their goods, very few felt that the suggested Government initiatives would encourage them to consider the use of the railway as a viable mode of transporting their goods.

7.20. A greater proportion of the small and medium sized businesses (15% and 10% respectively indicating very likely) were more inclined to transfer from road to rail following the provision of facilities (including Government Grants) compared with smaller businesses (4%).

7.21. This is interesting in that one of the main perceived barriers cited was the lack of accessibility of the railway; however, most respondents would still not consider this mode even if grants and extra facilities to aid accessibility were in place.

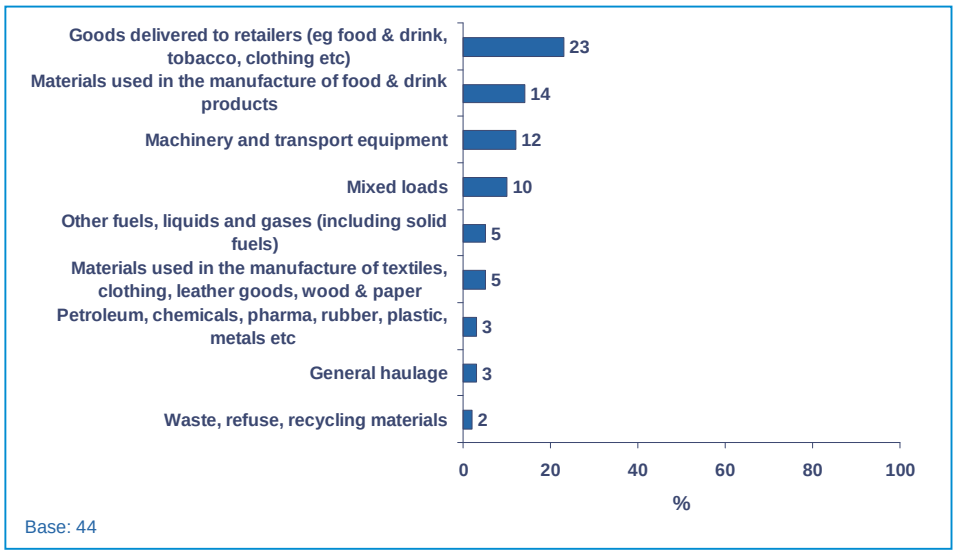
7.22. Therefore, whilst many respondents could see the potential value in the use of rail as a means of transportation, the majority would not consider using this either currently or if new policies were put in place to support this transition.

Figure 7.6: If you currently do not use rail to transport goods in Ireland, how likely would the following initiatives encourage you to consider this mode of transport?

7.23. In terms of those respondents who indicated that the above mentioned initiatives would quite likely and very likely encourage them to consider the use of rail, the main type of goods cited that this would be applicable to was those delivered to retailers, i.e., food, drink, tobacco and clothing etc (28%).

7.24. Materials used in the manufacturing of food and drink products (14%) as well as machinery and transport equipment (12%) were also suggested as potential goods types that these initiatives could apply to, however this should be treated with a degree of caution considering the relatively small base size of 44 respondents.

Figure 7.7: Which of the type of goods that you transport would this initiative apply to?



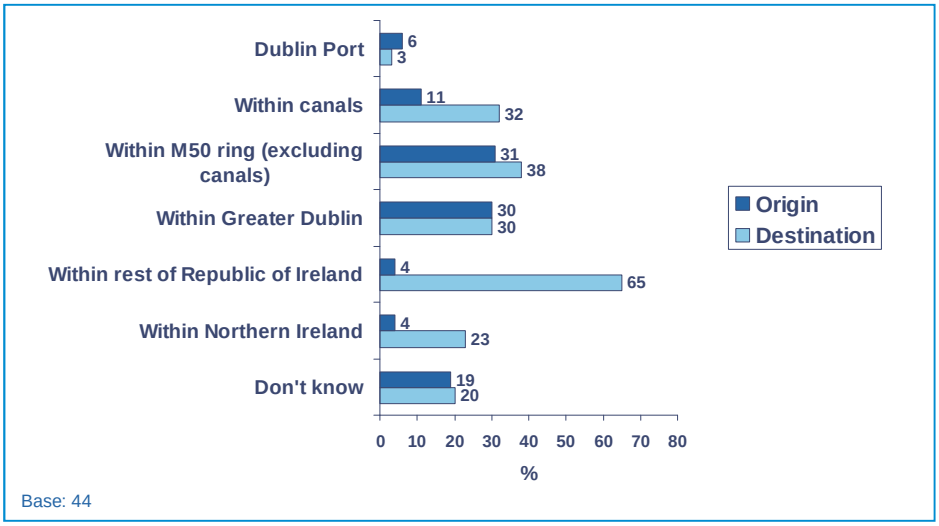
7.25. Of the goods highlighted above that have the potential to be carried by the railway, the dominant destination highlighted was to the 'rest of the Republic of Ireland' (65%). This was particularly the case for those businesses operating in the services sector with 67% highlighting this, together with a further 25% highlighting Northern Ireland as a potential destination.

7.26. The use of the railway was less of an option for those operating within the agri-business, manufacturing and construction sectors; however the data does illustrate that there is a clear potential to further explore the use of the railway for transporting goods within the services sectors if new initiatives were put in place.

7.27. Figure 7.8 also suggests that the most popular origin for the transportation of the suggested goods is within the M50 Ring (31%) and within the GDA (30%).

7.28. Therefore, on this basis, it would appear that the suggested Government initiatives would need to be targeted in the urban areas of Greater Dublin together with the satellite locations within the rest of the Republic of Ireland.

Figure 7.8: What is the origin and destination of these goods in Ireland?



7.29. In terms of the vast majority of those who took part in this consultation who indicated that the suggested initiatives would not have an impact of their transportation behaviour, the dominant response concerned the non-applicability to their businesses (55%).

7.30. This was particularly the case for those within the construction sectors with just over 70% indicating that the railway was not an applicable mode, principally as a consequence of increased cost and size of loads.

7.31. The practicality of the railway from a transportation perspective (13%) was also raised together with the respective unsuitable locations of many railway stations at present (8%), although this latter difficulty could in part be addressed by more and perhaps freight specific stations across the country.

"Our loads are delivered out of the way generally in rural or country regions where the rail network does not provide service."

"We would have to transport the furniture to the station anyway and unload and reload it would just be extra hassle and cost."

"Our delivery sites are all over the country, we would need rail stations at every McDonalds in the country otherwise the double handling would increase our costs."

Interview Quote

Transport Planning Initiatives

7.32. As Table 7.1 illustrates, many of the respondents were able to highlight specific examples of initiatives that they, or their business/organisation, have implemented with respect to noise and carbon emission reduction, parking/safety together with improving efficiency and cutting costs.

7.33. Just under half of the respondents (46%) highlighted cutting costs, with the most popular initiatives implemented to support this including better route analysis/scheduling (23%) more detailed fuel consumption monitoring (14%) together with more attention being paid to price comparisons (11%).

7.34. Further to this, 35% highlighted specific measures that have been adopted to help improve efficiency, including increasing loading levels (21%) and monitoring fuel consumption (17%).

