### USERS, NEIGHBOURS, AGENCIES AND CITIZENS – TELL US ABOUT YOUR MOTORWAY

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### ABSTRACT

In 2008 the New Zealand Transport Agency (NZTA) adopted a collaborative Alliance delivery mechanism to maintain and operate the Auckland motorway network. One challenge which the Auckland Motorway Alliance (the Alliance) has established a much closer linkage between customer desires and the actual motorway experience which was being delivered.

The Alliance developed an approach which focused on users, neighbours, agencies and citizens to develop a customer strategy. This approach needed to recognise that a "customer" often fits into more than one of these categories, and as such, the strategies cannot be implemented independent of each other. The paper reports on the customer strategies adopted, their implementation, and the lessons learned. The development, and subsequent use, of lead and lag indicators to drive Alliance behaviour, and to track progress on customer engagement is also reported.

The paper reports how the Alliance has utilised close engagement with key customers, and customer survey techniques to identify under and over investment in several asset areas, and opportunities to provide better value for money for NZTA. Where possible, the level of service provided by the Alliance is defined in terms that are meaningful for the customer.

# 1 INTRODUCTION

The Auckland motorway network comprises 218 centreline kilometres of carriageway and associated bridges, structures, interchanges, and ramps. The network also includes an eight kilometre section of dual carriageway toll road including two tunnels. The network serves a diverse population of 1.4 million people, and carries over 900,000 trips per day. The Auckland motorway network is the most complex and heavily trafficked road network in New Zealand. It serves one third of the countries' population and is currently undergoing a period of significant development.

In 2008 the New Zealand Transport Agency (NZTA) adopted an alliance delivery model to maintain and operate the Auckland motorway network. While alliance delivery models have become relatively common for delivery of construction projects, particularly in Australasia, their use in delivery of the maintenance and operation of complex public assets is relatively rare. The Auckland Motorway Alliance (the Alliance) was established in October 2008, for a period of ten years. It is essentially a virtual company comprising the NZTA, Fulton Hogan Ltd and three consultant companies (Beca, Opus International Consultants, and Resolve Group) bound by a commercial and performance mechanism to achieve significant advances in delivery of motorway customer satisfaction, maintenance and operations.

One challenge which the Alliance has responded to was to establish a much closer linkage between customer desires and the actual motorway experience which was being delivered. The paper sets out:

- The customer satisfaction challenges which the Alliance needed to address,
- The development of the customer and stakeholder strategies,
- The development and use of suitable lead and lag performance indicators used for measuring progress,
- The relationship between asset and operational management of the network and the various customer viewpoints,
- How the Alliance has utilised close engagement with key customers, and used customer survey techniques to identify under and over investment in several asset areas, and hence identified opportunities to provide better value for money for NZTA. The paper provides some examples of how customer engagement has resulted in several innovative solutions to manage network risks being identified and implemented with proven results.

# 2 THE CHALLENGES AND STRATEGIES

The Alliance's primary objective identified the Customer and Stakeholder Key Result Area (KRA) as one of the five top level objectives for the Alliance. Achieving excellent performance in this KRA required a new focus in the way the Auckland motorway network was operated and maintained. The re-launch of Transit New Zealand into the NZTA in 2008 provided an opportunity to link this change in focus with the launch of the new NZTA brand.

Considerable thought was put into the processes and organisation that would need to be established to perform well in the customer and stakeholder KRA. The customer-focused organisation is one that is close to each customer and understands the specific types or groups, and then uses this knowledge in its decision-making. Being customer-focused means gathering facts, data and knowledge about customers - current and potential - to develop an awareness of what they want and how they perceive the Alliance's products and services. This awareness enables the Alliance to continuously strive to meet their customer's requirements and secure the Alliance's long-term success. This is a broad description of what we need to achieve. It does not mean that we are driven only by our customer desires, but that we recognise our customer needs in everything we do.

Considerable time was spent developing an understanding of available information, recent activity and expected operating protocols within the new NZTA. This included review of previous surveys and discussion with other Agencies providing services to road users. Particular challenges that would need to be addressed became evident from this work. These included motorway users in the Auckland area:

- Considering themselves amongst the most poorly informed in the country;
- Having the highest proportion in the country expressing reliance on national or local media as their main source of information (as opposed to the road agency); and
- Having little recognition of the NZTA as the operator of the motorway network.

