RESEARCH MANAGEMENT PEER EXCHANGE
Hosted by the
Oregon Department of Transportation
October 25-29, 2004

Introduction

The Oregon Department of Transportation hosted a research management peer exchange October 25-29, 2004. The purpose of a peer exchange is to give research managers from state departments of transportation and the federal government a means to improve the quality and effectiveness of their research processes, both for the host department and the visiting research managers.

Members of the Peer Exchange Team were:

- Leni Oman, Director of Transportation Research, Washington Department of Transportation.
- James Sime, Manager of Research, Connecticut Department of Transportation.
- Sue Sillick, Research Manager, Montana Department of Transportation.
- Barnie Jones, Research Manager, Oregon Department of Transportation.
- Dave Reilly, Assistant Division Administrator, Federal Highway Administration, Oregon Division.

To prepare for the peer exchange, the team reviewed documentation describing Oregon's research procedures and program. During the exchange, the team discussed Oregon DOT's procedures and those used in other team members' respective agencies and organizations. The team also interviewed more than 50 people representing the following groups.

- ODOT
  - Research
  - Structures
  - Pavements and materials
  - Construction and maintenance
  - Geotechnical and hydraulics
  - Environmental
  - Roadway design and human factors
  - Safety, traffic and ITS
  - Planning and economic analysis
  - Public transit, rail, freight, pedestrian and cycle.
- Other
  - Transportation Research Group, Portland State University
  - Kiewit Center for Infrastructure Research, Oregon State University

The team also had the opportunity to meet over Tuesday lunch with ODOT Transportation Development Division Administrator Craig Greenleaf. In addition, we were able to enjoy a Thursday luncheon with Bob Raths, Director of the Oregon Technology Transfer (T2) Center.

Interviews followed a structured discussion format and provided the exchange team an opportunity to listen to concerns, experiences, technical accomplishments and suggestions from those interviewed.

Focus

The team began this peer exchange with a review of the previous Oregon Peer Exchange conducted in August, 2001.

The primary focus of the current peer exchange at Oregon DOT is Research Implementation: However, many other aspects of the research program were discussed within the context of 12 meetings, and included:

- Identification of research priorities
- Research project selection and development
- Project management and contracting
- Marketing and outreach

Major Observations of the Peer Exchange Team

1. The Research Unit is a recognized part of the agency and other offices seek their advice and assistance
2. The Research Unit staff seem to be respected and effective
3. Oregon's model for implementation appears to be effective and a high percentage of research is being used
4. People are sometimes unaware that a product or information is the product of the Research Unit
5. Elements of successful implementation include:
    a. Buy-in on project objectives at multiple levels
    b. Timeliness of results
    c. Clear communication of the role of TAC
    d. Well focused project scope of work
    e. Good study design
    f. Involving stake holders and implementers in project development (including outcomes), review, and oversight
    g. Outreach, marketing, and communication of results
    h. Well placed and involved project champion
    i. Active involvement by TAC and project manager
    j. Clear assignment of implementation responsibilities
6. Obstacles to implementation
    a. Turn over of key personnel (Risk increases with project duration)
    b. Lack of clear and researchable project scope
    c. Long duration projects may lead to loss of interest, development of work-arounds, or technology that is superceded
7. Opportunities and challenges with decentralization
    a. Short-term distraction

b. Standards and Practices groups may make good agents of implementation and communication, as well as project champions.

c. Connection of outsourced project delivery to research should be considered

d. Need to reconnect research to the new organizational structure (to assure needs identification and implementation)

8. Technological advances in information technology need to be embraced, computer network bandwidth capacity and access issues in particular
9. Reorganization of the RAC and ETGs is seen by stake holders as positive and as a good reflection of the agency's diverse research needs
10. Annual Report and Research Notes are very helpful in getting the word out
11. Research project management process is very inclusive and so supports implementation
12. The website is useful in information dissemination
13. Maintain a balance between low and high risk research

Opportunities Identified by the Peer Exchange Team

Leni Oman, Washington DOT

1. Investigate possibilities for and benefits of an organization modeled on the Connecticut Academy of Science and Engineering
2. Consider a regional pooled fund similar to the New England Transportation Consortium
3. Consider the size of projects as an incentive to attract better participation of academics and consultants
4. Look at MDT and Arizona DOT's research report guidelines
5. Create a list of publications generated by research projects
6. Develop a DOT briefing to students involved with DOT research to help explain needs, processes, and procedures
7. Develop Performance tools that describe project attributes
8. Work within WSDOT and with state universities to develop a video streaming seminar series

James Sime, Connecticut DOT

1. Review PSU web seminars and share with others at Connecticut DOT
2. Continue accumulating videos shorts as an element of implementation
3. Suggest an annual solicitation for information technology needs to the IT manager at ConnDOT
4. When available, investigate Washington DOT "Lessons Learned Database for Construction and Maintenance"
5. Investigate the ODOT research report on "Multimodal Project Prioritization Project"
6. Read book, "Road Ecology: Science and Solutions" by Forman, Sperling et al.

7. As an exercise, apply ODOT research project effectiveness categories to ConnDOT research project
8. Check on the existence of statistics describing pedestrian fatalities at transit stops
9. Investigate a baseball card format for research summaries

Sue Sillick, Montana DOT

1. Investigate ways to select projects more strategically and facilitate implementation such as through ETGs
2. Formalize MDT's implementation process and implementation plans
3. Begin publishing an annual report
4. Ensure project context is clearly translated to PIs
5. Investigate MDTs video streaming capabilities and ability to view PSU's conference series
6. Encourage peer reviewed publications resulting from MDT research
7. Make contact with the Montana Academy of Science to discuss their role in transportation research (use the Connecticut Academy of Science and Engineering as model)
8. Increase awareness of sources of research funding within MDT

Dave Reilly, FHWA

1. Stabilize FHWA Oregon Division involvement in Oregon's research program
2. Provide assistance to ODOT in instituting a body like Connecticut Academy of Science and Engineering
3. Provide notification to ODOT research manager of special funding opportunities that the Research Unit could utilize
4. Follow up on pedestrian fatalities at transit stops

Barnie Jones, Oregon DOT

1. More systematic feedback on project outcomes and implementation to ETGs and the RAC
2. Develop a branding strategy for research to address the observation that people don't recognize our work as being a product of the Research Unit
3. Reinvigorate marketing trips and presentations, particularly for construction and maintenance
4. Insist on project close out memos that document implementation accomplishments, expectations, and responsible parties
5. Consider the new organizational structure in future research marketing, outreach and project solicitation
6. Propose additions to the maintenance manual that identify and recommend research products like the night time construction decision model
7. Consider a regional pooled fund similar to the New England Transportation Consortium
8. Make contact with the Oregon Academy of Science to discuss the role they might play in Transportation
9. Document ODOT's role in professional workforce development through research projects.