7.35. Therefore, this highlights that many of the businesses who took part in this consultation are both conscious of their responsibilities in terms of being more efficient and carbon neutral, as well as beginning to implement specific measures that will aim to address these very aspects.

Table 7.1: Does your company have any initiatives in the following areas and can you provide examples?

Initiative	Most popular example	Second most popular example	Third most popular example
Nose Reduction	Sound proof equipment (35%)	Extra Insulation (32%)	Noise monitoring (23%)
Carbon Emission Reduction	Regular maintenance (33%)	Monitor fuel consumption (19%)	Vehicles are fitted with Ad-blue (18%)
Parking / Safety	Company policies and procedures (32%)	Regular training for drivers (27%)	Allocated parking spaces (20%)
Improving Efficiency	Increase loading levels (21%)	Monitor fuel consumption (17%)	Continual / on-going initiatives as necessary (12%)
Cutting Costs	Route analysis / scheduling (23%)	Fuel consumption monitoring (14%)	Price comparisons (11%)

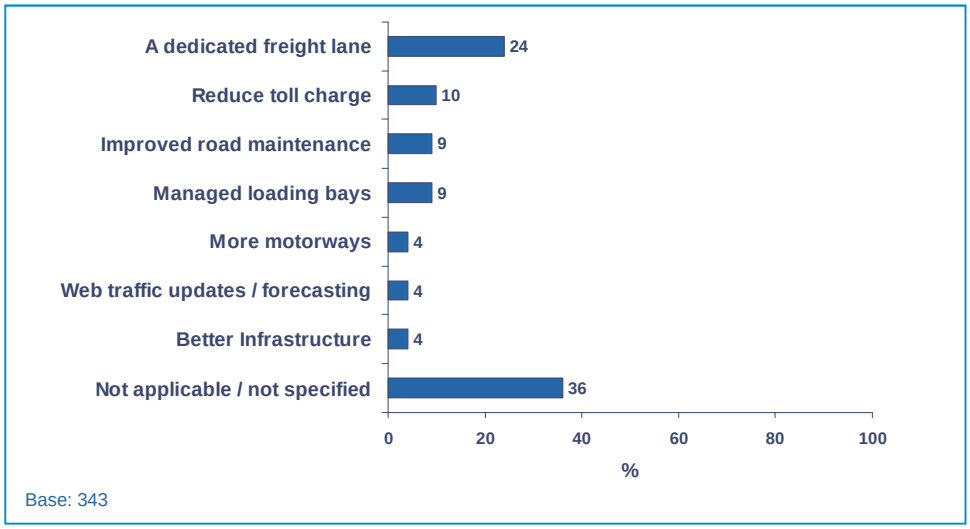
7.36. Figure 7.9 illustrates the combined responses from respondents representing future transport planning initiatives that would particularly help their business.

7.37. The most common measure across all groups and sectors was the introduction of a dedicated freight lane (24%). It was felt that this would be most successful in combating and addressing some of the most important issues with respect to congestion and delays as well as having the most tangible impact on the day to day activities of their businesses.

7.38. The most significant affect that a dedicated freight lane was said to have was to improve journey times which in turn would allow costs to be reduced.

7.39. Respondents also felt that reducing toll charges would have a positive impact in terms of cutting costs, which was particularly important for those who operate small businesses and fleet sizes, in addition to further investment towards road maintenance and facilities.

Figure 7.9: What regional transport planning initiatives in future would particularly help your business?



City Centre 5-Axle Cordon

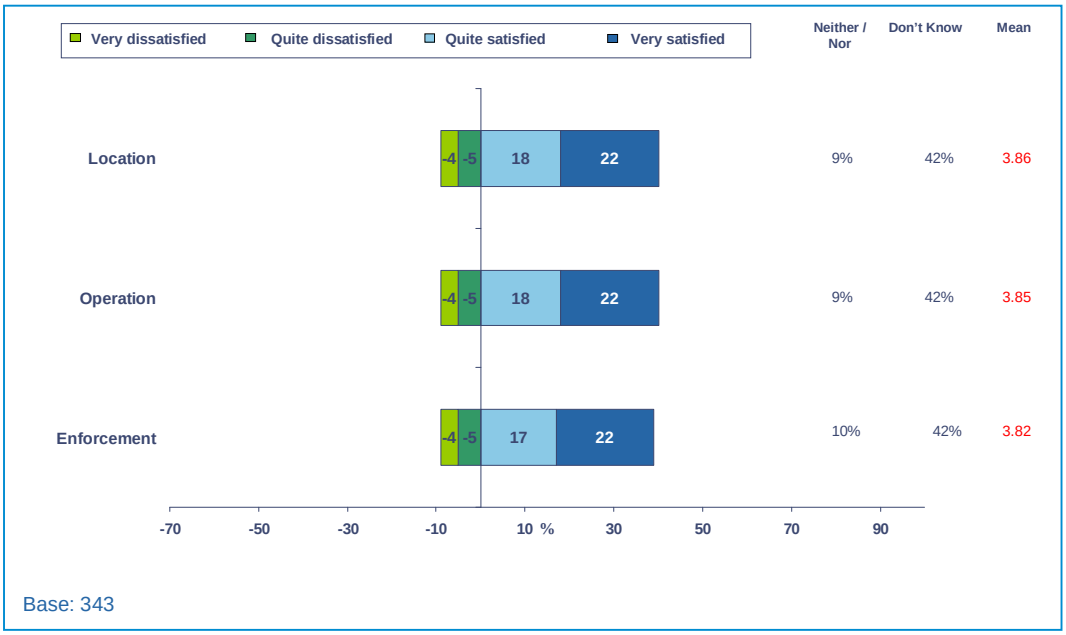
7.40. As Figure 7.10 illustrates, there was considerably high levels of satisfaction with respect to the location, operation and enforcement of the City Centre 5 Axle cordon.

7.41. This was very consistent across the participating sectors and business sizes, with the most significant degrees of satisfaction from those with medium sized fleets.

7.42. The most significant levels of dissatisfaction were with respect to the 'location' of the 5 Axle cordon, with those operating the largest fleet sizes voicing the most prominent issues (8%).

7.43. However, this data clearly illustrates that the measures that were adopted both prior to and post the introduction of the 5 Axle ban have been managed extremely well and that the majority of respondents have not been adversely affected or impacted.

Figure 7.10: How satisfied are you with the information provided regarding the location, operation and enforcement of the City Centre 5 Axle cordon?



7.44. Levels of satisfaction with the current arrangements were further emphasised in that most respondents were unable to identify specific measures which could be implemented that would improve the existing situation.