The Alliance therefore adopted an approach based on the following:

- Developing communications programmes from a "demand-side" rather than "supply-side" perspective. In other words thinking first as a "user" and "neighbour".
- Adopting a proactive approach based on engagement with stakeholders and customers, not just provision of information. One of the benefits of this approach is the opportunity to better understand, and possibly modify their expectations; and
- On-going testing (particularly of new initiatives), monitoring, and evaluation to ensure that there is appropriate, and timely user/stakeholder information for travel planning, making decisions, and for enhancing road network efficiency.

### 2.1 The Strategy

The overarching vision for the Alliance is to operate and maintain a connected network for all stakeholders, where customers feel informed, and are confident that they will get the destinations comfortably, safely and reliably at all times. While this vision requires delivery of a number of services (which are outside the scope of this paper), from a pure customer perspective, the overall goal could be summarised as "two-way communications with users, neighbours, citizens and agencies that contributes to the safe, efficient, responsive and responsible operation and maintenance of the Auckland motorway network". Within this goal is the acknowledgement that stakeholders and customers have a variety of different interests and communication needs. Early in the development of the strategy, all known parties with an interest in the operation of motorway network were listed. In many cases, the interests were at several levels. The model set out in Figure 1 below represents these overlapping interests. This provided a basis to develop individualised communication strategies which recognised differing needs.

#### Users

e.g. trucking industry, Automobile Association, heavy haulage operators, buses, private users, couriers, tourists, cyclists, pedestrians

# Agencies

e.g. Environmental regulators, Local Councils, Emergency Services, Utilities, Airport, Rail, Hospitals, Tourism agencies **Neighbours** e.g. Businesses, Institutions, Residents

# Citizens

Those who live near, or are interested in the network

Figure 1 - Categorisation of customers and stakeholders

This categorisation allowed us to recognise, that many people belong to two or more groups.

- <u>Users</u> are people who travel along the network. Although this group focuses primarily on private motorists and commercial vehicles, users may also include some public transport operators and their passengers.
- <u>Neighbours</u> reside close to the motorway and may be affected by the motorway location, operation and maintenance activities, including environmental effects.
- <u>Citizens</u> have dual status: they are an audience because they often have a keen interest in how public works and services are delivered, and they are also potential agents because they undertake a wide range of activities in society. For instance they participate in local organisations which may provide communication channels for our messages.
- <u>Agencies</u> include government organisations, major employers and other major generators of travel or transport demands such as airports, ports, hospitals, universities, stadiums, shopping malls etc. This group also includes utilities, the media, community and other advocacy groups including those with environmental, economic and social interests.

Our strategy has five integrated goals which are set out below. In a number of cases, actions listed under one goal also address one or more other goals.

# 2.2.1 We have a customer-focused culture

All staff joining the Alliance are required to be inducted into the stakeholder focused culture to understand the diverse demographics, expectations, aspirations and travel patterns of our stakeholders. All staff:

- Are trained in the use of the Customer Relationship Management (CRM) system;
- Undertake formal customer service training: take ownership of issues and develop solutions;
- Are encouraged to be champions and ambassadors for the Alliance and the NZTA, including through their families and social networks;
- Are encouraged to resolve issues arising from operations and maintenance through cross-discipline, process improvement groups;
- Consider user and neighbour amenity concerns, behaviours and agency issues in the operation of the network, and in particular at the outset of planning of maintenance activities
- Participate in an externally managed, annual staff satisfaction and workplace culture survey to understand the internal wellness of the Alliance team;
- Are encouraged to participate in internal team-building by communicating celebratory activities such as awards for exceptional stakeholder relations.

# 2.2.2 We will engage effectively with users, citizens, neighbours and agencies (including indigenous peoples) to minimise environmental and social effects and enhance economic efficiency

From the identification and categorisation of our customers and stakeholders described above, the Alliance established a database of all interested parties, contact points, historic issues and areas of interest. A prioritised meeting schedule was then developed, in conjunction with NZTA, to allow face-to-face contact and to understand first-hand their issues, and expectations both of the state highway network, and of the service we provide. These meetings not only provided valuable feedback, but also established the on-going frequency and purpose of future meetings and the stakeholder's need for further information or communication. Information gained from these meetings was used to inform the way we operate, and prioritise work. From these initial meetings, a stakeholder engagement programme was established for each individual stakeholder. Appropriate staff were assigned responsibility for ensuring that the engagements were undertaken as programmed, issues identified and resulting actions were appropriate.

