Improving Intermodal/Multimodal Connectivity

Abstract

Many infrastructure providers, service providers and public agencies tend to focus on their own assets, service and projects without relation to the system or services up or downstream in the supply chain. This pertains to both passenger and freight systems. What is needed is a more integrated and intermodal thinking and practice.

The issue, particularly in the passenger arena, may be attributed to a combination of organizational structures and funding. As suggested, agencies tend to maximize their own interests without taking into account other parties involved in the transportation network. One critique attributes blame to the source of funding, that is, separate modal interests in the federal government. Specifically, you have highway, transit and railroads operating as separate interests all competing for scarce resources as opposed to a single entity concerned about all surface modes.

Mobility management will play an ever increasing and important role in the future of passenger transport as more and more people come to rely on the local transportation network. It will move traditional transit operators away from fixed-route operators to more collaboration with other transportation providers to provide a full range of services to users. These changes will be to a greater degree consumer driven.

On the freight side of the equation, the objective is to have a relatively seamless, cost efficient system that minimizes paperwork, unnecessary movements, and delivers the goods to the customer in a timely manner. Funding can also influence decision making where one segment in the transportation system is disadvantaged and causes poor connectivity for the entire movement. Future governmental funding could mandate that the issue of intermodal or multimodal connectivity be addressed to the satisfaction of all participants.

Passenger Connectivity

- Between 2005 and 2010, 3.5 million rural residents lost access to scheduled intercity transportation. Currently 11% of rural residents lack access to intercity transportation.

- In the U.S. there are a myriad of transportation systems each with individual connections and a serious lack of intermodal/multimodal connectivity, in part because systems for each mode evolved independently at different times.

Primary Resources:

- Number of Facilities by Modes Served

- Rural Areas with Intercity Rail Transportation Coverage in 2010
Passenger Trends

- In the U.S. the millennial generation is driving a push for more intermodal/multimodal options with nearly 70 percent of millennials reporting to use multiple travel options several times or more per week.

- Since 1995, transit ridership has grown by nearly 3 billion trips. Reasons for this increase include continued and constant investment in public transportation, as well as renewed interest in central city living (urbanization).

- Due to a lack of affordable and easy to access public transportation, the level of income directly affects a person’s mobility.

Sharing Economy and the Internet of Things

- The internet and mobile technology offer creative new ways to connect people to the intermodal transportation options available to them. The California Department of Transportation has been studying the potential use of mobile and web based apps to encourage smarter travel choices.

- The emergence of the sharing economy both threatens existing passenger services and has the potential to revitalize them with fresh services and increased access.

  - Some of these new innovations include Uber, Bridj, Lyft, RelayRides, Zipcar, etc.

Intermodal Freight Connectivity

- Intermodal/multimodal connectivity in the freight industry can increase more quickly than in the passenger industry because it relies more on private entities than the government to initiate and construct intermodal hubs.

- Intermodal/multimodal connectivity and cooperation on the freight side has been largely driven by customers’ desires for efficient, fast, reliable, and environmentally friendly shipping options.

- Intermodal/multimodal shipping provides many benefits to both businesses and the public. It is the fastest growing sector of the freight industry and is projected to continue growing in the future.

Freight Movement is Multimodal

Every mode of transportation moves freight, but trucking is the primary mode of freight travel.

- Shifting 10 percent of long-haul freight from truck to rail would save nearly one billion gallons of fuel annually, according to a study by the Federal Railroad Administration. And replacing over-the-road with intermodal transportation for shipments of more than 1,000 miles reduces greenhouse gas emissions by 65 percent, according to the Environmental Protection Agency.

- There has been continued growth in the intermodal industry and a shift from intermodal being used as a substitute service during peak shipping times to intermodal becoming a viable and often preferred mode of transportation.

- As promoted by CSX Transportation Intermodal, many companies are utilizing transportation management systems to determine the combination of modes and routes that make the most cost effective and efficient transportation path for their goods.

Industry Cooperation

- Individual organizations across all transportation modes benefit from an increase in intermodal shipping.

- Alliances between ocean carriers have proven effective and may yield even more positive results when these alliances are extended to landside operations.

- Industries will benefit most when they work together to create a system highlighting their combined strengths, however, the current political system focuses on each industry individually instead of as a cohesive system which pits industries against each other as they are forced to defend their own interests and fight for individual and precious funding as well as favorable legislation.

Intermodal/Multimodal Policy

- Federal legislation and regulation can have a drastic impact on the viability of intermodal shipping and the economies of the different transportation segments.

- The FAST Act transforms the National Freight Policy provisions of MAP-21 into a new program that funds freight-related highway improvements. It authorizes a five-year total of $6.2 billion for the program.

- Chances are that policy will likely be driven by more nimble private interests and entrepreneurial companies who can harness the power of the Internet of Things more quickly and efficiently than the public sector.