

RD&T Brief



*From Research
to Reality*

*The Wisconsin
Department of
Transportation carries out*

**RESEARCH,
DEVELOPMENT AND
TECHNOLOGY TRANSFER**

in partnership with

**FHWA
Industry
Academia**

Partnerships for INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

William A. Hyman, Booz Allen & Hamilton Inc.; Matt Ames and Marci Frischkorn,
Miller & Van Eaton, P.L.L.C; Kim Lobdell, K.L. Engineering, Inc.

Since the early 1970s the Wisconsin Department of Transportation (WisDOT) has taken advantage of computer and information technologies, known as Intelligent Transportation Systems (ITS), to help reduce highway congestion and improve safety. WisDOT's MONITOR System on Milwaukee's freeways links ITS components such as traffic detectors, closed-circuit TV cameras, variable message signs and ramp meters to regulate traffic flow, respond to accidents and advise motorists of adverse conditions and alternate routes.

WisDOT believes ITS can be used in many additional ways to improve the quality of Wisconsin's transportation system, not only for individual travelers (e.g., route guidance, Mayday service and ride matching) but also for transit riders (e.g., en-route information and security) and commercial vehicle operators (e.g., electronic clearance, mileage reporting and safety monitoring). However, available public funds for ITS will likely be insufficient for many promising ITS applications, so WisDOT is interested in exploring the potential for private investment through partnerships with companies involved in ITS technologies.

What's the Problem?

Other states and countries that have embarked on ITS public-private partnerships report mixed successes. There is not yet in place a national "institutional architecture" for public-private cooperation in ITS to complement the National ITS Architecture, a technical framework to ensure interoperability and encourage systems integration. Therefore WisDOT commissioned this study of existing ITS public-private partnerships to gain in-depth understanding of potential opportunities, models and pitfalls to guide its own efforts.

Research Objectives

The consultant employed literature reviews, surveys, focus groups, interviews and a workshop to accomplish the following tasks:

1. Document and analyze existing state practices and lessons learned.
2. Identify legal and procurement barriers in Wisconsin.
3. Identify policies, programs and practices for attracting private-sector resources.
4. Identify and evaluate opportunities for public-private and public-public partnerships.
5. Identify and evaluate approaches to determining fee structures.
6. Draft recommended options for needed changes to state laws or regulations.
7. Prepare guidelines for WisDOT staff to use in pursuing public-private ITS partnerships.

Research Results

Results of tasks 1-6 are separately detailed in a single volume, *Project Task Reports* (325 pages). The results of task 7 comprise a separate report, *Guidelines for Enhancing ITS Public-Private Partnerships* (58 pages). The *Guidelines* are a distillation of key conclusions from the six task reports organized into chapters on Guiding Principles, Recommended Institutional Framework, Alternative Approaches to Providing Statutory Authority and Lessons Learned. An executive summary precedes the *Guidelines* and each *Task Report*.

The MONITOR control room in Milwaukee is an example of Intelligent Transportation Systems (ITS) currently used by Wisconsin to reduce traffic congestion and improve safety.

Resources

- *Partnerships in the Implementation of ITS*, Federal Highway Administration, Washington, D.C., September 1995.

- *Saving Lives, Time and Money Using Intelligent Transportation Systems: Opportunities and Actions for Deployment*, ITS America, February 2000.

- ITS America
400 Virginia Ave., S.W.
Suite 800
Washington, D.C. 20024
www.itsa.org

Research Report
0092-45-11
RDTB 00-02

July 2000

WisDOT Project Manager
Philip DeCabooter
(608) 267-0452

Wisconsin Department
of Transportation
Research Coordination Section
4802 Sheboygan Ave.
Madison, WI 53707
Nina McLawhorn
Research Administrator
RD&T@dot.state.wi.us

Three of the 19 Guiding Principles are considered to be highest priority.

- ◆ WisDOT needs **statutory authority** “to engage in innovative technology projects and business arrangements.” Strengths and weaknesses of four approaches are compared.

The first option of legislatively giving WisDOT broad authority to enter into innovative agreements, similar to Minnesota’s legislation, is considered the most practical and effective.

- ◆ The need for an ITS **program plan** is also emphasized. The plan would set forth an ITS vision, directions, specific opportunities and projects, anticipated public and private sector benefits, funding and staffing requirements, and an implementation timetable. The plan would be coordinated or integrated with other state ITS efforts, such as the Gary-Chicago-Milwaukee Corridor Plan, the Wisconsin ITS Commercial Vehicle Operator Plan, the Wisconsin ITS Strategic Plan and other state transportation plans with potential ITS components.

- ◆ A distinct **financial and business planning** process appropriate to ITS public-private partnerships is considered by the authors the third most important guiding principle for future WisDOT action. “This process should address principal methods to finance the public sector’s share of costs and leverage public-sector resources to attract private-sector investment.”

Samples of the many **Lessons Learned** from the *Guidelines*:

- ◆ Partnering arrangements require non-traditional procurement and contracting mechanisms, such as open solicitations, to attract creative, economically viable ideas.

- ◆ Public awareness and support are critical to success.

- ◆ Model FHWA franchise agreements for Advanced Traffic Management Systems and Advanced Traveler Information Systems may be useful for ITS deployment in Wisconsin.

- ◆ The failure to fully protect the privacy of businesses and individuals can quickly undermine a public-private partnership.

Implementation

WisDOT administration, particularly the Division of Transportation Investment Management, will use the detailed background and recommendations of this research report to plan and execute ITS public-private partnerships in Wisconsin.

Benefits of this Research

- ◆ Detailed inventory and analysis of the experience of other states and countries that have entered into ITS public-private partnerships.

- ◆ Detailed listing and explanation of good practices to follow and pitfalls to avoid.

- ◆ Comprehensive blueprint for developing ITS partnerships in Wisconsin.

- ◆ Ranking of ITS partnership opportunities in Wisconsin based on ability to attract capital, benefits to the public, ability to overcome barriers and alignment with WisDOT priorities.