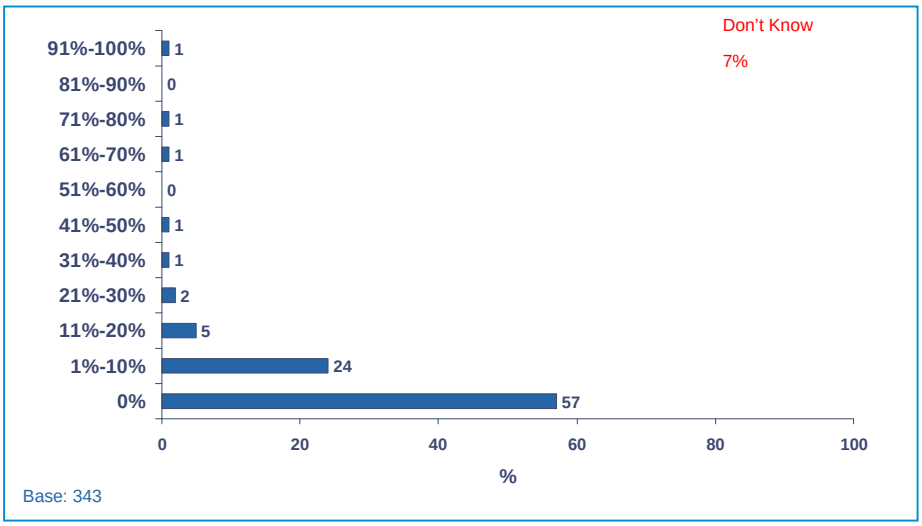
7.45. Of the few that could identify areas for improvement, better and larger signage (7%) and more bulletins, billboards and publications (4%) were most prominent.

Dublin Port Tunnel

7.46. As Figure 7.11 highlights, more than half of the respondents do not use the Dublin Port Tunnel at all as part of their day to day freight activities.

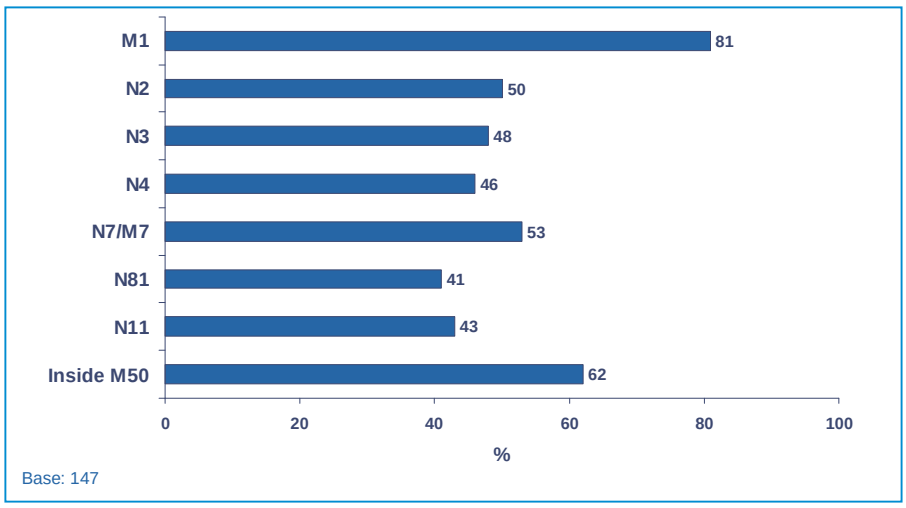
7.47. Of those that do, the majority (24%) use the Dublin Port Tunnel between 1%-10% of the time, with the remainder using the tunnel intermittently.

Figure 7.11: What proportion of your trips use the Dublin Port Tunnel?



7.48. For trips using the port tunnel, the main road corridors that were used were the M1 (81%) and N2 (50%), although there were significant proportions using the remaining road corridors as detailed in Figure 7.12.

Figure 7.12: For trips using the Port tunnel what percentage use the following road corridors?



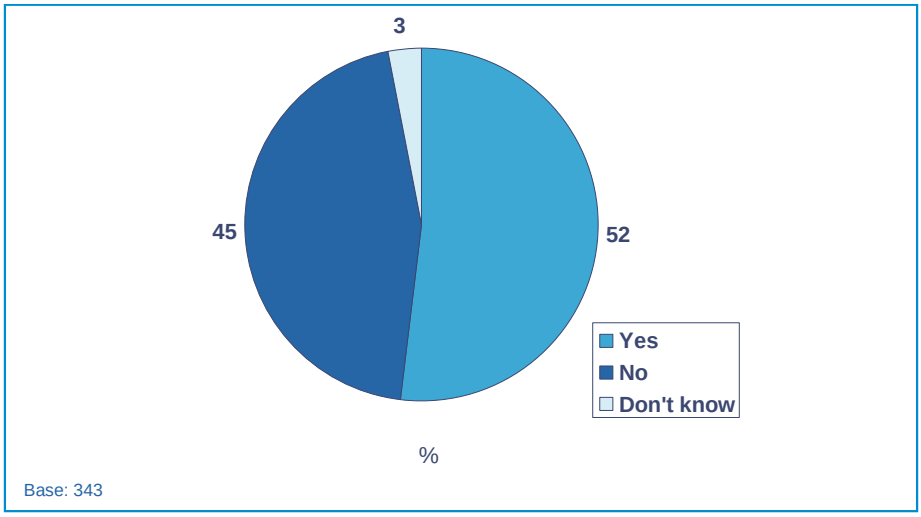
8. Further Information

8.1. In addition to the main body of questions, respondents were also asked if they, or their organisation, would be prepared to participate in a journey diary survey on one day in order to capture a picture of a typical day's activities.

8.2. As Figure 8.1 illustrates, more than half of the respondents indicated that they would be prepared to participate in such a one-off survey which is very encouraging and perhaps represents a potential avenue by which the NTA or others may wish to explore day to day freight activities in more detail.

8.3. Of those who indicated that they would be prepared to take part in such a journey diary, large businesses (59%) were particularly keen to do so as well as those operating within the Agri-business, Forestry and Mining sectors (51%).

Figure 8.1: Would your company be prepared to participate in a journey diary survey for one day?



8.4. On a final note, respondents were also asked to consider any other information that they thought would be useful to planning freight transport on an open basis.

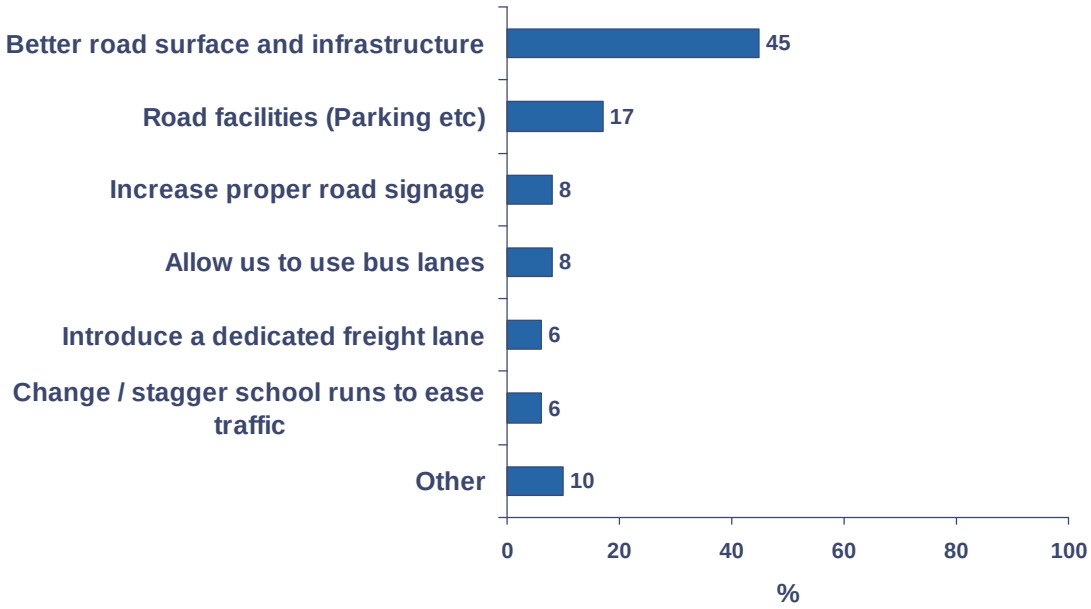
8.5. As Figure 8.2 highlights, the key measure put forward concerned more improvements with respect to road surfaces and wider infrastructure, which was particularly important for those in the agri-business, forestry and mining sectors.

