SHRP2 SOLUTIONS
TOOLS FOR THE ROAD AHEAD

Freight Demand Modeling and Data Improvement (C20)

A strategic roadmap for making better freight investments

Challenge

Efficient freight and commercial truck travel is essential to national, state, and local transportation infrastructure planning and our economic well-being. Understanding and forecasting freight flows is critical to planning for future transportation capacity, operation, preservation, safety and security, energy and economy investment needs. Incorporating freight movement considerations in the transportation planning process, however, may be difficult. Many current freight demand forecasting models and data sources are more appropriate for passenger transportation than for forecasting freight movements and understanding freight travel behavior.

Freight data and modeling tools used in planning could also benefit from a single clearinghouse for freight information. Much of the most important data are generated by private sources that are difficult to replicate in the public domain. Although government and industry officials agree that freight planning is important and that freight projects can create many benefits, new tools are needed to advance the state of the industry.

Solution

The Freight Demand Modeling and Data Improvement (C20) product offers a road map that will lead to improved freight data sets and freight modeling practices. The project includes the Freight Demand Modeling and Data Improvement Strategic Plan, which outlines an organizational approach that will help identify freight modeling and data priority needs, spur innovative ideas, and result in breakthrough solutions for wide application.

This product encompasses an analysis of the current state of the practice, freight decision making needs, and the gaps between current freight forecasting models and real-world needs. The project also produced a strategic plan to guide future advances in freight modeling and data. The plan identifies seven strategic objectives to serve as the basis for future innovation in freight demand modeling and data and to guide both near-term and long-term implementation. Finally, C20 recognizes thirteen Research Initiatives (RI) that represent near-term opportunities to advance the seven strategic objectives. A Global Freight Research Consortium is planned to serve as an ongoing international forum of key stakeholders to expand the dialogue on freight analysis and data innovation.

Benefits

Freight planners and decision makers will benefit from having a consistent approach to evaluating transportation projects that affect freight movement. Creating better data and models will enable state, regional, and local planners to better predict freight movement trends, and make more informed project investment decisions.

Save Lives

Improved decision making on project investments can hasten the development of freight projects, including safety and security projects.

Save Money

Targeting limited investments to deploy state of the art modeling practices to catalytic freight projects can increase a region's economic vitality and stretch limited resources across many states and metropolitan regions.

Save Time

Improved freight data sets and advanced models can expedite decision making.

CAPACITY

One of four SHRP2 focus areas, Capacity products help transportation organizations to systematically integrate environmental, economic, and community requirements into the analysis, planning, and design of new highway capacity.

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Visit: www.fhwa.dot.gov/GoSHRP2
Learn more about products, case studies, and implementation assistance.

Next Steps

The Freight Demand Modeling and Data Improvement Strategic Plan has been completed and follow-up work has prioritized initial data collection needs. The major next steps under this effort include deploying and evaluating 11 proof of concept pilots, professional development activities such as workshops and cross-industry partnerships, and research activities including international literature scans.

The Implementation Assistance Program

Implementation assistance is available to help State departments of transportation (DOTs), metropolitan planning organizations (MPOs), and other interested organizations deploy SHRP2 Solutions. A range of opportunities is available to raise awareness of SHRP2 Solutions and to encourage early adoption of these products. Application periods are offered approximately twice per year. Each product selected for implementation assistance has the potential to deliver more efficient, cost-effective programs to meet the complex challenges facing transportation today.

How can you learn more?

Visit: www.fhwa.dot.gov/GoSHRP2

- Additional product information
- Information about how this product is being used in the field
- Contact information for peers who are familiar with this product
- Links to research reports

Contacts

Ed Strocko (FHWA)
ed.strocko@dot.gov

Keith Platte (AASHTO)
kplatte@aashto.org

About SHRP2 Implementation

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.