# 2.2.3 We will develop a detailed understanding of the demographics, knowledge, attitudes, expectations, aspirations, and behaviours of customers and stakeholders as network users, neighbours, citizens and agencies.

Analysis of the information obtained from stakeholders was the starting point of developing an understanding of our key customers. One issue that needed to be considered was that many of our customers, particularly the users of the motorway, do not have effective twoway communication channels with us. In many cases, the most common representation of the "user" group is by those who have become sufficiently motivated to complain about the service they have received. To better understand this large group, the Alliance developed and undertook an independent road user survey to identify areas of interest, and the degree of satisfaction or dissatisfaction with their motorway experience. Survey respondents were stratified into user types, users of individual highways etc. The initial survey created a baseline against which satisfaction could then be measured in future annual surveys. The survey allowed us to pinpoint actual or potential areas of dissatisfaction, and develop appropriate action plans. The objective of such action plans is to reduce the volume and seriousness of complaints, and improve overall satisfaction with different aspects of the motorway "product".

The stakeholder engagements, together with the use of surveys were also used to better understand how we can communicate with our stakeholders and users, thus ensuring the maximum effectiveness of NZTA and the Alliance communications.

# 2.2.4 Affected and interested parties will be informed about network operations and maintenance in a timely and appropriate manner;

From the preceding work, we consider all residents and visiting users of the motorway network in terms of their possible roles as users, neighbours, citizens and agencies, and recognise the multiple overlaps with those roles. Our external communications occur in three main topic areas. The main areas of focus for each audience and topic are highlighted in Table 1.

Traditionally mass communication methodologies such as radio advertising and Public Notices have been a primary means of informing people about the motorway network operations and maintenance. Such mass communication is necessary to meet statutory obligations, but is not sufficient to ensure that people are informed. A more targeted communications approach has been adopted, and is being progressively implemented for affected and interested parties. This approach better addresses:

• The diversity of the Auckland population, which has an enormous range of ethnic backgrounds and associated languages and customs, and growing diversity of venues and lifestyles;

- The greater readiness of some people to complain, and increasingly sophisticated use of power, influence and the media to object to change and perceived objectionable effects;
- The growth in decentralised media, with fragmented audiences, and a decline in newspaper readership; and
- The competition for attention amongst the mass of information that bombards people every day.

|            | Subject      |               |   |
|------------|--------------|---------------|---|
|            | Incidents    | Planned Works | Corporate                                 |
| Audience   |              |               | (i.e. not related to a specific activity) |
|            |              |               | specific activity)                        |
| Users      | $\checkmark$ | $\checkmark$  |   |
| Neighbours |              | $\checkmark$  |   |
| Citizens   |              |               | $\checkmark$                              |
| Agencies   | $\checkmark$ | $\checkmark$  | $\checkmark$                              |

Table 1 – Primary Communication Topic Areas

The Alliance has addressed these issues, by using a "narrow casting" approach through existing networks. This is undertaken alongside formal communications that can attach to communications from others, such as local councils, to targeted emails to local groups and businesses, and opt-in text messaging at the most local or individualised level. The main advantages of this approach are:

- Direct access to people who need to be informed (ranging from a public enquiry to a call centre, internal communication at the site of a major employer, a church meeting, school newsletter etc.);
- Using an existing channel that is relevant to the intended recipient;
- Low-cost, as distribution costs are partly internalised by networks and typically only require an e-mail from the Alliance to initiate the communication.

# 2.2.5 The reputation of NZTA will be enhanced.

As the Alliance is a virtual company responsible for the maintenance and operation of the motorway network, many users are unable to distinguish the Alliance from NZTA. The Alliance business, stationery, protective clothing, communications, and increasingly the vehicles and plant used in motorway operations are branded as "NZTA -- Auckland Motorways". All branded communications produced by the Alliance requires close alignment within NZTA brand values. Clear protocols have been developed between the Alliance and the NZTA to ensure consistency. In short, the reputation of NZTA is enhanced (or damaged) by the actions of the Alliance. Achievement of this goal is supported by the consistent branding, and is primarily the outcome of the effective and efficient execution of the activities described under the other strategy goals above.