8.6. Improvements to the road infrastructure was viewed as very important to those companies/organisations that operate non-freight journeys/business services with 11% of these respondents highlighting this issue as of specific concern.

8.7. Additional issues raised included better road facilities including parking (17%), better road signage (8%) together with more bus lanes (8%).

8.8. Further to this, 6% highlighted the need for some form of modification or staggering of school runs as a means of easing traffic, with some respondents citing schools related traffic as a major contributor to early morning traffic and congestion.

Figure 8.2: Do you have any other information that you think would be useful to planning freight transport?



Base: 53

"If you are planning freight transport I think that initiatives are just thrown out there and you have to like it or lump it. I think a partnership between companies and NTA etc should be formed to try and work through the issues together"

"I would like to see a staggering of school time which would help with traffic especially between 9 and 10 am"

Interview Quote

APPENDIX A: QUESTIONNAIRE

Freight Survey Questionnaire

Respondent ID.							

Background to survey
This survey is part of ongoing consultation between planners and industry. Your contribution will ensure that transport policy more fully reflects the needs of the Irish freight industry and is based on practical solutions. You are given opportunities to suggest these. At a later date, the results of the research will be shared with you which will be beneficial in understanding the state of the industry and benchmarking your company against others. This is the biggest survey on transport industry needs and attitudes undertaken in Ireland.

Policy landscape
Whilst Ireland has made tremendous investments in inter-city road infrastructure in the last 10 years, planners are still seeking solutions for goods vehicle traffic in urban areas and facing increasing pressure to meet global environmental goals.

Purpose
This survey is to provide information for the better understanding and planning of freight transport in Greater Dublin . This is not only with a view to support environmentally sustainable transport but also to build a business case for freight initiatives to support the economy.

Survey Partners
Partners in the project are the National Transport Authority(which now includes the Dublin Transportation Office), the National Roads Authority and the EU 7th Framework SMARTFREIGHT project. It is supported by both the Freight Transport Association and the Irish Road Haulage Association.

Structure of the survey
The survey will take about one hour of your time. The interviewer will assist you in answering.

Section 1 is a general description of your company, vehicle fleet and type of transport work.
Section 2 is about the type of technology and information you use in your business. This is to ensure that traffic management information provided in the future fits industry needs.
Section 3 is to capture your opinion on issues that affect transport, and the measures that could be taken to relieve them.

The survey will be conducted in accordance with the Market Research Society Code of Conduct, which guarantees confidentiality and anonymity. Your contact information or individual views will not be shared with anyone beyond PwC's core study team and your responses will not be attributed to you.
Only general statistical data will be published.

Section 1: Company & Fleet Description

Q1.1 Firstly, could I ask you to please confirm/provide the following details?

Name of Company/Organisation	
Name of respondent	
Position in the company/organisation	
Address for correspondence	
Address where vehicles are based	
Telephone number	
E-mail address (please read this out to the respondent and confirm)	

Q1.2a How would you describe the sector in which your organisation operates?
[RECORD VERBATIM HOW INTERVIEWEE DESCRIBES THEIR BUSINESS]

[THEN SELECT ONE OPTION FROM THE LIST BELOW]

Agri-business	1
Forestry	2
Mining/quarrying	3
Manufacturing of food & drink products	4
Manufacture of textiles, clothing, leather goods, wood & paper products	5
Manufacturing - petroleum, chemicals, pharmaceuticals rubber, plastic, metals, minerals	6
Manufacturing of electrical goods, machinery, transport equipment	7
Other manufacturing	8
Construction & maintenance including plumbers and electricians)	9
Electricity, water, gas supply	10
Retail	11
Wholesale	12
Transport services, distribution and storage, logistics	13
Financial and professional services	14
Hotels and restaurants/catering	15

IT, communications	16
Business services (photocopier repair/delivery of plants)	17
Other private sector services	18
Public sector services (eg local authorities, hospitals)	19
Other (please specify)	94

Q1.3a What is the MAIN use of the commercial vehicles in your organisation?

INTERVIEWER NOTE: Own-account transport is transport operated as an ancillary part of a business, for moving goods that relate to their main activity.

Hire and reward relates to the carriage of goods for another company under contract.

Non freight journeys/ Business services' relates to the use of a commercial vehicle for carrying out business activities where no freight is carried e.g. plumber, photocopy repairer/maintenance/crew transport.

Own account (transporting own goods)	1
Hire or reward (haulage & courier or courier courier	2
Non freight journeys/Business services	3
Other (please specify)	94

Q1.3b What type of goods do you carry (if any)? IF MORE THAN ONE: What is the main type of goods carried?

Services only	97	Continue to Q1.4
No goods carried	98	Continue to Q1.4
Goods associated with agri-business/forestry/fishing e.g. animal feeds, livestock,	1	Continue to Q1.3c
Mined or quarried materials	2	
Materials used in the manufacture of food & drink products	3	
Materials used in the manufacture of textiles, clothing, leather goods, wood & paper or products made from these	4	
Petroleum, chemicals, pharmaceuticals rubber, plastic, metals, minerals, or products made from these	5	
Other fuels, liquids and gases (including solid fuels)	6	
Waste, refuse, recycling materials	7	
Machinery, transport equipment, or parts associated with these	8	
Cars, vans, other vehicles	9	
Construction materials	10	

Boxes and parcels for delivery to businesses and private households	11	
Goods delivered to retailers and the service industry e.g. food & drink, tobacco, clothing, electrical goods, household goods, books, newspapers	12	
Mixed loads	13	
General haulage	14	
Other (specify)	94	

Q1.3c Of the main type of goods that you carry, are any of these considered dangerous goods i.e. goods that require ADR certification?

Explosive substances and articles	1
Gases	2
Flammable liquids	3
Flammable solids	4
Oxidizing substances	5
Toxic substances	6
Corrosive substances	7
Other goods (please specify)	94
Don't know	97
None	98

Q1.3d How are the goods that you carry packaged?

Packed goods	1
Bulk liquid	2
Loose Bulk	3
Parcels	4
Palletised	5
Other (please specify)	94

Q1.4 (i) How many employees are employed in total by your organisation?
(ii)How many of these are employed solely as drivers?

