



February 8, 2010

On behalf of the Oregon Transportation Research and Education Consortium (OTREC) and our partners, we are pleased to submit our comments on the USDOT strategic research direction, research priority areas and performance metrics for research outcomes. OTREC is a national University Transportation Center (UTC) that brings the academic perspective to the USDOT strategic direction. The following memo is divided into three sections: 1) Barriers to research innovation 2) Feedback on USDOT key priorities and 3) an Addendum on specific areas for research.

Barriers to Research Innovation

First off, we applaud an open call for comments on the USDOT research strategy. This approach supports partnerships and coordination among the larger research community that encompasses federal partners, university programs and cooperative research. To elevate research to the next level which requires even closer coordination and cooperation among various partners to answer cross-modal research questions, we feel that some barriers exist that stifle innovation and prevent collaboration. We feel as part of the USDOT research strategy, these barriers should be examined more carefully. These include the following:

- **Broaden federal match for University Transportation Centers (UTCs).** We see and understand the value in bringing match funds for federal research in expanding cooperation and showing local support for research projects. However, we urge USDOT to re-examine match requirements and allow other federal sources as match (e.g., other USDOT, NIH, CDC, NSF, etc.). In the next iteration of the USDOT research strategy, we envision close cooperation with other federal agencies such as the US Environmental Protection Agency to work on greenhouse gas emission issues, the National Institute of Health to examine linkages between transportation and health policies and the Department of Housing and Urban Development to assist in the interagency partnership for Livable Communities. Allowing federal match dollars from these potential partners would encourage cross-agency and cross-discipline collaboration. In addition, we urge you to consider federal transportation dollars from a metropolitan planning organization (MPO) to be eligible as match. Having a comparable program for MPOs similar to allowing federal State Planning and Research (SP&R) funds to be used as match would accelerate research innovation and adoption. For example, Metro (the Portland regional metropolitan planning organization) is a big and active research partner with OTREC.



While there is widespread cooperation and collaboration between Metro and OTREC faculty, the inability to use Metro federal funding sources (both in-kind and/or cash) is a real barrier for leveraging local resources. In addition, the smaller MPOs in Oregon want to partner on research but have no non-federal funding. Overall, we feel that broadening the federal match eligibility would broaden local partnerships, reduce duplication and improve efficiency.

- **Embracing the cross-modal perspective on transportation.** Transportation is at a crossroad. We see shifting priorities that look at transportation issues from a cross-modal perspective moving beyond traditional silos. The current processes for adopting best practices and innovation needs to also be examined to look at ways of encouraging or rewarding research with visible outcomes. For example, the current process for adopting and updating the Manual for Uniform Traffic Control Devices is difficult and stifles innovation. The state of the technology and innovative treatments being developed locally and regionally are constantly evolving. However, a shortage of funding directed at evaluating new, innovative technologies (including traffic control devices), limits the amount of innovation. And, innovation that is proven and could help to advance the state of practice across the country is often hampered by slow policy changes. An integral part of the DOT research program could be a way to help streamline the process for researching, evaluating and adopting new innovations.
- **Better tracking of how research is implemented.** Understanding and then effectively communicating the value and role of research is not something that is easy to do. We understand that measuring outcomes of research is difficult. Perhaps one step in that direction is to better track how research gets implemented. We feel that a potential barrier to understanding why research does not get implemented happens at the leadership level. This in and of itself is a research question that needs further exploration along with developing better tools that can be used to persuade or facilitate implementation of research.
- **Increasing the role of national university transportation centers.** The national UTCs are currently an underutilized resource and could be used in a greater coordination and leadership role to the USDOT. The ten national UTCs could help to specifically move the national research agenda forward as their research themes tie well with national priorities. The USDOT should lean on the national UTCs for greater assistance. This would be an appropriate role for national UTCs in close coordination with RITA.
- **Making better linkages between research groups.** We encourage more visible connections with and between national laboratories and research groups, including UTCs. RITA should continue playing that role and help to communicate the work that is



happening among the various groups. These connections again would help to broaden partnerships and promote collaboration.

