This is a rendering of the new channel that will connect the third set of locks in the Pacific to the Gaillard Cut. The new Borinquen Dam separates the existing channel (at right) from the new channel built to handle post Panamax ships.
Volume in million PCUMS per year

- Capacity
- Demand

Economics of Iowa

Producer State = Iowa

$18.5 Billion exports 2012
$1.1 billion - $2.5 billion in transportation costs

84% of Iowa Exporters are Small to Medium-sized companies

"Freight is our competitive advantage."

2008-2012 Manufactured Exports grew 20%

95% of customers for Iowa products are outside the US
Modern Infrastructure for Modern Agriculture & Manufacturing

Predictability + Reliability = Performance;
Logistics Management

21st Century Farm-to-Market System: Develop a new comprehensive transportation system to move products to global marketplace seamlessly on Road, Rail, and Water

Improved flow from:
Point of Origin to Point of Consumption

Tomorrow’s Agricultural Transportation System needs to be smaller but built to a higher level

Freight Corridors enriching ability to transfer products easily from mode to mode - road, rail, water, air

Safety – Mobility – Economics focused on competitive edge for Iowa’s businesses and citizens.
Linking Transportation and Economics

Supply Chain Network Design =
Discipline to determine the optimal location and size of facilities and the flow through network

Demand-Based Supply Chain Optimization =
- Applies supply chain network and optimization techniques to Freight transportation network
- Focuses on end users' demand
- Identifies opportunities to use lower cost modes and additional infrastructure elements to enable lower cost routes that meet constraints
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In Process:

- Iowa Statewide Freight Transportation Network Optimization
- Iowa Supply Chain Business Intelligence (BI) Priorities and Data Warehouse
- Business Analytic Capabilities
- Value added Supply Chain Design for Iowa Companies (Small and Mid-sized) linked to Transportation Improvements
- Energy Transportation - Propane (Underway), Economic Opportunities & Preparedness
What Data?

- Domestic
  - Import/Export
    - 43 commodities
      - Modes included: Truck, Rail, Water, and Intermodal
  - Network Capacity Data
    - Freight transportation capacity (in tonnage) for all 99 Iowa counties
    - Networks included: primary roads, rail, and inland waterway
  - Value Added
    - FAI 3.4 freight flow data disaggregated to all 3,143 U.S. counties and their 40 foreign trading partners
  - Transportation
  - Business Analytics
Network Capacity Data

- Freight transportation capacity (in tonnage) for all 99 lower 48 states
- Networks included: primary roads, rail, and inland waterways

Demand Forecast Data

- Domestic
  - FAF3.4 2040 forecast data disaggregated to all 3,143 U.S. counties
  - Modes included: Truck, Rail, Water, and Intermodal
  - 43 commodities
- Import/Export
  - Iowa 2040 forecast import/export data disaggregated to 99 Iowa counties and their 40 foreign trading partners
  - Modes included: Truck, Rail, Water, and Intermodal
  - 43 commodities

Transportation Cost Benchmark Data

- Full Truckload (FTL) shipment distance and cost data for multiple equipment types
- Less-Than-Truckload (LTL) shipment distance and cost data for multiple equipment types
- Rail shipment distance and cost data for multiple equipment types
- Barge shipment cost data in 4 seasons (winter, spring, summer, and fall)
- Intermodal shipment cost data
- Ocean container shipment cost data for import/export
- A number of socio-economic datasets for data disaggregation
- Ocean container shipment cost data for import/export
- A number of socio-economic datasets for data disaggregation

**Top 100 Inbound Truck ODs**
Polk Co. - 726,611
Wilkin Co. - 698,159
Redwood Co. - 684,883
Renville Co. - 567,287
Blue Earth Co. - 549,872
Total MN Counties = 11,668,756

Polk County, Minnesota:
CHS, Inc, Grain Elevator
Farmers Elevator & Trading Company, a $17 million grain elevator
Beltrami Farmer’s Elevator, a $10 million grain elevator
Fosston Co-op Elevator Association

Wilkin County, Minnesota:
Minn-Kota Ag Products Inc., an $18 million grain elevator
Weaton-Dumont Coop Elevator
Red River Grain Company, a grain elevator

Redwood County, Minnesota:
Harvest Land Cooperative, a $263 million grain wholesaler
Highwater Ethanol, with sales over $156 million a year
Farmer’s Cooperative Association, a $45 million grain elevator
Meadowland Farmers, a $40 million grain elevator with 3 locations in the county
Morgan Grain and Feed Company, a $34 million grain wholesaler with 3 locations in the county

Renville County, Minnesota:
Co-Op County Farmer’s Elevator, a $150 million grain elevator with 5 locations in the county
United Farmer’s Cooperative, a $52 million grain wholesaler
Minnesota Energy Ethanol LP
United Mills, a $2 million cereal grain mill

Blue Earth County, Minnesota:
Purina Mills
Horizon Milling, a flour and other grains milling company
Archer Daniels Midland
Big Gain Inc., a $31 million in sales livestock feed company.
Protein Sources LLP, a $17 million in sales feed company.
Northstar Ethanol LLC, a $13 million in sales ethanol company
BI Example - Large-Box plans to build a perishables distribution center to serve IA, MN, NE, SD, and ND

- Site selection
- Cost analysis
  - Transportation network
  - Transportation costs
  - Supply chain labor costs
  - Construction costs
  - Facility costs
Business Analytic Capabilities

Economic and Business Development
- Supply chain cost analysis to recruit and retain businesses
- Iowa product demand analysis
- Strategic industries for new businesses
- Competitive analysis – Iowa product landed costs vs. competitors’
- Strategic site location analysis
- Industry Specific Supply Chain Design
- Supply chain design for agriculture, energy, etc.

Shipper Supply Chain Analysis
- Supply chain constraint analysis and optimization
- Supply chain cost benchmarking
- New plat/warehouse site selection
- Supplier performance/freight rate benchmarking

Transportation Company Investment Analysis
- Transportation demand analysis
- Market segmentation and cost analysis
- Demand forecast
- Site selection for new facilities

Transportation Network Management
- Infrastructure inventory analysis
- Network capacity analysis
- Network utilization trend analysis
- Contingence-based planning and business impact assessment
- Value assessment of transportation network

Network Optimization
- Ongoing state-wide transportation network optimization
- Industry specific transportation network optimization
- Private sector supply chain network optimization

DOT Operational Key Performance Indicators (KPI) Analysis
- Trend analysis
- Slice and dice, drill down, roll up, and pivot analysis to understand constraints in transportation systems
Pre Panama Canal Expansion (70 miles)

Post Panama Canal Expansion (111 miles)

Post Panama Canal Expansion (161 miles)

Source: Soy Transportation Coalition