

## **Synthesis of Transportation Data Program Assessment Strategies and Practices**

**Submitted by: Ed Christopher, on behalf of TRB Data Section (ABJ00)**

**Scope:** Data, and the information produced from data, play a key role in transportation decision making. Yet, evidence exists that decision makers are often compelled to use the data at-hand, without regard for quality (see Transportation Information Needs Assessment, E-Circular 109). For instance, in the case of a major infrastructure failure, data on demand patterns, network structure and capacity are essential for rerouting traffic. The absence of timely data risks traffic management decisions that are ineffective and inefficient. Quality is defined as fitness for use and has many dimensions (i.e., relevance, accessibility, timeliness, accuracy). State DOTs, MPOs, transit operators, and other transportation organizations need guidance to ensure the fitness of their data programs. Developing a set of common strategies and practices for assessing data for decision making on critical issues, such as resource allocation for safety, environment and congestion, is important for achieving long-term sustainability of transportation data programs. This synthesis provides the foundation for a broader effort to develop an evaluation framework for ensuring that transportation data programs truly support decision making.

This proposed synthesis would (1) define a framework for this assessment, (2) survey strategies and practices among SDOTs and other transportation organizations, (3) identify ongoing research and data assessment models from the private sector and other disciplines (e.g., healthcare), (4) organize and evaluate the results of the foregoing activities in order to develop a description of the current state of the practice and identify what is largely unsolved, and (5) develop recommendations for future research leading to the development of an evaluation framework for ensuring that data systems managed by transportation organizations truly support decision making.

**Genesis:** In March 2008, the eleven committees of the TRB Data Section (ABJ00) along with several of its subcommittee chairs and representatives of FHWA, BTS, NCHRP, AASHTO and SCOR held a retreat to discuss issues facing the data community at large. One outcome was a call for the development of a process and tool that data program managers could use to do a self-assessment of their data programs and databases. It was widely acknowledged that this effort would need to build upon what other areas have done. This proposal was developed in a special meeting of a 5-person Section task force consisting of Johanna Zmud (Section Chair, ABJ00 ), Reg Souleyrette (Chair ABJ60), Section members at-large Joseph Schofer and Ed Christopher, and James Hall (Section Research Subcommittee Chair, ABJ00-1).

**Information Sources:** Information sources include: safety data reporting standard ANSI D-16; Archive Data User Service standards; Model Minimum Inventory of Roadway Elements (MMIRE); Federal Geographic Data Committee; Performance Measurement literature and Advances, Traffic Monitoring Guide, State DOT and SCOP Business Plans and Peer Reviews.