Evaluation of the value of NZTA research programme reports to end users
July 2011

Evalue Research

Keywords: dissemination, influence, research, use, utilisation, value.

An important note for the reader

Acknowledgements

Abbreviations and acronyms

IPENZ   Institution of Professional Engineers New Zealand

NZTA   New Zealand Transport Agency

REAAA   Road Engineering Association of Asia and Australasia

Contents

Executive summary

This report presents the findings of an evaluation of the NZ Transport Agency (NZTA) research programme. The key evaluation objective was to assess how valuable the findings of NZTA research reports, published from 2005 to 2009, have been for end users (individuals, organisations and industries in the land transport sector) in New Zealand. Two secondary objectives were to:

- identify the barriers and enablers that made the difference between successful and less successful uptake and use of findings from the research reports

- ascertain the extent to which current NZTA mechanisms for disseminating and promoting research findings represented the best possible use of available resources.

Methods

Qualitative interviews with key stakeholders from the NZTA, the Ministry of Transport and researchers were conducted in February 2011. These were followed by an online survey of 165 potential end users of NZTA research and follow-up telephone interviews with 21 of the respondents who said they had used the research in their work. A scan of literature on research utilisation and 'good practice' dissemination and promotion of research findings provided a framework for the evaluation.

Three evaluative rubrics were developed with input from the NZTA to establish performance 'standards', ie what 'end use', 'relevance' and 'successful uptake' would look like if it was meeting NZTA stakeholders' expectations (appendix B: table B2). These standards were applied to the online survey data to provide an overall assessment of respondents' use of NZTA research, the relevance of the research findings and the ratings of the NZTA's mechanisms for disseminating the research findings.

Findings

The following tables provide an overall assessment for the dimensions identified by the NZTA as being critical to the research programme's value and its successful uptake. The evidence behind each rating is in the main body of the report.

Respondents were asked to comment on how often, when they read a NZTA research report, they learned something new; used the information to inform further research, new or existing policies or programmes; developed or improved standards, guidelines or specifications; and shared the information with others.

Overall findings showed:

- 88% (n=15) of those working in research organisations and 73% (n=96) of those in all other organisations said they always or usually learned something new when they read a NZTA research report (resulting in an overall rating of 'excellent').

- 71% (n=12) of respondents working in research organisations always, usually or sometimes used research to contribute to decision-making processes, programme/policy formation or improvement (resulting in an 'excellent' rating). Of those in other organisations, 64% (n=92) reported always or usually using research to contribute to decision-making processes, programme/policy formation or improvement (resulting in an 'adequate' rating).

Table ES1   Evaluative rubric 1: respondents' use of NZTA research

	End user group	Evaluation rating
Learn something new	Researchers	Excellent
	Other end users	Excellent
Use research to contribute to decision making, programme/policy formation and/or improvement[1]	Researchers	Excellent
	Other end users	Adequate

Overall most respondents viewed NZTA research as highly relevant:

- 95% (n=141) of respondents said the research was always, usually or sometimes relevant to their work.

- 93% (n=138) said the research was always, usually or sometimes relevant to the New Zealand transport sector.

Table ES.2   Evaluative rubric 2: relevance of NZTA research

	End user group	Evaluation rating
To respondents' work	All respondents	Excellent
To the transport industry	All respondents	Excellent

Survey respondents were asked to explain their 'relevance' rating. Those who said the research was always or usually relevant to their work commented on:

- the good match between the research subject matter and their work

- research that included new ideas and innovation

- research that focused on practical issues.

Research that was viewed as too academic, or not focused on respondents' areas of interest, was considered less relevant. Respondents who considered the research only sometimes relevant commented that some transport issues were being neglected, for example energy efficiency and smart technology. A few respondents were concerned about poor implementation of findings, commenting that it was not always clear how research findings would be put into practice. Respondents considered research to be relevant to the wider transport sector when it was:

- New Zealand specific

- focused on improvement and new ideas

- applied and practice ready.

Comments across the data sources highlighted the importance of the NZTA research programme as an independent, reliable source of research on transport-related issues. Several researchers commented involvement of steering group members and peer reviewers was an important aspect in ensuring the research was regarded as credible.

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[1] Note: this dimension did not include an expectation that researchers would use research to contribute to decision making, programme/policy formation and/or improvement.

The interviews with researchers and end users suggested utilisation of research prior to 2010 had occurred mostly in an ad hoc way. The findings suggested a planned, deliberate and strategic approach to the whole research process was required if evidence was to be used to inform policy and practice.

Respondents were asked to rate the three mechanisms the NZTA used for disseminating information about its research findings. Overall:

- only 22% (n=33) rated the website as excellent to very good, with 36% rating it as adequate

- 50% (n=58) rated the 'Recently published reports' email as excellent to very good, with 25% rating it as adequate

- 42% (n=53) rated the *NZTA research* newsletter as excellent to very good with 33% rating it as adequate.

Table ES.3   Evaluative rubric 3: assessment of NZTA dissemination mechanisms

	Mechanism	**Evaluation rating**
Respondents' satisfaction with:	Website	Adequate
	Email notification	Excellent
	Research newsletter	Excellent

The NZTA 'Recently published reports' email and the *NZTA research* newsletter play an important role for those who have limited time to search for information as they are a quick and easy way to find out about what research has been done. However, the findings indicated these mechanisms needed to be more prominently promoted as many survey respondents did not know, or had no opinion, about the newsletter or email notification. The findings also indicated the research was currently not easy to find on the NZTA website. Overall, the website was not considered the best possible use of the current resource. The research needs to be given more prominence on the NZTA website and further consideration given to the search function.

Abstract

This evaluation assesses how valuable the findings of NZTA research reports, published from 2005 to 2009, have been for end users in New Zealand. The evaluation also identifies the barriers and enablers that make the difference between successful and less successful uptake and use of findings from the research reports, and the extent to which current NZTA mechanisms for disseminating and promoting research findings represent the best possible use of available resources.

The findings suggest the research is of substantial value to end users in all areas of the transport sector. The research is highly regarded because it provides practical, innovative New Zealand-based solutions to their issues.

Currently there is more use occurring at the conceptual end of the 'use' continuum and less evidence of research being used to inform decision making, programme/policy formation and/or improvement. More value could be gained by considering, up front, how research findings can be linked to policy and programme decision making.

Good communication of research findings is an important enabler to research use. The email and newsletter notifications of newly completed research are valued by those who receive them. Online access to reports is also valued; however, the NZTA website is not considered user friendly.

1   Introduction

This report presents the findings of an evaluation of the NZ Transport Agency (NZTA) research programme. The evaluation was conducted by an independent evaluator in the first quarter of 2011. The purpose of the evaluation was to assess how valuable the findings of NZTA research reports, published from 2005 to 2009, have been for end users (individuals, organisations and industries) in New Zealand. Two secondary objectives were to:

- identify the barriers and enablers that made the difference between successful and less successful uptake and use of findings from the research reports, and

- ascertain the extent to which current NZTA mechanisms for disseminating and promoting research findings represented the best possible use of available resources.

1.1   Methodology

As part of the scoping phase, the evaluators conducted a review of selected research proposals from 2005 to 2009. The review identified lead researchers, information about potential end users and intended end use of the research. The evaluators also conducted a scan of international literature to find out about use of research in the transport sector.

Key stakeholder interviews were then held with nine NZTA staff, two Ministry of Transport staff and 13 researchers (identified in the review of research proposals). These interviews, and the literature scan, informed the development of a survey questionnaire and provided contextual information for the evaluation findings.

An online survey of potential end users was conducted in March 2011. In total, 165 responses were received (resulting in a 41% response rate). Respondents were asked to identify the extent to which they used NZTA research (from 'always' through to 'never'). They were asked how they used the research and how they rated the relevance of the research to their work and to the transport sector. Follow-up interviews were then conducted with 21 end users to cross-check respondents' data and to find out more about the factors that enabled or inhibited their use of NZTA research.

Three evaluative rubrics were developed with input from the NZTA to establish performance 'standards', ie to identify what 'end use', 'relevance' and 'successful uptake' would look like if it was meeting NZTA stakeholders' expectations (see appendix B). These standards were applied to the online survey data to provide an overall assessment of use, relevance and the NZTA's dissemination mechanisms. Together with the qualitative data, the evaluation provides an insight into how the research is being used by the respondents and the enablers and barriers to use. More detailed information about the methodology is in appendix B.

1.2   Report structure

The report begins with background information about the NZTA research programme and an overview of 'end user' respondents.

The findings are structured in three sections:

- Value of NZTA research to end users

- Factors that facilitate 'use' of research findings

- Dissemination and promotion of NZTA research findings.

This is followed by a discussion of the findings, together with recommendations.

2   Background

This section includes information about the NZTA research programme and an overview of the 'end user' respondents.

2.1   NZTA research programme

The NZTA is the Crown agency with responsibilities for land transport in New Zealand. These responsibilities include planning, regulating and funding land transport, promoting safety and sustainability, and managing land transport systems such as the state highways.

There has been a history of research in the New Zealand transport sector since 1953 when the National Roads Board was established, with the Road Research Unit as part of it. Government-funded transport research has been successively managed by Transit NZ, Transfund NZ, Land Transport NZ and now the NZTA.

The NZTA research approach seeks to fund applied research that delivers strategic outcomes for the land transport sector (NZTA 2008, p8). The programme aims to fund innovative, applied research, which complements the Foundation for Research, Science and Technology's focus on more 'blue skies' research.

NZTA defines the purpose of its research as:

> *Research undertaken to acquire new knowledge and information of land transport sector issues applicable to the New Zealand context.* (NZTA 2008, p12)

The results of research must be applicable to interventions that can be applied in New Zealand in the short-to-medium term for longer-term impacts (NZTA 2008, p12). The NZTA research programme is distinct from research the NZTA carries out to assist with its business activities. NZTA intends its research will:

- have multiple potential end users

- not provide commercial gain for a sole supplier or single product

- not exclusively benefit a single organisation to achieve its own operational needs or business objectives

- have strong support by end users to address information gaps (NZTA 2008, p12).

Table 1 includes the reports published during 2005–2009 (the focus of the evaluation) by NZTA research topic area.

Table 2.1   NZTA research reports 2005–2009

Key topic areas	NZTA reports published 2005–2009	
	No.	%
Asset management	33	25
Environmental effects	19	14
Natural hazard risk	6	5
Network management	13	10
Safety and personal security	21	16
Sustainable transport	19	14
Travel behaviour	21	16

Information from stakeholder interviews suggests asset management has had a longer history, in terms of research focus, than the other areas. As one interviewee commented:

> *The 2005–2009 programme moved from the traditional areas of asset management and safety to new areas, eg sustainability, travel behaviour, integrating planning. This was a new area for the NZ transport sector as a whole and NZTA did a lot without knowing what the gaps were. The net was cast really wide during that period…*

All but one of the 132 reports from this timeframe are on the NZTA's website. A spreadsheet, available at www.nzta.govt.nz/resources/research/index.html lists all reports by theme and topic from the most recent through to the older ones.

