

## Missouri Department of Transportation Constituent Service Quality Survey (CSQS)

### Introduction

Extensive research in the past 20 years has shown that high-performance organizations identify several factors as necessary for success. Not surprisingly, customer satisfaction is often considered the most important. Only by knowing what customers (constituents) want from an organization can that organization confidently plan and manage its resources and performance.

The importance of customer satisfaction was demonstrated by the National Quality Initiative (NQI), which acted to establish a database of customer needs and expectations at the national level. To date, more than 20 state departments of transportation have followed the NQI effort and surveyed constituents concerning their needs and expectations at the state level.

Based on the NQI model, MoDOT conducted a statewide telephone survey to assess customer perception of the quality of services MoDOT provides. Survey results and data analysis aid in measuring our efforts to meet customer expectations and serve as a baseline database from which to assess the department's progress in meeting their needs and expectations.

### Research Approach

A multidisciplinary team was formed to direct the study. It included employees with backgrounds in community development, research methods, sociology, public involvement, planning and engineering. The team worked with the University of Missouri Department of Rural Sociology to identify relevant performance areas and data collection and analysis methods. The purpose of the research was refined to establish a baseline of customer service and performance and to evaluate MoDOT's effectiveness in meeting customer expectations for quality transportation services.

The study was expected to provide information on customer perception of performance, information to refine operations and services, a benchmark for future research, information to guide planning efforts, and a system of performance management based on the replication of the research. The CSQS research project design consisted of a literature review including other recent NQI efforts, internal and external stakeholder interviews, project review and buy-in by stakeholders and the constituent telephone survey.

MoDOT determined a telephone survey of the state's residents would be the most cost effective and successful means to collect the data needed to develop a statistically valid and reliable database. The survey consisted of 1,581 completed telephone surveys with randomly selected Missourians. The data was collected on a statewide and regional basis facilitating comparisons between the St. Louis Region (4 counties), the Kansas City Region (5 counties) and the rest of the state. This approach allows for a 95 percent confidence level and a maximum sampling error of plus or minus 3 percent for each region and the state as a whole. The elements of the telephone survey included demographic information and transportation use characteristics of the respondent, quality ratings and future priority ratings for transportation system characteristics, and an evaluation of project rating criteria.

### Research Development and Technology Division

Missouri  
Department  
of Transportation

1617 Missouri Blvd.  
P.O. Box 270  
Jefferson City,  
Missouri 65101

## Results

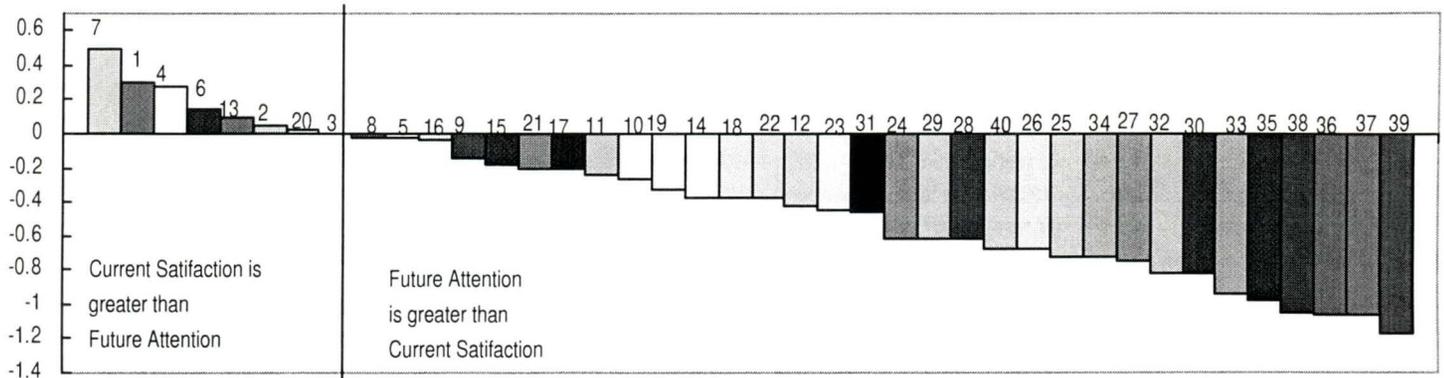
The focus of the research analysis involved a set of 41 questions covering all aspects of Missouri transportation, including road conditions and markings, availability of a variety of transportation options, highway construction and maintenance, safety issues and customer service. A discrepancy analysis was used to examine the 41 performance items on the survey questionnaire. Discrepancy analysis is commonly used in helping make decisions about priorities in performance management.

A discrepancy analysis consists of a comparison of the customer's perceptions of the quality of a service currently provided and what level of effort should be expended toward that service in the future. The discrepancy between the evaluation of current satisfaction and expectations of performance in the future

identifies services that are a concern for the department, a strength of the department, or a service on which customers feel MoDOT spends more resources than needed.

