

Measurement of All Freight Movement in the United States

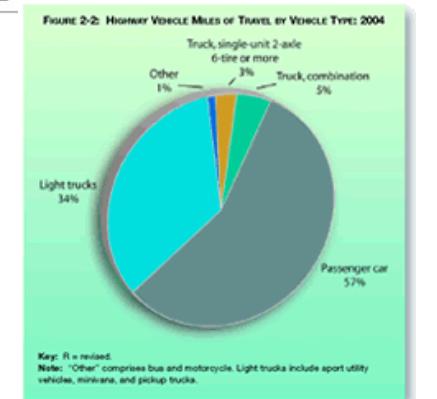
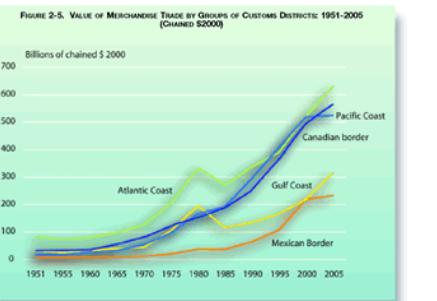
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U.S. Department
of Transportation

**Bureau of
Transportation Statistics**

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The Challenge

- **Intermodal Transportation Database (49 USC 6303)**
 - BTS is required to provide “information on the volumes and patterns of movement of goods, including local, interregional, and international movement, by all modes of transportation, intermodal combinations, and relevant classification”
- **BTS and Census survey 100,000 shippers every 5 years**
 - Commodity Flow Survey covers 2/3rds of the tonnage
 - How to estimate the missing pieces and provide more timely results?

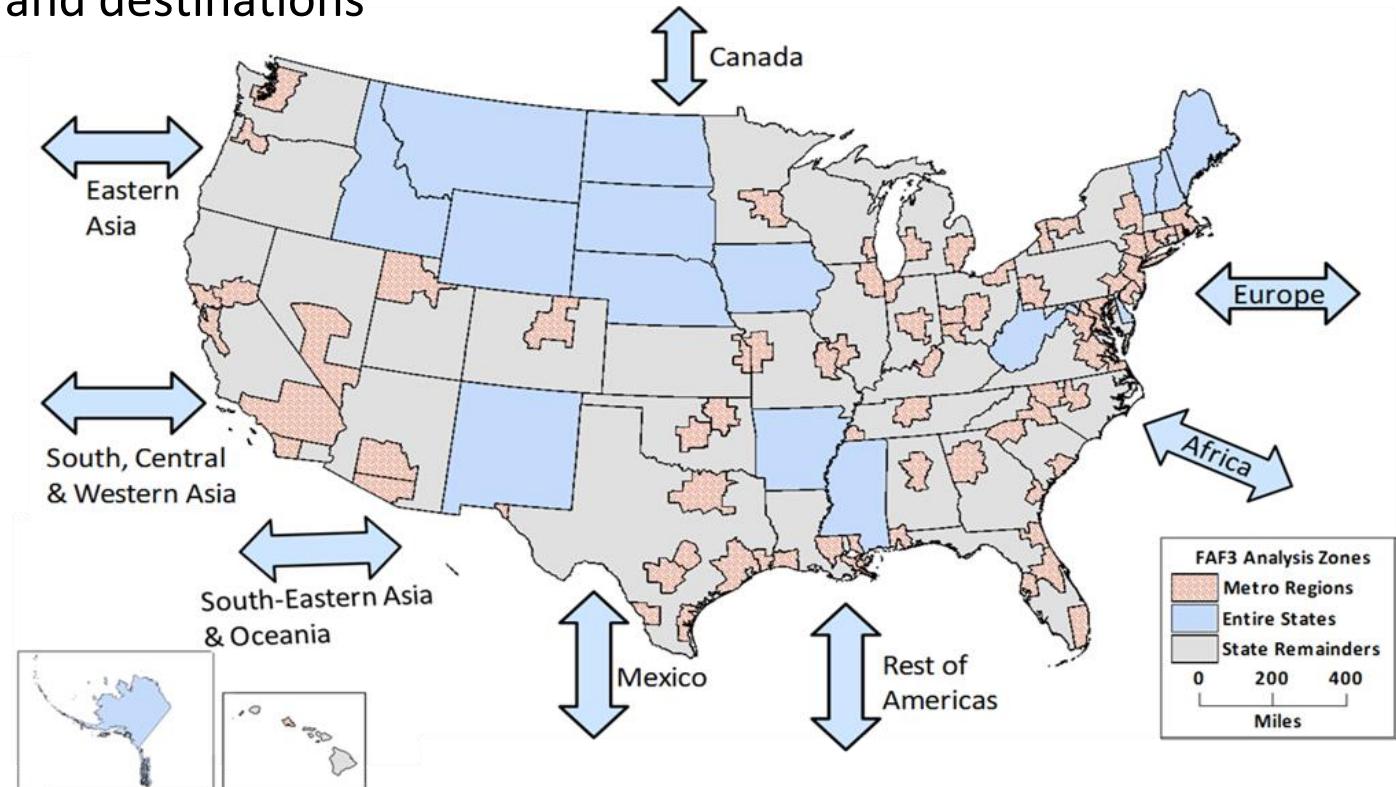
Freight Analysis Framework (FAF)