### **3 MEASURING OUR PERFORMANCE – KEY PERFORMANCE INDICATORS**

A major differentiating feature of alliances compared with other contractual arrangements is the alignment of the required performance outcomes with the commercial drivers of the various owner (NZTA), and non-owner participants. Five Key Result Areas (KRA's) were developed to describe the performance aspirations of the Alliance. These KRA's, together with their supporting Key Performance Indicators (KPI), define the performance objectives of the Alliance at the highest level. The top-level KRA's are as follows:

- Maximise network efficiency (safety, congestion and trip reliability)
- Customer satisfaction
- Delivering a positive legacy (improvements in asset durability, quality or other performance areas which will benefit NZTA beyond the end of the Alliance in 2018);
- Delivery of enhanced value for money; and
- Healthy organisation.

The performance of the Alliance against these five KRA results in commercial pain or gain for the Alliance participants. Achievement of customer satisfaction contributes to 18% of the variation from agreed financial costs (pain/gain), and therefore creates a significant behavioural driver for the Alliance to succeed.<sup>1</sup>

The challenge for the Alliance was to establish a means of measuring customer satisfaction, understand what drives satisfaction across all services provided to maintain and operate the motorway, and to develop plans and actions to improve the level of satisfaction while still recognising the impacts and cost of such activities across the rest of the business. This required the development of Key Performance Indicators (KPI) to give particular meaning and measurability for the customer satisfaction KRA. Ideally, a mix of lead and lag indicators is desired. Lag indicators measure the actual outcome and provide specific quantitative measurement upon which the commercial pain/gain share can reliably be calculated. Identification of reliable lead indicators is difficult. However, lead indicators are necessary to provide early indication that chosen customer strategies are showing success, or require amendment prior to the periodic measurement of the customer satisfaction lag indicators.

### 3.1 Establishment of the Annual Satisfaction Survey

The Auckland motorway network is unique within New Zealand, although it has similarities to most other major metropolitan cities road networks across the world. Customer satisfaction is influenced not only by the asset provided, but also the customers' ability to freely use the motorway network, supported by appropriate real-time information. The overall level of satisfaction is driven by the asset and service provided, together with the level of expectation of its customers. While nationwide user and stakeholder surveys had previously been undertaken by the NZTA, a greater depth of understanding of customer perceptions on the Auckland network was required to establish a credible baseline of customer satisfaction, and create a mechanism which could be utilised over time to measure trends in the various factors affecting satisfaction.

The Alliance designed and commissioned an independent telephone survey of 500 users who had driven on the motorway network in the previous week. The sample was selected to ensure that it was representative of the distribution of the regional population across the area. The initial survey, undertaken in April 2009, occurred at a time when the Key Performance Indicators were being finalised. The survey does not ask a question which seeks an overall assessment of motorway user satisfaction with their motorway experience. One of the difficulties with such questions is that it is impossible to interpret what factors contribute to the respondent's assessment, and whether those views are uniform across a range of factors, or widely varying. This lack of clarity also makes it difficult to identify areas for improvement. The survey instead builds a composite measure of satisfaction from the ratings of performance. This involved assigning scores on a range of excellent (5), very good (4), good (3), needs some improvement (2), needs a lot of improvement (1), don't know (0). While there are some technical issues with assigning interval based measures in such instances, (e.g. the intervals do not reflect a uniform progression of satisfaction) it was considered that the benefits of a clear, reproducible structure warranted its use. The survey explores a number of areas including:

- Travel patterns and reliability of travel times;
- The importance of various features of the motorways;
- Performance of the NZTA and Alliance's operations and maintenance activities;
- Provision of traffic and road works information; and
- The public's understanding of whom to contact for information, or to notify repair needs on the motorway.

The baseline measure of overall satisfaction using this methodology in 2009 resulted in a satisfaction rating of 62.0%. This had improved to 65.2% in the 2010 survey, with the 2011 survey to be undertaken in April. Of particular note is that performance is rated as "good" on 12 of 13 key indicators of motorway operations and maintenance. Some key themes from the 2009 and 2010 survey are set out below:

- Motorway users are doubtful about the reliability of their journey time in peak periods;
- The appearance and upkeep of the motorway pavement and corridor is rated as very important to users, and currently road users are well satisfied;
- More than one third of respondents did not know who they should report a repair made on the motorway to; and
- Users consider that radio is the most important source of traffic information. There is a significant demand for information via additional Variable Message Signs (VMS) to give drivers more time to react and think about alternate routes when an incident has occurred on the motorway network.

