Managing changes in transport demand

A survey of local authorities

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NZ **TRANSPORT** AGENCY
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An important note for the reader

The NZ Transport Agency (NZTA) is a Crown entity established under the Land Transport Management Amendment Act 2008. The objective of the NZTA is to undertake its functions in a way that contributes to an affordable, integrated, safe, responsive, and sustainable land transport system. Each year, the NZTA invests a portion of its funds on research that contributes to this objective.

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The material contained in this report is the output of research and should not be construed in any way as policy adopted by the NZTA but may be used in the formulation of future policy.

Additional note

The NZTA was formally established on 1 August 2008, combining the functions and expertise of Land Transport NZ and Transit NZ.

The new organisation will provide an integrated approach to transport planning, funding and delivery. This research report may refer to Land Transport NZ and Transit NZ.

Contents

Acknowledgements

Abbreviations and acronyms

GPS   Government Policy Statement on Land Transport Funding

LGA   Local Government Act 2002

LTCCP   Long term council community plan

LTMA   Land Transport Management Act 2003

NZTA   New Zealand Transport Agency

NZTS   New Zealand Transport Strategy

RTC   Regional Transport Committees

RLTP   Regional Land Transport Programmes

RLTS   Regional Land Transport Strategy

RMA   Resource Management Act 1991

TDM   Travel Demand Management

Executive summary

The purpose of the research is to understand the extent to which local authority transport and land use decision-making processes enable local transport networks to adapt to changes in transport demand.

It is local authorities who make decisions about the shape and configuration of our urban areas, deciding what type of land uses go where and the transport networks that link them together. These decisions influence local, regional and national movement patterns and govern how communities can travel from one place to another for work, for leisure and for social and community needs.

The objectives of this research were as follows:

- **Evidence based, integrated, policy outcome transport approaches**: Assess the extent to which transport activities (planning through to implementation) are underpinned by evidence-based, integrated, policy-outcome approaches.

- **Planning decision making that enables adaptation and change**: Assess the extent to which decision-making processes (from planning through to implementation) enable the transport system to adapt to and encourage changes in transport demands.

- **Local authorities placed to adapt to change**: Understand how local authorities are currently placed to adapt to significant and unexpected changes in transport demand.

Information required to address these three research objectives was gathered through three stakeholder workshops and a survey. The survey was undertaken online and was distributed to all local authorities in New Zealand. It was emailed to local authority chief executives who were asked to distribute it within their organisation to officers in the areas of transport planning and policy, transport engineering the RMA planning. An overall response rate of 45% was achieved, with the responses being fairly representative of rural and urban areas, and territorial authorities and regional councils. The analysis and the conclusions of the research are provided in the context of the very good work and action that has been revealed as being undertaken by officers in transport and planning fields; there is substantial evidence of understanding of transport issues and proactive approaches to resolve them. The research has focused on areas where there is opportunity to improve performance. Its intention has been to identify barriers and issues and to advise on what change can be made. Hence, it is not to be taken as being reflective of overall performance. That would entail more substantial research.

Evidence-based, integrated, policy-outcome transport approaches

The survey has found that evidence (data) based, integrated and policy-outcome approaches are being used. However, in detail, evidence is not particularly robust and appears to be focussed on cars and trucks with very few officers (of councils) considering fuel price change data. Councils do not appear to be collecting or using data for non-car modes.

The survey found that officers tend to plan for the car ahead of public transport. It appears that planners and transport officers may not be entirely integrated and that there are certainly inter-agency and organisation integration issues. This lack of integration is probably undermining the ability of councils to change current transport approaches and policy. It also could explain why councillors and communities are perceived as being a barrier for change. A lack of integration, and robust and comprehensive data can create mixed and uncoordinated messages, which means that overall, officers cannot convince councillors and communities on key issues and is why officers tend to plan for cars ahead of public transport.

This then means that funding continues to be allocated mainly towards providing for cars and trucks where issues are understood. It also means that the case for increasing funding for public transport and other non-car based modes is not able to be properly or evidentially argued. It is noted that the case for these alternative modes, in preference to providing for the car, is much more difficult as it

relies on complex data and compelling demonstration that the current system is not or will not continue to work.

Planning decision making that enables adaptation and change

Most councils appear to be aware of national transport policy objectives and what this might mean in terms of enabling the transport system to adapt and encourage change in travel demands. However, the actions of councils (and officers) appear to be strongly constrained by the perceived need to accommodate the car first. Thus, when assessing applications and when planning for new development the starting point of most councils is to accommodate the car and then, if there is space or budget, consider other modes.

Some tools to plan for all transport modes and to enable walking, cycling and the use of public transport are in place. However, they appear to be applied generically and not to compete with or to be at the expense of the car. Therefore, and as a consequence of the lack of evidence and other barriers, most councils are not being as proactive as they perhaps could be to help change patterns in transport mode use and transport demand. This is a reporting of survey responses and not necessarily a criticism. Nevertheless, it indicates that councils are seeking to accommodate a significant proportion of the communities preferred transport mode (the car) and in so doing utilising most of their available resources. This is too a degree understandable as in some instances it would be unreasonable to suggest that other approaches should be used. The ability for council to make changes, therefore, needs further careful examination.

Local authorities placed to adapt to change

Generally councils are not planning for the scenario where there is a significant change in the demand for transport, caused by example through a significant increase in fuel price. Therefore, councils are generally not well placed to manage the effects from such an eventuality. However, should it occur, then the preferred response would be to increase bus frequencies and expand bus networks. This would not work in peri-urban or rural areas. This solution may only really work in relatively dense urban environments where roads are laid out to allow for bus services.

Current policies and rules in district plans do not assist; they do not promote denser development at accessible or central locations, and car parking standards and engineering standards are on the whole unresponsive.

There may be integration problems between planners and transport officers and between agencies, who may not be working very well together in terms promoting and allowing non-car based transport networks, although they are both consistently accommodating the car as a starting point in the network.

Evidence on the use of data is inconclusive but suggests that data on non-car based modes is probably not being collected (consistently or robustly), which conversely means that they are not being planned for or funded.

Given these integration and data issues, it seems that the potential for a transport solution to be delivered in some settlements may be eroded in the longer term, especially where development is not necessarily being designed or planned with the bus and other modes in mind. This also means that existing urban areas are unlikely to become more accessible, or become easier to service by the bus.

Conclusion

In conclusion the following are identified as key issues:

- Planners and transport disciplines could be better integrated, and notably planners could be more aware of current transport practice and approaches.

- Data collection and the use of data by councils could be better and appears to be currently directed towards collecting data associated with accommodating the car. Data that is available is

not necessarily robust and appears to be focussed on cars and trucks with very few considering fuel price change data. Councils do not appear to be collecting or using data for non-car modes.

- Current planning and transport policy appears to be directed towards accommodating the car before other modes.

- Major barriers to securing change are public perception, councillors (in their decision-making capacity) and funding.

- Lack of integration and good data could explain current policy directions and also why funding is not being directed towards other modes. Lack of integration creates an uncoordinated message and/or means that changes wanted by one organisation are not delivered by the other. Similarly, lack of good data makes it difficult to justify schemes and to shift emphasis away from the car (if that was wanted).

- Planning processes associated with managing where major new urban growth will occur and the shape and form of settlements in the future tend to plan for the car first and then for other modes. This is the same when considering applications for new development.

- Many respondents think that there is capacity in buses and that this could be further expanded to accommodate some increases in demand (associated with a significant fuel price increase, for example). No other solution was particularly popular, but it was noted that whilst changing settlement pattern and form would be effective, making the required changes could only occur in the longer term.

Thus, overall, most councils are aware of national transport policy objectives and what this might mean in terms of enabling the transport system to adapt and encourage change in travel demands. However, the actions of councils appear to be strongly constrained by the perceived need to accommodate the car first. As mentioned, factors that affect this are integration and data, and the barriers are public perception, councillors as decision makers and funding.

A probable consequence of a lack of evidence base and barriers is the ability to persuade the public and councillors of the need for a shift in emphasis away from car-based transport or to make significant investment in public transport, cycling, walking or other modes. Hence, councils are not being as proactive as they perhaps could be in attempting to change patterns in transport mode use and transport demand.

Recommendations

It is noted that councils could look at the following areas of their practice:

- Increase awareness and understanding of transport issues, best practice and data (sources and modelling) within council, and notably to planners, urban designers and others involved in the RMA district plan and LTCCP. This could be via distribution of information including best practice and/or in-house seminars.

- Increase understanding of transport modelling amongst all professionals and especially of the data outputs and data inputs/variables. Where there are data gaps, councils should consider how they might be addressed and as necessary discuss them with local, regional and national partners. It is then important to ensure that the data is used in decision-making processes and to inform policy direction.

- Develop, reinvigorate and stimulate working groups with other organisations and intra-departments involved in transport (where appropriate). Share the results from this survey with them to ensure that they are aware of potential issues. Brainstorm and share ideas and best practice and consider how some of the issues in the survey might be addressed.

In more detail and as complementary action, the following is also recommended to be undertaken:

- NZTA to provide guidance on the use of and development of road user hierarchies, appropriate to location.

- The non-motorised user audit is a draft document adopted by NZTA, but has as yet, not been adopted at the local level. It is recommended that NZTA promote the use of the non-motorised user audit and potentially look at making it mandatory in future years.

- Develop improved communication with regards to the changes in the Economic evaluation

manual. Provide assistance for users on how to complete the procedures. This could, for example, entail workshops and communication to TLAs and consultants involved in implementing and delivering walking and cycling schemes.

- A theme for the next walking conference could focus on securing support for walking from the people making decisions at the national, regional and local level.

- There is a need to encourage before and after monitoring of walking and cycling. It is accepted that in rural locations, conducting pedestrian counts could be inefficient. To address this, guidance on how to apply monitoring pedestrian trips to different geographical areas could be developed. This could include the development of a pedestrian trips generation tool that predicts walk-ability.

In tandem with the above it is noted that other actions could be appropriate. This could include development of a national planning policy, a web portal to share information and seek advice, development of a training programme and more assistance with funding applications.

Abstract

This research involved examining how local authorities are responding to changes in the demands placed on their transport networks. Three research objectives were posed:

• Assessing the extent to which transport activities (planning through to implementation) are underpinned by evidence-based, integrated, policy-outcome approaches.

• Assessing the extent to which decision-making processes (from planning through to implementation) enable the transport system to adapt to and encourage changes in transport demands.

• Understanding how local authorities are currently placed to adapt to significant and unexpected changes in transport demand.

Workshops and an online survey were used to collect necessary information from local authorities.

1. Introduction

1.1   Purpose of this research

The policy direction for transport in New Zealand has changed considerably over the last two decades. Concepts such as modal integration, efficiency of infrastructure use, access and mobility, public health and environmental sustainability have all become increasingly important considerations in the planning and funding of transport systems. At the highest level these goals are reflected in the New Zealand Transport Strategy (NZTS).

The vision outlined in the NZTS is that 'people and freight in New Zealand have access to an affordable, integrated, safe, responsive and sustainable transport system'. This research touches on all of these elements, but is particularly focused on three, namely: integration, responsiveness and sustainability.

Legislative and institutional changes have also been focused on creating an environment where these broad goals can be realised. Creating the right conditions for this to occur is essential to achieving positive change. The focus of this research, however, is the activity of local authorities. It is the local authorities who make decisions about the shape and configuration of our urban areas, deciding what type of land uses go where and the transport networks that link them together. These decisions regulate local, regional and national movement patterns and govern how communities can travel from one place to another for work, for leisure and for social and community needs.

The purpose of the research is to understand the extent to which local authority transport and land use decision-making processes enable transport networks to adapt to changes in transport demand.

1.2   Research objectives

The objectives of this research are provided in full below with text in bold being a summary title for the purpose of the report:

- **Evidence-based, integrated, policy-outcome transport approaches**: Assess the extent to which transport activities (planning through to implementation) are underpinned by evidence-based, integrated, policy-outcome approaches.

- **Planning decision making that enables adaptation and change**: Assess the extent to which decision-making processes (from planning through to implementation) enable the transport system to adapt to and encourage changes in transport demands.

- **Local authorities placed to adapt to change**: Understand how local authorities are currently placed to adapt to significant and unexpected changes in transport demand.

1.3   Structure of this report

This report is structured as follows:

- Chapter 1 outlines the purpose and objectives of the research.

- Chapter 2 provides background to the research.

- Chapter 3 outlines information gathering methods used including workshops.

- Chapter 4, 5 and 6 provides results and analysis by study objective, as follows:

  - Chapter 4 – Evidence-based, integrated, policy-outcome transport approaches

  - Chapter 5 – Planning and decision making that enables adaptation and change

  - Chapter 6 - Local authorities placement to adapt to change.

- Chapter 7 presents the conclusions and recommendations.

2. Research background

This section provides some background to the research including a brief description of the key aspects of New Zealand's transport system and the roles and responsibilities of local authorities in the planning and funding of the transport system. It shows the vital role that local authorities play in transport planning and funding, and consequently why they have a key role to play in managing and planning for changes to the demand of their transport networks.