DOT Key Priorities

We support the top five key priorities identified in the Request for Public Comment as part of the USDOT strategic direction. We do feel that a couple of other key areas could be emphasized and perhaps not fully captured in the key priorities as currently stated. These include the following:

- **Resiliency in the face of climate change & natural disasters.** Given the real and present impacts of recurring natural disasters and climate change on transportation infrastructure and communities across the country, more research and inclusion of resiliency across all key priorities is needed. Communities that are designed for change such as economic conditions, fuel prices, and climate will be better adept at bouncing back given harrowing times. There are clear examples such as the rebuilding efforts that currently continue as a result of Hurricane Katrina.
- **Consider equity issues across all priorities.** Vulnerable populations from the elderly to the socio-economically disadvantaged needs greater consideration across all key priority areas. Similar to resiliency, transportation equity is yet another cross-cutting issue. For example, those that are most at-risk on the roads are older adults, the poor who cannot afford more advanced vehicle safety features, and kids (where vehicle crashes are the leading cause of unintentional injuries and deaths). Another example is livable communities that provide good access to sidewalks and better linkages between transit, pedestrian and bike facilities that make these viable transportation options for the vulnerable populations that cannot drive or own a vehicle. Equity as it also relates to pricing and congestion management strategies are also examples where it needs to be recognized as a deleterious problem or something that cannot be overcome.
- **Align performance measures with new policy direction.** Prevailing performance measures that have been used to historically characterize our transportation system are at odds with the direction that policy decisions are headed. Measures of success are evolving to reflect cross-modal benefits and better represent the transportation system as a whole. We urge the research strategic plan to evaluate the applicability of traditional measures of such as benefit cost ratios or volume to capacity ratios across all modes, and explore other options that support the Department's policy direction.
- **Consider health as another key USDOT priority.** Given the obesity, diabetes, asthma and other chronic disease epidemics stemming from the lack of physical activity and air pollution in addition to the exorbitant health care costs the US is facing, we are



suggesting that health be included as a sixth priority. This would address issues such as increasing walking and bicycling, as well as the issues that relate to an aging population, and safety and accessibility issues of all users of the transportation system. Health impact assessments are also being integrated across the country as part of the transportation planning process and this perspective is gaining momentum at local levels.

- **Recognize active transportation as a mode.** We are pleased at seeing the USDOT include livable communities as one of its key priorities. While we understand that regional differences will shape the implementation of livability principles, we do believe that active transportation, such as bicycling and walking, needs to be recognized as a mode. This national recognition may be a catalyst for cities and regions that are seeing significant increases in bicycling, walking and non-motorized travel to help further implement infrastructure and safety programs. It would also encourage other areas to see active transportation as a practical strategy among others that can help address climate change, congestion, safety, health and equity issues.

As an addendum to our overall comments on the strategic direction of the plan, we are providing specific examples of research activities that should be considered in the overall USDOT research strategy.

We thank the USDOT for providing the opportunity to comment on the national strategic research direction. We look forward to seeing the results of this strategic planning effort. If you need further clarification on our comments or need any assistance, please feel free to contact me at 503-725- 2855 or jdill@otrec.us.

Sincerely,

Professor Jennifer Dill, PhD
OTREC Director



Addendum: Specific Areas of Research

Climate Change

- Developing models, tools, information, and practices that meet the current issues around greenhouse gas inventories in conjunction with the US Environmental Protection Agency. Existing models do not sufficiently capture climate change impacts and can be improved include:
 - tour-based models and dynamic traffic assignments;
 - non-motorized methods and models; and
 - econometric models integrating land use, regional economics, and transportation.
- There is a need to mine data related to vehicle CO₂ creation that can be used to compare projects effectively from crosscutting data sources from a vast array of DMV, DEQ, EPA, data from vehicle manufacturers for use in transportation models, simulations, and other analysis.

Mobility/Accessibility

- More research is need on methods, tools, information and techniques that further explore the transportation and land use connection with specific focus on density, mixed-uses, and access.
- More research is needed to better understanding how multi-modal corridors perform or should perform, particularly near mixed-centers.
- “Smart mobility” research on innovative information technology and systems that will facilitate the development of seamless connectivity among different transportation modes within urban areas.

Congestion Management

- There is a need to develop better tools for incident management and pricing. The research and results need to be integrated with other work such as climate change.

Safety

- Practical research is needed on traffic control devices and human factors to advance safety as part of support to the MUTCD.