2.1.1   Criteria for selecting research projects

Until 2009, the programme comprised research projects selected from proposals submitted by researchers in a two-stage competitive application process (known as industry-generated research)[2]. The programme also comprised some NZTA identified and commissioned research to meet particular needs not addressed by the industry-generated proposals. This is referred to as directed research.

As part of the application process researchers were required to include information about 'when, how and by whom the research would be used and the initiatives that would support this'[3]. Steering groups and peer reviewers were also to be established as part of the research project.

From 2010 onwards NZTA has selected the topics to be researched. These topics:

> *express the priority research needs of transport decision makers (the NZTA, the Ministry of Transport and approved organisations). This is because the NZTA is seeking higher-quality and more sharply focused proposals from the research community, with an emphasis on practical application or end use.* (NZTA 2010)

Requests for proposals are asked for via the Government Electronic Tendering Service (GETS) and researchers are invited to submit proposals.

2.2   Overview of respondents

The survey respondents included 148 who said they had read at least one NZTA research report and had used the research in some way, and eight who said they had never accessed NZTA research findings.

2.2.1   Survey respondents who have used NZTA research

As table 2.2 shows, 34% of survey respondents worked in consultancies, 24% in local government and 11% in research organisations. The 'other' category comprised 16 people who said they worked in more than one place, including education (7), industry or professional bodies (6), consultancies (3), research organisation (1), local government (1) and a laboratory (1).

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[2] The two-stage process started with expressions of interest (EoIs) from researchers. The NZTA and the Research Reference Group, comprised of representatives from a wide range of transport sector groups and organisations, assessed the EoIs and successful researchers were asked to submit tenders through a request for proposal (RFP) process.

[3] Land Transport New Zealand 2006–2007 Request for proposal

Table 2.2   Respondents' work places

Type of organisation	% of respondents	No. of respondents
Consultancy[4]	34	51
Local government	24	35
Research organisation	11	17
Education or training institution	6	9
Central government or Crown entity	7	11
Road contracting company	6	9
Other	11	16

Source: NZTA survey (n=148)

2.2.1.1   Respondents' job roles

Respondents were asked to identify their main job role (table 2.3). More than 50% worked as researchers (22%), engineers (22%) and as consultants (15%). The 'other' category included librarians and those who had mixed roles involving combinations of research, teaching, engineering, planning, road safety and sustainable transport, strategic analysis, public transport operations, environmental effects' assessments, aggregate and earthworks testing, administration and product development to reduce traffic.

Table 2.3   Respondents' main job role

Job role	% of respondents	No. of job roles
Engineering	22	33
Research[5]	22	32
Consulting	15	22
Policy making	7	11
Planning	7	10
Road contracting	5	8
Teaching	3	4
Other	20	29

Source: NZTA survey (n=148)

2.2.1.2   Research interest

Respondents were asked to select their areas of research interest from the seven NZTA research topic areas[6] (table 2.4). More than 70% reported an interest in sustainable transport. Travel behaviour was the second highest topic of interest for respondents (59%). These topic areas reflect respondents' interests in 2011 and cannot therefore be compared to the level of funding allocated to each topic area for the 2005–2009 period (table 2.1).

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[4] The type of consultancies included general consultancy (24), engineering (15), research (7), planning (3) and policy making (1). Four respondents indicated their consultancies did a combination of research and engineering, research and consulting, research and policy making and evaluation.

[5] Researchers work in research organisations (15); consultancies (8); education or training organisations (8); and central government (1).

[6] Respondents could select more than one topic area.

Table 2.4   Respondents' research interests

Key topic areas	Respondents' areas of interest (%)
Asset management	53
Environmental effects	46
Natural hazard risk management	21
Network management	53
Safety and personal security	53
Sustainable transport	72
Travel behaviour	59

Source: NZTA survey (n=148). Note: respondents could select more than one topic area.

Looking at the areas of interest against where respondents were employed (appendix A: table A1), those in local government (n=35) were most interested in network management (86%, n=30) followed by asset management (77%, n=27) and sustainable transport (71%, n=25). In addition, the data shows those in:

- consultancies were most interested in sustainable transport (72%, n=37)

- road contracting companies (100%, n=9) were most interested in asset management

- research organisations were most interested in sustainable transport (82%, n=14) followed by environmental effects (71%, n=12)

- education or training institutes were most interested in safety and personal security (78%, n=7)

- central government or Crown entities were most interested in travel behaviour (81%, n=9)

- 'other' places were most interested in sustainable transport (94%, n=15).

2.2.2   Survey respondents who had never accessed NZTA research

Eight respondents said they had never read a NZTA research report or listened to a talk about NZTA research findings. These respondents worked in consultancies (3), education or training organisations (2), local government (2) and a trade association (1). They worked as engineers (3), researcher (1), teacher (1), consultant (1), road contractor (1) and policy maker and engineer (1). No other information about these respondents was available.

2.2.3   Follow-up interviews with end users

Follow-up qualitative interviews were conducted with 21 survey respondents. These respondents were selected because they reported always, usually or sometimes using NZTA research. The evaluators were struck by respondents' experience in the transport sector. Ten said they had worked in the sector for more than 20 years; another six had been in the sector for between 11 and 20 years. Table 2.5 identifies where the respondents worked. Their job roles included chief executive officer, engineer, policy analyst, planner, manager, transport modeller, roading asset manager and transport economist. The respondents included 18 men and three women.

Table 2.5   Qualitative interviews with end users

Respondents' organisation	No. of interviews
Local government	12
Consultancy	6
Professional organisation/advocacy group	3

3   Findings

The findings are discussed under three headings:

- Value of NZTA research to end users

- Factors that facilitate 'use' of research findings

- Dissemination and promotion of NZTA research findings.

3.1   Value of NZTA research to end users

The data for this section comes from two sources: 148 survey respondents who said they had read a NZTA research report and follow-up telephone interviews with 21 of the survey respondents who indicated they had used NZTA research in their work.

At the outset, it is important to note respondents may have used information without realising it was the end product of NZTA research (for example, using specifications that had been developed from research). This had implications for the evaluation in that the findings were limited to respondents' reported use of research. In addition, use of research findings may not occur immediately, but be dependent on other factors. In the words of one respondent (a researcher):

> *We often don't see immediate results from research – results can be incremental.*

Respondents' use of the research is discussed in relation to 'conceptual' and 'instrumental' use. Huberman defines conceptual use of knowledge as a 'change in the level of knowledge, understanding or attitude' and instrumental use as 'changes in behaviour or practice' (1992, p6). In other words use is not just about putting something into practice, it also includes the concepts of learning and influence (Kirkhart 2000). These terms are useful for framing the different ways respondents reported their engagement with NZTA research.

The survey questionnaire asked respondents to comment on how often, when they read a NZTA research report, they:

- learned something new

- used the information to inform further research, new or existing policies or programmes

- developed or improved standards, guidelines and/or specifications

- shared the information with others.

As figure 3.1 shows, the first two types of use are categorised as conceptual types of use, while the last two are considered instrumental types of use. Research used to inform further research can be either conceptual or instrumental and thus sits in the middle.

Figure 3.1   Types of use for NZTA research
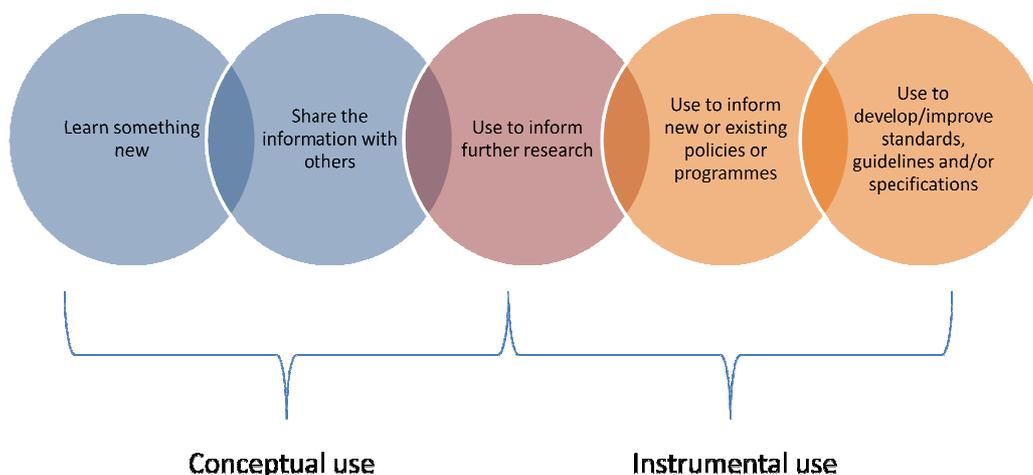
3.1.1   Assessment of use

Respondents could select from a five-point Likert scale to report the extent to which they used research, ie always, usually, sometimes, hardly ever and never. Overall findings showed respondents' use of NZTA research was higher at the conceptual end of the 'use' continuum. As table 3.6 shows, 75% of respondents said they always or usually learned something new when they read a NZTA research report. Another 25% sometimes learned something new. At the other end of the 'use' continuum, 23% of respondents always or usually used the research to develop/improve standards, guidelines and/or specifications, while 44% sometimes used it in this way.

Conversely, there were no respondents who said they hardly ever or never learned something new when they read a research report. Around 30% hardly ever or never used the research to inform further research, new or existing policies or programmes, develop/improve standards, guidelines and/or specifications.

Table 3.1   Use of NZTA research

How often	Learn something new	Share information with others	Use to inform further research	Use to inform new or existing polices or programmes	Use to develop/improve standards, guidelines and/or specifications
Always	16% (24)	7% (11)	3% (5)	3% (4)	4% (6)
Usually	59% (87)	45% (67)	34% (50)	18% (26)	19% (28)
Sometimes	25% (37)	42% (63)	32% (48)	50% (74)	44% (65)
Hardly ever	0% (0)	4% (6)	18% (27)	17% (25)	17% (25)
Never	0% (0)	1% (1)	12% (18)	14% (19)	16% (24)

Source: NZTA survey (n=148)

The following sections provide further analysis of the different types of use by respondents' work places. Commentary is also provided on the comparison between those who work in research organisations and those in all other organisations. The assumption here is that those working in research organisations are

producers as well as potential end users of research, while those in other organisations are primarily end users.

3.1.1.1   Learning something new

Reading research reports is a core component of researchers' work, as it helps to put their own research into context. This was reflected in the analysis of data by respondents' work places which showed 88% (n=15) of those working in research organisations were more likely to always or usually learn something new when they read a NZTA research report than respondents working in other work places (73%, n=96).

Table 3.2   Learn something new from the research

	Local govt	Consultancy	Road contracting company	Research org.	Education or training institution	Central govt or Crown entity	Other	Overall
	(n=35)	(n=51)	(n=9)	(n=17)	(n=9)	(n=11)	(n=16)	(n=148)
always	14% (5)	14% (7)	11% (1)	29% (5)	11% (1)	18% (2)	19% (3)	16% (24)
usually	57% (20)	65% (33)	56% (5)	59% (10)	67% (6)	45% (5)	50% (8)	59% (87)
sometimes	29% (10)	22% (11)	33% (3)	12% (2)	22% (2)	36% (4)	31% (5)	25% (37)

Source: NZTA survey (n=148)

The following vignettes, based on follow-up interviews with respondents, provide examples of how NZTA research is being used at this end of the 'use' continuum. Pseudonyms have been used to protect respondents' identities.