2.1 New Zealand's transport system

Transport is about the movement of goods and people. As a system it is extraordinarily complex and contains many private and public components. Furthermore, a transport system at a national, regional and local scale is subject to numerous external factors that influence the demand for transport. Perhaps the most significant factor influencing the demand for transport is the spatial arrangement of the land uses being serviced. Although it is easy to overlook, a transport system does not exist for its own benefit, but rather to act as a conduit between land use activities.

Some key features that influence the transport system are:

- New Zealand is a heavily urbanised country, with 86 percent of people living in urban areas.
- Overall, New Zealand is relatively sparsely populated with an average population density of 15 people/km².
- High levels of private motor vehicle ownership.
- A relatively high number of shipping ports relative to the land area and population.
- A long, narrow geographical form and significant areas of hilly topography.
- New Zealand's freight sector is dominated by a relatively small group of commodities, namely aggregates, logs and wood products and milk and dairy products (Richard Paling Consulting 2008).
- More than half of New Zealand's freight (70%) is transported by road, while rail and coastal shipping each transport 15 percent.
- The main energy source for New Zealand's transport system is imported oil.
- The transport sector (MfE2009) makes up 20% of New Zealand's total greenhouse gas emissions.

The country's transport system is already under pressure in many areas and the demand for more transport capacity is likely to increase significantly. In the freight sector alone, it is estimated that by 2040 the total amount of freight needed to be transported will be 2.2 times greater than at present (MoT 2008).

2.2 The role of local authorities in transport planning

Local authorities have a pivotal role in transport policy and planning. This is both directly through the provision of transport services and indirectly, through influencing land use planning. The relationships between the various land use planning (resource management), transport and local government legislation are complex and sometimes not well understood. The key pieces of legislation influencing transport in New Zealand are:

- Land Transport Management Act 2003 – planning and funding of transport system through regional and national land transport programmes.
- Public Transport Management Act 2008 – empowers regional councils and NZTA to facilitate the provision of public transport services.
- Local Government Act 2002 – regional councils and territorial authorities can allocate funding to local and regional transport projects through the long-term council community plan (LTCCP) process.

- Resource Management Act 1991 – empowers local authorities to control land use planning, including considering the effect of land use development on transport networks.

Figure 2.1 shows the relationships between many of these processes.

FIGURE 2.1: HIERARCHY AND RELATIONSHIPS OF TRANSPORT AND PLANNING POLICIES, PLANS AND DOCUMENTS
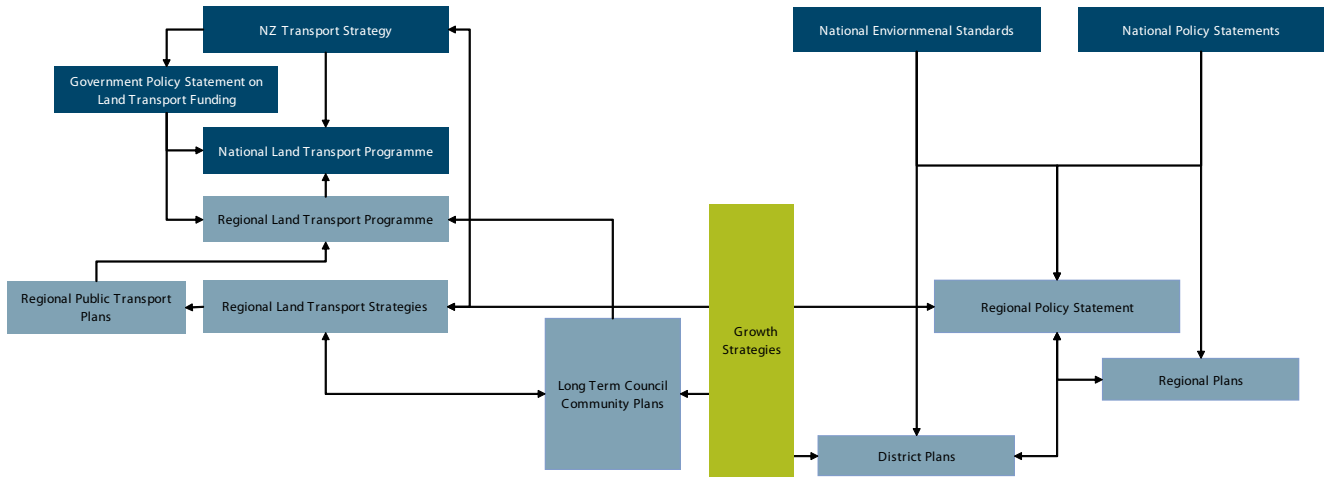
3. Information gathering

Information was obtained from two key sources – three stakeholder workshops and an online survey.

3.1 Workshops

There were three workshops, which were attended by approximately 20 officers who were from the NZTA regional offices, regional and local authorities and, in the case of Auckland, ARTA. Whilst these workshops were used to scope the survey they provided some extremely useful advice.

The scoping workshops were held in the following centres:

- Wellington, 3 April 2009.
- Christchurch, 7 April 2009.
- Auckland, 15 April 2009.

These workshops were used to refine the survey and provided valuable information on the areas and topics where questions should be directed. The main points raised during the workshops are listed below:

- Integration is a concept often talked and written about, but in reality the level of integration (in whatever context) is often less than ideal. An integrated and holistic approach to managing development (through consents and district plan) requires a three way relationship between consents, policy and transport. The size of organisations and departmental structure affects relationships between departments within councils and thus integrated thinking. Relationships between officers and managers and members is crucial to getting, and then delivering strategies; the whole Council approach is required as other departments might be delivering 'things' which run counter to LTS objectives.

- The size and structure of an organisation can have an important bearing on how transport demands are considered at a strategic or regulatory level.

- Cross boundary issues can make region wide transport planning difficult and this applies pertinently to managing development as well as to planning for new infrastructure and services.

- There was a recognised disconnect between planning and delivering public transport services in conjunction with new developments including intensification and subdivision. Generally the process for securing changes as well as key drivers or considerations to enable public service change were not clearly known. This means new growth does not easily plan to accommodate public transport. Workshop attendees pointed to commercial sensitivity issues preventing full understanding of bus/train loadings and so local authorities can find it difficult to work out popularity and/or commercial worth.

- There is a significant transport planning skill gap which is difficult to fill. Staff turnover also effects ability to deliver strategies.

- Currently it is considerably easier for a developer to do a greenfield development rather than intensification, which makes retrofitting urban areas in order to make them more sustainable from a transport perspective commercially relatively unattractive, or at least less profitable. Use of structure planning exercises is becoming more common and provides the opportunity to govern and/or require mix use development and higher densities. However, it is still difficult to plan for schools and public transport as providers outside of the development process, which in any event is not geared to consider how it might be delivered.

- Car parking is still typically based on minimums.

- The use of models and forecasting is inconsistent, as are the factors that are considered as part of these approaches.

- Road hierarchies are commonly used, but road-user hierarchies are much less commonly used.

- Political barriers to change within council tend to become an issue at the implementation/project level, with high-level strategies being relatively easy to push through as policy. This represents a disconnect between strategy and project; ie the concept is ok but reality is not politically tenable.

- Local Government Act 2002 consultation requirements can be onerous and a hindrance to implementing significant and/or swift change. Schemes to develop better public transport facilities can be difficult to implement where local communities can resist because of amenity issues associated with bus stops and rail lines.

- Strategies are developed but not delivered and then new ones formed; lack of stamina and constant changes to councillors and officers undermines ability to deliver strategies.

- Non-RMA plans (such as walking and cycling strategies) cannot be used in determination process; plan changes to integrate into district plans are lengthy, and resource hungry (unaffordable); development codes non-statutory.

- Road and transport funding regimes can lead to decisions on funding that cause undesirable outcomes, notably allowing local authorities to bring forward schemes that they would not otherwise have delivered ahead of others. For example, if part funding was available at a national level for increased car parking, then local authorities would seek to make use of it, ahead of using that investment to secure other, unfunded, projects, such as providing public transport routes.

The results from the workshop have not been used to skew the assessment section or the conclusions and are outlined above to provide context. However the above provides a useful understanding and discussion between senior officers which provides useful insights into current thinking. In some instances, these are used to demonstrate and elaborate analysis in the following sections.

3.2 Survey

A preliminary survey was then piloted to the workshop attendees for further refinement. Based on comments received during the pilot, further modifications to some questions were made.

The finalised survey was distributed by email to all local authorities via Local Government New Zealand's distribution list. The online survey was available for a two week period from 5–19 May 2009 and reminder emails were sent out on 12 May 2009. A copy of the survey is contained in Appendix A.

A total of 59 responses were received, with responses from 45% of all councils within New Zealand. Of urban (city) councils, 56% were represented. Almost half (45%) of regional councils (including unitary authorities) were represented. The response rate was slightly higher for North Island councils, where 51% of all councils responded, compared with only 32% of South Island councils responding.

Although the number of responses received was lower than hoped, the sample provides a broad representation of local authorities in New Zealand. The proportion of rural and urban councils was 12% and 88% respectively (although it is noted that in the survey over half of councils considered themselves to be part urban and part rural). The split of respondents closely mirrors New Zealand's rural and urban split.

With regards to who responded to the survey, approximately half the respondents were transport professionals while a quarter were RMA planners. The remaining quarter were economists, scientists and managers. Of the respondents taking part, 53% were involved in RMA planning and 40% in transport planning, policy and engineering. The respondents were relatively experienced with 55% of respondents having over 16 years experience and 71% of respondents having over 11 years experience.

There was also a good coverage of different sized councils, with half having staff of up to 100 and 36% between 100 and 500. A few councils (10%) had more than 500 staff. Approximately 60% of people worked in small teams of up to five people.

4. Evidence based, integrated, policy outcome transport approaches

This set of questions were about understanding the extent to which transport activities are underpinned by evidence-based, integrated, policy-outcome approaches.

4.1   Results

Does your organisation have any additional transport related strategies, over and above statutory requirements? [4A]

Most respondents indicated that their organisation had cycling (79%) and walking (71%) strategies, whilst only 29% had travel demand strategies and 23% integrated/regional transport strategies. All of these strategies are above and beyond those required to be provided by the LTMA. It is noted that very few respondents indicated that their organisation has traffic management, parking, public transport, road safety or freight management plans or strategies.

Does your organisation use the following to provide a basis for transport forecasts and policy formulation? [4B]

Between 56% and 69% of respondents stated that their organisation used the following as a basis for forecasting transport and forming policy:

- Demographic profiles (69%).
- VKT (vehicle kilometres travelled) profile (65%) – It was noted that there was a significant difference in response between respondents who were planners of some kind (only 46% said they used VKT profiles) and those who were involved in transport planning of some kind (85% said they used VKT profiles).
- Vehicle speeds (65%).
- Travel time (64%).
- Number of people moved by mode (56%).

Between 22% and 24% of councils stated that 'the number of people moved by mode' and 'travel time' data was not used at all. Only 25% of respondents indicated that their organisation used fuel price scenarios, although again this was significantly higher among respondents with a transport-related role (40%) than planners (8%), with 45% of councils stating they do not. Results showed 33% did not know if they were used.

Notably between 13% and 33% of councils did not know if a particular attribute was used to forecast traffic or to formulate policy.

Does your organisation use a road user hierarchy in transport policy and scheme design? [5A]

Respondents were asked about the use of road user hierarchies. Responses were sought in the context of the starting position of the organisation when it allocates space and plans for the use of its roads. It was made clear that the allocation of space was not about what might happen in each and every circumstance as that would be reflective of the purpose of the road and land uses on it.

According to respondents, 31% of councils use a road user hierarchy in transport policy and scheme design, with 45% not using one and 24% not knowing if one is used (this result was similar across urban and rural councils). It is noted that the 24% not knowing if one is used or not is indicative of its weight and relevance to policy formulation and implementation, and every day actions of those councils.

If yes, what is the road user hierarchy in a normal suburban street? Please rank the following from highest to lowest priority in the road user hierarchy. [5B]

What do you think the road user hierarchy should be in a normal suburban street? Please rank the following from highest to lowest priority. [5C]

If you have a different hierarchy in 5C than in 5B (ie your ideal road user hierarchy is different than what currently exists), please identify the reasons for this. [5D]

Of the councils who have a road user hierarchy, the Figure 4.2 below shows the current hierarchy and what the preferred one would be (most respondents without a hierarchy provided their ideal hierarchy but did not answer the question (5B) about current hierarchy).

