

Subject	Improved public transport performance monitoring and reporting – A nationally consistent customer satisfaction survey
Circulation	Regional and Local Authority Transport Officers Local Government New Zealand NZ Transport Agency Planning and Investment Managers Audit New Zealand Bus and Coach Association
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Purpose

To notify approved organisations and other stakeholders of changes to public transport customer satisfaction survey requirements to ensure that regional surveys are consistent and comparable across the whole country.

Background

Over the last decade, investment in the provision of scheduled public transport services has increased substantially. This has increased the need to better understand the value obtained for the money invested, while at the same time improving public transport effectiveness. The quality of the evidence base needed to support high quality decision making in relation to procurement of public transport services is becoming increasingly important.

Further improvement to public transport effectiveness is reliant on a good understanding of customer needs and preferences. As a national land transport investor, it is also important that the Transport Agency can make meaningful comparisons of customer satisfaction across the country, hence requiring the introduction of a nationally consistent customer satisfaction survey.

Amendments to NZ Transport Agency documentation:

NZ Transport Agency Procurement manual – Section 11.0 - Performance measurement and monitoring NZ Transport Agency Knowledge Base

This general circular focuses specifically on *Section 11.4 - Key performance indicators* in the *NZ Transport Agency Procurement manual*. The current references in the *NZ Transport Agency Procurement Manual* on page 11-8 to customer satisfaction will be altered as follows: an amendment to the wording in line 7. *Customer satisfaction*, and removal of line 8. *Passenger facilities (on-bus)*.¹

A separate section titled: Customer satisfaction – as laid out in the amendment to this circular will be added to set out in detail the question wording and rating scale, and a guideline on how to carry out the survey sampling.

The *NZ Transport Agency Knowledge Base* will also be amended to reflect these changes.

The relevant annual achievement return fields in *Transport Investment Online* have been amended, and customer satisfaction returns from 2012/13 will need to be in the new format.

For customer satisfaction survey results to be comparable across different operators, modes and regions, the questions, sampling methods and rating scales must be the same.

¹ The procurement manual public transport performance monitoring is currently focused on bus services only. The scope will be broadened to consider all modes of scheduled service (bus, ferry, train).

The Agency has developed a list of common questions that will form the core of individual public transport customer satisfaction surveys for scheduled services. This set of questions will allow national statistics to be developed for the purpose of accountability reporting to government and allow benchmarking between regions and between operators.

The customer satisfaction survey changes set out in this general circular relate to scheduled (bus, train, ferry) services. For Total Mobility services, the Agency is contemplating moving to a nationally coordinated survey undertaken periodically (probably every three years). This policy decision is still under consideration, but in the meantime, the Agency is removing any requirement for regional authorities to undertake Total Mobility surveys and report the results to the Agency through regional *Transport Investment Online* annual achievement returns.

If you require further information please contact your NZ Transport Agency regional program advisor or David Cope on David.Cope@nzta.govt.nz or 04 894 6413.

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Attachment 1 Amendment to the NZ Transport Agency Procurement manual – Section 11.4 Public transport service key performance measures

Customer satisfaction

The table below sets out the question wording and Attachment 2 sets out the required rating scale and sampling method and provides a guideline for carrying out surveys.

Customer satisfaction	National questions
<p>Surveys must include at least:</p> <ul style="list-style-type: none"> • The 19 questions shown opposite • an on-board survey method that conforms with the principles set out in Attachment 3 • The rating scale set out in Attachment 3 • Regional survey reports broken down by mode <p>(Note: This minimum set of questions is necessary to ensure a core customer satisfaction dataset that is nationally consistent)</p>	<p>Section A</p> <ol style="list-style-type: none"> 1 The bus/train/ferry being on time (keeping to the timetable) 2 How often the services run 3 The value for money of the fare 4 Having enough seats available 5 Ease of getting on and off the [bus/train/ferry] 6 Comfort of the inside temperature 7 The helpfulness and attitude of the driver [train staff / ferry staff] 8 Personal security during this trip 9 Overall satisfaction with this trip <p>Section B</p> <ol style="list-style-type: none"> 10 The ease of getting information about public transport routes and timetables 11 Information about service delays/disruptions (if applicable) 12 The travel time (considering the distance you travel) 13 How convenient it is to pay for public transport 14 The public transport system overall 15 How likely is it that you would recommend using public transport here to a friend or a colleague <p>Section C</p> <ol style="list-style-type: none"> 16 Was the trip free because you are a SuperGold cardholder 17 Are you: Male/Female 18 Which age group do you fall into (15-17; 18-24; 25-34; 35-44; 45-59; 60-64; 65+) 19 What is ONE thing you could suggest to improve the region’s public transport services?
<p>Rating scale</p>	<p>A scale of 0 to 10 where 0 = extremely dissatisfied and 10 = extremely satisfied. A “not applicable” option should also be included for questions where this is a valid response option.</p>

