

ProVenture Network Modeling overview



ProVenture's independent consulting group has delivered many successful network designs and redesigns.

Software platform: **Insight[®] SAILS 21v4[™]**

- ▶ Specializing in mergers & acquisitions optimization
- ▶ A Network Redesign typically identifies savings of 8% to 15 % of the total Logistics cost.
- ▶ Project scope and size determine final cost
- ▶ Typical projects range between \$15,000 and \$40,000
- ▶ Concise data is essential for time management

Network Modeling objectives



Objective:

Minimize the cost of getting product from the source to the customer while providing a high level of customer service

Important Network-Design Questions

Supplier Sourcing & Purchasing

- Which suppliers should we use?
- What should we purchase from each supplier?
- Which suppliers should supply which manufacturing site?
- Should we outsource inbound transportation?

Manufacturing

- What should we manufacture at each plant?
- Do we need all of our plants?
- How do we decide between capacity expansion at an existing location and building an all-new facility?

Transportation & Distribution

- How many DCs do we need, and which markets should they serve?
- Should we centralize? If so, how?
- What is the optimal product flow to customers?
- What is the best way to expand our distribution network?
- Should we outsource logistics?

Customer Sales In Markets

- Which locations should serve which customers?
- How do we determine the profitability of a particular customer segment or region?
- What lead times should we offer our customers, given specific constraints?

Network Modeling scope & requirements



Scope:

Products –	All finished product SKUs
Time –	One full year of detail
Geography –	North America / International

Data Requirements:

Shipment History –	One record for each line item shipped for one full year
Record data –	Order #, order date, shipping date, RAD, customer name, number ship-to address, SKU's, quantity shipped, gross weight shipped, CPU vs delivery, SCAC, transportation cost, Line haul vs. LTL and any accessorial charges

Network Modeling additional items considered



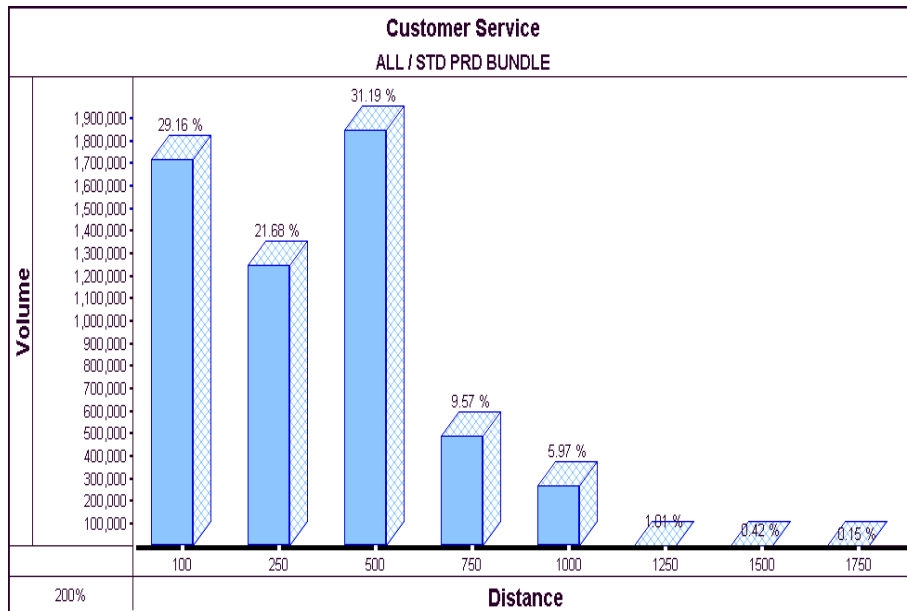
- Plant Location(s)
- Source of inbound replenishments
- Current DC Location addresses
- Product Item Master, by Item
- Outbound Transportation Information
 - Parcel activity, LTL freight class, TL, CPU's

Network Modeling methodology



- Prepare a Demand Analysis, analyzing Customer Demand
- Replicate (as a baseline) the current costs
- Agree on suggested new DC location(s)
- Perform “What if” and “Sensitivity Analysis
- Recommendation