- A benchmark database of freight tons and value by 8 modes of transportation by over 40 classes of commodities by 130 origins by 130 destinations for each Economic Census year starting in 1997
- Annual provisional updates of the database
- 30-year forecasts of the database
- Assignment of tonnage moved by truck to individual highway routes

Regions

- Domestic regions are from the Commodity Flow Survey

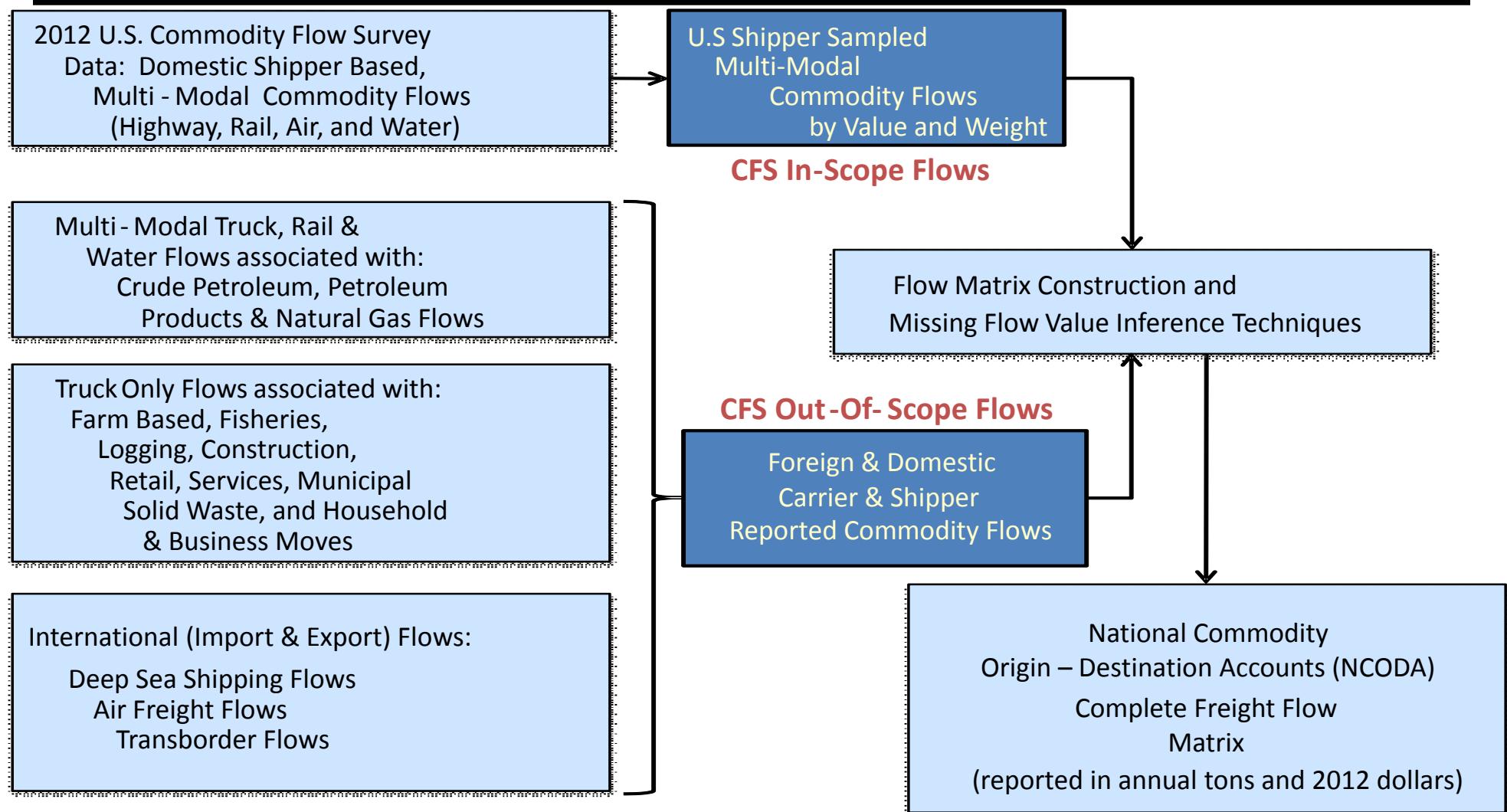
- State portions of major metropolitan areas as an origin, destination, or gateway
- Balance of state as an origin, destination, or gateway
- International origins and destinations



Major Data Sources

- **Commodity Flow Survey (CFS)**
- **Transborder Freight Data**
- **U.S. Merchandise Trade Statistics**
- **T-100 air traffic data**
- **Waterborne Commerce Statistics**
- **Census of Agriculture**
- **Energy Information Administration**
- **National Transportation Atlas Database**

Creating the Benchmark



Products



Freight Analysis Framework Version 4 (FAF4)

Freight Analysis Framework Data Tabulation Tool (FAF4)