David

> is the asset manager for a district council. He reported being well informed about NZTA's research. He receives the email and newsletter updates about recently published research and 'the guys from NZTA will say "hey, there is this new stuff out there you should read"'. David says his council does not do much 'new stuff'; they are focused on maintenance. When he reads research findings he is not looking for new ideas but is keen to stay informed. He said different information 'floats around' so it is hard to know what information he has gained from research and what has come from talking to people. He can recall reading research on pavement deterioration which has helped with planning maintenance, as the research findings put an asset life on pavement deterioration.

Ray

> is a roading engineer in a district council. He said he receives information from the NZTA about new research through a NZTA newsletter. He has a general interest in what is being done elsewhere and whether there are alternatives to what his council is already doing. In his words: 'There is no need to reinvent the wheel'.

3.1.1.2   Research to inform further research

Those respondents working in research organisations were more likely (95%, n=16) to always, usually or sometimes use NZTA research to inform further research than those working in other types of work places. A relatively high percentage (78%) of respondents working in consultancies (a number of whom were research focused) were also using NZTA research to inform further research. As an example of this type of use, one researcher interviewed said he read NZTA research on public transport modelling to inform his own research on the topic.

Table 3.3   Research to inform further research

	Local govt	Consultancy	Road contracting company	Research org.	Education or training institution	Central govt or Crown entity	Other	Overall
	(n=35)	(n=51)	(n=9)	(n=17)	(n=9)	(n=11)	(n=16)	(n=148
always	3% (1)	2% (1)	11% (1)	6% (1)	0% (0)	0%(0)	6% (1)	3% (5)
usually	17% (6)	35% (18)	22% (2)	71% (12)	33% (3)	36% (4)	31% (5)	34% (50)
sometimes	26% (9)	41% (21)	22% (2)	18% (3)	56% (5)	18% (2)	38% (6)	32% (48)
hardly ever	31% (11)	14% (7)	33% (3)	0% (0)	0% (0)	27% (3)	19% (3)	18% (27)
never	23% (8)	8% (4)	11% (1)	6% (1)	11.1% (1)	18% (2)	6% (1)	12% (18)

Source: NZTA survey (n=148)

In comparison, 66% of those working in non-research based organisations always, usually or sometimes used NZTA research to inform further research. The following vignette is an example of a district council using NZTA research to inform a research trial within their jurisdiction.

Hugh ⟶ is responsible for the district's road and transport network 'everything from infrastructure to footpaths and street lights'. He described trying to find information about the use of foam bitumen on unsealed roads. He had specific questions about the life of the treatment and issues regarding maintenance and future costs. He had accessed information from Canada 'but they have a different geology'. Then his NZTA liaison person told him about NZTA research on foam bitumen. Hugh said the information was the most useful he'd obtained. 'It was practical, had a lot of answers to what I was seeking and it was New Zealand based.' Hugh's council then proceeded with its own road trial.

3.1.1.3   Research to inform new or existing policies or programmes

Overall, 20% (n=26) of respondents not working in research organisations reported always or usually using research to contribute to decision-making processes, programme/policy formation or improvement. Another 50% (n= 66) of respondents not working in research organisations sometimes used research for these purposes. This finding may reflect respondents' job roles and their ability to use research in this way (for example, only 7% (n=11) work as policy makers).

Table 3.4   Research to inform new or existing policies or programmes

	Local govt	Consultancy	Road contracting company	Research org.	Education or training institution	Central govt or Crown entity	Other	Overall
	(n=35)	(n=51)	(n=9)	(n=17)	(n=9)	(n=11)	(n=16)	(n=148)
always	6% (2)	0% (0)	0% (0)	6% (1)	0% (0)	0% (0)	6% (1)	3% (4)
usually	23% (8)	16% (8)	0% (0)	18% (3)	11% (1)	18% (2)	25% (4)	18% (26)
sometimes	60% (21)	55% (28)	44% (4)	47% (8)	22% (2)	46% (5)	38% (6)	50% (74)
hardly ever	6% (2)	18% (9)	44% (4)	6% (1)	33% (3)	27% (3)	19% (3)	17% (25)
never	6% (2)	12% (6)	11% (1)	24% (4)	33% (3)	9% (1)	13% (2)	13% (19)

Source: NZTA survey (n=148)

The following vignettes are examples of respondents in local authorities using NZTA research findings to inform regional council policies on parking charges and to plan for an influx of tourists during the Rugby World Cup 2011.

Don

> is a transport planner for a regional council. He identified a report he had read on transport demand elasticity which looked at how parking charges would impact on people using an area and how raising charges would impact on utilisation. He used this information to inform his council on probable impact of increasing parking charges in the central business district. He said he also looked at overseas information but preferred the NZTA research 'as there is always someone who says "if it applies overseas it doesn't necessarily apply in New Zealand"'.

Ian

> is interested in traffic statistics, particularly as they relate to the state highway network. Ian works for a district council and his role includes managing the local road network 'about 900km of unsealed roads and 400km of sealed roads'. He has used NZTA research findings to inform the council's transport planning, most recently in preparation for the Rugby World Cup. The council is keen to make the most of the opportunity, but they needed information about the expected numbers of people who would pass through the district.

Meanwhile, Trevor is a civil engineer with 20 years experience in the transport sector. His clients include local and state highway authorities.

Trevor

> referred to a report on chip seal performance under moisture. This information led him to use a different approach to his designs of heavy demand pavements. It helped him face reality: 'you cannot guarantee to keep water out of chip seal pavements'. He keeps the research findings in the back of his mind when he's designing high-trafficked roads that are either being repaired or about to be built. Recognising there will be water forced into the pavement means he now includes measures that will improve resistance to water.

3.1.1.4   Research to develop/improve standards, guidelines or specifications

Overall, 23% (n=30) of respondents not working in research organisations reported always or usually using research to develop or improve standards, guidelines or specifications. Another 44% (n=58), not working in research organisations, sometimes used research in this way. Again, with this specific type of use one might expect some organisations to be more involved in this type of work than others. There was very little difference in the type of use across local government, consultancies, road contracting organisations and research organisations.

Table 3.5   Research to develop/improve standards, guidelines or specifications

	Local govt	Consultancy	Road contracting company	Research org.	Education or training institution	Central govt or Crown entity	Other	Overall
	(n=35)	(n=51)	(n=9)	(n=17)	(n=9)	(n=11)	(n=16)	(n=148)
always	6% (2)	2% (1)	11% (1)	6% (1)	0% (0)	0% (0)	6% (1)	4% (6)
usually	20% (7)	22% (11)	11% (1)	18% (3)	22% (2)	9% (1)	19% (3)	19% (28)
sometimes	60% (21)	47% (24)	56% (5)	41% (7)	11% (1)	9% (1)	38% (6)	44% (65)
hardly ever	9% (3)	12% (6)	22% (2)	12% (2)	22% (2)	64% (7)	19% (3)	17% (25)
never	6% (2)	18% (9)	0% (0)	24% (4)	44% (4)	18% (2)	19% (3)	16% (24)

Source: NZTA survey (n=148)

In the following vignettes, respondents from a government agency and an engineering company describe how NZTA research has been used to develop guidelines and specifications.

Sean

works as an engineer in a government agency. He referred to research on 'self explaining' roads being used to inform standards for building new subdivisions. Rather than building wide roads and using speed limits, the research suggested keeping roads narrow and using trees and other features to slow down vehicles. Sean also cited research on trip generation rates which is used to work out how many vehicles visit a site, for example a shopping centre. This research has proved to be a valuable guideline as everyone, including the developer, uses the same data.

Paul

is a structural engineer for an engineering company. He refers to a report on standard precast bridges 'all the time' for bridge design. 'There are no other bridge reports like this.'

3.1.1.5   Sharing research information with others

Survey respondents were also asked if they share information from NZTA research reports with others. More than 52% (n=78) of respondents always or usually shared NZTA research findings with others (table 3.6).

Table 3.6   Sharing NZTA research with others

	Local govt	Consultancy	Road contracting company	Research org.	Education or training institution	Central govt or Crown entity	Other	Overall
	(n=35)	(n=51)	(n=9)	(n=17)	(n=9)	(n=11)	(n=16)	(n=148)
always	14% (5)	6% (3)	11% (1)	0% (0)	0% (0)	0% (0)	13% (2)	7% (11)
usually	34% (12)	49% (25)	44% (4)	59% (10)	33% (3)	46% (5)	50% (8)	45% (67)
sometimes	49% (17)	41% (21)	44%(4)	41% (7)	56% (5)	36% (4)	31% (5)	43% (63)
hardly ever	0% (0)	4% (2)	0% (0)	0% (0)	11% (1)	18% (2)	6% (1)	4% (6)
never	3% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1% (1)

Source: NZTA survey (n=148)

Respondents also commented on networks they had where information was shared. For example, a land transport manager at a district council commented he was part of a technical officers' group in his region that worked closely together and shared information. Another respondent, also from a district council, commented he was part of a small, national community where 'people tend to be well connected in terms of sharing information'.

3.2   Factors that facilitate use of NZTA research

The data for this section comes from three sources: the survey, follow-up telephone interviews with those who indicated they had used NZTA research in their work and interviews with 13 researchers. The overall findings on factors that facilitate use of NZTA research are presented and then two factors, credibility of the information and involvement of end users, are discussed in more detail..

3.2.1   Overall findings

Survey respondents were asked to identify up to three factors that helped them to use the research findings. The key factors, as shown in figure 3.2 were:

- relevance to the work people do (70%, n=103)

- ability to understand the technical content of reports (51%, n=75)

- knowing where to access the research (38%, n=56)

- research reports that provide a succinct summary and conclusion (36%, n=53).

Other factors (7%) included a methodology that is sound and potentially replicable, and easy access to the information.

All these factors are identified in the literature on successful end use of research (Research Utilization Support and Help 1996; Ottoson and Hawe (Eds) 2009; European Conference of Ministers of Transport 1999; Transportation Research Board 2003; Torres et al 2005).