Of particular interest to our work with customers and stakeholders, and recognised in the KRA's established for the Alliance, are the three lowest scoring features from the survey, which all relate to traffic management:

- The way that congestion is managed ;
- The way traffic is controlled and information given when there are crashes on the motorway;
- The way lane closures and detours are managed during repairs and maintenance.

Each of these user perceptions of the motorway operation raises three questions:

- What does the user perceive is being done?
- Is this what is actually being done?
- How can we better communicate the appropriate information to meet their needs?

The Alliance has developed a response to a number of these issues. Typically, the response comprises asset maintenance, operational and communication components. Several examples of these are outlined later in the paper. While the survey does develop a single satisfaction indicator from road users, and year by year trends to show whether we are making progress, most value is derived from the development of a statistically valid

view of the value that our customers see in the different aspects of the motorway operation.

### 3.2 Development of Key Performance Indicators

There are a number of different mechanisms, and different indicators that could be chosen to guide our on-going quest for improved customer satisfaction. Our objective was to choose a limited number of both lead and lag indicators which would encourage the correct behaviour and actions within the Alliance to address the customer satisfaction challenges. The six customer satisfaction KPI which have been used since commencement of the Alliance are set out in Table 2. Performance in these areas comprises 18% of the assessment used to determine the commercial parameters for the Alliance participants. The customer satisfaction KPI's represent a balance between maintaining a focusing on the most important issues, while not creating an extensive and complex measuring system which would consume resources simply to maintain.

| Customer Impact        | Key Performance Measure |   |  |
|------------------------|-------------------------|---|--|
|                        | Name                    | Definition  |  |
| (% of total KRA score) | (Indicator type)        |   |  |
| Customers are          | Super City              | Percentage of "Super City" stakeholders               |  |
| Engaged and            | (lead)                  | engaged as per engagement plan                        |  |
| understood.            | Who are you going       |   |  |
|                        | to call?(lead/lag)      | call NZTA / Alliance for repairs and matters          |  |
| (5%)                   |                         | related to travel to the Motorway                     |  |
| Customers are          | Satisfied (lag)         | Overall annual satisfaction survey result             |  |
| Satisfied and          | Call Back               | Percentage of satisfaction from a                     |  |
| Informed               | (lag)                   | dedicated follow up survey of stakeholders            |  |
|                        |                         | contacting the Alliance.                              |  |
|                        | Get Back                | Percentage of feedback to stakeholders                |  |
|                        | (lag/lead)              | recorded and provided within the service level limits |  |
|                        | React (lag/lead)        | Percentage of resolutions logged in CRM               |  |
| (13%)                  |                         | within the service level limits                       |  |

Table 2 – Customer Satisfaction Key Result Area: Key Performance Measures

Each of the above six KPI are monitored, and with the exception of the results of the annual satisfaction survey, reported monthly. Monthly reports tend to be graphical and exception based. Trends are identified monthly, analysed, and appropriate responses are planned to continually improve KPI performance. An example of the monthly "Callback" KPI reporting is set out in Figures 2 and 3. This call–back survey of at least 10% of callers to the Alliance call centre is undertaken by personnel independent of those who dealt with the issue. The results of the call-back surveys are analysed to identify how our service can be further improved.