Attachment 2

Public transport customer satisfaction surveys National questionnaire wordings

(Note: This attachment sets out the questions and rating scale for the core questions required at a national level. Final regional surveys may include additional questions and be formatted by survey specialists to meet the needs of individual regions. In laying out the questions as shown below, the NZ Transport Agency does not intend to dictate the format of the final questionnaire, only the question wording and rating scale).

Section A

Please indicate your level of satisfaction with the following service features for **this [bus/train/ferry] trip**.

Please circle one number for each question.

1. The [bus/train/ferry] being on time (keeping to the timetable)

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

2. How often services run

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

3. The value for money of the fare

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

4. Having enough seats available

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

5. Ease of getting on and off the [bus/train/ferry]

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

6. Comfort of the inside temperature

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

7. The helpfulness and attitude of the driver [train staff/ ferry staff]

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

8. Personal security during this trip

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

9. Overall satisfaction with this trip

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

Section B

Now thinking about your experience of public transport in this region over the last three months, please indicate your level of satisfaction with the following:

Please circle one number for each question.

10. The ease of getting information about public transport routes and timetables

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

11. Information about service delays/disruptions (if applicable)

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

12. The travel time (considering the distance you travel)

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

13. How convenient it is to pay for public transport

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

14. The public transport system overall

	Extremely dissatisfied							Extremely satisfied				
N/A	0	1	2	3	4	5	6	7	8	9	10	

Public transport user sampling guidelines

Context

Surveys of user perceptions of public transport are carried out by regional organisations receiving central government funding, as part of monitoring requirements. Results are summarised at a national level by the NZ Transport Agency (e.g. for performance measures in the annual report). To improve consistency between data collected in different regions, identical wording and a consistent format for questions across regions is mandatory.

Survey frequency

Given the resourcing requirements of this type of comprehensive survey (on-board sampling across a representative sample of service routes and times), the NZ Transport Agency recognises that many regions might find it difficult to resource an annual public transport customer satisfaction survey. It is at the discretion of each regional authority to determine the frequency of surveying, but the NZ Transport Agency would expect that even small regions should undertake a customer satisfaction at least every three years.

Objectives

These guidelines aim:

- to make sampling processes reasonably consistent (consistent between regions and consistent over different years)
- to encourage good quality sampling methods.

These guidelines do **not** aim to be a complete step-by-step handbook providing all details of how to sample and how to instruct staff how to carry out such surveys. That would be very difficult to do in a single document (and require much greater length) because of the substantial differences between regions in services and available resources. Rather, these guidelines aim to promote consistency and good practice, yet be flexible enough to be adapted to the level of services and resources available in each region.

Basic requirements

Requirement	Explanation
Use onboard/intercept sampling	Onboard/intercept sampling means selecting users either onboard buses/trains/ferries or intercepting them at arrival/departure points (e.g. ferry wharfs, rail stations). Other options such as telephone surveys and online surveys were considered by NZ Transport Agency in 2011 but onboard/intercept methods preferred (and already in use by the majority of regions).
Include a good number of different trips (routes, services, times)	Margins of error for such surveys do not depend just on the total number of users responding. The number of different services (i.e. bus trips, train trips, etc) covered may have a strong impact too. For example, consider a trip that leaves half an hour late—most users on that trip are likely to give lower ratings for punctuality and overall satisfaction with that trip than users on other trips. Hence, getting 400 responses from only two overcrowded peak-hour train services would tell us relatively little about satisfaction with all train services.
Selection of trips and passengers should approximate random	Letting passengers self-select (e.g. by picking up questionnaires from a station) is not acceptable. Nor is selecting a set of trips because they seem convenient. Note that a (simple) random sample is not haphazardly chosen, rather each unit sampled has an equal