Figure 3.2   Factors that help people to use the research (%)
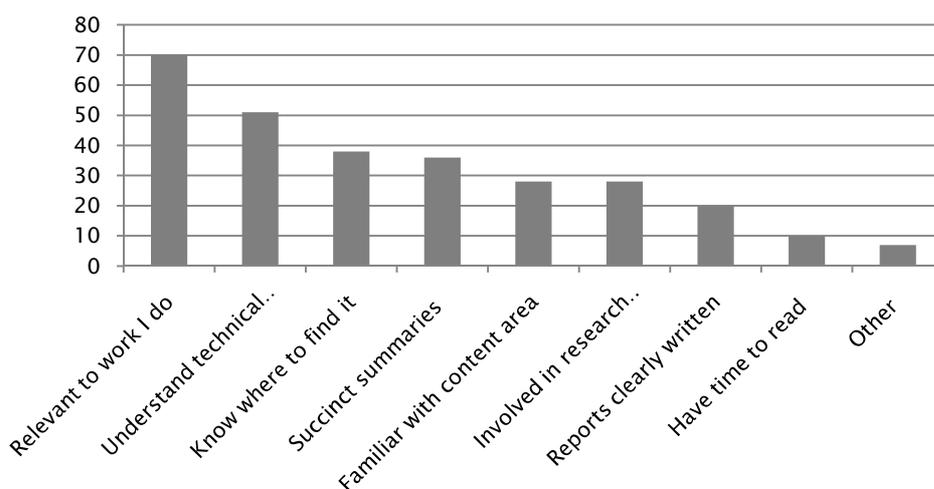
Source: NZTA survey (n=148)

3.2.2 Relevance of the research

The survey respondents (148) were asked to rate the relevance of the NZTA research programme to the work they do and to the wider New Zealand transport sector. Overall:

- 47% (n=70) of respondents said the research was always or usually relevant to their work and 48% (n=71) said it was sometimes relevant to their work

- 71% (n=105) said the research was always or usually relevant to the New Zealand transport sector and 22% (n=33) said it was sometimes relevant to the New Zealand transport sector.

Figure 3.3   Relevance of NZTA research to respondents' work and to the transport sector (%)
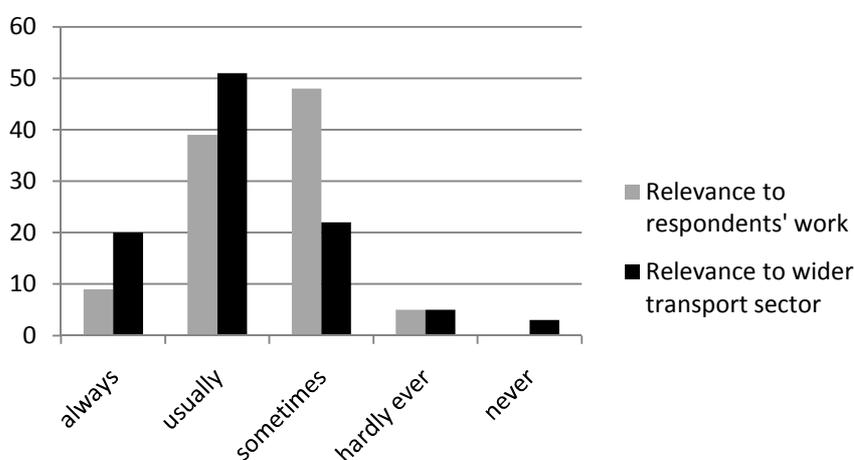
Source: online survey (n=148)

Three respondents said they considered the research 'never' relevant to the transport sector. Two commented they were not in a position to assess the relevance of the research to the transport sector, while the third person made no comment.

3.2.2.1   Relevance to respondents' work

The survey responses show 48% (n=70) of respondents believed the research was always or usually relevant to the work they did. Across all organisations only seven respondents considered the research was hardly ever relevant to their work.

Analysis of the survey data by job role suggests there is little difference between how those in different roles perceived the relevance of the research to their work. For example planners (60%, n=6), researchers (59%, n=19), engineers (49%, n=19) and consultants (45%, n=10) all indicated the research was very relevant to their work (appendix A, table A.1). Two planners working in local government commented they liked to keep up-to-date with research topics and findings as their jobs included:

bringing innovation to council programmes

informing community leaders and recommending strategies.

Table 3.7   Relevance of NZTA research to respondents' work

	Local govt	Consultancy	Road contracting company	Research org.	Education or training institution	Central govt or Crown entity	Other	Overall
	(n=35)	(n=51)	(n=9)	(n=17)	(n=9)	(n=11)	(n=16)	(n=148)
always	14% (5)	8% (4)	0% (0)	6% (1)	11% (1)	0% (0)	13% (2)	9%(13)
usually	34% (12)	49% (25)	44% (4)	53% (9)	22% (2)	18% (2)	19% (3)	39% (57)
sometimes	49% (17)	39% (20)	56% (5)	41% (7)	56% (5)	82% (9)	50% (8)	48% (71)
hardly ever	3% (1)	4% (2)	0% (0)	0% (0)	11% (1)	0% (0)	19% (3)	5% (7)
never	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)

Source: NZTA survey (n=148)

Comments from other respondents included:

Researchers:

> *It is important to stay up to date. While research may not necessarily be useful for a current project it is important to have it available for potential future applications*

> *Research results in more appropriate designs and specifications and /or has practical applications for New Zealand stakeholders*

> *The research helps to set (my) research in context*

Engineers:

> *With the topics that relate to our business we utilise these to improve or modify our approach to carry out our business*

> *[For] long term planning there is not much in other literature, but I've found some useful ideas in some of the NZTA reports*

Consultants:

> *I am a problem solver and as such heavily rely on facts and research-based data to design effective, safe, sustainable, healthy and rewarding transport systems that work*

> *We are constantly looking to improve and have evidence to support our position - research reports help to provide that.*

Survey respondents were asked to explain their rating of the relevance of the NZTA research findings to their work. Table 3.8 is a summary of the most common comments within each rating group. There was some overlap of similar type comments within each group; however, the table serves to highlight the factors that make NZTA research more or less relevant.

Table 3.8 Factors that impact on relevance to individual's work

Always/usually relevant (48%)	Sometimes relevant (48%)	Hardly ever (5%)
• Good match between respondent's work and research subject matter • Respondents are interested in new ideas and innovation • Research is based on practical issues	• Transport is only one aspect of respondent's area of interest • NZTA research is not always relevant to respondent's particular problems or areas of interest • Some research is too academic or engineering focused	• Most research is not in respondent's area of interest • Research seldom produces practical results that can be applied

Source: online survey and end user interviews

The following comments provide further insight into respondents' views about what makes the research relevant to their work.

Always/usually relevant

Many respondents in this group commented NZTA research was the primary source of New Zealand-based transport research. As two local government respondents said:

> *The research had a lot of the answers to what we were seeking. It was practical (and) New Zealand based.*

> *The fact that the research is New Zealand based means it's frequently more relevant. Generally the researcher will have looked at overseas information in the first place.*

Comments from respondents in other workplaces mirrored those above. A road contractor said:

> *The research reports are relevant to my areas of interest (and) provide expert findings to help develop my own thinking in these areas.*

Likewise, an engineering consultant commented:

> *In general the pavement design and asset management papers are based on practical issues for design and construction.*

Sometimes relevant

Respondents who commented NZTA research was only 'sometimes' relevant included people whose primary job was not in the transport sector. One respondent, for example, worked in public health and another as a librarian. Likewise an engineering consultant commented:

> *Not all reports are relevant to my current duties.*

Several respondents commented NZTA research only occasionally published reports on topics they were interested in, such as sustainable transport, active transport, improving passenger transport. A government respondent involved in campaign/advocacy work commented:

> *A lot of (NZTA) research is about improving roads and freight movement and is irrelevant to me …*

Other respondents viewed the NZTA research as too academic. A road contractor commented:

> *There is not much practical research on roading at all.*

Hardly ever relevant

Respondents who view NZTA research as 'hardly ever' relevant had the following comments:

Most research is not in my field of work (engineer)

Seldom any practical results that can be applied in the real world (engineer)

3.2.2.2   Relevance of NZTA research to the transport sector

As table 3.9 shows, respondents across most work places considered NZTA research to be highly relevant to the New Zealand transport sector. Only among those working in education or training institutions were there diverse views, with four respondents rating the research as highly relevant to the transport sector and five respondents rating it less relevant.

Analysis of the survey data by job role showed all but one of the respondents working as policy makers viewed the NZTA research as usually relevant to the transport sector. Most planners, consultants, researchers, teachers and those in 'other' job roles also considered the research relevant to the transport sector.

Table 3.9   Relevance of NZTA research to the transport sector

	Local govt	Consultancy	Road contracting company	Research org.	Education or training institution	Central govt or Crown entity	Other	Overall
	(n=35)	(n=51)	(n=9)	(n=17)	(n=9)	(n=11)	(n=16)	(n=148)
always	20% (7)	26% (13)	11% (1)	24% (4)	22% (2)	9% (1)	13% (2)	20% (30)
usually	51% (18)	43% (22)	67% (6)	47% (8)	22% (2)	82% (9)	63% (10)	51% (75)
sometimes	20% (7)	29% (15)	22% (2)	18% (3)	33% (3)	9% (1)	13% (2)	22% (33)
hardly ever	6% (2)	2% (1)	0% (0)	0% (0)	22% (2)	0% (0)	13% (2)	5% (7)
never	3% (1)	0% (0)	0% (0)	12% (2)	0% (0)	0% (0)	0% (0)	2% (3)

Source: NZTA survey (n=148)

Survey respondents were asked to provide an explanation of their rating. Table 3.10 is a summary of the most common comments within each rating category. Again, there was some overlap of similar type comments within each group; however, the table serves to highlight the factors that make NZTA research more or less relevant to the transport sector.

Table 3.10   Factors that impact on relevance to the transport sector

Always/usually relevant (71%)	Sometimes relevant (22%)	Hardly ever/never (7%)
• New Zealand specific • Focused on improvement, new ideas • Applied, practice ready • Responds to current or foreseeable issues	• Some issues are neglected, eg energy efficiency, smart technology • Little original content in some research	• Not always clear how research findings will be put into practice

Source: online survey and end user interviews

The following comments provide further insight into respondents' views about what makes the research relevant to the transport sector.

3.2.2.3   Always/usually relevant

Many comments from respondents who said the research was always or usually relevant to the transport sector emphasised the NZTA's role as the primary source of transport-related research in New Zealand:

I am unaware of a better source of information in New Zealand (researcher)

I have not stumbled across a report which is not related to the NZ transport sector (engineer)

The research I have seen is all relevant to the New Zealand transport sector (strategic analyst)

NZTA research was considered relevant if it focused on improvement or new ideas. As three local government respondents commented:

It's important the sector continually improve our standards (manager)

New ideas, improvement methods (are) healthy for the industry (planner)

(It's) important to look at new methods of doing things and new materials (engineer)

Research that focused on current or foreseeable issues was identified as a priority for a number of respondents. The perception amongst most survey respondents was that NZTA research was funded on the basis of need. As two respondents from the education sector commented:

Generally projects have been picked based on sector needs

The research is almost always based on existing or foreseeable needs for New Zealand's transport sector

3.2.2.4   Sometimes relevant

Comments from respondents who said the research was only sometimes relevant to the transport sector included a concern that some transport issues were not being researched:

Some issues are neglected, eg energy efficiency, smart technology (consultant)

Energy efficiency and smart technology is neglected in New Zealand roading networks (consultant)

Research was also considered less relevant by some respondents if it did not focus on new ideas:

Some of the research does not provide a different approach to current practices … ie there is nothing unique about the research findings (planner)

Research should be used to learn about how to do things differently or better in the future, not just to support existing political angles (researcher)

3.2.2.5   Hardly ever/never relevant

Comments from respondents who considered the research hardly ever or never relevant were critical of a lack of follow-through by the NZTA or other stakeholders:

Not always clear how research findings will be put into practice (researcher)

We find that NZTA do not really 'pick up and run' with the findings in any way – NZTA should ensure TLAs take on board best practice findings (researcher)

3.2.3   Credibility of the information

Comments across the data sources highlighted the importance of the NZTA research programme as an independent, reliable source of research on transport-related issues. Several researchers commented that

involvement of steering group members and peer reviewers was an important aspect in ensuring the research was regarded as credible. One researcher said it was important to be strategic in selecting who was involved in a project, commenting that:

> *Overseas steering group members can add credibility if they are knowledgeable.*

Likewise, two researchers commented if research had been peer reviewed, or had appeared in peer reviewed journals, then end users were more likely to 'trust' it. However, as one government stakeholder commented, it was important the peer reviewer was regarded as an expert. Their view was some NZTA reports were peer reviewed by people who did not have the required technical expertise.