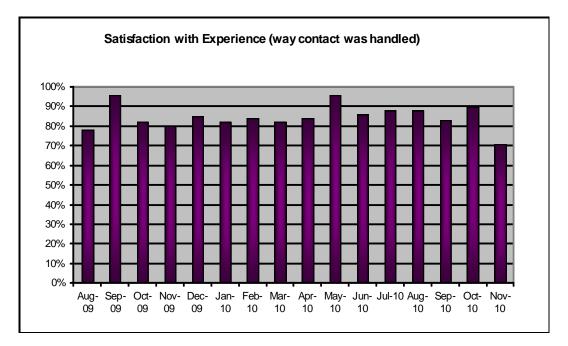


Figure 2 - "Callback" KPI monthly reporting: Satisfaction with the Experience

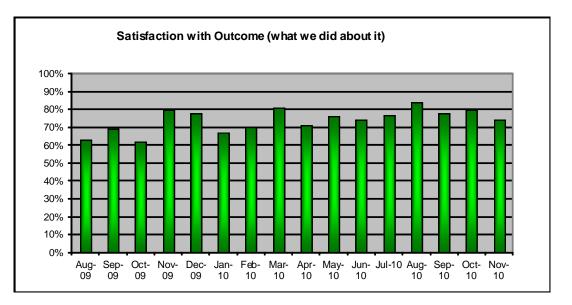


Figure 3 - "Call-back" KPI monthly reporting: Satisfaction with the Outcome

# 4 IMPROVING PERFORMANCE – UNDERSTANDING WHAT DRIVES CUSTOMER SATISFACTION

By mid-2009 the Alliance had finalised the Key Performance Indicators that would be used to assess performance across all significant activities of the Alliance. These KPIs included the overall customer perception of the motorway in its entirety. In the customer satisfaction area, a number of lead and lag indicators had been established to provide a mechanism to quantify the Alliance's current and expected future performance. For the first time, we now held some statistically robust information for the level of customer satisfaction for different aspects of the maintenance operations on the network, and for those customers who were dissatisfied, some understanding of the reasons behind their dissatisfaction. This information provided the basis for improvement plans to be developed to improve performance for those KPI which were performed poorly and/or were trending in the wrong direction.

Further analysis of the annual survey provided some useful graphical representations of how the customer perceived their motorway experience compared with the service the Alliance believed we were providing them with. Figure 4 sets out an example of such a representation which clearly shows the mismatch between customer expectation and what is being provided in congestion management. It provides a clear indication of priority areas of focus for improving the services we provide on the motorway network.

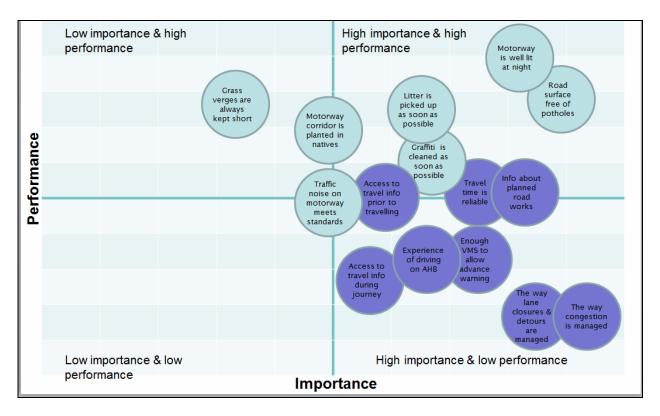


Figure 4 - Importance & Performance of motorway features identified from road user survey

KPI performance improvement plans are documented, and reported quarterly to the Alliance Management Team. In a more traditional environment, improvement plans would tend to be asset based and focused primarily on physical works. In the Alliance environment, the performance improvement plans also contain operational and information/communication actions. The plans are typically developed by cross-disciplinary groups to ensure that innovative approaches are identified, explored and applied where feasible.

# 4.2 Customer Focussed Strategy in Action

The development of a much closer relationship with customers and stakeholders has resulted in the identification and implementation of a number of different solutions to old and new issues. It has also provided a sound basis for reassessing the level of service delivered on different aspects of the motorway maintenance and operations. Some specific examples are set out below. While most are not complex, they are provided to illustrate the

establishment of a linkage between customer satisfaction and traditional motorway maintenance and operations.

The initial customer survey in 2009 confirmed one aspect that was well understood previously -- specifically that road user perception of how well a network is being maintained is primarily driven by how "tidy" the network looks . Tidiness is assessed by the user from how well vegetation is controlled and how quickly litter and graffiti is removed. The cost of grass mowing and vegetation control on the more rural areas of the Auckland network is significant. Early road user survey work, followed by field trials and monitoring customer feedback confirmed that customers considered the motorway corridor to be tidy provided vegetation was not significantly higher than adjoining land. This resulted in the Alliance reaching agreement to reduce the frequency of cutting grass in the rural areas of the network with no consequent reduction in customer satisfaction or effect on the asset.

As noted above, one of the top three causes of customer dissatisfaction exposed in the annual survey was "the way lane closures and detours are managed during repairs". Further interrogation of this issue revealed that this was caused by several factors including:

- The lack of understanding by users of the need for the work;
- The lack of advance warning of the work, and of the expected additional travel time, both before travel and prior to arriving at the road works;
- A belief that those undertaking work were not putting sufficient effort into managing congestion appropriately; and
- Motorists becoming lost on detours, despite all the usual detour signage being in place.