FIGURE 4.1: WHAT IS THE CURRENT ROAD USER HIERARCHY IN A NORMAL SUBURBAN STREET? [5B]
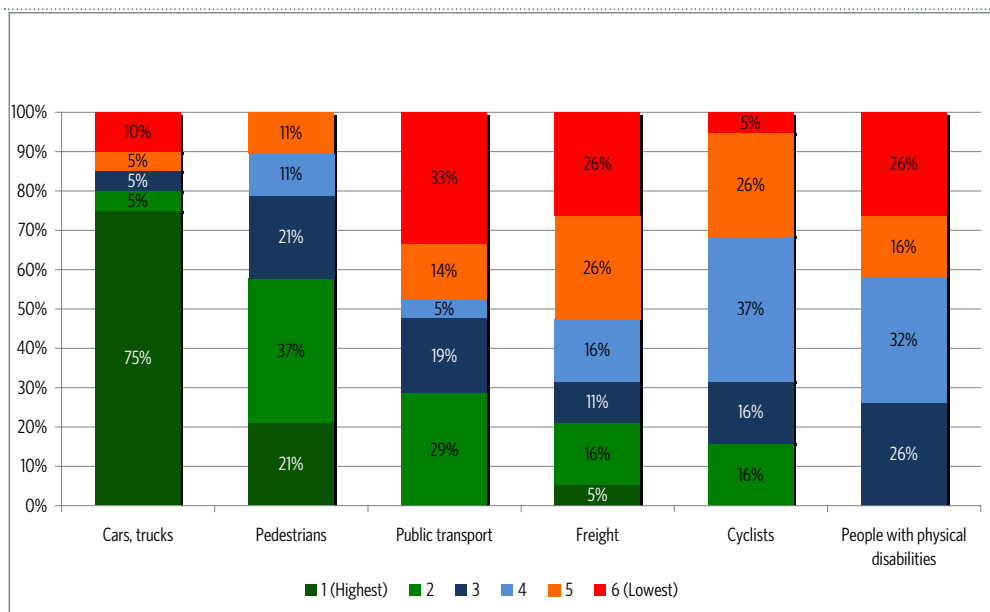
FIGURE 4.2: WHAT DO YOU THINK THE IDEAL ROAD USER HIERARCHY SHOULD BE IN A NORMAL SUBURBAN STREET? [5C]
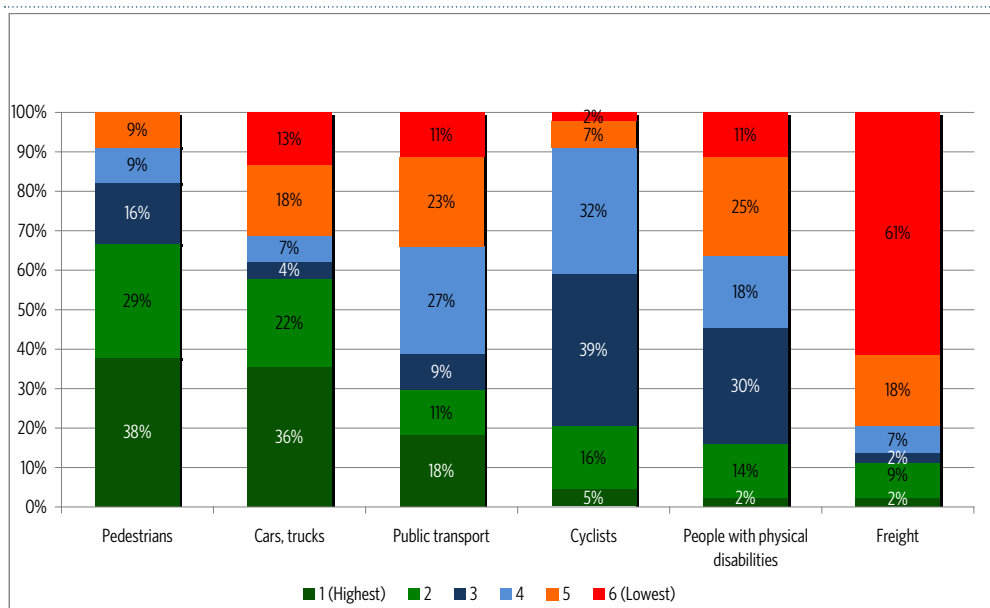
Most councils state that the priority is currently overwhelmingly weighted towards cars and trucks (75% have them as the highest rank and 5% as the second highest rank). This is followed, a relatively long way behind, by pedestrians (58% have them as either the highest or second highest rank). Public transport is ranked third highest, although (and in contrast) approximately a third of all respondents also stated that public transport is ranked lowest. Half of councils stated that freight is ranked lowest or second lowest.

In comparison with the above, respondents were asked to advise what they thought the prioritisation should be. Most respondents considered that priority should be shifted away from cars and trucks, although approximately a third of respondents thought cars and trucks should be ranked highest (half of respondents considered that cars and trucks either should be ranked highest or second highest). A third thought that the priority for cars and trucks should be ranked either lowest or second lowest.

Notably, most respondents (70%) thought that priority for pedestrians should be ranked either first or second highest. Results also showed 70% of respondents thought that cyclists should be ranked third or fourth highest.

Respondents, who considered that public transport should be ranked highest as compared with the current prioritisation practice where no respondent stated that it was ranked highest, numbered 18%. Most respondents thought that priority for people with physical disabilities should be increased and that priority for freight should be reduced as compared with current prioritisation.

There were some notable differences in ideal road user hierarchies between planners and transport staff. In particular, while 63% of transport staff felt pedestrians should be the highest priority road users, only a quarter of planning staff agreed. In contrast, 70% of planners felt that cars and trucks should be prioritised (either priority 1 or 2 in the hierarchy) compared with 38% of transport-related staff. The difference in desired road use priority or hierarchy between planners and transport professionals indicates a reasonably strong misalignment between organisations and disciplines, with planners not as aware of current thinking and practice around multiple road users.

A substantial proportion of respondents (42%) did not know why there was a difference between the current road user hierarchy and their ideal hierarchy. The most commonly cited reasons why the current hierarchy did not match the ideal hierarchy were: a lack of political will (35%); public perceptions (31%) and engineering design codes (27%). A fifth of respondents considered that resources, political understanding and staff skills were also significant issues.

Which of the following Travel Demand Management (TDM) measures does your organisation use? [6A]

TDM measures are measures with the objective of reducing the use of motor vehicles in favour of more sustainable means of transport, for example, walking, cycling, public transport and carpooling.

Respondents stated that the most commonly used TDM measures were pedestrian crossings (70%), cycle/pedestrian shared use routes (58%), drop kerbs for pedestrians (55%) and off and on road cycle paths (53% and 47%). Respondents reported relatively substantial use of pedestrian bridges and subways (40%), streetscape design (such as using the same materials for pedestrian and motor vehicle areas) (38%), travel plans (38%) and cycle training and maps (32% and 30%).

Much less popular were measures that affect the manner in which roads are able to be used by motor vehicles, such as introducing bus lanes, bus priority at intersections and multi-occupancy vehicle lanes.

In general, respondents commented that TDM is not applicable to rural areas. One respondent noted that physical width of roads prevented introduction of bus lanes. One respondent helpfully listed other TDM measures that are used including:

- limiting road network capacity for general traffic
- education and awareness raising programmes
- shared space, parking plans and policies, and
- coordinating service provision.

In a typical financial year, what proportion of your organisation's total transport funding is allocated to each of the areas listed below? [6B]

And in an ideal world, what proportion of your organisation's total transport funding would be allocated to each of the areas listed below? [6C]

Options for both questions were: walking schemes, cycling schemes, public transport schemes, improving transport options for people with disabilities, new roads and road widening, road maintenance, footpath maintenance, traffic calming, new car parking, other activities.

Respondents were asked about the proportion of transport funding that is spent on a range of activities in a financial year, and in contrast, asked how they thought funding should be allocated. Due to the fact that percentage ranges were offered, responses only provide an indication of proportions of funding and do not necessarily add up to 100%.

Overall, respondents indicated that currently most funding was allocated to:

• road maintenance

• public transport

• new roads.

In comparison, in an ideal world where respondents could decide funding allocations, the split remained the same overall, but with less allocated to road maintenance and more towards road widening. Most respondents thought that some funding should be allocated to public transport, whereas currently around 21% of councils do not allocate any funding to public transport.

In detail, respondents indicated that the majority of current spending is on road maintenance with nearly half indicating that more than 50% of total budget is spent on this activity (a quarter of respondents considered that funding represented more than 70% of total budget). Ten percent of respondents stated that more than 70% of current total funding budget was on public transport schemes. New roads and road widening were the next highest rated, with a quarter of respondents stating that 11 to 20% of budget is allocated for this activity.

All other areas of spend (new car parking, footpath maintenance, traffic calming, cycling, walking schemes and improvements for disabled people) were similarly rated with funding typically being between 1 and 10% of overall budgets. Also, apart from footpath maintenance, roughly a quarter of respondents thought that nothing (zero) was currently actually allocated towards these activities.

In comparison, in an ideal world where respondents could decide funding allocations, most respondents (49%) still considered that more than half of funding should be on road maintenance. However, the proportion who allocated more than 70% of funding to this activity was reduced from 26% to 13%. More respondents allocated funding for new roads and road widening, with 31% stating that 21–40% of budgets should be allocated for this purpose.

Respondents considered that slightly less funding should be allocated to public transport, although few respondents considered that none should be allocated.

Many more respondents thought 1 to 10% of funding should be allocated to footpath maintenance, traffic calming, cycling, walking schemes, improvement for disabled people. Few respondents thought that none should be allocated to these. Notably, 42% of respondents thought no funding should be allocated to car parking.

What does your organisation use transport models for? [7A]

Of the organisations surveyed, 65% use transport models for the main urban area and 55% use them across the entire district. In urban areas, 29% do not use them and 41% do not use them across the district.

If your organisation does use transport models, do you think: they provide multi-modal assessments? They provide accurate forecasts? They provide a basis for improving walking facilities? They provide a basis for improving cycling facilities? They provide a basis for improving public transport facilities? [7B]

Of those organisations that used transport models, about half believed that they provide:

- a basis for improving public transport facilities

- multi-modal assessments

- accurate forecasts.

Approximately a quarter of respondents did not think that models would be able to do the above. Less than a third of respondents believed they provided a basis for improving cycling and/or walking facilities whilst half thought that they did not. Overall, transport models do not appear to be considered as being useful by between 24% and 56% of respondents. Between 15% and 24% of respondents did not know about the functionality or usefulness of models.

Please consider the ways in which NZTA could assist council organisations to achieve more resilient transport networks. How useful do you think each of the following potential NZTA activities would be? [7C]

Respondents were queried in respect of how NZTA could assist in helping to provide more resilient transport networks. Resilient transport networks are ones that are responsive to consumer demand changes, adaptable to change in energy sources and provide low impact travel choice. Just as diversity makes ecosystems more resilient, so it does with transport systems. Creating such networks would include the concept of retrofitting to make transport networks more orientated towards people and creating conditions for economic development and growth.

The survey showed 86% of respondents considered that the most useful assistance that NZTA could provide would be to increase funding allocations for walking, cycling and public transport. Also, 63% of respondents thought that NZTA could usefully assist by encouraging more political support for sustainable transport (this was particularly true among urban councils, where 80% felt this would be useful), and 44% by continuing research programmes.

Forty one percent of respondents considered that design guidance would not be helpful, although 34% thought this guidance would be useful.

Very few respondents (4%) thought that non-motorised user audits would be useful; where these audits would identify how existing networks perform and seek to identify operational issues. While 55% thought that they would be not useful at all.

4.2   Analysis

Some of the key messages from the survey to understand the extent to which transport activities are underpinned by evidence-based, integrated and policy-outcome approaches were, as follows:

- Most organisations have a walking and a cycling strategy.

- Approximately two thirds of respondents use transport data to form policy, although a quarter do not use 'number of people moved by mode' or 'travel time' data.

- Transport models were used by two thirds of councils, but only half considered that they provided a basis for:

  – improving public transport facilities

  – providing multi-modal assessments

  – providing accurate car travel forecasts.

- Less than a third of respondents believed they provided a basis for improving cycling and/or walking facilities.

- Road user hierarchies are used by almost half (45%) of organisations and where they are used, cars and trucks are overwhelmingly the highest priority users, with pedestrians being the next highest followed by public transport. When queried about their 'ideal' hierarchy respondents tended to indicate that they would have pedestrians ranked highest. However, a very notable proportion of respondents retain cars and trucks as either highest or second highest in their 'ideal' priority. Political will and public perception were identified as barriers to introducing 'ideal' hierarchies, but do not explain why respondents indicated that cars and trucks should have a high position in their 'ideal' ranking.

- 'Soft' infrastructure such as travel plans, real-time information and integrated ticketing initiatives are hardly used to manage transport.

- The majority of spending is currently on roads (maintenance, widening and new roads) and to a much lesser degree on public transport. This priority was not altered significantly when respondents were asked about an ideal allocation although more respondents tended to want higher proportions of funding to be directed at new roads, road widening and for public transport.

- The greatest assistance NZTA could provide would be through more funding for walking, cycling and public transport.