Of the 41 variables included in the research, 29 of the variables measured were determined to be "strengths"; the remaining 12 items were determined to be "challenges" for the department. The following bar chart identifies the 41 measures used and the discrepancy between the satisfaction and importance for each issue. Items on the left side of the chart represent areas where customers report their current satisfaction is greater than the need for future attention. Variables listed on the right side of the chart are areas that customers report needs greater future attention.

**Figure 0.1: Mean Discrepancies between Current Satisfaction and Future Attention - Statewide**



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|---|--|
| <ol style="list-style-type: none"> <li>1. Placing orange construction signs to mark active work areas</li> <li>2. Ensuring that traffic signals and lights are working</li> <li>3. Marking railroad crossings</li> <li>4. Providing rest area services and facilities that meet my needs</li> <li>5. Placing yellow warning signs to assure sufficient response time</li> <li>6. Providing a sufficient number of local/regional airports</li> <li>7. Setting speed limits</li> <li>8. Using electronic message boards to advise drivers of delays or construction areas</li> <li>9. Providing lanes that are wide enough for safe driving</li> <li>10. Having signs that can be easily seen at night or in bad weather</li> <li>11. Building bridges that are wide enough to feel safe</li> <li>12. Building bridges that last long enough</li> <li>13. Mowing along roadways to improve the appearance of the roadway</li> <li>14. Removing snow / ice efficiently</li> <li>15. Communicating with the public in easy to understand language</li> <li>16. Keeping roadsides free of litter and debris</li> <li>17. Providing useful information about construction, repairs or road conditions</li> <li>18. Striping center lines and road edges to ensure safety</li> <li>19. Lighting interchanges and bridges</li> <li>20. Providing a sufficient number of commuter parking spaces</li> <li>21. Offering a toll free phone line that is useful</li> <li>22. Providing sufficient passing opportunities on two-lane highways</li> <li>23. Providing crosswalks and signals that allow you to cross the highway safely</li> </ol> | <ol style="list-style-type: none"> <li>24. Providing pavement markings that can be easily seen in wet weather</li> <li>25. Building new highways to meet future demand</li> <li>26. Treating highway surfaces to resist skidding in wet weather</li> <li>27. Honoring commitments to provide and maintain Missouri's transportation system</li> <li>28. Providing shoulders that are adequate to pull off the road safely</li> <li>29. Providing sufficient transportation for those who don't or can't drive</li> <li>30. Improving existing highways to meet increasing traffic demands</li> <li>31. Providing Amtrak passenger rail service to meet your needs</li> <li>32. Planning a project in a reasonable amount of time</li> <li>33. Completing road and bridge construction and repairs in a timely manner</li> <li>34. Providing the public with adequate opportunities for input in project planning</li> <li>35. Distributing transportation funds fairly to all areas of the state</li> <li>36. Using public funds in a cost effective manner</li> <li>37. Providing pavement that lasts a long time</li> <li>38. Maintaining the pavement so it provides a smooth ride</li> <li>39. Repairing pavement surface promptly</li> <li>40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe</li> <li>41. Provide light rail such as MetroLink (St. Louis only)</li> </ol> |
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Interestingly, there are items where the public thinks MoDOT is doing better than their importance warrants. These items are shown on the far left side of the bar chart. These include items such as setting speed limits, use of work zone signs, maintaining rest area facilities and providing for regional airports. Conversely, the findings indicate that pavements are the primary concern of Missourians as shown on the far right side of the bar chart. Three of the top items identified as needing improvement include providing pavement that lasts a long time, maintaining the pavement to provide a smooth ride, and repairing pavement surfaces promptly. Other items that were identified as needing more effort included project planning, and the allocation of resources.

Besides the discrepancy analysis, the CSQS report includes a variety of analyzes including significance testing for regional differences and relationships between the variables, demographic profiles, as well as frequency reports. For example, for most items in the survey, the regions are far more similar than they are different. Additionally, the demographic characteristics of the survey respondents' are largely representative of the state as a whole.

The report also indicates that respondents prefer greater attention to maintenance and preservation activities rather than expansion of the system. The survey reports that respondents would devote 60 percent of MoDOT's budget to preservation and 40 percent to

new construction. The full report breaks all of the research focus areas down and presents a thorough analysis of the CSQS database.

### **Implementation**

The information provided by the CSQS report will serve MoDOT well as we consider how to allocate future resources to meet the needs of our customers. The information has already been incorporated into the long-range planning process. Additionally, the success of this effort has led to greater use of customer surveys and non-traditional methods of acquiring input on customer satisfaction. As the CSQS project was designed as a baseline effort, we are now preparing to complete the research effort on a 3 to 5 year basis. We found that the CSQS effort has provided valuable information for planning and operations management as well as communicating to the state's residents that MoDOT wants to know what the public thinks.

For more information, please contact:  
Jim Radmacher (573) 751-0852, email:  
[radmaj@mail.modot.state.mo.us](mailto:radmaj@mail.modot.state.mo.us)  
Ernie Perry (573) 526-4317, email:  
[perrye1@mail.modot.state.mo.us](mailto:perrye1@mail.modot.state.mo.us)  
Missouri Department of Transportation

(Reference: Research Report RDT RI-034)  
or, the full report can be found at: <http://www.modot.state.mo.us/>