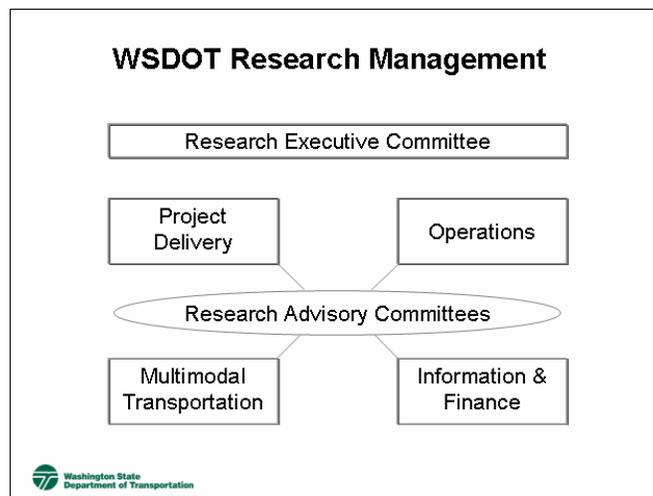


# Technology Transfer at WSDOT

2007 Technology Transfer Peer Exchange  
Iowa Department of Transportation  
August 15, 2007

## Organization of WSDOT Research Committees

WSDOT has five Research Committees. The Research Executive Committee (REC) provides sets strategic goals for the WSDOT Research Program. Four Research Advisory Committees (RACs) were created by the REC to focus on critical business functions of the department. These four committees are chaired by members of the REC. The RAC members are Office managers responsible for functions of the department (State Materials Engineer, State Maintenance Engineer, Planning Director, etc.). The RAC facilitates the identification of research needs from within the department, prioritize these needs, and forward recommendations to the REC. They also review project status and outcomes. The involvement of senior managers in the identification of needs and oversight of projects helps facilitate implementation of research results.



*The following are ways that WSDOT communicates about research activities and results.*

## Increasing Program Awareness

- A Communication Plan has been developed to identify key audiences the Research Program is trying to reach and messages we seek to convey. The WSDOT Communications Office provides templates and support to develop communication plans.
- An Executive Monthly Report is prepared each month for the Chief of Staff and distributed to agency executives, the Federal Highway Administration Division contact for research, members of the Research Advisory Committees, and university TRAC Directors. The monthly report summarizes completed research projects, new starts, key project progress, program news, and library activity.  
<http://www.wsdot.wa.gov/Research/>
- The WSDOT Research web site includes a description of the research program, copies of recent research reports (older reports are being digitized to load on the web site), a form for submitting research proposals, copies of the quarterly newsletters, information about the WSDOT library and access to the library catalogue. The web site includes the Research Procedures Manual, office newsletter and a collection of standard

forms, white papers and links to a variety of useful sites and other information.

<http://www.wsdot.wa.gov/Research/>

- The TRAC Biennial Report is prepared every two years and summarizes many of the research activities conducted at the University of Washington and Washington State University – primarily but not exclusively with funding from WSDOT.  
<http://depts.washington.edu/trac/otherpubs/index.html>
- Research folios are prepared as a means to give a brief overview of aspects of the WSDOT Research Program. Folios have been prepared to describe Transportation Research, WSDOT Research Management, and Transportation Research Programs. Audiences vary for each folio but may include the Congressional Delegation, agency employees, university professors, and the public.  
<http://www.wsdot.wa.gov/Research/AboutUs.htm>
- Open House: A WSDOT Research Open House was conducted in 2006. It included displays of the research process and research results, a videoconference about TRAC and TransNow, and visits by faculty. The response to the open house was very positive. Many employees appreciated information about this 'little known' program.  
<http://www.wsdot.wa.gov/NR/rdonlyres/769BEEC4-497E-47C8-8E69-13E5D8A7AD68/0/WSDOTInvestigatesResearchattheOpenHouse.doc>