There are many positive aspects to the activities of councils, for example, increased priority would be allocated to pedestrians (in funding and road user hierarchies) if allowed. However, in detail, most respondents indicated that in their 'ideal' roading hierarchy, cars and trucks would be a close second behind pedestrians, and at the same time respondents directed most funding towards road maintenance, road widening and new roads. Thus, overall it appears that councils would in an 'ideal' scenario continue to direct most funding and action towards accommodating cars and trucks.

The survey also shows some misalignment between planners and transport engineers, where planners tend to consider that cars and trucks should be prioritised ahead of other modes (in a road user hierarchy and when prioritising transport infrastructure funding). This could suggest that whilst planners and transport engineers are generally pulling in the same direction they may not be trying to achieve exactly the same things. This may reflect the fact that transport engineers and transport planners are more likely to be aware of changing approaches in TDM than RMA planners and thus, are more willing to consider different things.

The survey identifies quite clearly that integration between agencies, including authorities responsible for public transport provision and roads is a major barrier to change (by nearly three quarters of all respondents). When it comes to making changes in an 'extreme scenario' (as explored in the final part of the survey – see section 6) the control of services lying outside of an organisation's control is identified as being a significant barrier by more than half of respondents. These factors combined with the above, indicates that there are integration issues existing between agencies/ organisations as well as within organisations.

Transport models are in relatively common use (two thirds of councils use them), but only half are multi-modal and are considered to provide a basis for improving public transport. Only half of respondents consider that they provide accurate forecasts. Most respondents considered that they cannot be used to improve cycling and walking. Very few respondents thought that non-motorised user audits would be useful; this may be because the survey did not say what those audits would do. They generally identify how existing networks are performing and seek to identify operational issues.

Fuel pricing was not a data input for 75% of respondents and of those who did planners were a very small percentage. Most planners do not use vehicle kilometre travelled data. It is noted that this aspect combined with the fact that planners tend to advocate a different hierarchy than transport professionals is perhaps further indication of a lack of integration between the transport and planning divisions within councils. As indicated above, this may simply be that transport professionals are more aware of transport matters than planners. However, it is interesting because when it comes to responsiveness of councils to manage change in travel (section 6), planning processes were not a major barrier.

As discussed in the next section, the RMA planning activities (policy and determination) of councils tend to have a starting point of accommodating the car and then looking at other modes. Thus, a policy-outcome approach is unlikely to achieve change in travel demand that entails a shift from car based transport. Current policy does not encourage, for example, increased density at central

locations, or locations that benefit from a range of land uses. Car parking policy is not able to be reduced and normal engineering standards will be used; they are seen as a barrier to planning for realistic alternatives to car by a third of councils.

If policy was amended to encourage a change in transport demand and the use of public transport, cycling, walking and other non-car based modes then it is not clear if that would be successful, because respondents identify lack of political will and public perception as being relatively substantial barriers. Communities and politicians appear unlikely to support change, which means that funding, the single largest barrier to securing change, is unlikely to be re-allocated from providing for the car. This appears difficult to remedy given data (including models) and integration issues (identified above). In short, data is not robust or comprehensive enough for it to be used to demonstrate matters convincingly to 'lay' people and politicians. This situation is likely to be exacerbated if different departments within council are not properly integrated and, thus, are not trying to achieve exactly the same things.

It is noted that there was very limited use of travel plans, integrated ticketing and other 'soft' tools, which indicates that councils (mainly transport professionals) are not prepared to employ techniques that manage transport, and thereby help reduce reliance on the car. This, as with policy based approaches, may also be a data issue which is not helped by lack of integration. When planning for new development (processing applications or strategic and policy planning), planners should be encouraging or requiring these aspects to be considered.

Most respondents considered that there was capacity in existing bus networks and that these networks could be expanded or existing service frequencies increased relatively quickly. This is important because buses are able to penetrate most urban areas relatively easily and so can provide a relatively easy way to manage transport. It is also indicative that this appears to be a practicable option, if change is required quickly.

Thus, turning to the extent to which transport activities are underpinned by evidence-base, integrated and policy-outcome approaches, the survey has found that evidence (data) based, integrated and policy-outcome approaches are being used. However, in detail, evidence is not particularly robust and appears to be focussed on cars and trucks with very few considering fuel price change data. Councils do not appear to be collecting or using data for non-car modes.

The survey found that officers tend to plan for the car ahead of public transport. It appears that planners and transport officers may not be entirely integrated and that there are certainly inter-agency and organisation integration issues. This lack of integration is probably undermining the ability of councils to change current transport approaches and policy. It also could explain why councillors (as decision makers) and communities are perceived as being a barrier for change. A lack of integration and robust and comprehensive data can create mixed and uncoordinated messages, which means that overall officers cannot convince councillors and communities on key issues and why officers tend to plan for the car ahead of public transport.

This then means that funding continues to be allocated mainly towards providing for the car and trucks where issues are understood. It also means that the case for increasing funding for public transport and other non-car based modes is not able to be properly or evidentially argued. It is noted that the case for these alternative modes, in preference to providing for the car, is much more difficult as it relies on complex data and compelling demonstration that the current system is not or will not continue to work.

5. Planning and decision making that enables adaptation and change

This part of the questionnaire survey focused on understanding the extent to which decision-making processes enable the transport system to adapt to, and encourage changes in travel demands.

5.1 Results

Please think generally about the land use policies that you encounter in your day-to-day work, eg district plans. To what extent are these policies aligned with the following: the New Zealand Transport Strategy, the regional transport strategy, local transport policies? [2A]

It was found that land use policies are more closely aligned with local transport policies than regional and national level transport policies. Overall, 28% of the respondents (a response of 4 and above) indicated that there is a high degree of alignment with the New Zealand Transport Strategy. The response rate was greater for alignment to regional policies, with 39% of respondents indicating that land use policies highly aligned. This compares to 53% of respondents indicating that land use policies were highly aligned with local policies. This result is not surprising given that the timing of policy development at the different levels and locations does not necessarily coincide, reflecting the fact that there will be a delay in updating local policies to reflect national transport objectives. Encouragingly, only 2% of respondents indicated that land use policies were not at all aligned with regional or national policies.

Does your organisation's current forward planning for growth (growth management planning) processes include the following: transport modelling, transport planning or engineering advice, urban design advice? [2B]

The survey found 92% of respondents stated that transport planning or engineering advice is always (47%) or usually (45%) included in growth management planning activities of councils. Growth management planning activities are those concerned with working out where future development will occur and how those demands will be best accommodated in the district or region. New development includes housing and employment as well as the retail, education, health, community and leisure uses needed to be brought forward as part of that development. Of those surveyed, 65% of respondents indicated that transport modelling and urban design advice is always or usually included in the process. In contrast, 25% of respondents indicated that transport modelling and urban design advice is rarely used.

Do these processes seek to ensure that ultimately, users of new developments (including new urban areas) can access a range of everyday uses (shops, schools, homes and employment) by non-car based modes? [2C]

Some 78% of respondents indicated that growth management processes are used to ensure that users of new developments can access non-car based modes most. Respondents who stated that these processes are rarely used to ensure access by non-car based modes (16%) probably means that for these respondents, growth management processes focus on accommodating car based modes.

In undertaking growth management planning activities, including plan review and preparation, structure and/or master planning, what methods does your organisation use to reduce the reliance on private cars in urban areas? [2D]

Most respondents indicated that the following growth management methods are used to reduce reliance on the private car in urban areas:

- Creating new public transport, walking and cycling routes to improve connectivity and accessibility (80%).

- Intensification of existing areas (73%) – (85% of councils in urban areas, compared with 66% of councils with rural constituents).

- Mixed use development such as residential and retail and/or leisure (65%) – (80% of these were urban respondents and 57% were rural).

- Promoting or providing public transport facilities and/or cycling and pedestrian connections to existing urban areas (using existing networks more) (62%).

Less popular methods used to reduce reliance on the private car (between 40% to 47% of respondents indicated these) are listed as follows:

- Methods that reconfigure roads to provide for non-car based modes.

- Design guides to control urban form.

- The promotion of new land uses so that existing communities do not need to travel as far.

- The promotion of higher density development at locations with a range of facilities, or at existing centres (although these were significantly more likely to be used by urban councils).

When determining major planning applications and plan changes (for major development), do the District Plan or Regional Plan through its policies and rules…? (multiple options provided) [2E]

When determining major planning applications and plan changes, policies require/support compliance with engineering standards (64%), provision of cycling and parking connections (53%) and an assessment of transport accessibility by a number of modes (51%). A third of councils encouraged provision of non-car based transport modes by allowing higher densities (34%). Very few councils have policies and rules that allow reduced car parking to be provided if:

- a site is close to/at public transport interchanges

- close to a range of other land uses

- a travel plan is prepared.

Policies and rules do not encourage non-car based modes by reducing financial contributions required.

It is desirable to reduce people's reliance on their car and provide real and attractive alternatives. In your organisation, what are the main barriers to encouraging change and providing realistic and attractive alternatives to private car use? [3A]

The main barriers to encouraging change and providing realistic and attractive alternatives to private car use are show in the following graph.

The table shows that the major barrier to encouraging change is money to fund or partly fund active and shared modes (74%). This is a slightly more pronounced barrier in councils with rural constituents (79%) than urban councils (65%). This is followed by current land use and urban form (49%) and then topography and geography (35%). It is noted that all barriers identified in the survey were considered by a third or more of respondents to be a barrier to encouraging change and providing realistic and attractive alternatives.

Based on the proportion of responses, the least significant barriers are considered to be:

- senior management support

- working relationships with other teams in the organisation

- staff skills and knowledge

- engineering standards.

FIGURE 5.1: IN YOUR ORGANISATION, WHAT ARE THE MAIN BARRIERS TO ENCOURAGING CHANGE AND PROVIDING REALISTIC AND ATTRACTIVE ALTERNATIVES TO PRIVATE CAR USE? [3A]
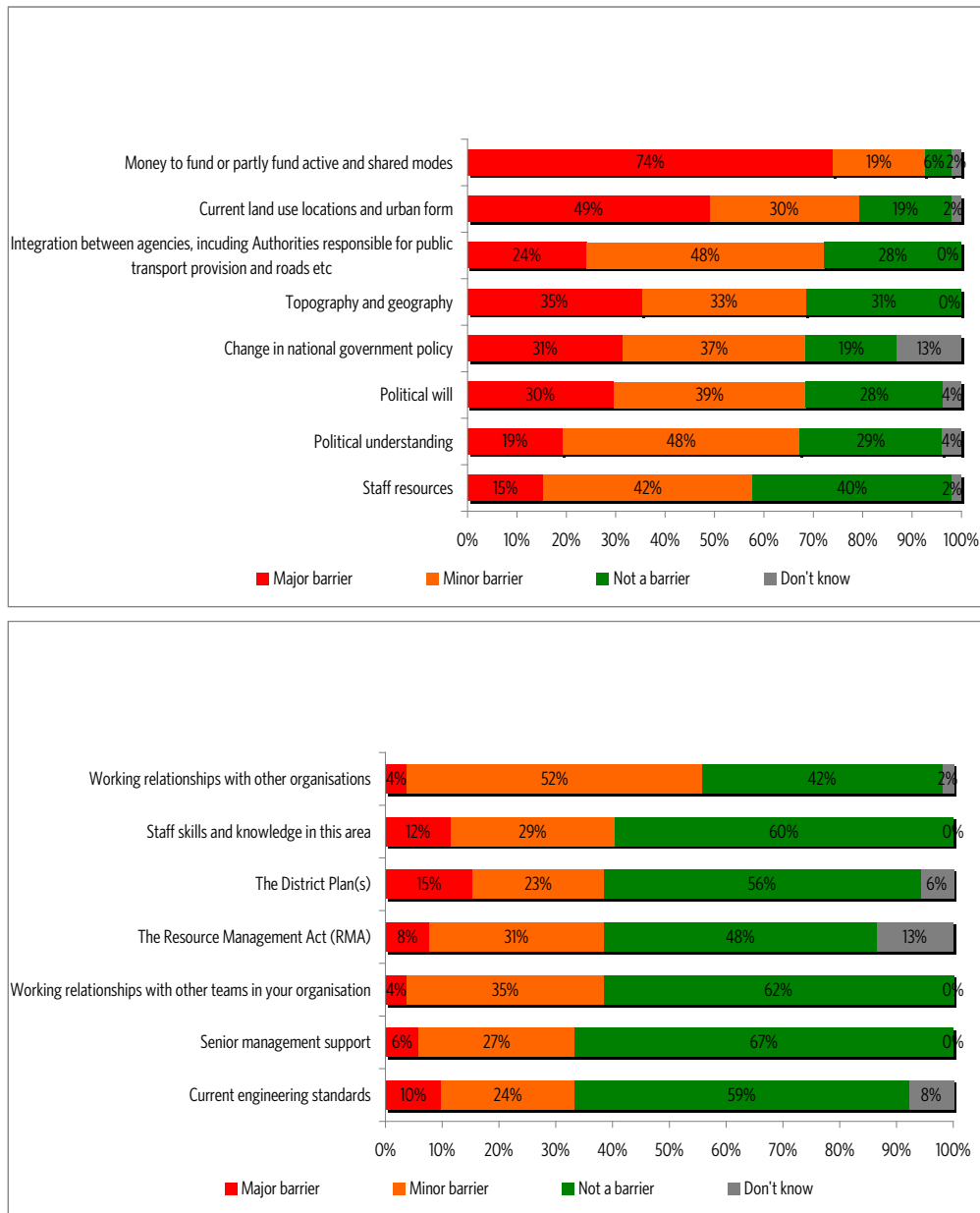
5.2   Analysis

There are a number of positive messages that have emerged from this survey notably in respect of the activities of council officers enabling transport systems to adapt to, and encourage changes in transport demand. The following are noted:

- Local land use policies tend to be aligned with local, regional and national transport policies and strategies.