One researcher commented their reputation for 'good research' was important in getting research used. They said they achieved this by doing literature searches before submitting proposals to the NZTA: 'so we know a lot about a topic before starting on it'. They also did not work in isolation, but with other interested groups.

Comments from the end user interviews suggested 'useful' reports included those where the research assumptions were clearly spelt out and where the research was 'thorough and reliable'. For example, one respondent who said NZTA research was of variable quality commented:

> *Some are 'crap' and tell people what they want to hear. This undermines the total value of the resource. The process needs more rigour* (policy maker).

3.2.4   Involvement of end users

One issue with getting research used is that use is often seen as an action that starts after the research is complete (Rogers 2003). In this respect research is viewed as a product rather than a process that involves end users from the start of a project. A review of research proposals from 2005–2009 showed the NZTA was aware of the importance of involving end users early on. Research applicants, in their proposals, were required to:

- identify stakeholders
- state how the research findings would be communicated
- state the end use of the research.

The review of a sample of research proposals showed stakeholders were primarily identified at a macro level, eg NZTA road controlling authorities, policy makers and local government. Likewise the proposals identified very general processes for communicating findings, eg conferences, workshops and publishing in technical journals.

Across the proposals, researchers' identification of end use varied from the very specific, eg:

> *in performance based material specs (eg TNZ M/22) for predicting with confidence the performance aggregates including alternative and modified materials to classify their use for low, medium or high traffic volumes in either wet or dry environments; input to future revisions of the NZ supplement to the Austroads Pavement Design Guide (1992, 2004) and performance based material specification TNZ M/22.*

to the more general eg:

> *a more commercial approach to road management that is likely to result in a more user pays approach for the future funding of the roading network. Road controlling authorities will be able to provide justification to road users for charges.*

A factor identified in the literature as being associated with utilisation was whether the research had an 'end user' responsible for implementation. This might occur in an ad hoc way, where an individual or organisation picked up the research and decided to implement it (as in the case of Hugh's vignette), or utilisation might be more strategic and planned.

Analysis of interviews with researchers and end users suggested utilisation of research prior to 2010 had occurred mostly in an ad hoc fashion. As one respondent commented:

> *Someone in a local authority … looks at the research and thinks 'that's interesting; we'll have a crack at it'. However, then the implementation becomes isolated and fragmented* (manager)

A comment from an engineer was typical of others' views:

> *Most of the time the research is fair and valid, but there can be a leap between the research report and putting it into the public domain for adoption*

Other respondents' comments suggested there had been limited follow-through by the NZTA on the end use of specific pieces of research:

> *There is no follow through. Processes don't function to implement (the research)* (policy maker)

> *There is a disclaimer on research reports about NZTA saying 'the material contained in the reports should not be construed in any way as policy adopted by the NZTA…' It's like they don't want it to form policy. There needs to be a softer statement – i.e. if this research is used to support new ideas it will be considered by an evaluation team'. If it's a smart idea it needs to be promoted* (researcher)

> *NZTA says it is strong on research and on promoting research, but it is hard to make progress if the government doesn't pick up on researchers' recommendations. You can lead a horse to water, but researchers can't make people pick it up and use it. We can suggest and encourage, but we can't say 'you'll do it'* (researcher)

Other end users commented that research might need to be followed up by more tests or development work before it was practical for use in standards, guidelines or specifications. They questioned the NZTA's capacity and capability to implement findings:

> *The research stops on the website. There needs to be an implementation process* (researcher)

The interviews with researchers identified some who clearly worked hard to ensure findings were implemented. One researcher said he made it his 'business' to make the NZTA and local authority stakeholders aware of the research. He did this by carefully selecting steering group members, choosing 'very strong individuals… the right influential people'.

The commitment of end users to implement findings may also be contingent on the current social and political climate. One researcher commented his findings were implemented, in part, because 'the timing was right'. Other respondents commented research was less likely to be used if there was no political will to implement findings. For example, one research respondent said when their project was funded there was interest in the topic, but with a change in government this interest had waned:

> *If it's not flavour of the month because of the political environment it won't be used.*

Another researcher viewed their research as ahead of its time:

> *It may take three or four years for someone to pick it up and more often than not it is someone overseas…*

A related factor was the cost to implement findings. As one researcher commented:

> *It may be more cost effective and environmentally friendly (to implement research findings) but it costs so much more than spraying waste oil on twice a year.*

One researcher commented that implementation of their research had occurred as a result of a mandatory policy change. Without that, they believe the findings would have been ignored by road contractors because 'cost was a major barrier'.

Respondents had several suggestions for improving the implementation of findings. One was that research reports contained a section on what could be implemented from the research, including an assessment of whether the NZTA would allow changes to standard specifications or documents. Another respondent suggested a process similar to that used by the Building Research Association New Zealand (BRANZ) whereby a transport body 'ticks research off' so everyone had confidence it could be used:

> *It's the research that produces the innovation, but currently there is no verification process for operationalising it* (manager)

Another suggestion was for the NZTA to develop a programme and funding stream to implement findings, where appropriate.

3.3   Effectiveness of NZTA dissemination of research findings

The NZTA has a commitment to disseminate research to as many New Zealand end users as possible. The following principles underpin the agency's approach to dissemination:

- results are widely disseminated, free of charge

- results are applicable to multiple end users

- results are applicable to interventions that can be applied in New Zealand in the short-to-medium term for longer-term impacts (NZTA 2008, p12).

The NZTA has three primary mechanisms for disseminating research findings. A link on the NZTA website provides access to 'Research and reports'. Full copies of research reports from 2005 onwards can be accessed by title, date and topic area.

The *NZTA research* newsletter is a quarterly publication which profiles the findings of three to five recently completed research reports funded through the NZTA research programme. It also lists, with their abstracts, new research publications. The publication is mailed to those who request (opt in) to be on the mailing list. There are currently about 800 postal addresses in New Zealand and overseas.

The NZTA also sends out email notification of research reports as soon as they are published on the NZTA website. There are currently about 300 email addresses on the email list. There is some cross-over between the email notification list and the NZTA quarterly newsletter mailing list so people can elect to receive both the immediate notification of newly published reports and the hard copy newsletter.

In addition, the NZTA provides a list of active research projects and published research reports for inclusion on the Austroads sponsored *Road research register* (www.roadresearch.com.au/). The register provides a database of road-related research information from Australasia and there is link to it on the NZTA's research programme webpage. A link (www.trb.org/Publications/PubsTRBENewsletter.aspx) is also provided on the NZTA's research programme webpage to the US Transport Research Board's newsletter

which profiles a wide range of US and international research reports, including selected research reports published by the NZTA.

3.3.1 How respondents find out about NZTA research

Respondents (N=165)[7] to the online survey were asked how they found out about NZTA research[8]. Most are informed through the NZTA's three mechanisms: the NZTA website (53%), the NZTA email 'Recently published reports' (47%) and the *NZTA research* newsletter (40%). Other ways respondents find out about the research are shown in figure 3.4.

Figure 3.4   How respondents find out about the research (%)
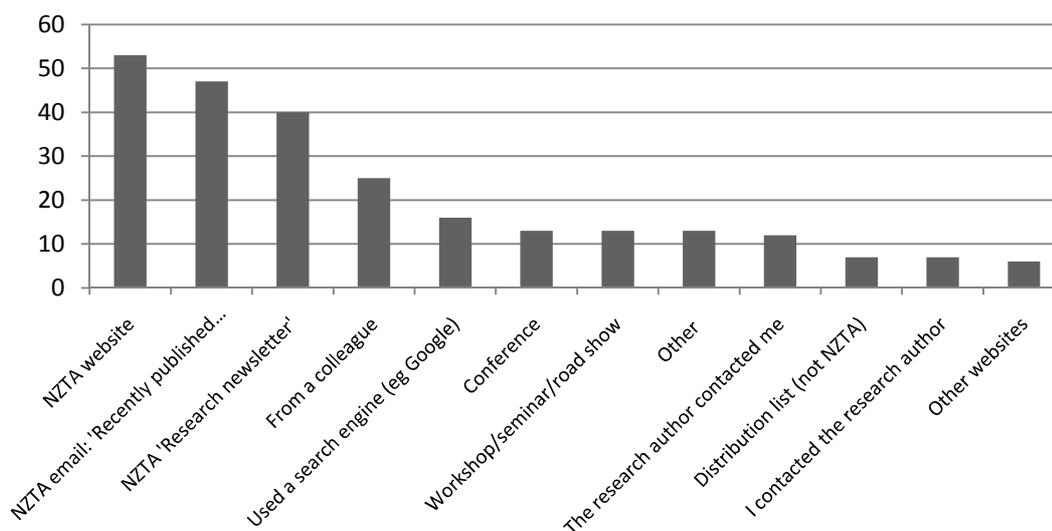
Source: NZTA survey (n=160)

Those who said they used 'other' mechanisms (13%) found out via direct contact with the NZTA; were involved in the research process; had electronic contact through search engines; or subscribed to other (non-NZTA) distribution lists.

When analysed by respondents' work place there were some indicative differences worth noting (see appendix A, table A.2). These included:

- Slightly higher percentages of those working in local government and research organisations found out about research through conferences, workshops or seminars.

- Those working in consultancies and research organisations made use of networks and were more likely to find out about research through colleagues than those who worked in other organisations. Ease of access to those involved with the research process may explain this difference.

- Those in road contracting were more likely to rely on the email notification.

- Those in the education/training sector were more likely to find out about the research via the website than by the email or newsletter notification.

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[7] Five responded they either could not remember or did not know. Their responses have been removed.

[8] Respondents could select more than one option.

- The low reach of the *NZTA research* newsletter was also found for those who categorised themselves as working in 'other' workplaces. These workplaces were a mix of education institutions, professional bodies and consultancies.

Researchers and end users were asked to comment on the NZTA's promotion of research findings. Eight said the newsletter and/or email notifications were useful while three commented they did not know about them or did not get the email any more.

> *I'm not sure whether I'm on the list for updates and don't know how to get on the list.*

Others commented on the dissemination that occurred in other ways, eg through people networks, steering groups, colleagues in the transport sector and the Road Engineering Association of Asia and Australasia (REAAA) road shows. One respondent thought researchers should do more to promote research.