Number of employees	(i)	(ii)
1- 10	1	1
11 - 25	2	2
26 - 50	3	3
50+	4	4
Don't know	97	97

Q1.5a Which of the following vehicles does your fleet consist of?
[CODE ALL THAT APPLY]

	Vans	2 axle Rigids	3 axle Rigids	4 axle Rigids	3 axle Artics	4 axle Artics	5+ axle Artics	Total	Of total vehicles how many are tankers? [ENTER ACTUAL FIGURE]
Number of vehicles									
Number in 2000									
Change since 2000 [INTERVIEWER TO RECORD]									
Average Age (in years)									
Estimated mileage pa									
Any Electric Vehicles?					If electric./hybrid vehicles are used enter the number of vehicles and continue to Q1.5c If NO electric./hybrid vehicles are used go to Q1.5e				
Any hybrid vehicles?									

Q1.5c What are the advantages to you of using electric/hybrid vehicles?

RECORD VERBATIM

Q1.5d What type of work are they used for?

RECORD VERBATIM	Continue to Q1.6a

Q1.5e If you don't currently use electric or hybrid vehicles, would you have any interest in using these type of vehicles in the future?

Yes	1
No	2
Don't know	97

Q1.5f What do you see as the disadvantages to you of using electric/hybrid vehicles?

RECORD VERBATIM

Fleet Management

Q1.6a Does your company measure the performance of its fleet/vehicles or drivers?

Yes	1	Continue to Q1.6b
No	2	Continue to Q1.7a
Don't know	97	Continue to Q1.7a

Q1.6b Which Key Performance Indicators (KPIs) does the company use?
[CODE ALL THAT APPLY]

% empty miles	1
Miles per gallon/ km/litre	2
Vehicle costs per mile/kilometre	3
Load factor	4
Labour costs per mile/kilometre	5
Other (please specify)	94
Don't know	97
None	98

Training / Management

Q1.7a Does your company undertake driver or fleet management training?
□

Yes	1	Continue to Q1.7b
No	2	Continue to Q1.8
Don't know	97	Continue to Q1.8

Q1.7b Which of the following training programmes are delivered for (i) drivers and (ii) fleet managers? CODE ALL THAT APPLY

	Driver	Fleet manager
Driver CPC	1	1
HGV test/refresher training	2	2
Operational training	3	3
Operator CPC	4	4
New technology training (e.g. digital tachograph)	5	5
Other (please specify)	94	94
Don't know	97	97

Q1.8 In terms of the commercial vehicle work of the company, what proportion of work is carried out away from the base during the following times?

[INTERVIEWER NOTE: THE TOTAL FOR DELIVERIES, COLLECTIONS AND SERVICING SHOULD EQUAL 100%. EQUALLY, THE TOTAL FOR MORNING PEAK, MIDDLE OF DAY, EVENING PEAK AND REST OF DAY SHOULD EQUAL TO 100% FOR EACH CATEGORY].

Type / Time	Total % of work	Morning peak (7am-10am)	Interpeak (10am – 4pm)	Evening peak (4pm – 7pm)	Off-Peak (7pm-7am)	
(I)Deliveries						100%
(II)Collections						100%
(III)Servicing / Non cargo trips						100%
	100%					

Q1.9a Could you do more work outside of the 2 peak periods (7am – 10am& 4pm-7pm)?

Yes	1	Continue to Q1.9b
No	2	Continue to Q1.10
Don't know	97	Continue to Q1.10

Q1.9b If yes, what is preventing you from currently doing this?

[RECORD VERBATIM]

Q1.10 On a typical day, what proportion of your fleet is on the road?

Less than 50%	1
51% - 60%	2
61% – 70%	3
71% – 80%	4
81% – 90%	5
91% – 100%	6
Don't know	97

Types of journey

Q1.11a What is the average total number of trips from your base location each day?

Record average number	

Q1.11b What is the estimated proportion of multi drop trips?
INTERVIEWER NOTE: A multi drop trip is where there are one or more stopping points / stages along the way.

Percentage	
0%	1
1% - 20%	2
21% - 40%	3

41% - 60%	4
61% - 80%	5
81% – 100%	6

Load Factors

Q1.12a Thinking about your time on the road, what percentage of time would your vehicle be empty?

0%	1
1% - 20%	2
21% - 40%	3
41% - 60%	4
61% - 80%	5
81% – 100%	6

Q1.13a Does your company look for return loads?

Yes	1	Continue to Q1.13c
No	2	Continue to Q1.13d
Don't know	97	Continue to Q1.13d

Q1.13c If Yes, how do they do this?

Use of freight forwarder	1
Personal contact/network (informal business network)	2
Web based freight exchange	3
Reschedule existing workload	4
Don't know	97

Q1.13d In your opinion how could load factors be increased generally?

[RECORD VERBATIM]

Q1.14a Do you use consolidation centres?

Yes	1
No	2
Don't know	97

Q1.14b If such a centre were provided at edge of city in conjunction with vehicle or access restrictions would you use it?

Yes	1
No	2
Don't know	97

Q1.14c What are the disadvantages of using consolidation centres?

Double handling	1
Loss of control	2
Lower rates	3
Interference of the supply chain	4
Issues with branding & merchandising	5
Cost	6
Other (please specify)	94

Q1.14d In terms of the journeys that your commercial vehicles make how many of them are (i) one off journeys and (ii) regular/ repetitive journeys?
[INTERVIEWER NOTE: A REGULAR/REPETITIVEJOURNEY MEANS A JOURNEY WITH THE SAME STOPS]

Percentage	One off journeys	Regular journeys
0%	1	1
1% - 20%	2	2
21% - 40%	3	3
41% - 60%	4	4
61% - 80%	5	5
81% – 100%	6	6

Q1.14e On average, how long in advance do you know about the need for commercial vehicle journeys?

1 – 2 days	1
3 -4 days	2
5 – 6 days	3
Two weeks	4
One month	5
Greater than one month	6
Don't know	97

Main destinations

Q1.15a (i) What are the places visited by your vehicle?
(ii) Approximately what percentage of stops are in each of these areas?