samples	probability of selection. Hence the guidelines below suggest more defined methods that better approximate random samples of trips and passengers.
Correct large imbalances in samples by statistical weighting when reporting total results	If peak trips account for about 80% of patronage in a region, NZ Transport Agency needs responses from peak trips to account for about 80% of the overall rating reported. So if only 40% of users sampled are from peak trips, then use statistical weighting to correct such a large sample imbalance (such weighting is routine for experienced survey researchers).
Supply a brief description of sampling methods and 'response rate' to NZ Transport Agency	Such a written description is useful to: <ul style="list-style-type: none"> • Check that the NZ Transport Agency can validly combine results from different regions into a national total • Check that there really is consistency in methods between regions • Ensure that regions have a written description that can be used to efficiently maintain consistent methods in future years (this is important because smaller regions are not now required to carry out annual surveys).

Guidelines

Topic	Guideline
1. Selecting trips/services	<p>Approximate a random sample. Acceptable methods include:</p> <ul style="list-style-type: none"> • using a spreadsheet to randomly sort a list of trips then using the top 200 trips; e.g. use =RAND() in Excel • selecting every 13th service/trip from a list (where there is no reason to suspect any recurring patterns every 13th trip). <p>It is fine to exclude a relatively small number of early morning or late night trips because of concerns about interviewer safety and/or excessive extra costs. But such exclusions should be written down so that they can be applied consistently in future years (and communicated to NZ Transport Agency).</p> <p>Coverage of trips across the entire year is not required. Surveying over at least a fortnight judged 'typical' is acceptable (e.g. not during major holidays).</p>
2. Selecting passengers on trips/services	<p>Approximate a random sample (of those aged 15 or more) on the selected trip.</p> <ul style="list-style-type: none"> • Allowing passengers to self-select (e.g. by picking up a questionnaire or not at a station) is not acceptable • Allowing staff to select the people they feel most comfortable about approaching is not acceptable. • To approximate a random sample, we need survey staff with explicit written instructions (e.g. select every 4th person entering the bus, excluding those who clearly appear younger than 15 years). If n-th person methods are used, the count of people should continue across different trips (e.g. if an interviewer selecting every 4th person has counted to 2 and the trip finishes, then they select the 2nd person on the next trip they work on). <p>You don't need to select every passenger on a sampled trip. Selecting every second or every fifth passenger can help:</p> <ul style="list-style-type: none"> • Keep sampling manageable at peak times (so workload is not too much for survey staff,

