Transportation Data:

Critical Issues Facing Data Collection

Bruce Lambert
Office of Freight Management and Operations
Transportation is a national concern

Between 1980 and 1998
  Vehicle travel up 72%
  Road Miles up 1%

Affirmed by:
  Texas Transportation Institute Congestion, Traveler Surveys, etc.

Travel Growth + Limited Capacity Expansion = Congestion
Transportation Research - Why

- What are my potential markets,
- What infrastructure is needed,
- What are the emerging trends,
- What are the transportation deployments,
- What is my competition thinking,
- The simple need to know,
- Asked for by decision makers or to satisfy program requirements
**Transportation Data - What is it?**

Contains information on:
- Infrastructure location (terminals, facilities, roads, etc.)
- Vehicle Use (trucks, trains, etc.)
- Origins and Destinations
- Driver information
- System performance

*No ideal database exists at the moment...*
The Characteristics of Transportation Data

- When Collected:

- When Processed:

- When Used:
When Collected:

- When Collected?
  - Transactional or post transaction

- How Often?
  - Monthly, per transaction, etc.,

- By Who?
  - What is mandate for collection?
When Processed:

- Who processes information?
- How often is the information processed?
- Who pays for processing?
- How is the information made available?
- Is the information filtered before being released?
When Used:

- Is it used by the same people who collected information?
- Is the information readily available in a finalized form, or is additional post-processing required?
- Is data converted to intelligence?
- What is publicly or privately released?
Freight Transportation Perspectives

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Public Sector
(States, MPOs)

Private Sector
(Shippers, Carriers)

Local

Regional

National

Global
Freight Transportation Planning Is Complicated By:

- Limited Funds
- Limited Expertise
- The false belief that all data are readily available
- Conflicting and incompatible data sources
- Data timeliness
- Traditional Focus on Passenger movements
Many Public/Private Partners in an Intermodal Movement
Freight Flow Data
The analysis used the following data elements

- 1998 Annual Volumes
- County-level flows
- International and domestic flows
- STCC commodity groupings
- Modal splits (truck, rail, air, water)
- Modal Networks
- Sources (Bureau of Transportation Statistics, Rail Waybill, PIERS, Reebie Transearch Database, other private data sources)
Uses of the FAF

- understand the geography of market areas
- understand the regional significance of corridors and nodes
- “how reliant is the Nation on me…how reliant am I on other areas of the Nation”
- display future flows…identify changing traffic patterns resulting from differential regional growth
- conduct “what if” analysis…Panama Canal, global manufacturing shift, NAFTA extension, etc.
Truck Freight Flows, All Commodities
All truck types; highway freight density in tons
Network segments that exceeding or approaching to capacity (based on HPMS Volume to Service Flow Ratio (VSF))
Other Analysis

Working with Other FHWA Offices
- Truck Diversion
- Travel Time in Freight Significant Corridors
- Cost – Benefit Analysis
- Planning Tool Kit

Working with other DOT Agencies
- MarAd
- US Army Corps of Engineers
- Office of the Secretary, Office of Intermodalism
The FAF and State and Local Agencies

We are developing a “freight toolbox” but:

● Are these the correct tools?
● Will these tools raise the awareness to program projects that are beneficial to freight?
● Can tools be developed to balance the wide range of American municipalities?
The Limitations:

- Varied sources of transportation information exist for different modes, commodities, etc.
- Little consistency between sources generally collected for system monitoring purposes, not planning
- Timeliness
- Few efforts underway to improve data
- Collection methods and reporting formats and requirements make comparisons across databases difficult
- Differences between internal and external statistics
- Staffing requirements-learning curve, and traditional focus away from freight transport, turnover by planning staff
The real challenge....

Data and Research must be an ongoing activity providing relevant, timely, accurate, cost-effective information for decision makers.

How do we encourage freight interests (both private and public) to provide this information?
This should not be the end of Transportation Data…
FHWA Office of Freight Management and Operations, USDOT

http://www.ops.fhwa.dot.gov/freight

Bruce Lambert
bruce.lambert@fhwa.dot.gov
202-366-4241