- Transport planning or engineering advice is always or usually included within forward planning and growth management processes so that councils are thinking about these issues when deciding where and how new development should occur. Also, transport modelling and urban design advice is generally used to assist these processes.

- Growth management processes do generally seek to ensure that users of new developments can use non-car based modes by:

  - creating new public transport, walking and cycling routes to them

– allowing intensification and mixed use development to occur.

However, the promotion of higher density development is less widely used.

• Compliance with engineering standards, cycling and parking connections and assessment of transport accessibility are the most common foci of district plans and regional plans.

As indicated in section 5.1 the survey shows some misalignment between planners and transport engineers where planners tend to consider that cars and trucks should be prioritised ahead of other modes (in a road user hierarchy and when prioritising transport infrastructure funding).

This theme is reflected in the actions of councils (as found by this research) in that whilst the general principles of providing for non-car based modes are understood, the actions of councils and the tools that they use do not seek to radically or fundamentally change current patterns of transport or urban form.

Instead the tendency of councils is to use growth management methods, policies and rules which are the least likely to result in relatively denser forms of development or concentrate development at accessible locations. In tandem with this (as outlined above in section 5.1) respondents indicate that councils currently allocate most funding to accommodate the car and allow for its growth and then, secondly, look to see if other things can be achieved. Respondents also indicated that the most useful thing that NZTA could do to help achieve mode shift is to increase funding allocations. This could be taken as a strong indication that respondents (or councils) are not willing to reduce funding on measures to accommodate the car.

In other words, the starting point for councils appears to be compliance with engineering standards first, to accommodate the car (perhaps at the expense of other modes). So it then follows that the car mode remains attractive. This point was illustrated by most councils generally not allowing reduced amounts of car parking to be provided as part of a new development if it is in a location that is accessible by a range of modes, including foot. Such a policy approach could be beneficial as it can enable denser forms of development at certain locations (and as has been demonstrated by other studies, can enable and promote public transport services, increase walking and cycling and reduce use of the car). This analysis is not a criticism, as there is nothing to suggest that council officers are not making sensible decisions based on the information available. However, it does highlight several issues that need to be addressed.

Essentially, this survey has found a multitude of barriers to providing for non-car-based users, which include funding, political will, public perception and difficulty. However, in light of the above, the reason why councils (and their officers) do not take a more radical approach could be simply a lack of understanding of the consequence of action (or lack of it) either by councils or their communities, because the evidence base is not there **(see above)**.

[It is noted that some Councils appear to be faced with infrastructure and land use and settlement patterns that appear incapable of supporting a public transport system that can compete. This great difficulty is recognised.]

The point is illustrated when, for example, considering respondents preferred funding allocation and road user hierarchies. Most respondents indicated that in their 'ideal' roading hierarchy, cars and trucks would be a close second behind pedestrians and most funding is directed towards road maintenance, road widening and new roads. Equally, in growth management processes and policies and rules, the onus is on accommodating the car.

Thus, overall, it is concluded that most councils appear to be aware of national transport policy objectives and what this might mean in terms of enabling the transport system to adapt and encourage change in travel demands. However, the actions of councils (and officers) appear to be strongly constrained by the perceived need to accommodate the car first. Thus, when assessing applications and when planning for new development, the starting point of most councils is to accommodate the car and then, if there is space or budget, consider other modes.

Some tools to plan for all transport modes and to enable walking, cycling and the use of public transport are in place. However, they appear to be applied generically and not to compete with or to be at the expense of the car. Therefore, and as a consequence of the lack of evidence and other

barriers, most councils are not being as proactive as they perhaps could be to help change patterns in transport mode use and transport demand.

This is a reporting of survey responses and not necessarily a criticism. Nevertheless, it indicates that councils are seeking to accommodate a significant proportion of the communities preferred transport mode (the car) and in so doing utilising most of their available resources. This is, too a degree, understandable as in some instances it would be unreasonable to suggest that other approaches should be used The ability for council to make changes, therefore, needs further careful examination.

6. Local authorities placement to adapt to change

Many commentators predict that there will be substantial increases in the price of fuel in the coming years, eg predictions for petrol fuel price vary between $2.80 and $4.00 per litre by 2011 in constant 2008 NZ dollars. An increase in oil prices would also affect construction prices and costs. Councils were presented with a scenario where sustained increases in fuel pricing had occurred.

6.1   Results

This set of questions focused on understanding how local authorities are currently placed to adapt to significant and unexpected changes in travel demand.

If there are significant ongoing increases in fuel prices, what impacts would you expect in the short term (within 12 months of the price rises) within your organisation's transport network? [8A]

And what impacts on your organisation's transport network would you expect in the longer term following price rises? [8B]

Respondents were asked what impacts could be expected in the short term (within 12 months of a fuel price rise) within the transport network. Over half the respondents (57%) stated that they believed that there would be a substantial increase in demand for bus services and 45% that there would be a substantial reduction in travel overall. Under half (42%) stated that there would be reduced peak hour congestion. This was significantly higher in urban areas (Auckland, Wellington, Bay of Plenty, Waikato and Wellington) with 57%, compared to 31% amongst rural councils.

In line with the above, approximately 40% of respondents believed that there would also be an:

- increase in cycling

- increase in walking

- increase in demand for train services (48% in urban areas, compared to 31% in rural areas).

Of the respondents surveyed, 11% commented that there would be only minor changes as a consequence of price change. If the above price rise scenario prevailed for the longer term then the above stated pattern essentially prevailed, but with slightly more respondents stating that the effect could be anticipated. In other words the amount of respondents who considered that there would be (i) an increase in demand for bus services, (ii) reduction in travel overall, and (iii) increase in walking and cycling, increased by up to 11% as compared with the short term. Again, 13% of respondents considered that there would be no or only minor change.

If there was a significant increase in demand on public transport services, how well do you think your existing organisation's network would cope? For each of the following please indicate how much capacity there is in your network to cope with increased demand (consequent of a change in fuel prices). Option provided were: physical capacity of buses, physical capacity of trains, capacity of rail lines and stations to accommodate extra frequency, capacity of bus routes and stations to accommodate extra frequency. [8C]

With regard to how organisations might cope with an increase in demand for public transport services (among a sample limited to those who indicated this was of relevance), 57% of respondents indicated that there was some capacity to accommodate an increase in demand for trains (approximately 30% stated that available capacity could only accommodate an increase in demand of up to 10%). As expected, this was in Auckland and Wellington, but interestingly most of the respondents from Waikato believed there was also some capacity for trains in that region.

The survey showed 30% of respondents considered that there was no capacity in trains to accommodate increases in demand. However, 62% of respondents indicated that there was capacity in buses: 41% of respondents thought that there was capacity to accommodate an increase in demand of more than 10% and 21% stated that they could accommodate demand increases of up to 10%.

Turning to increasing frequency of services, approximately half of respondents thought that there was limited or no capacity to increase frequency of trains but nearly 60% of respondents thought there was capacity to increase bus service frequency by more than 10%.

In your opinion, which of the following changes could be made to your organisation's transport network within 12 months of a significant increase in petrol prices? [8D]

What are the main barriers to achieving the above changes within a 12 month period? [8E]

With regards to the preparedness of local authorities, within 12 months of a significant increase in fuel prices respondents thought that the following could be achieved:

- Promoting the use of high occupancy vehicles (61% of respondents – this was slightly higher among urban councils at 67%).

- Increasing the frequency of existing services (51% of respondents).

- Increasing the coverage of urban services (51% of respondents).

Fewer respondents (approximately 30%) thought that an increase in the capacity of existing services (eg bigger and/or more vehicles to move more people) could be made, or that services to peri-urban and rural areas could be provided.

Of those surveyed, 85% of respondents indicated that the main barrier to achieving any of the above changes was funding (100% of urban councils considered this a barrier, compared with 76% of councils with rural constituents). More than half of the respondents (57%) indicated that a barrier was the fact that services were provided by third parties, for example, where agreements might be required. Approximately 40% of respondents indicated that staff resources, planning time, processing, consenting and other agencies were also barriers.

This indicates that even if funding was found, that other relatively substantial barriers would potentially remain and would need to be overcome.

How effective do you believe the following actions would be in allowing your organisation's transport network to respond to this challenge? [9A]

And how quickly do you think your organisation could deliver or facilitate delivery of the following actions? [9B]

The main actions that respondents believed would be effective in allowing the transport network to respond to the challenge of oil price increases, and any associated changes in travel demand were (see Figure 6.1):

- Increased frequency and capacity of public transport services (72% of respondents thought this would be most effective). This was to be particularly effective in councils with an urban population (89% though this would be highly effective).

- Providing more public transport (expanding networks as opposed to increasing frequency and capacity) – (69% of respondents thought this would be most effective).
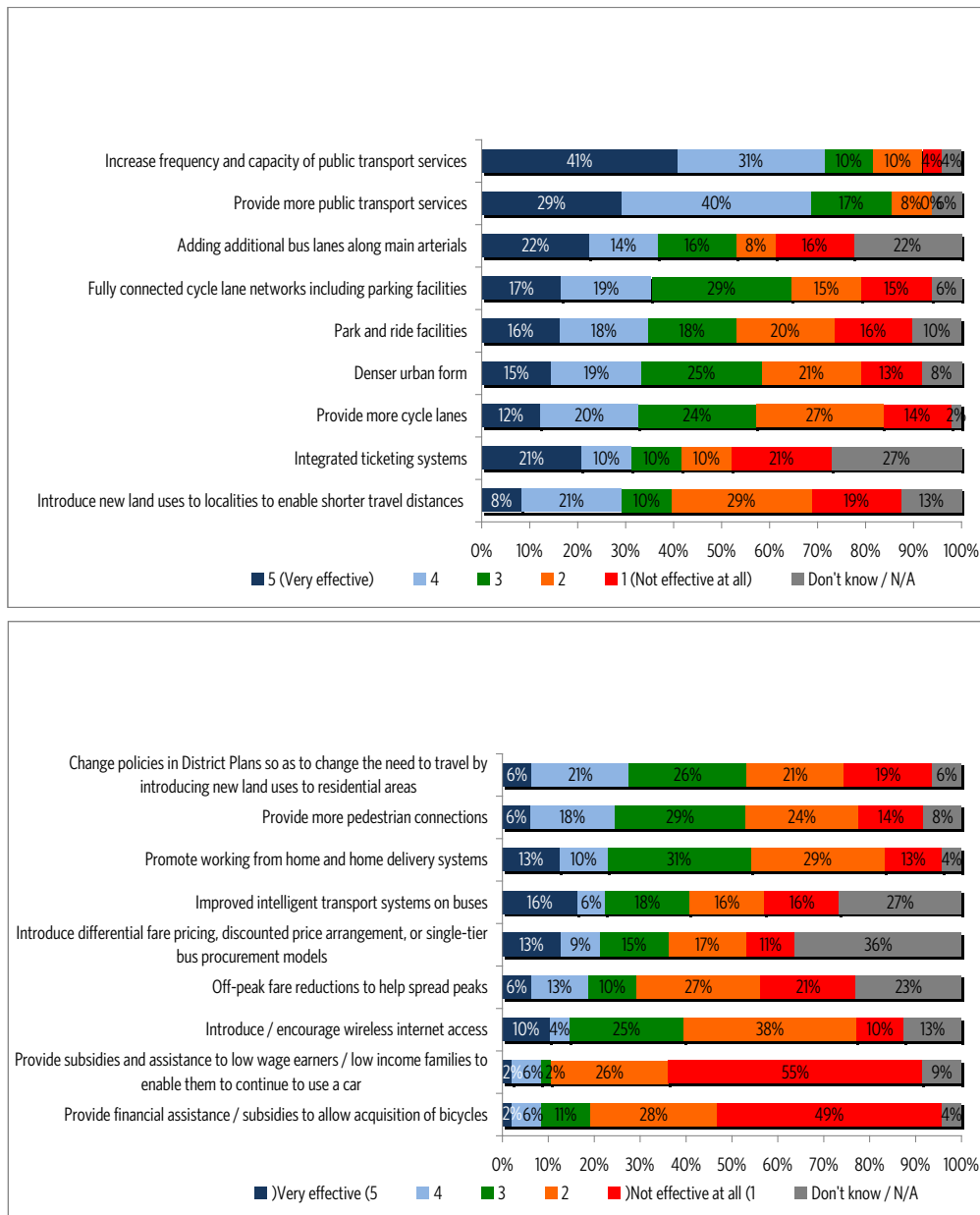
Apart from the above two named measures, there is a relatively even split amongst respondents with regards to the effectiveness of a large number of the other measures listed, with roughly 30–40% considering many to be effective and 30–40% 'less' and 'not effective'.