	<p>and delays to those boarding buses are minimised)</p> <ul style="list-style-type: none"> • Improve margins of error—because money saved on processing questionnaires from extra users on the same trip can broaden coverage to more trips. <p>NZ Transport Agency only requires surveying of passengers aged 15 years or more.</p> <ul style="list-style-type: none"> • The Market Research Society <i>Code of Practice</i> requires the informed consent of a parent or responsible adult before interviewing children aged under 15 years.
<p>3. Numbers of trips and users; margins of error</p>	<p>Consider both the number of trips and the number of responses from users; both affect accuracy of results.</p> <ul style="list-style-type: none"> • Exactly how number of trips and number of passengers affect margins of error is complicated to calculate and differs depending on services and sampling processes in each region. • To check on the number of trips and the spread of users over trips, record the trip from which each passenger response was obtained (e.g. by having route, time, day on questionnaire; or by having interviewers separately record this information for each numbered questionnaire given out). <p>For tolerable coverage of trips/services, sampling (in years when surveys are done) should exceed these minimum numbers of trips/services:</p> <ul style="list-style-type: none"> • 100 each for bus, and 80 for train (where relevant) in Auckland, Wellington, and Christchurch. • 50 each for Waikato, Otago, Bay of Plenty. <p>Other regions should provide lists of their service timetables to the NZ Transport Agency for advice on sampling.</p> <p>When providing margin of error estimates for such user surveys, some allowance for the extent to which users are similar/clustered by being on the same service/trip must be made.</p> <ul style="list-style-type: none"> • If the usual margin of error approximations are being used (which ignore the effect of clustering by assuming ‘simple random sampling’), the NZ Transport Agency requires that these simple adjustments to the approximations be made (unless the region has its own statistical evidence for the effects of clustering): <ul style="list-style-type: none"> – With bus surveys, halve the actual sample size before using it in such margin of error estimates (i.e., if the actual sample size is 1200, then the calculations should assume an effective sample size of only 600).² – With train surveys, multiply the actual sample size by 2/3 before using it in such margin of error estimates (that is, if the actual sample size is 1200, then the calculations should assume an effective sample size of only 800).³
<p>4. Weighting to correct sample imbalances</p>	<p>Small imbalances in samples in terms of day of week, peak versus off-peak etc. will inevitably occur even when the plan is to cover such trips equally. NZ Transport Agency does not require weighting to counteract such small accidental imbalances.</p> <p>Particularly in larger centres, there will often be practical reasons to target more users from a particular service type or operator than justified by the proportion they make up of total patronage. For example, it’s fine to devote 1/2 your sample to a selection of routes/services that only account for 1/6 of patronage if you particularly want to get accurate results separately</p>

² This recommendation of halving is based on statistical analysis of clustering with 2012 Auckland user survey data. If average cluster size is markedly more or less than the average of 78 in the Auckland data, then statistical advice for an alternative to the halving is desirable.

³ This recommendation of 2/3 is based on statistical analysis of clustering with 2012 Auckland user survey data. If average cluster size is markedly more or less than the average of 78 in the Auckland data, then statistical advice for an alternative to the 2/3 is desirable.

	<p>for that group of routes/services. But when reporting to NZ Transport Agency, use statistical weighting to correct for the oversampling of that group of routes/services. Regions using weighting should also get statistical advice on the increases to margin of error calculations such weights are likely to cause (beyond those required for clustering as mentioned above).</p> <p>NZ Transport Agency recognises that smaller regions will wish to avoid the complexity of weighting if possible; hence we only require it for large imbalances like the example above.</p>
<p>5. Good practice hints</p>	<p>This section is less about requirements, and more about practical hints that will keep up quality.</p> <p>A 'control sheet' for survey staff who recruit passengers is useful:</p> <ul style="list-style-type: none"> • To list the trips/services they should be sampling • To remind staff of major instructions/procedures. • To provide somewhere for staff to record the number of refusals and number of questionnaires accepted (needed to calculate the response rate). Other useful counts for good response analysis are: language/communication difficulty; Under 15; Already answered questionnaire; PT staff (ineligible) • To provide staff somewhere to record discrepancies (e.g. cancelled services). <p>Options to consider include:</p> <ul style="list-style-type: none"> • Having questionnaires printed with unique sequential serial numbers (so that interviewers can then record on the control sheet the first and last number of questionnaires given out on each trip/service); this can save several users on each trip needing to record things like day, time of day, or operator if that information is wanted for analysis • Different coloured questionnaires for different service types (e.g. train vs bus vs ferry). This helps prevent accidentally giving out the wrong questionnaire.
<p>6. Description of methods</p>	<p>The description must cover:</p> <ul style="list-style-type: none"> • Sampling of trips: how many selected (reported separately for bus, train, ferry where relevant)? how were these selected? how many trips excluded as out of scope and which ones (e.g. late night services starting after 8pm) • Sampling of passengers: how many selected? how were these selected on each trip (e.g. every 2nd passenger for buses; every 4th passenger on every second carriage for trains)? • Response rate: the proportion of passengers selected for the survey who provided usable responses (rather than refusing to accept the questionnaire, or not returning the questionnaire, etc.). <p>Regions will also find it helpful to have clear written instructions for survey staff. This ensures consistency between years and enables practical lessons learned to be incorporated to refine processes over time (rather than forgotten).</p>