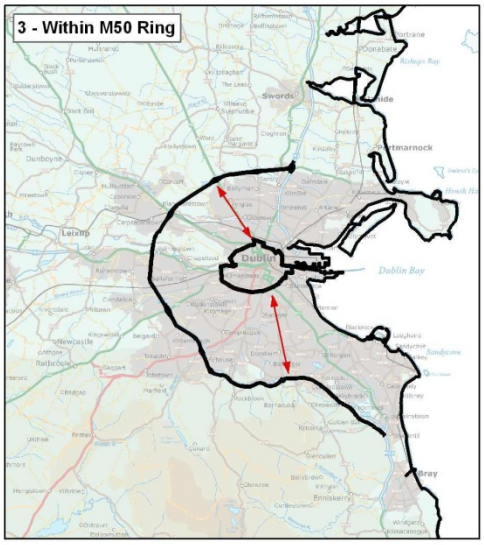
[NOTE TO INTERVIEWER: USE MAP OVERLEAF IF REQUIRED
TOTAL FIGURE SHOULD ADD UP TO 100%]

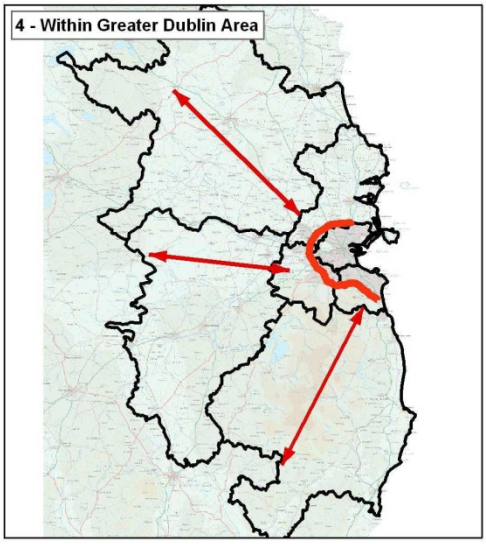
	(i)Places visited	(ii)Percentage
Dublin Port	1	
Within canals	2	
Within M50 ring (excluding canals)	3	
Within Greater Dublin (Counties Dublin, Meath, Kildare, Wicklow) excluding area within M50 ring	4	

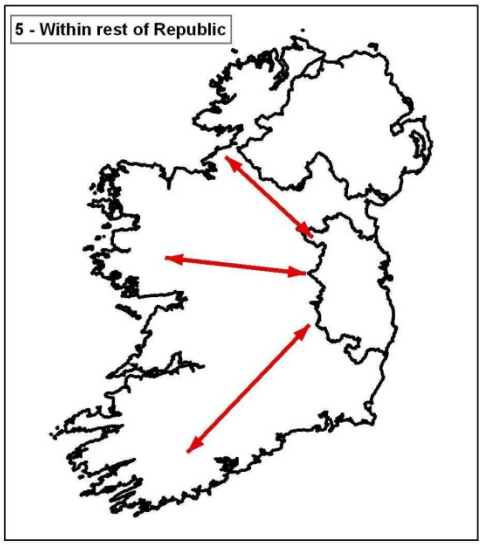
Within rest of Republic of Ireland (excluding Greater Dublin Area)	5	
Within Northern Ireland	6	
Outside Ireland	7	
Don't know	97	
		100%


1 - Dublin Port


2 -Inside HGV Cordon (incl. docklands)


3 - Within M50 Ring


4 - Within Greater Dublin Area


5 - Within rest of Republic


6 - Within Northern Ireland

Q1.16 Do you make any deliveries or pickups in the Dublin City Centre Area?
[INTERVIEWER NOTE: Dublin City Centre can be defined as the area within the canals].

Yes	1	Continue to Q1.16b
No	2	Continue to Section 2
Don't know	97	Continue to Section 2

Q1.16b If yes, what percentage of your trip destinations in the City Centre are to (i) on street areas and (ii) off street areas?
[INTERVIEWER NOTE TOTAL SHOULD ADD UP TO 100%]

Percentage	On street	Off street
0%	1	1
1% - 20%	2	2
21% - 40%	3	3
41% - 60%	4	4
61% - 80%	5	5
81% – 100%	6	6
Don't know	97	97

Q1.16c What percentage of off street stopping places have predetermined time slots?

0%	1
1% - 20%	2
21% - 40%	3
41% - 60%	4
61% - 80%	5
81% – 100%	6
Don't know	96

SECTION 2 : DESCRIPTION OF INFORMATION & TECHNOLOGY USED

This section aims to better understand information flows between traffic controllers in urban areas and freight vehicles.

Q2.1 With regard to the Computer & Information Technology skills in your company, how would you rate that of (i) senior management, (ii) fleet managers, (iii) drivers?

	High level of skills	Medium level of skills	Low level of skills	None
(i)Senior Management	4	3	2	1
(ii) Fleet Managers	4	3	2	1
(iii) Drivers	4	3	2	1

Q2.2a Which of the following information and communications technology, if any, do you use?

Type of technology	**Yes** (tick)	**Installed in how many vehicles?**	**Extra details**
Digital Tachograph	1		
SAT NAV	2		Can you set vehicle size? Yes 1 / No 2
Vehicle Tracking systems eg GPS	3		
Other E- tags (RFID[3] / smart-tags)	4		1 For motorway tolls 2 For load monitoring 94 Other ……
Other Vehicle monitoring (Please specify type)	5		1 Fuel monitoring 2 Temperature monitoring 3 Security monitoring 4 Driver monitoring 94 Other
On board computer	6		
Routing and scheduling system	7		1 in Depot 2 dynamic routing software on vehicle What software is used?……
Electronic load manifests	8		
On board printer (Please specify use)	9		1 Delivery dockets 94 Other ……
Mobile phone	10		

[3] Radio Frequency identification

Hand held PC / PDA/I-phone	11		For what purposes? For manifest, navigation, alerts? [RECORD VERBATIM]
Other Signature capture device	12		
Radio (Public)	13		
Radio (CB)	14		
Other detecting device on vehicle	15		1 Blindspot detector 2 Reversing aid 94 Other ……
Other on-board device or depot system (please specify)	16		1 CCTV (at depot / on vehicle) 94 Other ……
None	98		GO TO Q2.2C

Q2.2b What benefits have you experienced as result of using such technology? [DO NOT PROMPT]

Trip Planning/scheduling	1
Security	2
Cost or time savings	3
Improved customer service	4
Better management statistics	5
Other (please specify)	94
Don't know	97
None as yet	98

Q2.2c What issues would prevent you from using information and communication technology? [DO NOT PROMPT]

Cost	1
Too complex	2
Inappropriate	3
Training requirements to use technology	4
Fear of obsolescence/redundance of technology	5
Other (please specify)	94
Don't know	97

JOURNEY PLANNING

Q2.3 a Do you plan for your journeys in advance?

Yes	1	Continue to Q2.3a
No	2	Continue to Q2.4
Don't know	97	Continue to Q2.4

Q2.3b What percentage of trips are pre-planned in terms of approximate routing and time

0%	1
1% - 20%	2
21% - 40%	3
41% - 60%	4
61% - 80%	5
81% - 100%	6
Don't know	97

Q2.3c Which of the following information is currently used to plan journeys by (i) the depot manager and (ii) the driver? How important is or would this information be to your company?

INTERVIEWER NOTE: IF THE RESPONDENT DOES NOT CURRENTLY USE ANY OF THE INFORMATION OVERLEAF, CONTINUE TO ASK THEM TO RATE THE IMPORTANCE OF THIS TYPE OF INFORMATION (IE HOW USEFUL IT IS).