However, (i) provision of subsidies and assistance to low income individuals and families to enable them to continue to use a car so that they can get to work and have access to shops; and (ii) provision of financial assistance to allow acquisition of bicycles, were considered by most to be ineffective.

Turning to how quickly organisations could deliver the above actions, over 50% of respondents thought that the following could be brought forward relatively quickly, that is within 3–5 years (or sooner):

- Promoting working from home and home delivery systems (45% within 1–2 years).
- Providing more cycle lanes (43% within 1–2 years).
- Increasing frequency and capacity of public transport services (39% within 1–2 years).

- Providing more pedestrian connections (37% within 1–2 years).
- Providing more public transport services (34% within 1–2 years).
- Encouraging wireless internet access (33% within 1–2 years).

It is noted that 34% of respondents also considered that introducing off-peak fare reductions to help spread peaks in public transport usage would be possible within 1–2 years.

Just over half of respondents (52%) considered that creating a denser urban form could only be delivered over the longer term, that is 5 years plus. While 48% of respondents thought that providing financial assistance to allow acquisition of bicycles, and, 40% stated that providing subsidies and financial assistance to low wage earners to allow them to continue to use a car would never happen.

The graph below compares how effective respondents consider actions to be with how quickly they can be brought forward.

FIGURE 6.2: EFFECTIVENESS AND TIMEFRAMES OF ACTIONS TO RESPOND TO DIFFERENT TRANSPORT CHALLENGES

Effectiveness and timeframes of actions to respond to transport challenges
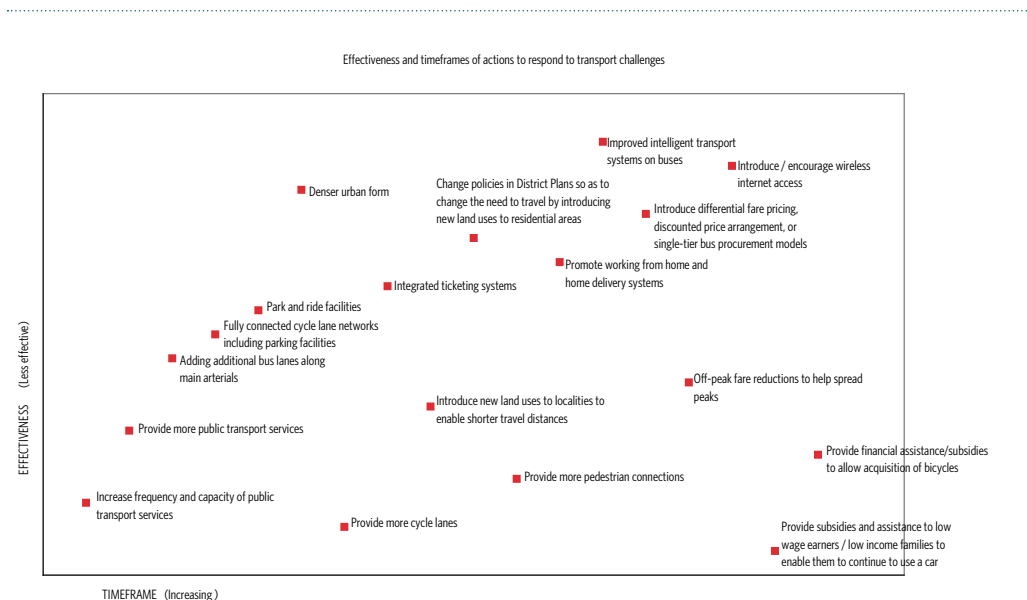
There is no discernible relationship between effectiveness and timeframe within which the action can be achieved. However, there are a number of key messages in that measures considered to be most effective (increasing frequency and capacity of public transport services, and expanding public transport networks) are considered by 39% and 34% of respondents (respectively) to be able to be brought forward within 1–2 years. The measure that is considered by most respondents to be able to be brought forward quickly (providing more cycle lanes) is considered effective by only 32% of respondents.

Is your organisation undertaking any planning for a range of fuel price or infrastructure failure scenarios? [9C]

With regards to organisations undertaking and planning for a range of fuel price or infrastructure failure scenarios, only 25% of organisations were definitely undertaking planning for a range of fuel price scenarios, 51% are not and 24% do not know.

6.2   Analysis

This part of the survey was promulgated on the scenario where a substantial increase in the costs of the use of the car occurred. It is noted that an equally relevant scenario would be a civil disaster or public transport systems failing. The main results from this part of the survey are set out below:

- Only a quarter of organisations were definitely planning for a range of fuel price scenarios.

- Just over a tenth of respondents thought that there would be no, or minor, effects on the transport network in the short and long term from a substantial increase in fuel price rise. However, two thirds of respondents thought that there would be a substantial increase in demand for bus services in the long term and that there was capacity to accommodate additional demand through existing bus services and/or expansion of the capacity of bus services. Just under a half of respondents thought that there would be:

  - a reduction in travel overall

  - reduced peak hour congestion

  - an increase in cycling

  - an increase in walking

  - increased demand for train services.

- The main action that respondents believed would assist in allowing the transport network to respond to the challenge was to expand the public transport network and to increase the frequency and capacity of existing networks. Most considered that increasing the capacity of public transport services could be achieved quickly (1–2 years).

- In metropolitan areas of Wellington and Auckland, trains are considered to be a viable solution similar to buses.

- Within 12 months of an increase in fuel prices, over half of respondents considered that the following measures could be introduced:

  - promote use of high occupancy vehicles

  - increase the frequency of existing services

  - increase the coverage of urban services.

- However, the overwhelming cited barrier to achieving change within 12 months was funding (85% of respondents), followed by the fact that services were outside the direct control of the council (57%).

The survey demonstrates that most councils (75%) are not planning on the basis of fuel price rises. Half of respondents indicated that they do not have access to fuel price data.

However, should an extreme fuel pricing event occur then councils consider that the solution is buses. Most consider that they have capacity, frequencies can be increased and networks can be expanded. This was considered to be able to be done within 1–2 years. The difficulties are that most considered that the services could not be expanded to rural and peri-urban areas, that there is no funding and that service providers fall outside of their (direct) control.

Introducing new land uses and increasing density (which may help make existing peri-urban areas more able to support a commercial bus service and/or reduce need to travel per se) was not seen by many as effective and in any event would take longer to introduce.

There was no other popular method, apart from buses, with other methods attracting varying effectiveness ratings and varying amounts of time needed to deliver ratings by respondents.

Thus, in terms of how well placed local authorities are to adapt to significant and unexpected changes in travel demand, councils are generally not well placed, because they are generally not planning for such an eventuality. However, should it occur, then the preferred response would be to increase bus frequencies and expand bus networks. This would not work in peri-urban or rural areas. This solution may only really work in relatively dense urban environments where roads are laid out so they can be serviced by buses.

Current policies and rules in district plans do not assist; they do not promote denser development at accessible or central locations and car parking standards and engineering standards are on the whole unresponsive.

There may be integration problems between planners and transport officers and between agencies, who may not be working very well together in terms of promoting and allowing non-car based

transport networks, although they are both consistently accommodating the car as a starting point in the network.

Evidence on the use of data is inconclusive but suggests that data on non-car based modes is probably not being collected (consistently or robustly), which conversely means that they are not being planned for or funded.

Given these integration and data issues, it seems that the potential for a transport solution to be delivered may over the longer term be eroded in some settlements, where development is not necessarily being designed with buses and other modes in mind. This also means that existing urban areas are unlikely to become more accessible or become easier to service by bus.

7. Conclusions and recommendations

7.1   Conclusions

The above analysis and the conclusions set out below have been developed in the context that there is very good work and action being undertaken by council officers.

Planners and transport professionals are working together to plan for the future of our urban and rural areas and are beginning to use more and more sophisticated mechanisms. There is evidence of increasing use of measures to enable our communities to have realistic alternatives to the car, such as the use of travel plans, bicycle and pedestrian strategies and promoting high density and mixed use development.

Whilst there are many positives, this survey has identified a number of issues that need to be addressed. The conclusions that follow may appear negative, however, this must be considered against clear evidence of positive and enthusiastic action of professionals and councils promoting and implementing transport objectives. The purpose of this survey is to identify areas were improvements could be made. This is important for two reasons.

This report has predominantly focused on areas where performance could be improved including identifying barriers and issues and suggesting what changes could be made. Hence, it is not to be taken as being reflective of overall performance. That would entail more substantial research.

In this context, the assessment above from the preceding sections has identified a number of key issues:

- Council policies are generally aligned with national policy.

- Planners and transport disciplines could be better integrated and notably planners could be more aware of current transport practice and approaches.

- Data collection and use of councils could be better, and appears to be currently directed towards collecting data associated with accommodating the car. Data that is available is not necessarily robust and appears to be focused on cars and trucks, with very few considering fuel price change data. Councils do not appear to be collecting or using data for non-car modes.

- Current planning and transport policy appears to be directed towards accommodating the car first and then other modes.

- Major barriers to securing change are public perception, councillors as decision makers and funding.

- Lack of integration and good data could explain current policy directions, and also why funding is not being directed more towards other modes. Lack of integration creates uncoordinated messages and can mean that changes wanted by one organisation are not delivered by the other. Similarly, a lack of good data makes it difficult to justify schemes and to shift emphasis away from the car (if that was wanted).

- Planning processes associated with managing where major new urban growth will occur and the shape and form of settlements in the future tend to plan for the car first and then for other modes. This is the same when considering applications for new development.

- Many respondents think that there is capacity in buses and that this could be further expanded to accommodate some increases in demand (associated with a significant fuel price increase for example). No other solution was particularly popular, but it was noted that whilst changing settlement pattern and form would be effective, making the required changes could only occur in the longer term.

- Most respondents (70%) thought that priority for pedestrians should be ranked either first or second highest and 70% of respondents thought that cyclists should be ranked third or fourth highest.

Thus, overall, it is concluded that most councils are aware of national transport policy objectives and what this might mean in terms of enabling the transport system to adapt and encourage change in

travel demands. However, the actions of councils appear to be strongly constrained by the perceived need to accommodate the car first. As mentioned above factors that affect this are integration and data, and the barriers are public perception, councillors as decision makers and funding.

A probable consequence of a lack of an evidence-base approach and the barriers encountered is the ability to persuade the public and councillors of the need for a shift in emphasis away from car-based transport or to make significant investment in public transport, or cycling or walking or other modes. Hence, councils are not being as proactive as they perhaps could be in attempting to change patterns in transport mode use and transport demand.

This is a reporting of fact and not necessarily a criticism. It indicates that councils are seeking to accommodate a significant proportion of the communities preferred transport mode (the car) using a limited resource capability. Indeed, on the face of it, it would be unreasonable to suggest otherwise. The ability for councils to make changes, therefore, needs further careful examination.

However, it provides context for the issue of preparedness. It appears likely that whilst many councils are not preparing for a significant change in transport demand (stemming from a massive increase in fuel price, for example), there is consensus that buses provides a quickly delivered solution (supported by trains in Wellington and Auckland) with the exception of peri-urban and rural locations.

However, given the integration and data issues, it seems that the potential for this solution to be delivered may over the longer term be eroded in some settlements, where development is not necessarily being designed with the bus and other modes in mind. This also means that existing urban areas are unlikely to become more accessible or become easier to service by the bus.

7.2   Recommendations

This research has focused on the identification of barriers and trends in current practice. It is no longer enough to say that Councils should think and act in an integrated way; they know that already and have been doing so for some time (arguably even before researchers noted that they should do so).

While this research has not examined solutions and recognises that a solution entails a multi-faceted response entailing a suite of actions within national, regional and local government, councils could look at the following areas of their practice:

- Increasing awareness and understanding of transport issues, best practice and data (sources and modelling) within councils, and notably to planners, urban designers and others involved in the RMA district plan and LTCCP. This could be via distribution of information including best practice and/or in-house seminars.

- Increasing understanding of transport modelling amongst all professionals and, especially of the data outputs and data inputs/variables. Where there are data gaps, councils should consider how they might be addressed and as necessary discuss with local, regional and national partners. Ensure that the data is being used in decision-making processes, and to inform policy direction.

- Develop, reinvigorate and stimulate working groups with other organisations and intra-departments involved in transport (where appropriate). Share the results from this survey with them to ensure that they are aware of potential issues. Brainstorm and share ideas and best practice and consider how some of the issues in the survey might be addressed.

In more detail, and as complementary actions, the following is also recommended to be undertaken:

- NZTA to provide guidance on the use of and development of road user hierarchies, appropriate to location.