Interviews with researchers suggested they were well aware they had an important role in disseminating findings. As one researcher commented:

> *Formal research reports, while important, are probably hardly ever read.*

Researchers identified a range of ways they disseminated information, eg through scientific papers, presenting at conferences, meetings, publishing the research on their own websites and engaging with the media. One respondent described his innovative approach to marketing research findings to key decision makers:

> *(I) got the hierarchy of NZTA and other agencies, including Police, and took them in the middle of the night to give them a demo. They could see firsthand what our efforts were and why we wanted (the intervention being studied) accepted.*

End users also commented on the role NZTA staff had in promoting the research. There were two respondents who thought this should be done by staff at the national office, and another who thought staff in regional offices should be more informed and do more to promote new ideas that had come out in the research.

> *NZTA senior staff need to be more familiar with it and when dealing with contractors and consultants promote certain projects that are relevant … [to] day-to-day operations* (quality manager)

There appear to be pockets of the latter occurring, with two end users from district councils commenting that their NZTA liaison person had directed them to the research:

> *Guys from NZTA will say 'hey there this is this new stuff out there; you should read this'. The [NZTA] guy who sees me knows about the research.*

3.3.2   How respondents rated dissemination mechanisms

Respondents were asked to rate the three mechanisms the NZTA uses for disseminating information about its research findings. As the 'don't know/no opinion' responses were relatively high for the 'Recently published reports' email (30%) and the *NZTA research* newsletter (24%) these responses were removed to ascertain the percentage of ratings given by respondents who were familiar with the mechanisms. Of the 50 who responded they did not know about/had no opinion about the 'Recently published reports' email, 20 worked in consultancies, 11 in local government and eight in research organisations. Of the 39 who did not know about/had no opinion about the *NZTA research* newsletter, 14 worked in consultancies, eight in local government and four in research organisations.

Figure 3.5 shows:

- 22% (n=33) rated the website as excellent to very good, with 36% rating it as adequate

- 42% (n=53) rated the *NZTA research* newsletter' as excellent to very good with 33% rating it as adequate

- 50% (n=58) rated the 'Recently published reports' email as excellent to very good, with 25% rating it as adequate.

There was little difference between most user groups in terms of how they rated the dissemination mechanisms (appendix A, table A.3).

Figure 3.5   Respondents' rating of NZTA dissemination mechanisms (%)
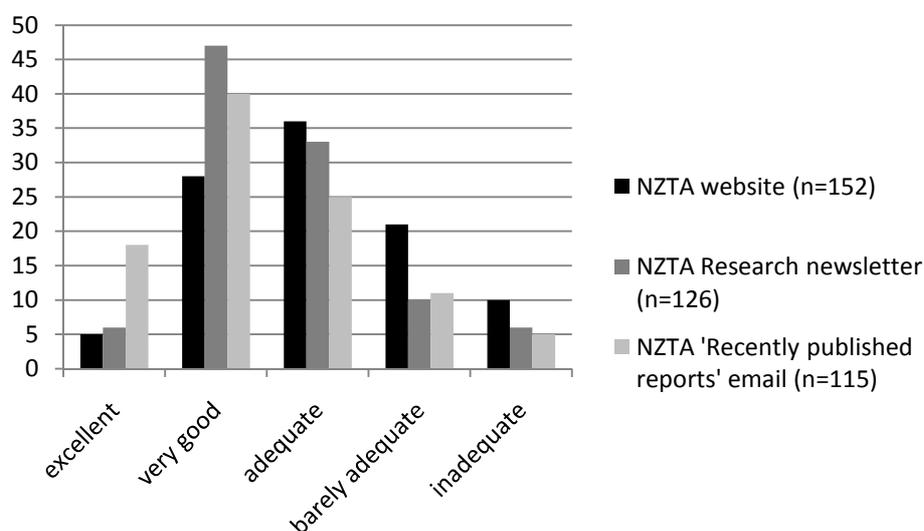
Source: NZTA survey (n=165)

3.3.3   Communication of research findings

The following comments provided further insight into respondents' views about the NZTA's dissemination of research.

Website

Several respondents said they appreciated reports were available free of charge via the website. Two commented they would also like to see older reports accessible online. As one person said:

> *The older documents that are archived are hard to get. Some of (them) have a restriction in terms of accessibility. These need to be listed electronically with the restriction attached, with a contact name in order to find out more about it* (transport economist)

Only two end user respondents had favourable comments about the website, with one person stating:

> *(It is) great. When talking to colleagues from overseas I tell them to look at it. It's effective. Whenever you search, by topic or search on surname, in most cases the NZTA site picks it (the report) up. Just fantastic* (researcher)

All other comments about the website concerned the difficulty end users had finding the information. Some commented the research reports were 'buried' in the NZTA website. While two respondents said they

'managed' because they knew their way around the website, the following comments were typical of respondents' views:

> *Generally it is too busy, trying to be all things to all people. I'm not interested in driver licensing. The website needs to be split out. Give direct access to the research* (policy analyst)

> *The research section ... needs to be more readily identifiable on the (main NZTA) website* (planner)

While the research site does have a 'search' function, a number of respondents' comments suggested it was inadequate:

> *I find it hard to find material on the website at times, unless I know the exact title* (researcher)

> *You can do key word searches, but you need to be very particular about the words* (researcher)

> *All resources are dumped into one space and nothing says 'read me, read me'. It's just like a database. The search facility is awful* (asset manager)

Suggestions for improving the website functionality included the following:

> *They need to be in a form linked to a science reference database system, so they will be located when researchers carry out a reference database search* (researcher)

> *The opportunity should be taken to have links installed on other industry websites that take you to the NZTA research website* (planner)

Email notification

Several respondents did not know about the email notification, suggesting this mode of dissemination needed to be marketed more effectively. As one person said:

> *This survey is the first time that I had heard of NZTA... having an email list on publications, yet I received an email invitation to do this survey, so presumably NZTA has my email address* (planner)

However, as figure 3.5 shows, the email notifications were rated highly by those 'in the know'.

> *It is good to send out emails advising people that reports are complete as you do not always have the time to go looking for them* (engineering consultant)

One end user commented they scanned the email to see if there was anything of interest. If they were not swamped they read those of relevance.

Research newsletter

There were only two comments about the research newsletter, both positive:

> *Regular newsletters are helpful* (road contractor)

> *NZTA's research newsletter is very interesting and could be published more frequently* (policy maker/researcher).

3.3.4   Respondents' suggestions for improving dissemination of findings

The interviews with end users identified the following suggestions for improving access to information about the research.

Electronic media

A consistent suggestion from end users was to target information by research topic and by end user. There was a concern from some users that those in smaller consultancies were less 'in the know' than those in larger ones. One suggestion was email notification be tailored so research on particular topics was sent to those who were interested rather than everything sent to everybody.

Other suggestions included improving the website so research was more visible and searching for information was easier; and providing online information about the progress of research projects. Several respondents suggested using webinars or other electronic formats to inform end users about research.

Other publications

Respondents suggested using other publications or newsletters to publicise research findings, eg the Institution of Professional Engineers New Zealand (IPENZ) newsletter and the Structural Engineering Society New Zealand Inc. journal.

Conferences, seminars, workshops

The REAAA annual roadshow provides an opportunity to showcase the research. This could also be done by:

- the NZTA hosting research days that showcased research

- making it a requirement that researchers run workshops as part of their NZTA funding

- the NZTA hosting internal research seminars for their staff.

People networks

Links could be made to the IPENZ Transportation Group – the technical interest group for transport in New Zealand.

In some regions NZTA liaison staff were familiar with the research and promoting its use. This could be encouraged across all regions.

Other suggestions about people who could be used to promote the research included:

- the road controlling authorities forum

- NZTA policy and operational groups.

4   Discussion

At the outset of this evaluation an international literature scan was conducted to find out about the use of research in the transport sector. While much has been written about the use of research in the fields of healthcare, education and justice, very little has been written about 'use' in the transport sector (Currie et al 2010). Further to this the literature showed:

> *in every research field, including transportation research, a wide gap exists between what is known from scientific research and what is actually put into practice* (Rogers 2003).

The literature also highlighted the multiple factors at play in relation to end use, including the source of the research, content and messages, how research findings are communicated, involvement of the end user, and the context in which research findings are released. Given this complexity, an assessment of end use and factors associated with it is a challenging task.

A related challenge is finding end users. This evaluation used the email lists maintained by the NZTA as the primary approach for contacting potential end users. This was supplemented by asking selected researchers and other key stakeholders to identify names and contact details of people they knew who had used NZTA research in some way. There were likely to be other people beyond those identified and targeted for this evaluation who had an interest in, and had used NZTA research. While the findings could not be generalised to all end users, they did provide insight into how NZTA research was being used across different sectors and stakeholder groups.

4.1.1   Value of the research

The report findings suggested the NZTA research was of substantial value to end users in all areas of the transport sector. Most respondents considered the research relevant to the work they did and the sector as a whole. The research was highly regarded because it provided practical, New Zealand-based solutions to their issues. As might be expected, the findings showed research use was stronger at the conceptual rather than instrumental end of the use continuum. However, it was likely the research had informed the thinking and practice of end users beyond what was reported in this evaluation. Many may be unaware, for example, that the transport guidelines they used were informed by NZTA research.

4.1.2   Enablers and barriers

The evaluation identified pockets of instrumental use that could be categorised in two ways. First, use can happen as a result of the motivation and interest of users who actively seek out evidence-based solutions to their problems. Second, there is use that is 'happenstance'. This occurs when a user comes across a research champion, someone who knows about particular research and promotes its use to others.

Whose responsibility is it to ensure research is used? While the NZTA is the research 'owner', active promotion and implementation of findings should be seen as a collective responsibility. A planned, deliberate and strategic approach to the whole research process is required if evidence is to be used to inform policy and practice. There was little evidence of such an approach in the research proposals, or in interviews with researchers or end users. This is one area where NZTA may want to focus more attention.

The findings indicated the end users valued research that was credible and innovative, and where the focus was on practical issues. Involvement of 'expert' peer reviewers was identified as an important aspect in ensuring NZTA research was regarded as credible and trustworthy. Respondents valued research that brought new ideas and innovation to the transport sector and which could be applied to their work issues.

4.1.3 Mechanisms for communicating and disseminating research findings

Good communication of research findings is an important enabler to research use. In his paper to the TRB symposium (Sweedler 2003) discussed a range of accessible formats that can be used to reach different audiences. These include the accessibility of formats and venues, the use of researchers and advocates to promote findings, and the use of language that creates clear messages.

The NZTA 'Recently published reports' email and the *NZTA research* newsletter are well received by those who know about them. They play an important role for those who have limited time to search for information as they are a quick and easy way to find out what research has been done. However, as the survey showed, almost a quarter of respondents did not know, or had no opinion, about the newsletter and almost a third did not know, or had no opinion about the email notification. These mechanisms could be more prominently promoted on the NZTA website and elsewhere.

Respondents value online access to the research reports. However, the findings indicate the research is currently not easy to find. Overall, the website is not considered the best possible use of the current resource. The research needs to be given more prominence on the NZTA website and further consideration given to the search function.

