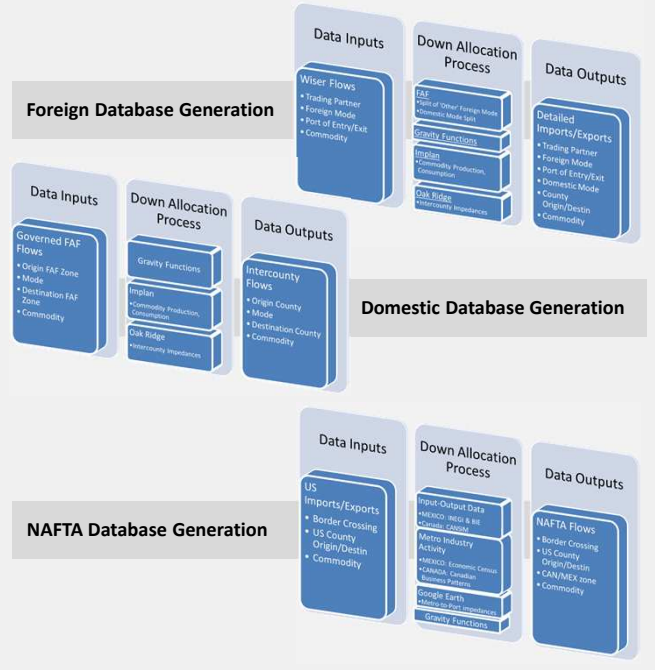


Visualization of Freight Data (vFreight[®]):

An Applied Approach to Disaggregation and Dynamic Display of Commodity Flow Based On County-to-County Trade Data and National Level Freight Data

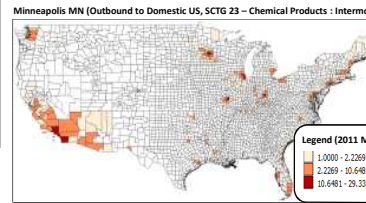
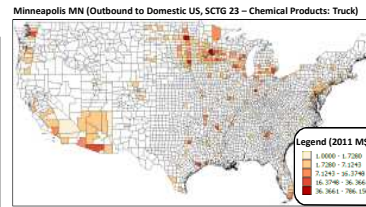
Data Development Process



Rich county to county/country freight data provides a picture of economic activity not seen before. Visualization can be achieved to easily communicate trends based on specific partners, commodities, and modes of transportation to get the insight you are looking for.

Compare commodity movement by mode:

- Assess major market locations for each of 43 commodity types;
- Track volume (tons) and value (US 2010\$)
- Visualize diversion potential



All 2011 Commodities Going Through the Port of New Orleans to be Exported (By County of Production, Ktons)



Assess inland markets for ports, border crossings or major inland multimodal facilities:

- Identify locations
- Determine volumes and value of export/imports
- Look at competitive market shares

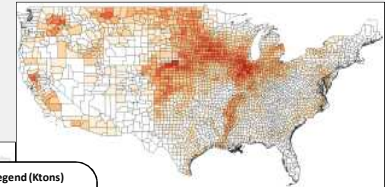
Isolate inland markets by commodity type (All Commodities v. Coal):

- Assess major export markets and connectivity requirements

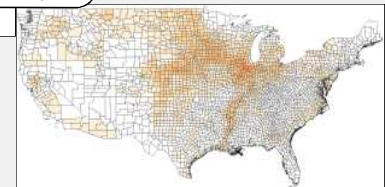
Total 2011 Coal Going through the Port of New Orleans to be Exported (By County of Production, Ktons)



Total 2011 Cereal Grain Commodities to be Exported (By County of Production, Ktons)



Total 2011 Cereal Grain Going through the Port of New Orleans to be Exported (By County of Production, Ktons)



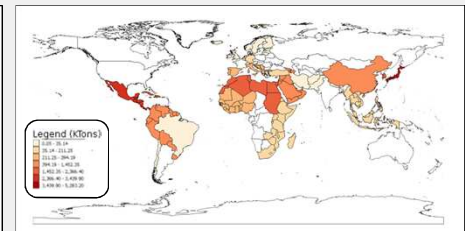
Isolate inland markets by commodity type (Cereal Grains):

- Examine both production patterns and commodity-specific market shares
- Identify export regions/states with "stake" in port investments

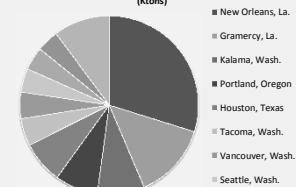
Identify major trading partners served through each port or border crossing:

- Assess current market shares
- Determine future market strategies
- Examine competitive export markets and ports of entry/exit

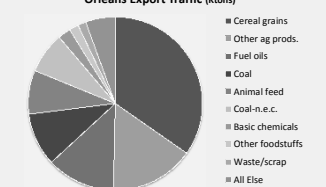
International Destinations for Cereal Grains Exported From US via New Orleans Port (2011 Ktons)



2011 Port Share of Cereal Grain Exports (Ktons)



2011 Commodity Share of Port of New Orleans Export Traffic (Ktons)



Data Availability & Comparison

Properties of vFreight[®]:

- Consistent with the US Department of Transportation's Freight Analysis Framework (FAF3)
- Provides county-level detail not available in FAF3
- Identifies trade between US Counties, 18 countries and 22 country groups, including port of entry/exit
- NAFTA database includes detailed information about commodity flow by domestic mode between US counties and 76 Mexican cities plus 29 "Rest of State" zones, and 33 Canadian cities plus 13 "Rest of Province" zones
- Fully integrates with TREDIS[®] Freight analysis system
- Interactive visualization tools generate maps, tables and spreadsheets for reports and presentations through vFreight[®] Visualization and Information Generator

Applications for vFreight[®]:

- Demonstrate national and international linkages for domestic freight movements
- Identify key ports of entry/exit for traded commodities
- Support MAP-21 analysis at levels of geographic detail consistent with statewide and regional planning
- Provide effective ways of graphically sharing complex trade and commodity flow data with policymakers and the public

Authors:

- Stephen Fitzroy, EDR Group
- Brian Alstadt, Adaptive Economics, Inc.
- Derek Cutler, EDR Group

Available Commodity Detail		Domestic	NAFTA	Foreign
Modes	Truck	✓	✓	✓
	Rail	✓	✓	✓
	Air	✓	✓	✓
	Water	✓	✓	✓
	MM & M	✓	✓	✓
	Pipeline	✓	✓	✓
	Other	✓	✓	✓
Commodities	2 Digit + SCTG Codes	✓	✓	✓
Units	Value (US 2010\$)	✓	✓	✓
	Volume (tons)	✓	✓	✓
Geographic Detail	County Level Detail	✓	✓	✓
	Canada: 47 Metro & 'Rest of Province'	-	✓	-
	Mexico: 97 Metro & 'Rest of State'	-	✓	-
	40 Countries and Regional Aggregations	-	-	✓