It has since become clear that motorists are surprisingly tolerant of critical road works having significant impact on their journey, provided that comprehensive communications and traffic management is put in place to address the above four factors. The Alliance has now put in place enhanced:

- Guidelines to ensure targeted communications plans are in place to provide advance and real time advice to motorists;
- Traffic management (particularly on detours) to provide the additional guidance desired by motorists. Congestion effects are monitored, with response plans ready for dealing with unexpected congestion prepared in advance, and implemented when necessary.
- Processes to measure delays due to road works. These are measured at the network level and reported as an Alliance KPI. At significant road works sites, congestion is also measured at individual site level, and corrective actions undertaken with the contractor involved in the road works, where required.

An example of using customer feedback to influence priorities for work on the network is the monitoring of types of issues that are creating customer calls. These are reported monthly as a simple "tornado diagram", as set out in Figure 5. Each month, the most frequently occurring issues are the subject of focus by a cross-disciplinary group to challenge the current methodology, and determine if any further initiatives can be applied, or the service otherwise improved so that the frequency of calls can be reduced.

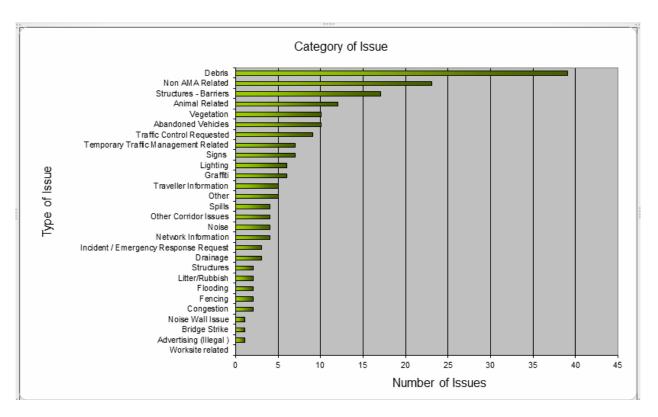


Figure 5 – Frequency of service requests, by type of issue

At a higher asset management level, work has recently commenced on redevelopment of the Corridor Operating Plans for the motorway network. These will integrate the concepts of customer satisfaction, as measured by surveys of user groups with more traditional Asset Management Plans. The result will be the publication of the service that motorway users can expect from the motorway asset that is being provided for them to use. The service (and the Level of Service expectations) will be expressed in customer terms rather than in traditional asset management terminology. These plans will be challenging to produce, but will represent a quantum leap in linking provision of maintenance and operational services with user aspirations.

# CONCLUSION

This paper has outlined some of the experiences of the Auckland Motorway Alliance in our pursuit of achieving increased customer satisfaction while delivering the maintenance and operation of the Auckland motorway network. Every road network will be different as the state of knowledge of the asset, the demands imposed upon it, and its deterioration profile will vary. Its customers will have different cultural, economic, social and environmental drivers, and will therefore value different aspects of their "motorway experience" in a different way. The availability of different communication tools and technology will mean that some solutions are not available or affordable in some situations. In summary:

- There is never a right time to start getting serious about addressing the issue of customer satisfaction -- you will never have all the information, but only by starting will you understand what you do not know.
- Understanding the real drivers of customer satisfaction requires different processes and different thinking to get beyond the obvious. However, it presents opportunities for efficiency and improving customer satisfaction, as well as challenges.

- The development of appropriate (but not too many) Key Performance Indicators is essential to provide focus on achieving what is really important. Well-developed improvement plans can provide both technical direction and management focus for improving performance.
- Strategies for improving customer satisfaction will change over time. Priorities change. It is important to keep challenging what we deliver by asking the question "Will this make our customer more satisfied?", or at least keep them satisfied? If not, then why are we doing it?
- Users, neighbours, agencies and citizens -- they are all our customers, and in their own way, they all demand satisfaction – our challenge is to understand what we need to do to meet that demand.

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### REFERENCES

1. Rendall, D.R. (2011). Value for Money Achievement in the Auckland Motorway Alliance. XXIV<sup>th</sup> World Road Congress, Paper 575

http://www.aucklandmotorways.com/