

# FY 2009 RESEARCH PROBLEM STATEMENT

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### TITLE

**PEA-09-07 Feasibility Study of a Web-Based Household Activity Planner to Reduce Household Vehicle Travel and Improve Transportation Service Provision**

### PROBLEM (Description of need)

The need to reduce greenhouse gas (GHG) emissions will be the defining challenge for transportation over the next several decades. To achieve the state goal for GHG emissions to be 75% below 1990 levels in 2050, per capita vehicle miles traveled (VMT) will need to be reduced substantially. Achieving the necessary VMT reductions will require a number of different transportation and land use actions. One promising approach to reducing VMT is to work with households to help them plan their activities and travel choices to reduce vehicle travel. Unfortunately, existing methods for doing this are labor intensive and can only reach small numbers of households. Fortunately, the wide availability of internet services, advances in web-based applications, and availability of transportation data offer opportunities for greatly expanding access to activity and travel planning services and reducing household VMT.

### PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

The ultimate goal of this research is to deploy an intelligent web-based service that people can use to plan their daily activities and travel. Users will enter their activities, schedule requirements, priorities and destinations into the web interface and the service will provide suggestions for trip chaining, travel mode, and routing. The service can also provide feedback on savings in travel distance, time, cost and GHG emissions.

Previous work by ODOT and others suggests that such a service could be successful. The Trip Check web service provided by ODOT has demonstrated the popularity of a web-based traveler information service. Transportation options pilot projects sponsored by ODOT have demonstrated that providing travel options information to households reduces vehicle travel.

This proposal is to research the feasibility of developing and deploying a web-based activity and travel planning service. The research project would evaluate service requirements to meet objectives, public acceptability, data availability, and computational tractability.

### BENEFITS

The proposed web-based service would help households cope with rising travel costs and congestion. Vehicle miles traveled, GHG emissions and congestion would be reduced. This would result in transportation and environmental cost savings and more efficient use of the transportation system. The information provided to households, in addition to helping them economize on travel, would educate them about the need to act and the consequences of their actions. Information on household activity patterns would help ODOT and other transportation agencies improve their transportation models, identify transportation system needs, and identify the most productive transportation investments.

**CONTACT PERSON:**

**FOR RESEARCH UNIT USE ONLY**

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*NCHRP*  
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