While the electronic media are the key dissemination mechanisms, the NZTA has an opportunity to build on its people networks to promote and champion the research. The findings of this evaluation show there are pockets where NZTA individuals in the regions know about the research and actively promote it. This approach to disseminating information could be encouraged across the organisation. There is also the opportunity to build from the workshops that are run through the REAAA or to have researchers present their findings at regional symposiums and other forums, such as webinars.

5   Conclusion and recommendations

The evaluation provides useful baseline information about the NZTA research programme – its dissemination, relevance and use. The email and newsletter notifications of newly completed research are valued by those who receive them. Access to reports online is also valued; however, the NZTA website is not considered as user friendly as it could be. The evidence gathered in this evaluation shows NZTA research is relevant and used by stakeholders across the transport sector. Currently there is more use occurring at the conceptual end of the 'use' continuum and less evidence of research being used to inform decision making, programme/policy formation and/or improvement. More value could be gained from the research programme by considering, up front, how research findings can be linked to policy and programme decision making and whose responsibility it is to follow this through. The evaluation findings present the NZTA with an opportunity to reflect on the refocused research programme and to consider what else might be required to enhance its use.

5.1   Recommendations

The evaluators recommend that, to improve access to the research, the:

- NZTA strengthen the process for communicating research findings internally

- NZTA gives consideration to improving the current dissemination mechanisms:

    – improving the reach of the email and newsletter

    – improving access to, and usability of the website.

We also suggest the:

- NZTA develops a strategic, planned approach to implementation of research findings, where appropriate

- survey be repeated in three to five years' time, with a focus on the end use of research commissioned and published after the recent review of the research programme.

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Appendix A: Additional data from survey

Table A.1   Research topics people are interested in and where they work (n=148)

Topic areas	Local government (n=35)	Consultancy (n=51)	Road contracting company (n=9)	Research organisation (n=17)	Education or training institution (n=9)	Central government or Crown entity (n=11)	Other (n=16)
Asset management	77% (27)	41% (21)	100% (9)	41% (7)	33% (3)	46% (5)	38% (6)
Environmental effects	37% (13)	45% (23)	22% (2)	71% (12)	33% (3)	46% (5)	63% (10)
Natural hazard	31% (11)	20% (10)	0% (0)	12% (2)	33% (3)	18% (2)	19% (3)
Network management	86% (30)	41% (21)	67 (6)	29% (5)	67% (6)	36% (4)	38% (6)
Safety and personal security	66% (23)	43% (22)	33% (3)	41% (7)	78% (7)	73% (8)	56% (9)
Sustainable transport	71% (25)	73% (37)	44% (4)	82% (14)	67% (6)	64% (7)	94% (15)
Travel behaviour	63% (22)	59% (30)	0% (0)	59% (10)	67% (6)	82% (9)	69% (11)

Table A.2   How respondents find out about NZTA research and where they work (n=156)

	Local government (n=37)	Consultancy (n=54)	Road contracting company (n=9)	Research organisation (n=17)	Education or training institution (=11)	Central government or Crown entity (n=11)	Other (n=17)
NZTA email: 'Recently published reports'	51% (19)	41% (22)	89% (8)	59% (10)	27% (3)	46% (5)	50% (8)
NZTA research newsletter'	46% (17)	41% (22)	44% (4)	53% (9)	27% (3)	46% (5)	31% (5)
NZTA website	51% (19)	52% (28)	44% (4)	65% (11)	73 (8)	46% (5)	44% (7)
Other websites	0.0% (0)	4% (2)	0.0% (0)	0.0% (0)	9% (1)	18% (2)	13% (2)
Distribution list/ forum (not NZTA)	14% (5)	7% (4)	0.0% (0)	6% (1)	0% (0)	18% (2)	0% (0)

	Local government (n=37)	Consultancy (n=54)	Road contracting company (n=9)	Research organisation (n=17)	Education or training institution (=11)	Central government or Crown entity (n=11)	Other (n=17)
Conference	11% (4)	13% (7)	11% (1)	29. (5)	9% (1)	9% (1)	13% (2)
Workshop/ seminar/road show	22% (8)	9% (5)	22% (2)	29% (5)	0% (0)	0% (0)	13% (2)
Used a search engine (eg Google)	8% (3)	17% (9)	11% (1)	23% (4)	9% (1)	18% (2)	19% (3)
From a colleague	16% (6)	26% (14)	22% (2)	47% (8)	18% (2)	27% (3)	25% (4)
I contacted the research author	0% (0)	9% (5)	11% (1)	12% (2)	9% (1)	0% (0)	19% (3)
The research author contacted me	11% (4)	15% (8)	0 (0.0%)	6% (1)	9% (1)	27% (3)	13% (2)
I can't remember	0% (0)	2% (1)	0% (0)	0% (0)	0% (0)	0.0% (0)	6% (1)
I don't know about it	3% (1)	4% (2)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Other (please specify)	5% (2)	7% (9)	11% (1)	12% (2)	9.1% (1)	27% (3)	19% (3)

Table A3   Ratings of NZTA dissemination by workplace (n=156)

	Local government (n=37)	Consultancy (n=54)	Road contracting company (n=9)	Research organisation (n=17)	Education or training institution (n=11)	Central government or Crown entity (n=11)	Other (n=17)	Overall (n=156)
NZTA website								
excellent	5% (2)	7% (4)	0% (0)	6% (1)	0% (0)	0% (0)	6% (1)	5% (8)
very good	41% (15)	22% (12)	11% (1)	24% (4)	55% (6)	0% (0)	6% (1)	25% (39)
adequate	35% (13)	35% (19)	56% (5)	30% (5)	18% (2)	27% (3)	35% (6)	34% (53)
barely adequate	8% (3)	24% (13)	11% (1)	24% (4)	27% (3)	36% (4)	18% (3)	20% (31)

	Local government (n=37)	Consultancy (n=54)	Road contracting company (n=9)	Research organisation (n=17)	Education or training institution (n=11)	Central government or Crown entity (n=11)	Other (n=17)	Overall (n=156)
inadequate	3% (1)	7% (4)	11% (1)	18% (3)	0% (0)	9% (1)	18% (3)	8% (13)
don't know/no opinion	8% (3)	4% (2)	11% (1)	0% (0)	0% (0)	27% (3)	18% (3)	8% (12)
NZTA research newsletter								
excellent	3% (1)	4 (2)	0% (0)	6% (1)	9.1% (1)	0% (0)	12% (2)	4% (7)
very good	49% (18)	37% (20)	33% (3)	41% (7)	18.2% (2)	36% (4)	18% (3)	37% (57)
adequate	16% (6)	24% (13)	33% (3)	29% (5)	45.5% (5)	18% (2)	29% (5)	25% (39)
barely adequate	8% (3)	4% (2)	11% (1)	0% (0)	18.2% (2)	18% (2)	12% (2)	8% (12)
inadequate	3% (1)	6% (3)	0% (0)	0% (0)	9.1% (1)	0% (0)	6% (1)	4% (6)
don't know/no opinion	22% (8)	26% (14)	22% (2)	24% (4)	0% (0)	27% (3)	24% (4)	22% (35)
NZTA 'Recently published reports' email								
excellent	3% (1)	13% (7)	33% (3)	12% (2)	9% (1)	9% (1)	35% (6)	13% (21)
very good	38% (14)	20% (11)	44% (4)	18% (3)	36% (4)	36% (4)	18% (3)	28% (43)
adequate	276% (8)	15% (8)	11% (1)	28% (4)	9% (1)	27% (3)	12% (2)	17% (27)
barely adequate	5% (2)	11% (6)	11% (1)	0% (0)	9% (1)	18% (2)	0% (0)	8% (12)
inadequate	3% (1)	4% (2)	0% (0)	0% (0)	18% (2)	0% (0)	6% (1)	4% (6)
don't know/no opinion	30% (11)	37% (20)	0% (0)	47% (8)	18% (2)	9% (1)	29% (5)	30% (47)

Appendix B: Methodology

The evaluation design was developed based on a NZTA request for proposal (RFP 148/10). The key evaluation objective was to:

- evaluate how valuable the findings of NZTA research programme reports, published from 2005 to 2009, have been for end users (individuals, organisations, industries) in New Zealand.

Two secondary evaluation objectives were to:

- identify the enablers and barriers that made a difference between successful and less successful uptake and use of findings from the research reports, and

- ascertain the extent to which current NZTA mechanisms for disseminating and promoting research findings represented the best possible use of available resources.

The evaluation scope excluded an assessment of the quality of the research projects as well as the NZTA's approach to selecting projects for research funding post 2009.

B.1   Research questions

Table B.1 includes the research questions that were developed in consultation with NZTA stakeholders, and a summary of the methods used to obtain answers to the questions.

Table B.1   Research questions and summary of methods

Research questions	Evaluation objective no.	Summary of methods					
		Evaluative rubrics	Key informant interviews	Document review	Literature scan	Online survey	Interviews with end users
How is 'valuable' defined by NZTA/other stakeholders?	1	✔	✔				
Who are the intended end users of the research findings?	1		✔	✔			
How have research findings been used?	2		✔			✔	✔
How valuable were the research findings for the end users?	1					✔	✔
What does 'successful' and 'less successful' uptake and use of findings mean?	2	✔					
What are the enablers to successful uptake and use of research findings?	2		✔		✔	✔	✔
What are the barriers to successful uptake and use of research findings?	2		✔		✔	✔	✔
How do particular groups of end users find out about NZTA research findings? (NZTA newsletter, email, website, other?)	3					✔	✔
What resources are currently used to disseminate and promote research findings?	3		✔				

Research questions	Summary of methods						
	Evaluation objective no.	Evaluative rubrics	Key informant interviews	Document review	Literature scan	Online survey	Interviews with end users
How is 'best possible use of available resources' defined by NZTA?		✔					
What are the best ways to promote research findings to end-users?	3				✔	✔	✔

B.2   Evaluation methods

B.2.1   Evaluative rubrics

The evaluation approach was based in part on evaluative rubrics. This involved establishing performance 'standards' (ie definitions of what constitutes 'excellent', 'adequate', and 'poor' performance against identified criteria) and applying these standards to the data to draw conclusions about performance quality and success[9]. The standards were recorded in a table (called a 'rubric'). Three rubrics (use, relevance and awareness of NZTA research) were developed with input from NZTA stakeholders to inform objectives 1 and 3. Table B.2 details the rubrics.

Table B.2   Evaluation rubrics

Use of NZTA research	Excellent	Adequate/satisfactory	Very poor
Conceptual use: learn something new	More than 70% of respondents (who have read one or more of the research reports in their area of interest) say they always, usually or sometimes learn something new.	50%–70% say they always, usually or sometimes learn something new.	Less than 50% say they always, usually or sometimes learn something new.
Instrumental use: research used to contribute to decision making processes, programme and policy formation or improvement	More than 70 % of respondents say they always, usually or sometimes use the research in this way.	50%–70 % of respondents say they always, usually or sometimes use the research in this way.	Less than 50% of respondents say they always, usually or sometimes use the research in this way.

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[9] Davidson, J (2005). *Evaluation methodology basics*. Thousand Oaks, California: Sage.

Relevance of NZTA research:	Excellent	Adequate/satisfactory	Very poor
to respondents' work:	More than 70% of respondents consider the research they read always, usually or sometimes relevant to their work.

