



Technical Report 149

EXECUTIVE SUMMARY:
**Megaregional Trends of Passenger and
Freight Movement: Evidence from
National Transportation Data Sources**

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16. Abstract In January 2017 the United States Department of Transportation (USDOT) designated thirteen Beyond Traffic Innovation Centers (BTICs) throughout the country. The BTICs set a clear focus on transportation research, education, and technology transfers in US megaregions. Megaregion is a concept originated from geography in the 1960s. The concept was rejuvenated at the turn of this century by urban and regional planners for spatial planning and research. The designation of BTICs signifies recognition of transportation-centered megaregion research and policy-making. This project investigated megaregional trends of passenger and freight movement by exploring national transportation databases and travel surveys. Designed to further conceptualize megaregions from the transportation planning perspective and identify trends and issues of megaregional mobility, this phase of the project completed the following tasks: 1) compiled historic data sets on passenger and freight flows at the national, metropolitan, and county levels; 2) developed a data-mining frame consistent with the megaregion concept; and 3) investigated and visualized passenger and freight flows. Future work in this area will focus on connecting the study findings to national megaregional transportation investment and policy-making and to state and regional transportation plans, with a focus on the Texas Triangle and the Gulf Coast megaregions.					
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Executive Summary

This project raised issues that demand more exploration. Pending the full final report that properly investigates such issues, this document is provided to summarize the project activities. Our primary goal was to determine whether passenger and travel data support transportation planning at the megaregion level rather than at the level of smaller jurisdictions.

1.1 Background

In January 2017 the United States Department of Transportation (USDOT) designated thirteen Beyond Traffic Innovation Centers (BTICs) throughout the country. The BTICs set a clear focus on transportation research, education, and technology transfers in US megaregions. Megaregion is a concept originated from geography in the 1960s. The concept was rejuvenated at the turn of this century by urban and regional planners for spatial planning and research. The designation of BTICs signifies recognition of transportation-centered megaregion research and policy-making.

1.2 Approach

This project investigated megaregional trends of passenger and freight movement by exploring national transportation databases and travel surveys. Designed to further conceptualize megaregions from the transportation planning perspective and identify trends and issues of megaregional mobility, this phase of the project completed the following tasks: 1) compiled historic data sets on passenger and freight flows at the national, metropolitan, and county levels; 2) developed a data-mining frame consistent with the megaregion concept; and 3) investigated and visualized passenger and freight flows. Future work in this area will focus on connecting the study findings to national megaregional transportation investment and policy-making and to state and regional transportation plans, with a focus on the Texas Triangle and the Gulf Coast megaregions.

1.3 Research Efforts

This project was designed to analyze the validity of the growth of megaregions in terms of transportation around the region. Our analysis of the 2009 National Household Travel Survey (NHTS) data found that another dataset was needed to capture the demand of travel in megaregions. Using data from the Bureau of Transportation Statistics T100 Airflow data, this project identified trends in air flow density (passengers/distance) throughout the country. The airflow density can show how many people are traveling from one region to another, providing a metric for the increase in demand for transportation on those routes. This project sought to determine whether growth is truly occurring in a way that supports a megaregional approach to transportation, either validating or challenging the claims made by America 2050 (the Regional Plan Association's national infrastructure planning and policy program).

1.4 Preliminary Findings

This project results do not address why people are making more long-distance trips but do show an increased demand on airways and highways. To most effectively plan transportation infrastructure, we need identify the motivations for long-distance trips. Airflow data shows how the megaregions are forming and demonstrate that this rate of growth will continue. Given this trend, cities and counties will need to practice some form of coordination at a regional level to handle the number of people in and out of their jurisdictions. Megaregion formation is not inhibited by jurisdictional boundaries and other bureaucratic issues that slow down collaboration. The task for planners is to help facilitate the existing demand for megaregional travel and provide safe, efficient means of travel.