

# FY 2008 RESEARCH PROBLEM STATEMENT

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### TITLE

**PEA-09-09 Tactically oriented freight-based transportation planning**

### PROBLEM (Description of need)

Freight plays a significant role in the economy and in transportation. Despite freight's importance it is often neglected in the transportation planning process. As revealed in the recent NCHRP study (NCHRP web-only document 112: Integrating Freight into Transportation Planning and Project-Selection Processes) on freight planning this is a significant impediment:

“One key to an ongoing and successful freight program is to integrate freight issues within an existing and accepted transportation planning program. While many states and MPOs have undertaken freight-specific studies – and many have even identified and deployed freight-specific projects – few have done so within the traditional transportation planning and programming process. Instead, freight planning efforts often are undertaken in parallel with the existing transportation planning process or on an ad hoc basis. That is, the identification, prioritization, development, and implementation of freight improvement projects in many areas is separate from the process used to plan, develop, and implement more “traditional” highway, transit, pedestrian, and bicycle projects. As a result, freight often is not viewed as a normal component of a state or MPO transportation planning program, making it more difficult for potential freight improvement projects to be included in discussions of statewide or regional transportation priorities or to compete for funds and planning resources.

The aforementioned study supports the integration of freight planning into the traditional transportation planning process as well as advocating the need for freight “champions” and improved freight data. Considering freight in a business decision model framework may yield substantially different results than would be evident in the conventional transportation planning process. This research seeks to understand that rather than bend freight to fit the confines of the transportation planning process, focused on capital-intensive projects with often long lead times and passenger traffic, if a different approach would yield improved results for freight projects. This approach would consider the business oriented location and distribution process which should have important add-on benefits for constructing an operationally oriented and quickly responsive transportation planning process. Cognizant of the land use planning framework in Oregon, a methodology needs to consider the boundaries this imposes on transportation decision making. Indeed the research proposes to evaluate a conceptual approach in the urban fringe since this is typically where major land parcels are available, where opportunities exist for transportation network improvements (both physical capacity expansion and operational and manageable cost levels compared to dense urban areas), and where major users of transportation network benefits in the form of warehouse and distribution are often sited.

**PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY**

The research will include:

1. Assembling a freight stakeholder committee to understand decisions related to location and the transportation network, focusing on warehouse and distribution centers at the urban edge
2. Development of business decision model
3. Alignment of business decision model with transportation process
4. Evaluation of test case of warehouse and distribution center location and operations
5. Comparison of approaches to traditional transportation planning methodology.

Reference:

[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_w112.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_w112.pdf)

**BENEFITS**

*Improved recognition of freight needs*

*Planning process explicitly geared to freight decision making*

*Testable approach allows scaling up to regional or statewide applications and other land uses and freight users.*

**CONTACT PERSON:**

**FOR RESEARCH UNIT USE ONLY**

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