	Information type	(i)Used by depot manager	(ii)Used by driver	(iii)Importance (scale of 5 to 1 where 5= very important and 1= not at all important)
1	Road network information	1	1	
2	Additional information on physical restrictions (eg low bridges) or location of services	2	2	
3	Location of preferred lorry route	3	3	
4	Weather information	4	4	
5	Usual journey time based on historical data	5	5	
6	Information on location and time of planned delays, road works, events, etc	6	6	
7	Current traffic information e.g. tunnel, cordon	7	7	
8	Information on likely clearance of delay	8	8	
9	Current Journey Times	9	9	
10	Location of access restrictions/tolls	10	10	
11	Advance information on facilities at point of delivery / collection and location of street bays	11	11	
12	Pre-booking a loading bay slot	12	12	
13	Information on lorry parking	13	13	
14	Web based multi-modal freight journey planner	14	14	
15	Web based e-marketplace for	15	15	

	matching loads to carriers			
16	OTHER (please specify)	16	16	

Q2.4 Do you have staff with responsibilities for obtaining traffic information?

Yes	1
No	2
Don't know	97

Q2.5a Does your company subscribe to / obtain traffic information from a third party for traffic information?

Yes	1	Continue to Q2.5b
No	2	Continue to Q2.6
Don't know	97	Continue to Q2.6

Q2.5b Which sources of traffic information does your company use?
[DO NOT PROMPT]

TrafficNav	1
AA Roadwatch	2
Trafficmaster	3
Snooper S7000 Truckmate	4
NRA Traffic/Dublin City traffic information	5
Other (please specify)	94
Don't know	97

Q2.5c What trip data do you record in your business?
[DO NOT PROMPT]

Tachograph readings	1
Routing information	2
GPS data	3
Other (please specify)	94

Q2.5d Would you be willing to share this with NTA on an anonymous basis to help their traffic forecasting?

Yes	1
No	2

Q2.6 In the 2002 Streetwise survey, the preferred means of communication was by mobile phone. Which information channels / methods are currently used by the depot and by drivers for journey planning and which do you prefer? (In Ireland or abroad)

formation channels / methods	**In current use at DEPOT**	**In current use by DRIVERS**	**Preference (5 to 1, 5=high and 1= low)**
Printed documents (manifests, worksheets, maps)	1	1	
Road signs	N/A	2	
Variable Message Signage (VMS)/Matrix sign (electronic traffic sign often used on roadways to give travelers information about special events)	N/A	3	
Television Traffic Bulletins	4	4	
Radio Traffic Bulletins	5	5	
CB radio	6	6	
RFD-TMS traffic alerts	7	7	
SMS (Text) alerts to Mobile phones	8	8	
Email to Mobile phones	9	9	
Email to on board computer	10	10	
Email to other handheld device	11	11	
Web-based Eg : www.dublinregionaltraffic.ie/	12	12	Please specify other sites used.
Internet Road Freight Journey Planner (with freight facilities, height, width, weight, access and time restrictions, tolls, etc)	13	13	
Basic SATNAV for route info	14	14	

SATNAV with Real Time traffic updates and alternative routing	15	15	
Other (please specify) …….. ……	94	94	
None	98	98	

Q2.7 In general, do you prefer on-board vehicle specific or roadside general traffic Information?

On board	1
Roadside	2
Both	3

Section 3: Transport issues that affect your business

In this section we aim to understand the issues that affect efficient freight and services transportation and possible improvements.

Q3.1 On a scale of 1 – 5 where 5 is very important and 1 not at all important, how important/unimportant do you consider the following issues:

	Very important	Important	Neither/ nor	Not very important	Not at all important	Don't know
(i) Space and time for loading and unloading	5	4	3	2	1	97
(ii) Comfortable and functional driving environment (HGV network)	5	4	3	2	1	97
(iii) Provision of truck layover areas and services on major routes	5	4	3	2	1	97

Q3.2a How often do you find slow journey times an issue in moving goods in Dublin, Meath, Wicklow or Kildare?

Always	5	Continue to Q3.2b
Most of the time	4	
Sometimes	3	Continue to Q3.3a
Seldom	2	
Rarely/never	1	
Don't know	97	

Q3.2b Where do these delays occur? Rank from 1 to 4 with 1= most important.

Rural area	Outskirts of town/city	Suburban areas	Town/city centre

Q3.2c Of these areas, what are the top three geographical areas where you experience these delays?

1	
2	
3	

Q3.3a To what extent do you find unpredictable journey times due to congestion an issue in moving goods in Dublin, Meath, Wicklow or Kildare?

Always	5	Continue to Q3.3b
Most of the time	4	
Sometimes	3	Continue to Q3.4
Seldom	2	
Rarely/never	1	
Don't know	97	

Q3.3b When does this unpredictability affect you the most?

7am – 10am	10am – 1pm	1pm – 4pm	4pm – 7pm	Outside these times
1	2	3	4	5

Q3.4 What other modes of transport do you use for the transportation of goods and services?

MODE	Currently use (Y)	What are the barriers to use or further use of this mode
□**Rail**	1	
□**Inland waterways**	2	
□**Sea**	3	
□**Pipeline**	4	
Air freight	5	
□**Other** (eg Motorcycle, cargo bike etc)	94	

NOTE: If respondent states that they currently use rail transport go to Q3.6

If they don't currently use rail transport continue to Q3.5a

Q3.5a If you currently DO NOT use rail to transport goods in Ireland, how likely would the following initiatives encourage you to consider this mode of transport?

	Very likely	Quite likely	Neither /Nor	Unlikely	Very unlikely	Don't know
Provision of facilities to enable transfer from road to rail (incl. Govt. grants)	5	4	3	2	1	97
Lorry road user charging	5	4	3	2	1	97
Government revenue support for railfreight operations	5	4	3	2	1	97
Other (please specify)	5	4	3	2	1	97
	Continue to Question 3.5b		Continue to Question Q3.6	Continue to Question Q3.5d		Continue to Question Q3.6

Q3.5b Which of the type of goods that you transport would this initiative apply to?

Goods associated with agri-business/forestry/fishing eg animal feeds, livestock,	1
Mined or quarried materials	2
Materials used in the manufacture of food & drink products	3
Materials used in the manufacture of textiles, clothing, leather goods, wood & paper or products made from these	4
Petroleum, chemicals, pharmaceuticals rubber, plastic, metals, minerals, or products made from these	5

Other fuels, liquids and gases (including solid fuels)	6
Waste, refuse, recycling materials	7
Machinery, transport equipment, or parts associated with these	8
Cars, vans, other vehicles	9
Construction materials	10
Boxes and parcels for delivery to businesses and private households	11
Goods delivered to retailers and the service industry eg food & drink, tobacco.clothing, electrical goods, household goods, books, newspapers	12
Mixed leads	13
General haulage (we need to define this)	14
Other (specify)	94

Q3.5c What is the origin and destination of these goods in Ireland?

	Origin	Destination
Dublin Port	1	1
Within canals	2	2
Within M50 ring (excluding canals)	3	3
Within Greater Dublin (Counties Dublin, Meath, Kildare, Wicklow) excluding area within M50 ring (nearest town)	4	4
Within rest of Republic of Ireland (excluding Greater Dublin Area) (nearest town)	5	5
Within Northern Ireland (nearest town)	6	6
Don't know	97	97

Q3.5d Why would these initiatives not encourage you to use rail to transport goods within Ireland?

RECORD VERBATIM

Q3.6 Does your company have any initiatives in the following areas. If so, can you provide examples of the initiatives?