And comments that suggest the research has not been replicated elsewhere. | Between 50%–70% of respondents consider the research they read always, usually or sometimes relevant to their work. | Less than 50% of respondents consider the research they read always, usually or sometimes relevant to their work.

And comments that suggest the research replicates what has already been done (ie waste of resources). |
| to the transport sector: | More than 70% of respondents consider the research programme always, usually or sometimes relevant to the political, economic, social or technological issues of the day. | Between 50 - 70% of respondents consider the research programme always, usually or sometimes relevant to the political, economic, social or technological issues of the day. | Less than 50% of respondents consider the research programme always, usually or sometimes relevant to the political, economic, social or technological issues of the day. |

Awareness of NZTA dissemination mechanisms	Excellent	Adequate/satisfactory	Very poor
	More than 70% of respondents say the current mechanisms (website, email list, newsletter) are adequate, very good or excellent.

In addition, respondents may have heard about NZTA-funded research at conferences, workshops etc. | Between 50 – 70% of respondents consider the current mechanisms adequate, very good or excellent.

Evidence that respondents know about NZTA mechanisms for accessing research reports. | Less than 50% of respondents consider the current mechanisms adequate, very good or excellent.

Evidence that most respondents have a limited awareness of how to access NZTA research reports. |

B.2.2 Document review

The sample frame for selecting researchers was based on the 2005–2009 reports located within the seven NZTA key topic areas. A systematic sampling approach was used within each topic area, whereby every 'nth' report was selected for inclusion in the sample. The evaluators asked NZTA staff to provide the research plan for each of the 27 reports selected. These were used to identify stakeholders, planned end use and information transfer. They were also used to identify lead researchers who were then contacted and invited to participate in a telephone or face to face interview.

B.2.3   Literature scan

A limited literature scan was conducted as part of the scoping phase of the evaluation. This started with keyword searches using Google Scholar and was followed with searches on international transport related websites and websites that held information on knowledge transfer and utilisation, and sites that had information on research dissemination. The keywords included, eg research and dissemination and transport; utilisation of research and roading; knowledge transfer from research; roading and research and knowledge transfer; disseminating transport research. As so little literature related to the use of transport research was found through keyword searches, the snowball method was used and references followed up on. The literature on transport research was mainly sourced from Australia and the United States. The literature on research dissemination was sourced from the United States.

B.2.4   Qualitative interviews

Qualitative interviews were held with the following stakeholder groups:

Table B.3   Qualitative interviews

Stakeholder group	No. of interviews
NZTA and Ministry of Transport key stakeholders	11
Researchers	13
End users	21

Key stakeholder group and individual interviews were held with staff involved in the administration and management of the NZTA research programme. Two staff from the research unit at the Ministry of Transport were also interviewed because of their involvement in the research programme.

Prior to the online survey, the evaluators also conducted interviews with 13 researchers. The purpose of these interviews was to inform the composition of the evaluation sample and to identify research authors' perspectives on how their research findings have been used.

Survey respondents (those who indicated they had used NZTA research) were asked if they would be willing to participate in a short follow-up telephone interview. One hundred and seven said they were willing to be contacted. The evaluators selected 21 end users, prioritising those who did not work as researchers or in research companies and who said they always, usually or sometimes use NZTA research.

At the start of all interviews the evaluators clarified we were interested in research published from 2005 to 2009. However, many respondents could not identify specific reports or when they had read them. As few reports had been published from the new programme approach it is assumed respondents were referring to reports in this timeframe.

Respondents were told that taking part in the interview was voluntary. They did not have to answer any questions and could withdraw from the interview at any time if they chose. They were then asked: 'Are you happy to proceed with an interview?'

The interviews were semi-structured and modified according to the respondent and their role. The following questions were asked:

Interview guide for key stakeholders (NZTA and MoT staff)

- What is your involvement with the NZTA research programme?

- We're interested in research funded and published by the NZTA between 2005 and 2009. How were research projects selected during this timeframe? How is that different to now?

- Thinking about that cohort of projects and what the NZTA's focus is now, what do you expect the evaluation to find? What are key stakeholders assumptions/expectations about the 'value' of projects undertaken then?

- Are you aware of any ways research funded by NZTA has been used? If so, how? [Collect any contact details for potential end users.]

- Where the research has been used (or been useful) what do you think contributed to successful uptake?

- Are there any barriers to people accessing/using the research findings? If so, what are these?

- Are there ways NZTA could better promote research findings to end users?

Interview guide for research authors

- How many projects have you been involved with (as a researcher/steering group member/peer reviewer) where funding has come from the NZTA? If more than one, start with the projects where you were on the research team.

- Why did you choose this topic area to study?

- Why did you approach NZTA for funding? Did you get funding from elsewhere as well?

- How important was it to get NZTA funding?

- In what ways did you think this research might be of value to the NZ transport sector?

- Who were the audiences/end users you had in mind? [Ask for names of people/organisations?]

- How would these people/organisations come into contact with the research?

- In your view, was NZTA dissemination of the research findings (through newsletter/email/website) useful for targeting these audiences?

- In what ways (if any) has the information been used/been useful?

- Where the research has been used, what do you think contributed to successful uptake?

- Were there any barriers to people accessing/using the research findings? If so, what were these?

- Are there ways the NZTA could better promote research findings to end users?

- Are you aware of the NZTA's current strategy for funding research. If so, do you think your research would have been funded, using the current strategy? [If not, why not?/ if yes, why?] [10]

Interview guide for end users

- [Ask for background info about their job/their organisation.] How long have you worked in the transport area?

- Can you remember which NZTA research report/s you have read? [Get details.]

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[10] Note: information from this question has not been analysed as, in retrospect, the evaluators considered it out of scope.

- In what ways has this research been useful to you/your organisation/your clients? When did you use the information, eg during the research process, straight after publication of the report or longer term?

- What were the enablers/factors that made it possible to use the research?

- Was there anything that made it difficult to use the research? If so, how did you get around this?

- How do you think the NZTA should promote the research?

B.2.5   Online survey

The survey questionnaire was purposefully kept short to encourage as many respondents as possible to complete it. The survey was developed using Survey Monkey and piloted with staff from the NZTA and a key stakeholder with extensive experience developing surveys.

An online survey was considered most appropriate as the NZTA had email addresses only for potential end users. The sample for the online survey came from:

- two email lists maintained by the NZTA (for the email and newsletter)

- a review of 27 research proposals (identifying steering group members and other key stakeholders)

- interviews with researchers and NZTA respondents (who were asked to identify specific potential end users)

- an email list of local authority stakeholders involved in transportation (provided by the NZTA).

The NZTA sent an advance email to the collated email list, giving addressees background information about the survey and the opportunity to opt out at this point. Three people asked not to receive the email with the link to the survey.

The survey was sent to 420 people, of which there were 15 'undelivered' emails. The email was successfully delivered to 405 respondents. Two reminders were sent out. In total 165 responses were received (resulting in a 41% response rate). However, nine people did not complete all questions and eight had not accessed any reports so were unable to complete the questions on 'use' of findings. Therefore there were 148 who completed the whole survey, a response rate of 37%.

As a thank you for participating in the survey, respondents could go into a draw for one of three $100 morning tea vouchers if they completed the survey by 25 March.

A key limitation of the survey sample was that the evaluators were reliant, to a great extent, on the email lists maintained by the NZTA. To some extent this was mitigated by asking researchers and other key stakeholders to identify names and contact details of possible end users.

Appendix C: Survey questionnaire

Thank you for taking time out to answer this survey. Your information will inform an independent evaluation of the value of the NZTA research programme reports to end users. Your response is confidential; your identity will not be shared with anyone outside Evalue Research.

As a thank you for participating, you can go into the draw for a $100 morning tea for you and your colleagues. Just complete the survey by 25 March to qualify.

1. How do you find out about NZTA research? (Select all that apply.)

- ☐ NZTA email: 'Recently published reports'
- ☐ *NZTA research* newsletter
- ☐ NZTA website
- ☐ Other websites
- ☐ Distribution list/forum (not NZTA)
- ☐ Conference
- ☐ Workshop/seminar/road show
- ☐ Used a search engine (eg Google)
- ☐ From a colleague
- ☐ I contacted the research author
- ☐ The research author contacted me
- ☐ I can't remember
- ☐ I don't know about it
- ☐ Other (please specify)

2. How do you rate NZTA's current approaches to disseminating the research findings?

	excellent	very good	adequate	barely adequate	inadequate	don't know / no opinion
NZTA website	☐	☐	☐	☐	☐	☐
NZTA research newsletter	☐	☐	☐	☐	☐	☐
NZTA 'Recently published reports' email	☐	☐	☐	☐	☐	☐

3. Have you ever accessed a NZTA research report? (eg read a report, listened to a talk about the research findings.)

- ☐ Yes
- ☐ No

4. We are interested in why you haven't accessed the findings. Was it because: (Select all that apply.)

☐ I have no time to read

☐ I don't know where to find the information

☐ The information is not easy to read (eg too technical)

☐ The reports do not have succinct summaries and conclusions

☐ None of the research is relevant to the work I do

☐ Other (please specify)

[text box]

5. The following are NZTA topic areas. Which of them align with your area/s of interest? (Select all that apply.)

☐ Asset management

☐ Environmental effects

☐ Natural hazard

☐ Network management

☐ Safety and personal security

☐ Sustainable transport

☐ Travel behaviour

6. On the whole, when you read a NZTA research report do you:

	Yes	No
Learn something new?	◉	◉
Share information from the report with others?	◉	◉
Use it to inform further research?	◉	◉
Use it to inform a new or existing policy/programme?	◉	◉
Use it to develop/ improve standards, guidelines and/or specifications?	◉	◉
Other (please specify)		

7. Select up to 3 things that have helped you to use the research findings:

☐ I have time to read the research reports

☐ I know where to find the research reports

☐ The research is relevant to the work I do

☐ I am familiar with the research content area

☐ I have been involved in the research process

☐ I understand the technical content of the reports

☐ The reports have succinct summaries and conclusions

☐ The reports are clearly written

8. How relevant are the research findings to:

	very	usually	sometimes	seldom	never
The work you do	☐	☐	☐	☐	☐
The NZ transport sector	☐	☐	☐	☐	☐

9. Tell us why you rated the relevance of the research findings in this way.

To the work you do

To the NZ transport sector

10. I work in:

☐ NZTA

☐ Central government or Crown entity (not NZTA)

☐ Local government

☐ A consultancy

☐ A road contracting company

☐ A research organisation

☐ An education or training institution

☐ A professional body

☐ Other (please specify)

11. The work I mainly do is:

☐ Policy making

☐ Planning

☐ Consulting

☐ Road contracting

☐ Engineering

☐ Research

☐ Teaching

☐ Study

☐ Other (please specify)

[ ]

12. Here's your last chance to comment further about the use of, relevance or access to NZTA research findings! We welcome your views.

[ ]

We are keen to find out more about how people have used research commissioned by NZTA. This would involve a short phone interview (about 10 minutes) with a researcher from Evalue Research.

Cancel Copy

13. Are you happy to be contacted by a researcher?

☐ Yes

☐ No