- The non-motorised user audit is a draft document adopted by NZTA but has as yet not been adopted at the local level. It is recommended that NZTA promote the use of the non-motorised user audit and potentially look at making it mandatory in future years.

- Improved communication with regards to the changes in the Economic evaluation manual and assistance for users on how to complete the procedures. This could, for example, entail workshops and communication to TLAs and consultants involved in implementing and delivering walking and cycling schemes.

- A theme for the next walking conference could have a political slant and focus on getting support for walking from the people making decisions at the national, regional and local level.

- There is a need to encourage before and after monitoring of walking and cycling. It is accepted that in rural locations, conducting pedestrian counts could be inefficient. To address this, advice on how to apply monitoring pedestrian trips to different geographical areas could be developed. This could include the development of a pedestrian trips generation tool that predicts walk-ability.

In tandem with the above it is noted that other actions could be appropriate. This could include development of national planning policy, a web portal to share information and seek advice, development of a training programme and more assistance with funding applications.

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Appendix A: Online survey questionnaire

1B: Where do most of your organisation's constituents live?

1C: What is your primary profession?

1D: How long have you been practising in this profession?

1E: What is your primary role?

1F: How many professional staff are there in your immediate team?

1G: How many professional staff are there across your entire organisation?

2A: To what extent are the land use policies that you encounter in your day-to-day work, eg District Plans, aligned with the following?

• The New Zealand Land Transport Strategy.

• The Regional Transport Strategy.

• Local transport policies.

2B: Does your organisation's current forward planning for growth processes include the following?

• Transport modelling.

• Transport planning or engineering advice.

• Urban design advice.

2C: Do these processes seek to ensure that ultimately, users of new developments can access a range of everyday uses by non-car based modes?

2D: In undertaking growth management planning, what methods does your organisation use to reduce the reliance on private cars in urban areas? (Tick all that apply)

• Creating new walking, public transport and cycling routes to improve connectivity and accessibility.

• Intensification of existing urban areas.

• Mixed use development (such as residential and retail and/or leisure and/or education and/or emploment uses).

• Promoting or providing public transport facilities and/or cycling and pedestrian connections to existing urban areas.

• Reconfiguring or reprioritising existing roads to provide cycling, walking and public transport connections.

• Pomoting higher density development (more than would be achieved through intensification) at locations with a range of facilities.

• Preparing design guides that control layouts and urban form.

• Promoting new land uses so that existing communities need to travel shorter distances.

• Promoting higher density development (more than would be achieved through intensification) in central areas.

• Promoting higher density development (more than would be achieved through intensification) at public transport nodes.

• Other.

• N/A.

2E: When determining major planning applications and plan changes, do the District Plan or Regional Plan through policies and rules …(tick all that apply)

- Require/support compliance with transport engineering standards.

- Require/support provision of cycling parking and connections.

- Require/support assessment of transportation accessibility by a number of modes.

- Encourage provision of non-car based transport modes by allowing higher densities.

- Allow reduced car parking spaces to be provided if the site is located close to a public transport interchange.

- Allow reduced cqar parking spaces to be provided if a transport plan is proposed which means that site users use private motor vehicles less.

- Encourage provision of non-car based transport modes by reducing contributions required.

- Other.

- None of these.

- Don't know.

- N/A.

3A: In your organisation, what are the main barriers to encouraging change and providing realistic and attractive alternatives to private car use? (top eight factors)

3A(ii): In your organisation, what are the main barriers to encouraging change and providing realistic and attractive alternatives to private car use?(other factors)

4A: Does your organisation have any additional transport related strategies, over and above statutory requirements? (tick all that apply)

- No additional transport related strategies.

- Cycling Strategy.

- Walking Strategy.

- Travel Demand Management (TDM) Strategy.

- Integrated/Regional transport Strategy.

- Traffic Management Strategy.

- Parking Strategy.

- Public Transport Strategy.

- Freight plan.

- Road safety plan.

- Don't know.

- Other.

4B: Does your organisation use the following to provide a basis for transport forecasts and policy formulation?

- Demographic profiles.

- VKT (vehicle kilometres travelled) profile.

- Vehicle speeds.

- Travel times.

- Number of people moved by mode.

- Fuel prices.

5A: Does your organisation use a road user hierarchy in transport policy and scheme design?

5B: If yes, what is the road user hierarchy in a normal suburban street?

5C: What do you think the road user hierarchy should be in a normal suburban street?

5D: If your ideal road user hierarchy is different than what currently exists, please identify the reasons for this. (tick all that apply)

- Political will.
- Public perceptions.
- Engineering design codes.
- Staff skills and knowledge.
- Political underestanding.
- Resources.
- District plan policy objectives and rules.
- Senior management support/will.
- Don't know.
- N/A.

6A: Which of the following TDM measures does your organisation use? (tick all that apply)

- Pedestrian crossing.
- Cycle/pedestrian shared use routes.
- Drop kerbs for pedestrians.
- Off-road cycle paths.
- On-road cycle lanes.
- Pedestiran bridges/subways.
- Streetscape design such as using the same materials for pedestrian and motor vehicle areas.
- Travel plans.
- Cycle maps/walking maps.
- Cycle training.
- Public transport ticketing initiatives.
- Real-time information of public transport timetable.
- Bus lanes.
- Car share clubs.
- Cycle parking programmes.
- Bus priority at intersections.
- Mult-occupancy vehicle lanes.
- None of these.
- Don't know.
- Other.

6B: In a typical financial year, what proportion of your organisation's total transport funding is allocated to each of the areas listed below?

- Road maintence.
- New road and road widening.
- Other activities.
- Public transport schemes.

- New car parking.

- Footpath maintenance.

- Traffic calming.

- Cycling schemes.

- Walking schemes.

- Improving transport options for people with disabilities.

6C: And in an ideal world, what proportion of your organisation's total transport funding would be allocated to each of the areas listed below?

- Road maintenance.

- New roads and road widening.

- Other activities.

- Public transport schemes.

- New car parking.

- Traffic calming.

- Cycling schemes.

- Walking schemes.

- Improving transport options for people with disabilities.

7A: Does your organisation use transport models for:

- the main urban area?

- the district?

7B: If your organisation does use transport models, do you think:

- they provide a basis for improving public transport facilities?

- they provide multi-modal assessments?

- they provide accurate forecasts?

- they provide a basis for improving cycling facilities?

- they provide a basis for improving walking facilities?

7C: Please consider the ways in which NZTA could assist council organisations to achieve more resilient transport networks. How useful do you think each of the following potential NZTA activities would be?

- Increasing funding allocation for walking, cycling and public transport.

- Encourage more political support for sustainable transport.

- Continue their research programme.

- Provide guidance on the funding regime.

- Provide more design guidance.

- Proivde training for staff.

- Encourage the use of audits, eg non-motrised user audits, cycle audits.

8A: If there are significant ongoing increases in fuel prices, what impacts would you expect in the short term (within 12 months of the price rises) within your organisation's transport network?

8B: And what impacts on your organisation's transport network would you expect in the longer term following price rises?

8C: If there was a significant increase in demand on public transport services, how well do you think your existing organisation's network would cope?

8D: Which of the following changes could be made to your organisation's transport network within 12 months of a significant increase in petrol prices?

8E: What are the main barriers to achieving these changes within a 12 month period?

9A: How effective do you believe the following actions would be in allowing your organisation's transport network to respond to this challenge? (top nine factors)

9A(ii): How effective do you believe the following actions would be in allowing your organisation's transport network to respond to this challenge? (other factors)

9B: And how quickly do you think your organisation could deliver or facilitate delivery of the following actions? (quickest nine factors)

- Provide more cycle lanes.

- Provide more pedestiran connections.

- Promote working from home and home delivery systems.

- Provide more public transport services.

- Introduce/encourage wireless internet access.

- Increase frequency and capacity of public transport services.

- Off-peak fare reductions to help spread peaks.

- Park and ride facilities.

- Introduce differential fare pricing, discounted price arrangement, or single-tier procurement models.

9B(ii): And how quickly do you think your organisation could deliver or facilitate delivery of the following actions? (other factors)

- Change policies in district plans so as to change the need to travel by indocuing new land uses to residential areas.

- Introduce new land uses to localities to enable shorter travel distances.

- Adding additional bus lanes along main arterials.

- Fully connected cycle lane networks including parking facilities.

- Integrated ticketing systems.

- Improved intelligent transport systems on buses.

- Denser urban form.

- Provide financial assistance/subsidies to allow acquisition of bicycles.

- Provide subsidies and assistant ot low wage earners/low income families to enable them to continue to use a car.

9C: Is your organisation undertaking any planning for a range of fuel price or infrastructure failure scenarios?

Appendix B: Survey results

1B: Where do most of your organisation's constituents live?

In a rural area
12%

Both urban and rural
49%

In an urban area
39%

1C: What is your primary profession?

- RMA planner — 26%
- Civil engineer — 21%
- Transport planner — 14%
- Traffic / transport engineer — 11%
- Economist/Accountant — 9%
- Strategic planner / project analyst — 5%
- Generalist / multi — 5%
- Planning manager / engineer — 4%
- Scientist — 2%
- Infrastructure manager — 2%
- Roading manager — 2%

1D: How long have you been practising in this profession?

Up to 5 years
14%

6-10 years
14%

11-15 years
16%

16 years or more
56%

1E: What is your primary role?

Role	Percentage
Planning policy, strategic planning or plan preparation	34%
Transport policy	25%
General / policy / asset manager	9%
Transport engineering	7%
Planning manager	7%
Other planner / generalist	7%
Processing planning	5%
Transport Manager	5%

1F: How many professional staff are there in your immediate team?

16 or more
9%

11 to 15
5%

6 to 10
28%

Up to 5
58%

1G: How many professional staff are there across your entire organisation?

- 501-1000: 5%
- 1001 or more: 5%
- Don't know: 2%
- Up to 100: 52%
- 101-500: 36%

2A: To what extent are the land use policies that you encounter in your day-to-day work, eg District Plans, aligned with the following?

	The New Zealand Land Transport Strategy	The regional transport strategy	Local transport policies
Don't know	11%	6%	13%
Completely aligned (5)	2%	11%	13%
4	26%	28%	40%
3	42%	36%	25%
2	17%	17%	9%
Not aligned at all (1)	2%	2%	0%

Legend: Not aligned at all (1) | 2 | 3 | 4 | Completely aligned (5) | Don't know

2B: Does your organisation's current forward planning for growth processes include the following?

	Transport modelling	Transport planning or engineering advice	Urban design advice
Don't know / N/A	2%	2%	7%
Never	2%	2%	4%
Rarely	29%	4%	25%
Usually	38%	45%	40%
Always	29%	47%	24%

Legend: Always | Usually | Rarely | Never | Don't know / N/A

2C: Do these processes seek to ensure that ultimately, users of new developments can access a range of everyday uses by non-car based modes?

Category	Percentage
Always	22%
Usually	56%
Rarely	16%
Never	0%
Don't know / N/A	5%

2D: In undertaking growth management planning, what methods does your organisation use to reduce the reliance on private cars in urban areas? (Tick all that apply)

Method	Percentage
Creating new walking, public transport and cycling routes to improve connectivity and accessibility	80%
Intensification of existing urban areas	73%
Mixed use development (such as residential and retail and/or leisure and/or education and/or employment uses)	65%
Promoting or providing public transport facilities and/or cycling and pedestrian connections to existing urban areas	62%
Reconfiguring or reprioritising existing roads to provide cycling, walking and public transport connections	47%
Promoting higher density development (more than would be achieved through intensification) at locations with a range of facilities	44%
Preparing design guides that control layouts and urban form	44%
Promoting new land uses so that existing communities need to travel shorter distances	42%
Promoting higher density development (more than would be achieved through intensification) in central areas	40%
Promoting higher density development (more than would be achieved through intensification) at public transport nodes	35%
Other	11%
N/A	5%

2E: When determining major planning applications and plan changes, do the District Plan or Regional Plan through policies and rules ......(tick all that apply)

Option	Percentage
Require / support compliance with transport engineering standards	64%
Require / support provision of cycling parking and connections	53%
Require / support assessment of transportation accessibility by a number of modes	51%
Encourage provision of non-car based transport modes by allowing higher densities	34%
Allow reduced car parking spaces to be provided if the site is located close to a public transport interchange	8%
Allow reduced car parking spaces to be provided if the site is within walking and cycling distance of a range of other land uses	8%
Allow reduced car parking spaces to be provided if a transport plan is proposed which means that site users use private motor vehicles less	4%
Encourage provision of non-car based transport modes by reducing contributions required	2%
Other	11%
None of these	11%
Don't know	4%
N/A	4%

3A: In your organisation, what are the main barriers to encouraging change and providing realistic and attractive alternatives to private car use? (top 8 factors)

Factor	Major barrier	Minor barrier	Not a barrier	Don't know
Money to fund or partly fund active and shared modes	74%	19%	6%	2%
Current land use locations and urban form	49%	30%	19%	2%
Integration between agencies, incuding Authorities responsible for public transport provision and roads etc	24%	48%	28%	0%
Topography and geography	35%	33%	31%	0%
Change in national government policy	31%	37%	19%	13%
Political will	30%	39%	28%	4%
Political understanding	19%	48%	29%	4%
Staff resources	15%	42%	40%	2%

Legend: ■ Major barrier ■ Minor barrier ■ Not a barrier ■ Don't know

3A: In your organisation, what are the main barriers to encouraging change and providing realistic and attractive alternatives to private car use? (other factors)

Factor	Major barrier	Minor barrier	Not a barrier	Don't know
Working relationships with other organisations	4%	52%	42%	2%
Staff skills and knowledge in this area	12%	29%	60%	0%
The District Plan(s)	15%	23%	56%	6%
The Resource Management Act (RMA)	8%	31%	48%	13%
Working relationships with other teams in your organisation	4%	35%	62%	0%
Senior management support	6%	27%	67%	0%
Current engineering standards	10%	24%	59%	8%

Legend: ■ Major barrier ■ Minor barrier ■ Not a barrier ■ Don't know

4A: Does your organisation have any additional transport related strategies, over and above statutory requirements? (tick all that apply)

Strategy	%
No additional transport related strategies	9%
Cycling strategy	79%
Walking strategy	71%
Travel Demand Management (TDM) strategy	29%
Integrated / regional transport strategy	23%
Traffic Management strategy	14%
Parking strategy	11%
Public transport strategy	9%
Freight plan	7%
Road safety plan	7%
Don't know	2%
Other	9%

4B: Does your organisation use the following to provide a basis for transport forecasts and policy formulation?