### **Project Specific Tech Transfer Tools**

- Transportation Synthesis Reports are developed on topics of importance to senior managers within the department. The synthesis reports are modeled after those conducted by Wisconsin DOT and CTC and Associates. The reports provide summaries of literature, web pages, surveys and other state of the practice information.
- Project Status Reports are provided to the REC and RACs so that they are aware of project progress. The status reviews are being modeled after quarterly project reviews of the agency's construction projects. A status is provided for all projects but discussion focuses on those that are deviating from planned schedule, budget or scope expectations.
- All Research Final Reports are distributed to all state research programs, national libraries, repositories and other interested entities. WSDOT publishes research findings in a consistent publication format and distributes to a wide audience of potential users. The summary of project implementation is reported in the Monthly Executive Report as well as the Biennial Implementation Report. All reports are entered into the Washington State Library and WSDOT Libraries where they are accessible through WorldCat and TLCat. They are also available through a searchable online database.  
<http://www.wsdot.wa.gov/Research/Reports/>
- Research Notes provide the end user with a summary review of a research project and describes how to implement the work in the field. They are designed to help the lay person understand how to use the research through photographs and more instructional details. <http://www.wsdot.wa.gov/Research/Working/Notes.htm>
- Workshops/Seminars: At the conclusion of selected research projects, a workshop or presentation may be conducted to explain the research and discuss the findings.
- LTAP Newsletter: The WSDOT Technology Transfer (T2) Center quarterly newsletter includes a section from the Research Office in each publication. The articles are prepared by Research Managers and Technical Monitors and focus on projects that may be of value to local government.  
<http://www.wsdot.wa.gov/TA/T2Center/T2Bulletin/2007Summer.pdf>
- A Research Listserve is in development and will be used to push information about research program activities and research results to interested employees.

- The WSDOT Lessons Learned Database may be a mechanism to distribute new methods to the user community. This is currently an internal-only database but may be made available to a broader community in the near future.
- Awards received for research projects are documented and shared through the Executive Monthly Report and web page.

#### **How o we ensure Tech Transfer occurs?**

- Encourage a culture of innovation (see additional attached information)
- Involve Division and Office Directors in the evolution and selection of research projects.
- Require Technical Monitor and Researcher to think of implementation needs, including technical transfer, when the project is developed.
- Include training in the research project scope when appropriate.
- Encourage the inclusion of technical staff in the conduct of the research project to foster interest in and use of the products.
- Provide “excuse-remover” funding as needed
- Build and facilitate relationships with WSDOT customers and researchers.

#### **How do you evaluate the effectiveness of Tech Transfer?**

- Developing awareness of implementation plans and technical transfer needs within Research Advisory Committees
- Work to capture stories of the use and value of research reports
- Testing the Research Performance Measures database

I'm very interested in learning how others evaluate their programs.

#### **Challenges to Technical Transfer**

- Technical Monitors do not have adequate time to develop implementation plans and information for Research Notes.
- Many technical staff targeted to review of draft reports do not review them. This can lead to “late objectors” to use South Dakota’s phrase. In accurate information can end up in published documents that are challenging to retract.
- Resources within the Research and Library Services Office are not adequate to maintain and develop material to push research results to user communities as much as needed.

#### **Ideas picked up from the Peer Exchange**

- More graphic/reader-friendly status reports. (WisDOT)
- Providing support for peer exchanges through the Research Office (WisDOT)
- The Project Status websites (Illinois)
- Using short targeted video clips (TxDOT)
- Video seminars (Caltrans)
- Investigate inclusion of performance measures in Research Notes (OHDOT)

## **Supporting a Relevant Research Program**

Telling the stories of success is key to maintaining the relevance and effectiveness of research. If research is understood to be valuable, it is more likely the culture to maintain and improve support for research will follow.

That's not to say this is easy. We're busy people. Short, focused messages that convey the benefits of work are important. Look for appropriate forums to share information. Use a variety of formats and delivery methods.

WSDOT has looked at why research is so successful in our State Materials Lab. They have a reputation, both internally and externally, for conducting very useful research. In their view, items that support their success are:

### ***A work culture that supports investigation***

- Business plan goals identify research objectives
- Position Descriptions include work tasks in support of research and testing
- Workload is managed to include research activities
- Management expects research project completion and monitors progress
- Research activities are results oriented and results are quickly and obviously incorporated into agency work methods/policy
- Research results are actively marketed through written summaries and advocacy in discussion
- Research benefits are captured and used as justification for additional resource devoted to investigation

### ***An environment of innovation***

- Experimental approaches are encouraged (New Products, Experimental Features, Literature Searches/Investigation, Lessons Learned)
- Employees are encouraged to participate in national research conferences to identify potential solutions and leverage the synergy possible with other innovators

### ***A strong network geared to problem solving***

- Relationships with researchers are developed and maintained beyond individual projects
- Connections with other states foster sharing of research results and partnering to address knowledge gaps
- Research results are used to influence national guidance through participation in national meetings

Certainly, support by the leadership of the department can help increase the expectation to use research as a tool in addressing agency challenges. And being an innovative agency can help attract new employees.

Lastly, it's important to be nimble, to think outside of traditional research and help investigate new areas of need. Programs should also be flexible – quick turn around research, synthesis studies, surveys may help meet the needs of the department. Research Programs should flex as the needs of the organization change.