

TCRP

REPORT 84

*e-Transit: Electronic Business
Strategies for Public Transportation*
Volume 4

Advanced Features of Transit Websites

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES



TRANSIT
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TCRP REPORT 84

***e-Transit: Electronic Business
Strategies for Public Transportation
Volume 4***

**Advanced Features of
Transit Websites**

MULTISYSTEMS, INC.
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and
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White River Junction, VT

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Task Order 4, “Advanced Features of Transit Web Sites,” of TCRP Project J-09 was performed by Multisystems, Inc., and Matthew Coogan. Multisystems served as the primary contractor for the study.

Buck Marks of Multisystems served as Principal Investigator of the study and was thus responsible for the overall supervision of the research. Joana Conklin had primary responsibility for conducting the case study interviews and aided in preparation of the final report. Mike Bolton and Dan Fleishman served as Senior Advisors for this

study. Rich Juster helped in editing the final report. Matthew Coogan provided input throughout the study process and aided in preparation of the final report.

The project team would like to express special thanks to the 16 organizations that participated in the research and made the project possible. The guidance of Stephan Parker and Gwen Chisholm, the TCRP Program Officers for the project, and the J-09 Project Panel is also acknowledged and appreciated.

The nation's growth and the need to meet mobility, environmental, and energy objectives place demands on public transit systems. Current systems, some of which are old and in need of upgrading, must expand service area, increase service frequency, and improve efficiency to serve these demands. Research is necessary to solve operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the transit industry. The Transit Cooperative Research Program (TCRP) serves as one of the principal means by which the transit industry can develop innovative near-term solutions to meet demands placed on it.

The need for TCRP was originally identified in *TRB Special Report 213—Research for Public Transit: New Directions*, published in 1987 and based on a study sponsored by the Urban Mass Transportation Administration—now the Federal Transit Administration (FTA). A report by the American Public Transportation Association (APTA), *Transportation 2000*, also recognized the need for local, problem-solving research. TCRP, modeled after the longstanding and successful National Cooperative Highway Research Program, undertakes research and other technical activities in response to the needs of transit service providers. The scope of TCRP includes a variety of transit research fields including planning, service configuration, equipment, facilities, operations, human resources, maintenance, policy, and administrative practices.

TCRP was established under FTA sponsorship in July 1992. Proposed by the U.S. Department of Transportation, TCRP was authorized as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). On May 13, 1992, a memorandum agreement outlining TCRP operating procedures was executed by the three cooperating organizations: FTA; the National Academies, acting through the Transportation Research Board (TRB); and the Transit Development Corporation, Inc. (TDC), a nonprofit educational and research organization established by APTA. TDC is responsible for forming the independent governing board, designated as the TCRP Oversight and Project Selection (TOPS) Committee.

Research problem statements for TCRP are solicited periodically but may be submitted to TRB by anyone at any time. It is the responsibility of the TOPS Committee to formulate the research program by identifying the highest priority projects. As part of the evaluation, the TOPS Committee defines funding levels and expected products.

Once selected, each project is assigned to an expert panel, appointed by the Transportation Research Board. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in managing cooperative research programs since 1962. As in other TRB activities, TCRP project panels serve voluntarily without compensation.

Because research cannot have the desired impact if products fail to reach the intended audience, special emphasis is placed on disseminating TCRP results to the intended end users of the research: transit agencies, service providers, and suppliers. TRB provides a series of research reports, syntheses of transit practice, and other supporting material developed by TCRP research. APTA will arrange for workshops, training aids, field visits, and other activities to ensure that results are implemented by urban and rural transit industry practitioners.

The TCRP provides a forum where transit agencies can cooperatively address common operational problems. The TCRP results support and complement other ongoing transit research and training programs.

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The members of the technical advisory panel selected to monitor this project and to review this report were chosen for recognized scholarly competence and with due consideration for the balance of disciplines appropriate to the project. The opinions and conclusions expressed or implied are those of the research agency that performed the research, and while they have been accepted as appropriate by the technical panel, they are not necessarily those of the Transportation Research Board, the National Research Council, the Transit Development Corporation, or the Federal Transit Administration of the U.S. Department of Transportation.

Each report is reviewed and accepted for publication by the technical panel according to procedures established and monitored by the Transportation Research Board Executive Committee and the Governing Board of the National Research Council.

To save time and money in disseminating the research findings, the report is essentially the original text as submitted by the research agency. This report has not been edited by TRB.

Special Notice

The Transportation Research Board, the National Research Council, the Transit Development Corporation, and the Federal Transit Administration (sponsor of the Transit Cooperative Research Program) do not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the clarity and completeness of the project reporting.

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FOREWORD

By Gwen Chisholm
Staff Officer
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TCRP Report 84: e-Transit: Electronic Business Strategies for Public Transportation documents principles and techniques that are used in electronic business strategies for public transportation. *TCRP Report 84* is being published as multiple volumes. *Volume 4: Advanced Features of Transit Websites* explores the potential of the following advanced website features for the transit industry: automated itinerary planners, real-time customer information, e-mail notification systems, and customer relationship management. This report may be used by senior managers, website design managers, operations managers, and technical and other professional employees.

The Internet and other new information and communication technologies are revolutionizing the way services are delivered and organizations are structured. Electronic business processes change the ways organizations operate and conduct business. Opportunities to lower transaction costs and improve efficiency have changed relationships between transit agencies and their suppliers and customers, and electronic business processes are likely to change industry structures in the longer term. Portals for transactions in government-to-government and business-to-government marketplaces are offered through diverse organizations. Numerous transit agencies are preparing to offer customized itinerary planning and fare media purchasing over the Internet.

The declining costs of communications, data storage, and data retrieval are accelerating the opportunities spawned by the Internet and other information and communications technologies. Choosing and sequencing investments in technologies, processes, and people to reduce costs and increase productivity present challenges to the transit manager, who must weigh the costs, benefits, and risks of changing the ways services are delivered. To assist in meeting such challenges, TCRP Project J-09 is producing a multiple-volume series under *TCRP Report 84*. The research program will identify, develop, and provide flexible, ongoing, quick-response research designed to bring electronic business strategies to public transportation and mobility management.

Volume 4: Advanced Features of Transit Websites is the fourth volume in the *TCRP Report 84* series; the report is in portable document format (pdf) on *CRP-CD-34*. Multisystems, Inc., prepared the report with assistance from Matthew Coogan. The objective of this task was to identify and document lessons learned regarding the potential of incorporating advanced web features into the transit industry. The focus is on automated itinerary planning systems, real-time transit information, e-mail notification, and the application of customer relationship management concepts to these services. The web features were reviewed in the context of customer relationship management. The report provides an overview of the implementation, technology, value creation, lessons learned, and best practices associated with web-based advanced features. The study findings reveal that an investment in advanced website features offers the potential to provide significant benefits to the customer and the transit industry.

Volumes issued under *TCRP Report 84* may be found on the TRB website at nationalacademies.org/trb.

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