	Demographic profiles	VKT (Vehicle Kilometres Travelled) profile	Vehicle speeds	Travel times	Number of people moved by mode	Fuel prices
Don't know	13%	18%	15%	15%	20%	33%
No	18%	16%	20%	22%	24%	45%
Yes	69%	65%	65%	64%	56%	22%

■ Yes   ■ No   ■ Don't know

5A: Does your organisation use a road user hierarchy in transport policy and scheme design?

Don't know 24%

Yes 31%

No 45%

5B: If yes, what is the road user hierarchy in a normal suburban street?

	Cars, trucks	Pedestrians	Public transport	Freight	Cyclists	People with physical disabilities
6 (Lowest)	10%	11%	33%	26%	5%	26%
5	5%	11%	14%	26%	26%	16%
4	5%	21%	5%	16%	37%	32%
3			19%	11%	16%	26%
2	5%	37%	29%	16%	16%	
1 (Highest)	75%	21%		5%		

■ 1 (Highest)   ■ 2   ■ 3   ■ 4   ■ 5   ■ 6 (Lowest)

5C: What do you think the road user hierarchy should be in a normal suburban street?

Category	1 (Highest)	2	3	4	5	6 (Lowest)
Pedestrians	38%	29%	16%	9%	9%	
Cars, trucks	36%	22%	4%	7%	18%	13%
Public transport	18%	11%	9%	27%	23%	11%
Cyclists	5%	16%	39%	32%	7%	2%
People with physical disabilities	2%	14%	30%	18%	25%	11%
Freight	2%	9%	2%	7%	18%	61%

Legend: ■ 1 (Highest)　■ 2　■ 3　■ 4　■ 5　■ 6 (Lowest)

5D: If your ideal road user hierarchy is different than what currently exists, please identify the reasons for this. (tick all that apply)

Reason	%
Political will	35%
Public perceptions	31%
Engineering design codes	27%
Staff skills and knowledge	23%
Political understanding	19%
Resources	19%
District Plan policy objectives and rules	15%
Senior management support / will	12%
Don't know / N/A	42%
Other	15%

6A: Which of the following TDM measures does your organisation use? (tick all that apply)

Measure	%
Pedestrian crossings	70%
Cycle / pedestrian shared use routes	58%
Drop kerbs for pedestrians	55%
Off-road cycle paths	53%
On-road cycle lanes	47%
Pedestrian bridges / subways	40%
Streetscape design such as using the same materials for pedestrian and motor vehicle areas	38%
Travel plans	38%
Cycle maps / walking maps	32%
Cycle training	30%
Public transport ticketing initiatives	23%
Real-time information of public transport timetable	23%
Bus lanes	21%
Car share clubs	17%
Cycle parking programmes	13%
Bus priority at intersections	13%
Multi-occupancy vehicle lanes	4%
None of these	6%
Don't know	6%
Other	17%

6B: In a typical financial year, what proportion of your organisation's total transport funding is allocated to each of the areas listed below?

Legend: None | 1-10% | 11-20% | 21-30% | 31-40% | 41-50% | 51-60% | 61-70% | or more 71% | Don't know/ N/A

6C: And in an ideal world, what proportion of your organisation's total transport funding would be allocated to each of the areas listed below?

Legend: None | 1-10% | 11-20% | 21-30% | 31-40% | 41-50% | 51-60% | 61-70% | 71% or more | Don't know/ N/A

7A: Does your organisation use transport models for:

Legend: Yes | No | Don't know

7B: If your organisation does use transport models, do you think:

	They provide a basis for improving public transport facilities?	They provide multi-modal assessments?	They provide accurate forecasts?	They provide a basis for improving cycling facilities?	They provide a basis for improving walking facilities?
Don't know	22%	15%	24%	17%	17%
No	24%	33%	26%	50%	56%
Yes	54%	51%	50%	33%	28%

Legend: ■ Yes ■ No ■ Don't know

7C: Please consider the ways in which NZTA could assist council organisations to achieve more resilient transport networks. How useful do you think each of the following potential NZTA activities would be?

	Increasing funding allocation for walking, cycling and public transport	Encourage more political support for sustainable transport	Continue their research programme	Provide guidance on the funding regime	Provide more design guidance	Provide training for staff	Encourage the use of audits, eg. Non-motorised user audits, cycle audits
Don't know	2%	4%	4%	6%		2%	6%
Not useful at all (1)		6%	4%	6%	6%	4%	20%
2	8%	12%	12%	21%	35%	22%	33%
3	4%	14%	35%	27%	24%	37%	20%
4	25%	24%	24%	27%	18%	20%	16%
Very useful (5)	61%	39%	20%	13%	16%	14%	4%

Legend: ■ Very useful (5) ■ 4 ■ 3 ■ 2 ■ Not useful at all (1) ■ Don't know

8A: If there are significant ongoing increases in fuel prices, what impacts would you expect in the short term (within 12 months of the price rises) within your organisation's transport network?

	Percentage
No / only minor changes	11%
Substantial increase in demand for bus services	57%
Substantial reduction in travel overall	45%
Reduced peak hour congestion	42%
Substantial increase in cycling	40%
Substantial increase in walking	40%
Substantial increase in demand for train services	38%
Don't know	8%
Other	11%

8B: And what impacts on your organisation's transport network would you expect in the longer term following price rises?

Response	Percentage
No / only minor changes	13%
Substantial increase in demand for bus services	65%
Substantial reduction in travel overall	56%
Substantial increase in walking	48%
Substantial increase in cycling	46%
Reduced peak hour congestion	42%
Substantial increase in demand for train services	35%
Don't know	6%
Other	8%

8C: If there was a significant increase in demand on public transport services, how well do you think your existing organisation's network would cope?

	Physical capacity of buses	Physical capacity of trains	Capacity of rail lines and stations to accommodate increased frequency	Capacity of bus routes and stations to accommodate increased frequency
At capacity now, couldn't cope with extra demand	16%	16%	14%	12%
Could cope with 10% or less increase in demand	16%	16%	14%	12%
Could cope with greater than 10% increase in demand	31%	13%	11%	44%
Don't know	14%	7%	14%	10%
N/A	24%	49%	48%	23%

Legend:
- At capacity now, couldn't cope with extra demand
- Could cope with 10% or less increase in demand
- Could cope with greater than 10% increase in demand
- Don't know
- N/A

8D: Which of the following changes could be made to your organisation's transport network within 12 months of a significant increase in petrol prices?

Response	Percentage
Promote the use of high occupancy vehicles	61%
Increase the frequency of existing services	51%
Add services to urban areas not currently served	51%
Increase the capacity of existing services (e.g. bigger and/or more vehicles to move more people)	31%
Add services to peri-urban areas not currently served	31%
Add services to rural areas not currently served	29%
None of these	10%
Don't know	8%

8E: What are the main barriers to achieving these changes within a 12 month period?

Barrier	Percentage
Funding the improvements	85%
Services are provided by third parties (and so for example new agreements may be required)	57%
Staff resources to plan and implement changes	41%
Other agencies (who's approval may be required)	39%
Planning time / processes / consenting	37%
Don't know	2%
Other	15%

9A: How effective do you believe the following actions would be in allowing your organisation's transport network to respond to this challenge? (top 9 factors)

Action	5 (Very effective)	4	3	2	1 (Not effective at all)	Don't know / N/A
Increase frequency and capacity of public transport services	41%	31%	10%	10%	4%	4%
Provide more public transport services	29%	40%	17%	8%	0%	6%
Adding additional bus lanes along main arterials	22%	14%	16%	8%	16%	22%
Fully connected cycle lane networks including parking facilities	17%	19%	29%	15%	15%	6%
Park and ride facilities	16%	18%	18%	20%	16%	10%
Denser urban form	15%	19%	25%	21%	13%	8%
Provide more cycle lanes	12%	20%	24%	27%	14%	2%
Integrated ticketing systems	21%	10%	10%	10%	21%	27%
Introduce new land uses to localities to enable shorter travel distances	8%	21%	10%	29%	19%	13%

9A: How effective do you believe the following actions would be in allowing your organisation's transport network to respond to this challenge? (other factors)

Action	Very effective (5)	4	3	2	Not effective at all (1)	Don't know / N/A
Change policies in District Plans so as to change the need to travel by introducing new land uses to residential areas	6%	21%	26%	21%	19%	6%
Provide more pedestrian connections	6%	18%	29%	24%	14%	8%
Promote working from home and home delivery systems	13%	10%	31%	29%	13%	4%
Improved intelligent transport systems on buses	16%	6%	18%	16%	16%	27%
Introduce differential fare pricing, discounted price arrangement, or single-tier bus procurement models	13%	9%	15%	17%	11%	36%
Off-peak fare reductions to help spread peaks	6%	13%	10%	27%	21%	23%
Introduce / encourage wireless internet access	10%	4%	25%	38%	10%	13%
Provide subsidies and assistance to low wage earners / low income families to enable them to continue to use a car	2%	6%	2%	26%	55%	9%
Provide financial assistance / subsidies to allow acquisition of bicycles	2%	6%	11%	28%	49%	4%

9B: And how quickly do you think your organisation could deliver or facilitate delivery of the following actions? (quickest 9 factors)

Action	Within 1-2 years	Within 3-5 years	After 5 years plus	Never	Don't know / N/A
Provide more cycle lanes	43%	30%	9%	5%	14%
Provide more pedestrian connections	37%	35%	7%	2%	19%
Promote working from home and home delivery systems	45%	23%	7%	5%	20%
Provide more public transport services	34%	30%	9%	7%	20%
Introduce / encourage wireless internet access	33%	28%	5%	9%	26%
Increase frequency and capacity of public transport services	39%	20%	7%	5%	30%
Off-peak fare reductions to help spread peaks	34%	9%	2%	9%	45%
Park and ride facilities	17%	22%	30%	7%	24%
Introduce differential fare pricing, discounted price arrangement, or single-tier bus procurement models	20%	16%	2%	7%	55%

Legend: ■ Within 1-2 years ■ Within 3-5 years ■ After 5 years plus ■ Never ■ Don't know / N/A

9B: And how quickly do you think your organisation could deliver or facilitate delivery of the following actions? (other factors)

Action	Within 1-2 years	Within 3-5 years	After 5 years plus	Never	Don't know / N/A
Change policies in District Plans so as to change the need to travel by introducing new land uses to residential areas	16%	20%	31%	9%	24%
Introduce new land uses to localities to enable shorter travel distances	5%	30%	34%	14%	18%
Adding additional bus lanes along main arterials	9%	24%	13%	13%	40%
Fully connected cycle lane networks including parking facilities	9%	20%	39%	9%	23%
Integrated ticketing systems	14%	16%	7%	14%	50%
Improved intelligent transport systems on buses	11%	11%	14%	11%	52%
Denser urban form	2%	14%	52%	9%	23%
Provide financial assistance / subsidies to allow acquisition of bicycles	9%	5%	7%	48%	32%
Provide subsidies and assistance to low wage earners / low income families to enable them to continue to use a car	7%	5%	2%	40%	47%

Legend: ■ Within 1-2 years ■ Within 3-5 years ■ After 5 years plus ■ Never ■ Don't know / N/A

9C: Is your organisation undertaking any planning for a range of fuel price or infrastructure failure scenarios?

- Yes 24%
- No 52%
- Don't know 24%