

MOUNTAIN-PLAINS CONSORTIUM

PROJECT BRIEF | December 2013

Integrating Supply Chain Models in Urban Freight Planning



the **ISSUE**

Urban freight planning is more complex than urban passenger transport in many respects. The complexity of the planning process arises from the fact that freight movement in urban areas is a logistics chain for diverse goods moving from and to various locations and that the commodities categorized as urban freight are very broad and can be subdivided into diverse groups, each with its own set of supply chain models.

the **RESEARCH**

This study aims to present a holistic view on the importance of incorporating logistics into the freight modeling process. The flow of various categories of commodities is incorporated into the urban freight planning process to improve the decision-making process of individual firms or groups of firms to determine shipment size, consolidation and distribution center, and mode of transport. An agricultural freight analysis case study is used to illustrate the potential of the method of integrating supply chain models in freight planning.



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Project Title

Integrating Supply Chain
Models in Urban Freight
Planning

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the **FINDINGS**

Results for agriculture, manufacturing, transportation and warehousing did seem to represent those industries accurately. However, data suggest that using the employment ratio as a factor in modeling freight movement has some issues. Service companies with high employment skew the data with higher volumes of data than is accurate.

the **IMPACT**

Greater accuracy of freight modeling will result in improved urban transportation planning that will help identify critical infrastructure investment needs, and identify intermodal and other transportation hub locations that reduce congestion and truck traffic. The research suggests that integrating logistics into urban freight planning can improve the modelling process, enhancing its value as a tool for planners and decision makers.

For more information on this project, download the entire report at <http://www.ugpti.org/resources/reports/details.php?id=765>

For more information or additional copies, visit the Web site at www.mountain-plains.org, call (701) 231-7938 or write to Mountain-Plains Consortium, Upper Great Plains Transportation Institute, North Dakota State University, Dept. 2880, PO Box 6050, Fargo, ND 58108-6050.



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