RECORD VERBATIM FOR EACH

Initiative	**(Y)**	**Examples**
Noise reduction	1	
Carbon emission reduction	2	
Parking/safety	3	
Improving efficiency	4	
Cutting costs	5	
Other initiatives (please specify)	94	
None	98	

Q3.7 What regional transport planning initiatives in future would particularly help your business? Prompt: regional distribution centre, dedicated freight lane, web traffic forecast, managed loading bay, better building design/planning for integrated loading, etc.

TRANSPORT INITIATIVE	AFFECT ON YOUR BUSINESS
1.	
2.	
3.	
4.	
5.	

Q3.8a How sufficient is the information provided regarding the (i)location, (ii)operation and (iii) enforcement of the City Centre 5 Axle Cordon?

	Very satisfied	Quite satisfied	Neither /Nor	Quite dissatisfied	Very dissatisfied	Don't know
Location	5	4	3	2	1	97
Operation	5	4	3	2	1	97
Enforcement	5	4	3	2	1	97

Q3.8b What could be done to improve the information?

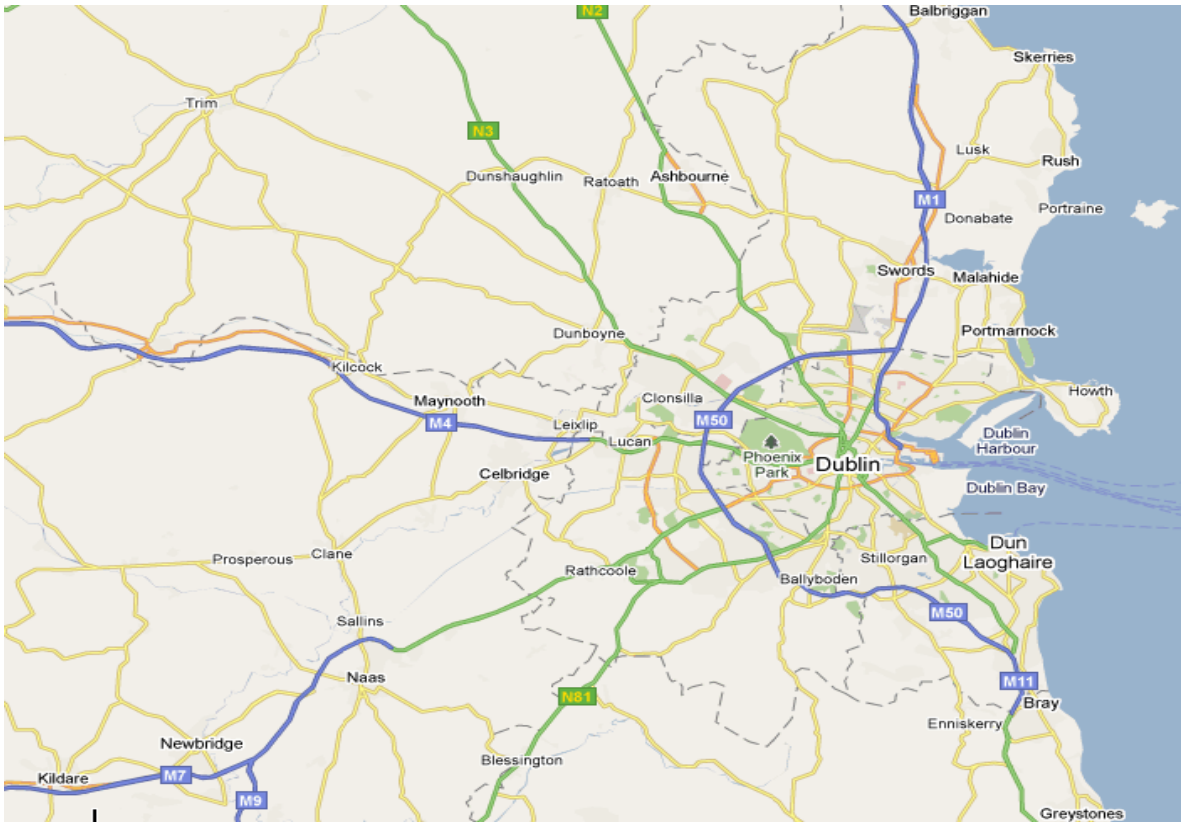
RECORD VERBATIM

Q3.9a What proportion of your trips use the Dublin Port Tunnel? (A trip in the tunnel is defined as a one way journey. Return trips in the tunnel are counted as two trips)

Percentage	

Q3.9b For trips using the Port tunnel what percentage use the following road corridors? [INTERVIEWER NOTE: USE MAP OVERLEAF TO CLARIFY ROAD CORRIDORS TOTAL SHOULD ADD TO 100%]

	Percentage
M1	
N2	
N3	
N4	
N7/M7	
N81	
N11	
Inside M50	
	100%



Q3.10 If at some stage in the future, the city centre introduced environmental vehicle standards (e.g. noise, emissions) that restricted the use of certain commercial vehicles, how would your business respond to:

(i) change fleet to comply with standards	
(ii) outsource delivery	
(iii) consider participation in purpose-built consolidation centre for city centre	
(iv) move business out of city centre	
(v) Change hours of operation	
(vi) other (please specify)	
(vii) Do nothing/make no change	

FURTHER INFORMATION

Q3.11 Would your company be prepared to participate in a journey diary survey for one day? Each driver would be asked to fill in a form. The information would be used to increase our understanding of use of commercial vehicles. EXPLAIN THAT THIS NOT AN ELEMENT OF THIS RESEARCH BUT MAY BE UNDERTAKEN IN THE FUTURE.

Yes	1
No	2

Q3.12 Do you have any other information you think would be useful to planning freight transport?

RECORD VERBATIM

Thank and Close.

APPENDIX B: WEIGHTING MATRIX

Sector		Population in NUTS 2 region	estimated % owning commercial vehicles	estimated population owning commercial vehicles	% population based on IDS profile and applying the NUTS 2 proportions	PwC sample structure
Manufacturing	mining/quarrying/electricity	263	95	250	0.6	**2.3%**
	food/drink	751	85	638	1.5	**6.4%**
	textiles/wood/paper products	978	95	929	2.2	**2.3%**
	chemicals/rubber/plastics/minerals/metals	1303	90	1173	2.8	**6.7%**
	electrical/optical/transport equipment	403	85	343	0.8	**3.8%**
	other	503	90	453	1.1	**4.7%**
	TOTAL	4201		3786	**9%**	
Services	wholesale/retail	31343	80	25074	37.1	**11.7%**
	hotels restaurants	10285	15	1543	2.3	**0.6%**
	transport/storage/comms	7321	70	5125	7.6	**23.6%**
	real estate/business activities/community/social/personal	44814	50	22407	19.0	**13.7%**
	TOTAL	93763		54149	**66%**	
Construction	TOTAL	not known			**11%**	**13.7%**
Agriculture	TOTAL	not known			**2%**	**7.0%**
Public					**12%**	**3.5%**
TOTAL		**97964**		**57935**	100%	100.0%
Size (employees)						
Small					88.0%	72.0%
Medium/Large					12.0%	28.0%
					100.0%	**100.0%**