Network Modeling baseline



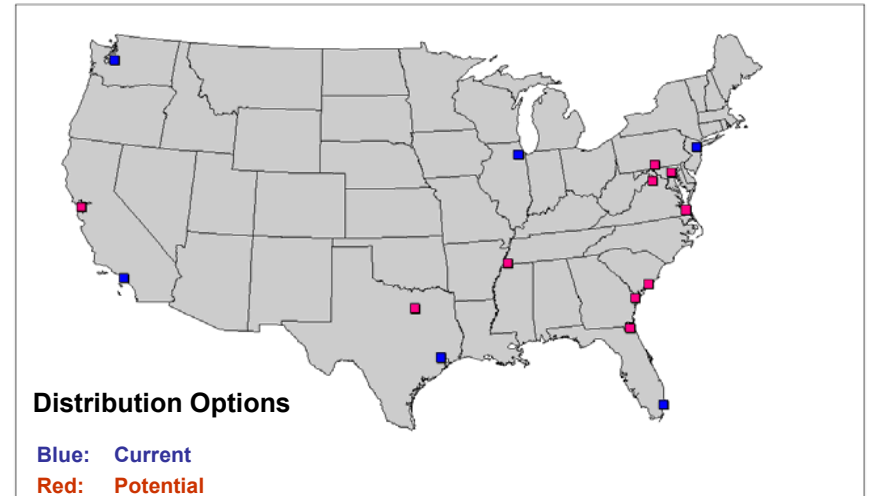
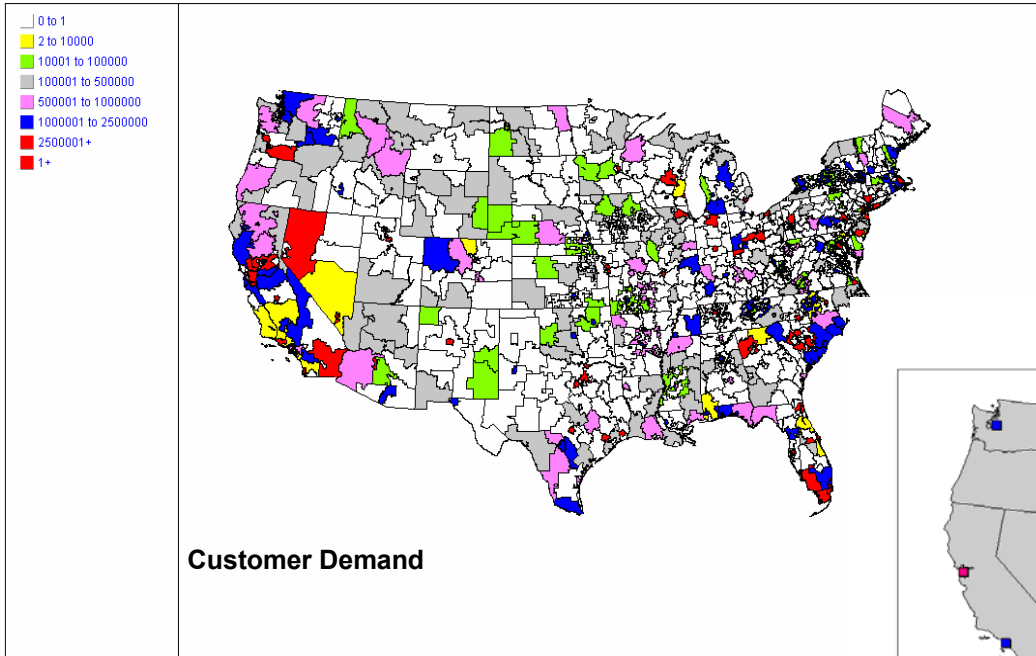
Volume by Distribution Center - FY 2006

DISTRIBUTION CENTER	UNITS SHIPPED	POUNDS SHIPPED	CUBIC FEET
Miami, FL	10,706,617	160,599,656	4,054,449
Romeoville, IL	14,024,719	210,371,386	5,311,032
Carteret, NJ	13,689,520	205,343,310	5,183,830
Houston, TX	5,796,723	86,951,150	2,195,569
Carson, CA	12,160,541	182,408,528	4,604,342
Auburn, WA	1,921,648	28,824,888	727,767
TOTALS:	58,299,769	874,498,918	22,076,990

Network Modeling analysis



Customer Demand
(Total Pounds by 3-Digit Zip Code)



Network Modeling solutions - cost / customer service



	2006 Baseline	3 D.C.s Cost only	4 D.C.s Cost only	5 D.C.s Cost only	6 D.C.s Cost only	7 D.C.s Cost only
Customer Demand (Pounds)	874,498,918	874,498,918	874,498,918	874,498,918	874,498,918	874,498,918
Ocean Freight	\$44,465,707	\$37,638,083	\$36,914,687	\$36,773,309	\$37,587,399	\$37,673,272
Port Charges	\$10,344,849	\$10,144,141	\$10,302,199	\$10,398,323	\$10,398,054	\$10,338,687
Drayage	\$4,372,126	\$4,442,456	\$4,346,433	\$3,927,195	\$3,912,928	\$3,983,297
Warehousing	\$9,380,609	\$9,636,546	\$9,561,640	\$9,997,152	\$10,032,045	\$9,797,053
Freight-to-Customer	\$19,337,132	\$26,450,109	\$23,913,281	\$22,938,933	\$21,505,228	\$21,064,584
Total	\$87,900,423	\$88,311,334	\$85,038,240	\$84,034,912	\$83,435,654	\$82,856,893
Customer Service						
0 - 250 miles	51.0%	33.7%	38.9%	42.8%	44.8%	47.8%
251 - 500 miles	30.0%	27.3%	30.9%	23.3%	23.8%	26.3%
501 - 750 miles	10.3%	11.4%	11.7%	18.8%	19.3%	14.8%
751 - 1,000 miles	6.3%	13.9%	10.9%	7.5%	6.6%	5.5%
1,001 - 1,500 miles	1.5%	12.5%	6.5%	6.5%	4.8%	4.8%
1,501 - 2,000 miles	0.2%	0.5%	0.3%	0.3%	0.3%	0.3%
Beyond	0.7%	0.8%	0.8%	0.8%	0.5%	0.5%
Warehouses Open	Carteret, NJ	Carteret, NJ	Carteret, NJ	Carteret, NJ	Carteret, NJ	Carteret, NJ
		Jacksonville	Jacksonville	Baltimore	Baltimore	Baltimore
	Miami			Miami	Miami	Miami
	Chicago					
	Houston		Houston	Houston	Houston	Houston
	Carson, CA	Carson, CA	Carson, CA	Carson, CA	Carson, CA	Carson, CA
	Seattle				Seattle	Seattle