SHRP2 SOLUTIONS
TOOLS FOR THE ROAD AHEAD

Fast Facts — Innovations in Local Freight Data

Implementation Assistance Program: Freight Demand Modeling and Data Improvement

Data projects organized under the SHRP2 C20 Freight Demand Modeling and Data Improvement program seek to integrate into conventional practices new freight data sources and innovative means for enhancing data use and value. The projects also help to break down barriers between public and private sector stakeholders, creating new, mutually beneficial avenues of interaction. Better planning and operations to support freight transportation needs is a key goal. Projects are also designed to be beneficial to each grant recipient while providing elements transferable to peer organizations.

Projects below span two years, from 2014 to 2015.

Grant Recipient Agency	Project Synopsis
Florida	
Florida DOT District 4	**GOALS : Use emerging technologies for automated vehicle recognition and classification counts (distinguishing fuel tankers from other freight) for better understanding of goods movement.** Support regional planning for transportation needs by clarifying the complex supply chain of petroleum commodities at Port Everglades moving to the 12 counties of South Florida.
	EXPECTED OUTCOMES: New data collection and exchange methods and technologies to support county, regional, and State freight programs. Enhanced analytical approaches integrating energy commodity data into regional freight system planning and operations.
Kansas and Missouri	
Mid-America Regional Council	**GOALS: Combine existing data with new source of commercial freight waybill data (shipment origin, destination and cost) to formulate performance measures based on the true price of congestion (actual costs to move freight through congested areas).** Measure direct economic impact of infrastructure investment on the freight transportation system. Implement analysis techniques that combine near- and long-term trend analysis to account for changing market conditions.
	EXPECTED OUTCOMES: Codified data mining process to extract pertinent information from freight waybill data to improve analysis of trips and costs of freight movements in the region. Analysis by mode/distance/route to correlate cost and freight movement on congested links, and better relate all to regional planning.
New York	
Capital District Transportation Committee	**GOALS: Obtain timely freight data at the zip code or transportation analysis zone (TAZ) level that accurately characterizes freight movement in the region for use in regional freight planning and decision-making.** Develop a process to effectively collect, integrate, and maintain freight-related data from multiple sources, including innovative, easily obtainable private data and commonly used public databases.
	EXPECTED OUTCOMES: Enhanced relationship with freight stakeholders that leads to new data sources and enhanced data sharing. A data fusion process that can integrate multiple data sources, generate synthetic freight data at the disaggregate spatial level, and predict future freight activities for the region. The “Capital District’s Dynamic Freight Database” comprising new data, such as GPS, and information from in-depth interviews with stakeholders.

Grant Recipient Agency	Project Synopsis
North Carolina	
Winston-Salem Urban Area MPO	**GOALS: Produce a new data source and model recommendations to support the development of a freight component to the region's travel demand model.** Establish analytic approaches describing how elements of the freight transportation system operate and perform, and how they affect the larger transportation system. Identify and tabulate existing freight facilities, and conduct an establishment survey to collect more information on the facilities**.**
	EXPECTED OUTCOMES: Stakeholder relationships that produce freight facility information-sharing as a new freight data source for the region. Model recommendations for a plan of action to enhance the freight component of the Piedmont Triad Travel Demand Model.
Pennsylvania	
Delaware Valley Regional Planning Commission	**GOALS: Supplement ongoing freight data collection program, increase amount of data presented on freight data clearinghouse, *PhillyFreightFinder*, and enhance the data clearinghouse's replicability for use by agencies nationwide.** Identify and prioritize data needs of public and private sectors. Collect and integrate diverse data for core freight database, including data related to intermodal freight, freight demand and activities, and system performance.
	EXPECTED OUTCOMES: Supplemental data sources for the ongoing *PhillyFreightFinder* data collection effort and an increased amount of data presented on the clearinghouse. Plans to share and maintain the data/tool (e.g., open source products) to enhance the data clearinghouse's replicability for use by agencies nationwide.
South Dakota	
South Dakota DOT	**GOALS**: **Gain insight into the State's highly dynamic agriculture industry and related transportation system demands.** Augment historical trends data with unconventional data sources including waybills, privately held and remotely sensed data. Support freight forecasting at local and State levels, with applicability at regional and national levels, especially in areas with a large agricultural presence that stresses economic importance of rural agricultural freight connectivity.
	EXPECTED OUTCOMES: Interaction with railroads, shippers, agricultural industry experts, and local producer groups to enhance collection of agricultural shipment data. Formal recommendations on the outcome of the research that can be shared with practitioners.
Washington	
Washington State DOT	**GOALS: Understand interplay between public policy, market forces, and supply chain behavior, particularly with regard to natural gas fuel implementation and greenhouse gas reduction.** Focus on food distribution supply chains in central Puget Sound and the cross-State wheat supply chains. Support truck trip modeling by collecting truck count data at food distribution facilities under variety of land use scenarios. Use interviews and questionnaires to collect information on characteristics of business and likely behavioral responses (route and mode choice) to various conditions.
	EXPECTED OUTCOMES: Shipment data, collected from freight originators, receivers, and transportation providers, that sheds light on how decisions are made for movements across the supply chains. Recommendations for integration into Statewide freight planning process.

For More Information

FHWA RESOURCE CENTER

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SHRP2 SOLUTIONS

The second Strategic Highway Research Program (SHRP2) is a partnership of the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the Transportation Research Board (TRB). TRB completed the research, and now FHWA and AASHTO are jointly implementing the resulting SHRP2 Solutions that will help the transportation community enhance productivity, boost efficiency, increase safety, and improve the reliability of the Nation's highway system.