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Catching Up with Growth: The Role of Stakeholders in Transportation Planning

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Over the last thirty years, large industrialized states have watched as the composition of their economies has changed over time from manufacturing to services and retail. This shift has placed demands on transit systems, originally designed to transport the workforce to an urban center. Now they are required to provide service to areas where jobs are, certainly in inner ring and outer ring suburbs, but particularly radiating outward from small urban areas along commercial corridors.

Attendant issues accompany this growth: communities or developments, such as malls, are often unwilling to support public transit; transit agencies that often plan service according to cost allocation models do not conduct gap analyses; finally, stakeholders (workforce development professionals, local government and the business sector) are often seeking to close gaps. Home to the second largest transit district in the nation, Illinois is no exception to this trend, particularly in the greater Chicago region as well as throughout small urban areas in the state. Today, small urban centers such as Waukegan, Elgin, and Aurora rarely have service after 7pm or on weekends. Inadequate transportation aggravates the spatial mismatch between jobs and affordable housing perpetuating racial and income disparities in access to affordable, convenient public transit and length of commute times.ⁱ

Stakeholders, such as workforce development professionals, local government and the business sector often embrace transportation as a resource to support economic development but view its limitations as a priority for action. These stakeholders, though, are often disconnected from the MPO process, and the larger problem of addressing gaps in transportation-to-work to support the new economy requires a consensus-building process to knit together projects that have often begun as member initiatives. Disconnected stakeholders mean a potential group of allies are uninformed, unable to support transit projects and often do not participate in public involvement activities of the local MPO.

This paper will explore the role of stakeholders, particularly the workforce development system, in identifying areas of job growth significant to the workforce, selecting priority projects to support commuting to these areas and working with transportation professionals to do it. This paper chronicles a community engagement process conducted by *Work, Welfare and Families* in five areas in

northern Illinois, including Chicago, Lake County, Elgin, Aurora and Rockford, the findings of this process and the lessons learned:

- That the workforce development system, and its participating partners (employers, economic development professionals, education and training organizations), are a resource for transportation planning;
- That despite well-documented recommendations to the contrary, regional and state transportation authorities rarely mingle with workforce development professions;
- That most communities, even large urbanized communities, are seeking flexibility in transit systems, service during off-peak hours and to areas where job growth has occurred;
- That developing brokerage systems is a model that can address these issues.

Formulating and Implementing a North American Short Sea Shipping Policy: Challenges and Impediments - Exploiting the EU Experience

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The paper addresses the matter of formulating and implementing an efficient Short Sea Shipping (SSS) Policy in North America.

Advances and initiatives in US and Canada are reviewed. The challenges various stakeholders are facing towards establishing SSS as an integral part of the National Transportation System are analyzed and critically discussed.

Impediments associated with the inherent difficulties of short sea transportation, as well as the structure of the Transportation System and Industry in these Countries are particularly addressed. It is widely recognized that institutional and operational impediments can offset external benefits of SSS, if not properly addressed and solved.

Particular attention is given to the potential of promoting International Short Sea Shipping in North America, by implementing the provisions and extending the scope of the Memorandum of Cooperation signed by US, Canada and Mexico.

The paper draws heavily on the experience gained in the European Union (EU) during the last fifteen years. Developments and policy measures taking place in the EU are systemically presented to assist in proposing a series of strategic and tactical measures in promoting SSS in North America. Four distinct periods in EU SSS Policy are considered and analyzed. The "political declaration" period (1990-1994), where the political incentive to shift cargo from roads to more environmentally friendly modes of transport was for the first time laid down in policy documents. The "public awareness" period (1994-1999), where the validity of SSS was substantiated through feasibility studies and demonstration projects, financed through various scattered sources, mainly through research funding. The PACT (Program Action for Combined Transport) Initiative (1999-2002), the first initiative dedicated to full scale modal shift actions. The MARCO POLO I Initiative (2003-2007), the first initiative where quantifiable goals and distinct project action categories were set up. Furthermore a future initiative, the MARCO POLO II Initiative (2007-2013), will extend the financial support to selected infrastructure projects.

Drawing experience on the "lessons learned" from the EU paradigm helps in proposing a coherent set of concrete strategic and tactical measures to be taken in promoting SSS in North America, covering institutional, investment, promotional and operational aspects of the Initiative.

Integrating Intermodal Freight Flows with Intermodal Terminals: Using Spatial Logistic Methods with GIS

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As rail and truck freight traffic have increased in the last several decades, attention has been given to the role of multi-modal, or intermodal, transportation to achieve operational efficiencies and economies of scale. Intermodal shipments involve the use of two, or more, modes of transportation in a closely linked, "seamless", movement of freight (or people). Such movements are typically associated with containerized freight shipping through major open-water ports, but also encompass truck-to-barge movements on inland waterways and truck-to-rail shipments across rail and highway networks.

There are two important components for the purposes of flow modeling and simulation of intermodal freight networks. These are the physical locations and characteristics of the transportation network components and actual commodity flow data. One common approach for analysis of intermodal freight flows has been through use of the Commodity Flow Survey (CFS) developed by the US Census Bureau under the sponsorship of the Bureau of Transportation Statistics (BTS). From these sources origin-and-destination (OD) matrices can be constructed to model the dynamics of freight flows between regions, states and localities throughout the United States. Unfortunately, the CFS is only compiled every 4 to 5 years (recent surveys have been for 1993, 1997 and 2002).

As an alternative, it is proposed that intermodal freight flows for the US rail network can be modeled using the 1% Waybill Survey maintained by the Surface Transportation Board (STB). Although this data represents only one percent of the total annual volume of rail shipping in the United States, the number of observations of the survey is over 350,000 per year, and recently has been greater than 500,000 observations per year. Moreover, it can be argued that most intermodal freight in the United States moves by rail at some point, so the database should reflect these movements. By using the Waybill Survey data, O-D matrices for intermodal rail freight can be more frequently updated and modeled.

In order to create these O-D matrices, accurate depictions of the physical intermodal rail network need to be established. This physical network then needs to be linked with the commodity flow data from the surveys. This linkage is constrained by the structures of the network and survey databases; there is no direct means of linking the databases in order to create an accurate O-D matrix.

The physical intermodal network is defined by the National Rail Network database maintained by the Federal Railroad Administration (FRA) and the National Intermodal Terminals Database developed by the Center for Transportation Analysis at Oak Ridge National Laboratories (ORNL), which are not directly linked with each other. In order to resolve this linkage issue, it is proposed that a probabilistic flow assignment model be established that would link the waybill survey data to the rail network and intermodal terminals databases using measures of spatial proximity and network analysis in combination with characteristic variables associated with the intermodal terminals and the freight flows. The resulting model of spatial probabilistic flow assignment is conducted using a spatial multinomial logit model and results of the estimation are presented.