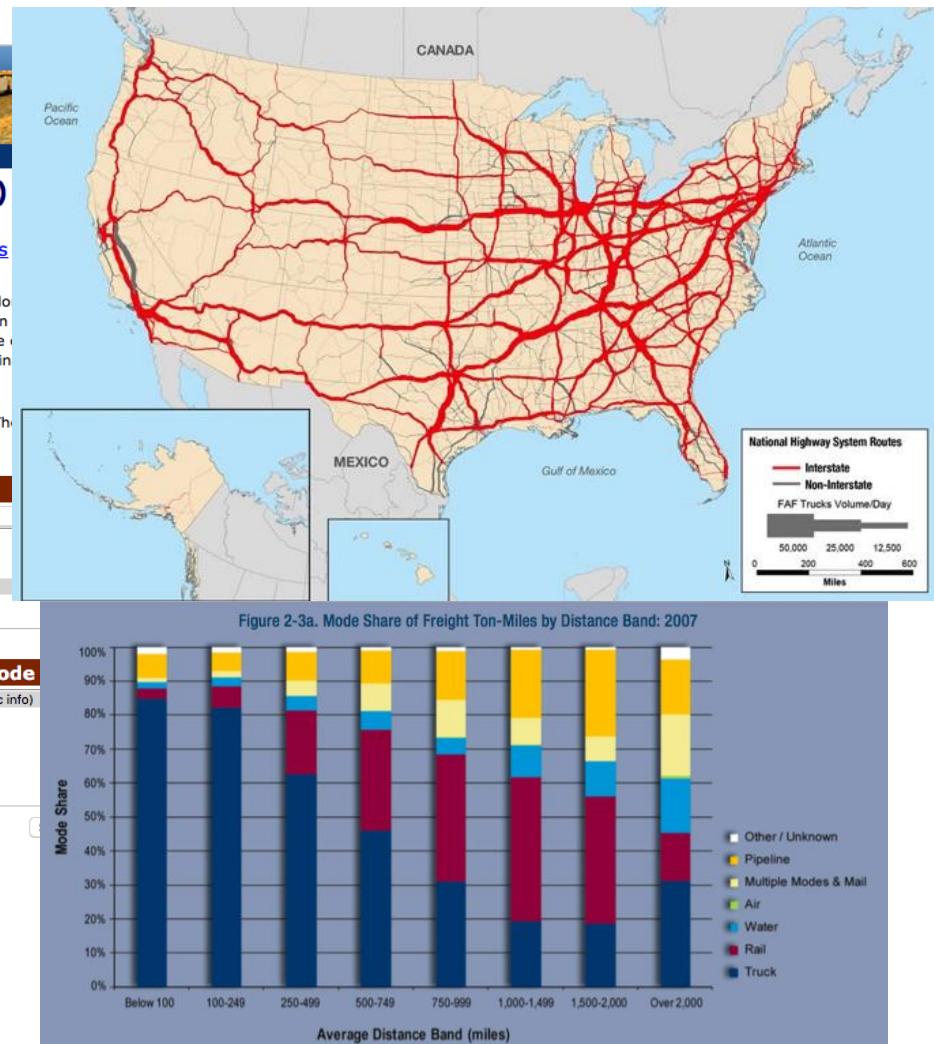
Total Flows **Domestic Flows** **Import Flows** **Export Flows**

This option is provided for users interested in tabulating FAF⁴ data to examine total flows moved between domestic origins and destinations and includes both domestic and foreign shipments. For import shipments, the origin is the zone (state or region) of entry, and for export shipments the destination of the flow is the zone (state or region) of exit. Mode of transportation for this tabulation is the mode used from zone of entry to the domestic destination, from domestic origin to domestic destination, and domestic origin to zone of exit.

Note: Currently, only 2012 data is available. Data for other years will be added as they become available. The measures used to tabulate flows are **thousands of tons** for weight, **millions dollars** for value, and millions for ton-miles.

Year	Origin	Destination
1997	Origin state-specific info	Destination state-specific info
2002	iowa	Select all (50 states & DC)
2007	Kansas	Alabama
2012	Kentucky	Alaska
2013	Louisiana	Arizona
2014	Maine	Arkansas
2015	Maryland	California

Distance Band	Measure	Commodity	Domestic Mode
Combine all (no specific info)	Select All	Combine total (no specific info)	Combine total (no specific info)
	Tons	Select all	Select all
	Ton-Mile	01 Live animals/fish	1 Truck
	Values	02 Cereal grains	2 Rail
		03 Other ag prods.	3 Water
		04 Animal feed	4 Air (include truck-air)
		05 Meat/seafood	5 Multiple modes & mail



Issues

- **Demand for greater geographic detail**
- **How to determine quality**
- **Commodity classification versus product classification**
- **Administrative records and other alternative data for improved quality, especially for annual updates**
- **Alternative strategies for improved timeliness**
 - **Benchmark with expanded updates**
 - **Continuous measurement**
 - **Other?**

Thank You

For additional information on BTS programs and products visit:
www.bts.gov

For additional information on USDOT freight data programs and products visit: freight.dot.gov

