

Implementation Guidelines

Performance Measure: Customer Satisfaction

Guidance on issues related to methodology and survey design:

The quality of the data from a customer satisfaction survey depends on the quality of the research methodology. In order to collect meaningful data, the methodology must be tailored to address the specific research objectives of the study, and rigorous data collection procedures must be used.

Professional assistance is essential to implement an effective customer survey and to insure that rigorous data collection procedures are used. Such assistance may be a professional consultant, university personnel, or in-house customer feedback specialists. Although such a professional cannot define your objective or data needs, they can help focus the intent of the survey and develop a rigorous methodology to efficiently carry it out. Partner with a survey professional early.

The primary responsibility of the transportation organization is to establish the objective and information needs of the survey, and define the characteristics of the population they are trying to reach. A survey consultant can assist in focusing those activities, however their primary function is to design and administer a rigorous survey methodology to meet the objective of the organization.

Below are some points to consider:

1. Define the Survey Objective and Information Needs

Clearly articulated objectives guide the design of the study as well as the development of questions that are ultimately included in the survey. Key questions to address include:

- What is the objective of the survey?
- What information is needed?
- How will the information be used in the organization?

2. Use professional resources (such as survey consultants or university personnel versed in survey methods) to develop the survey methodology and the questionnaire. These professionals can help in the development of a survey design that meets the objectives of the study.

3. Define the Survey Population

- The first step in designing a survey is to characterize the study population, that is, define “who” will be surveyed. This will vary, depending on the study objectives. For example, if you are measuring customer satisfaction with traffic signal operations, you may want to survey regular users of the arterial.
- **Consider the sampling procedure carefully.** Ideally, representative sampling methods should be used, so that it is possible to generalize the findings to the larger population. In the case of customer satisfaction with

traffic signal operations, respondents might be randomly sampled by geographic area (i.e. randomly sample residential phone numbers for census tracts near the study route). Again, the sampling strategy will vary based on characteristics of the target population, the nature of the service being evaluated, and the questions being addressed in the study. Do any specific subgroups require over-sampling?

- Finally, consideration needs to be given to the sample size that is necessary to meet the data requirements of the study. With larger samples, there is greater confidence that the sample findings are representative of the general population, and larger samples also allow for more detailed subgroup analysis. However, costs scale with sample size.

4. Select the interview method. The nature of the study population as well as the type of service being evaluated will guide decisions on the appropriate interview method. An evaluation of a 511 website, for example, could be completed online by customers of the website, whereas a survey measuring customer satisfaction with traffic signal operations might be conducted by phone or mail.

- Consider factors in the local context that might affect the design of the study and the collection of data.

5. Design of survey questions. Pay close attention to the design of the survey questions. The survey questions must be properly written so they yield meaningful data. When questions are poorly worded or biased, the responses are likely to be inaccurate or uninterruptible. **In determining the content of the survey, consider the research objectives and information needs of the overall study, as well as any features of the service that might be specific to your area.** The survey questions should be designed to address the study objectives and information needs. For example, if one objective of the study is to assess differences in opinions between “peak” and “non-peak” travelers, then the survey will need to include a question measuring this concept. Below are additional guidelines for the types of questions that should be included in the survey:

- Frequency of access – “How often do you drive on a certain roadway?” or “How often do you access this website?”
- Overall satisfaction rating for the service, and for various components of the service. Satisfaction ratings should be on a balanced rating scale, typically on a 5 to 7 point scale (though 11-point scale may be appropriate in some cases).
- Importance of providing the service
- Particularly for information services, determine if the information had an impact on traveler behavior (example: “Did you chose an alternate route as a result of the information?”)
- Ask how the service could be improved
- Include key socio-demographic variables. Examples include gender, age, income and education. Other questions that may be of interest, depending on the nature of the study are: household composition, number of vehicles in the household, employment status, trip type.

- If previous surveys have been conducted, consider reuse of question for consistency and trend analysis.
 - Make use of available resources:
 - Consult 511deploy.org for sample 511 survey questions (See additional comments 1)
 - Consult previous research (including surveys) conducted on the topic
- 6. Use rigorous data collection procedures.** This will contribute to higher response rates, increasing confidence that the sample findings are representative of the general population. Potential techniques for increasing response rates include (these will vary according to the survey method): pilot test the survey, advance letter or brochure introducing the study, reminder calls to complete the survey, and incentives (among others).
- Consider an independent survey design review.
- 7. Reporting of Survey Results.**
- For scaled questions, it is recommended that responses be processed to provide both the distribution of responses (i.e. standard deviation or percent answering 5 and above, etc.) as well as the average response. Survey results should also be analyzed by type of customer and by relevant trip characteristics, such as travel location and trip type (commute, school, vacation, freight movement, etc.), among others.
 - Survey report should contain a full description of the methodology, response rate, and a copy of the survey itself.

Additional comments:

1. A particularly useful document is the 511 Implementation and Operational Guidelines (survey questions are included in the appendices).
<http://www.deploy511.org/docs/511%20Guidelines%20Version%203.0.pdf>