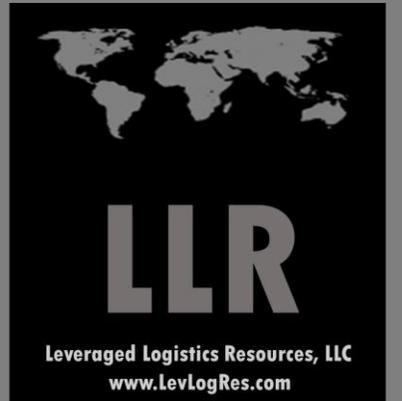


Network Strategy & Optimization

August 6, 2020



DESIGN FRAMEWORK



FIVE AREAS IN NETWORK ANALYSIS

- Every area has a direct impact on the operational costs, asset management, and customer service and must be taken into consideration when designing and optimizing the distribution network.



Sites	Inventory Management	Information systems	Transportation	Distribution Center operations
<ul style="list-style-type: none"> • How many DCs do we need? Where should they be located? What size should they be? • Which products should be stored in the DC? • What type of facilities/customers should they service? • Tax implications 	<ul style="list-style-type: none"> • What type of inventory will be held? • Which type of replenishment method is being used? • How can we ensure our customer service level is adequate? 	<ul style="list-style-type: none"> • Which systems do we need? • What are the benefits of a WMS, TMS? • Which tools will have a positive impact on productivity? 	<ul style="list-style-type: none"> • How can we balance our network to minimize our transportation costs? • Which transportation mode is the most appropriate? • What is the composition of our cost structure; how does it compare to the industry? 	<ul style="list-style-type: none"> • What types of handling and storage equipment do we need? • How should we configure the layout of our DCs in order to be the most efficient? • Which type of picking method is the most appropriate for our environment?

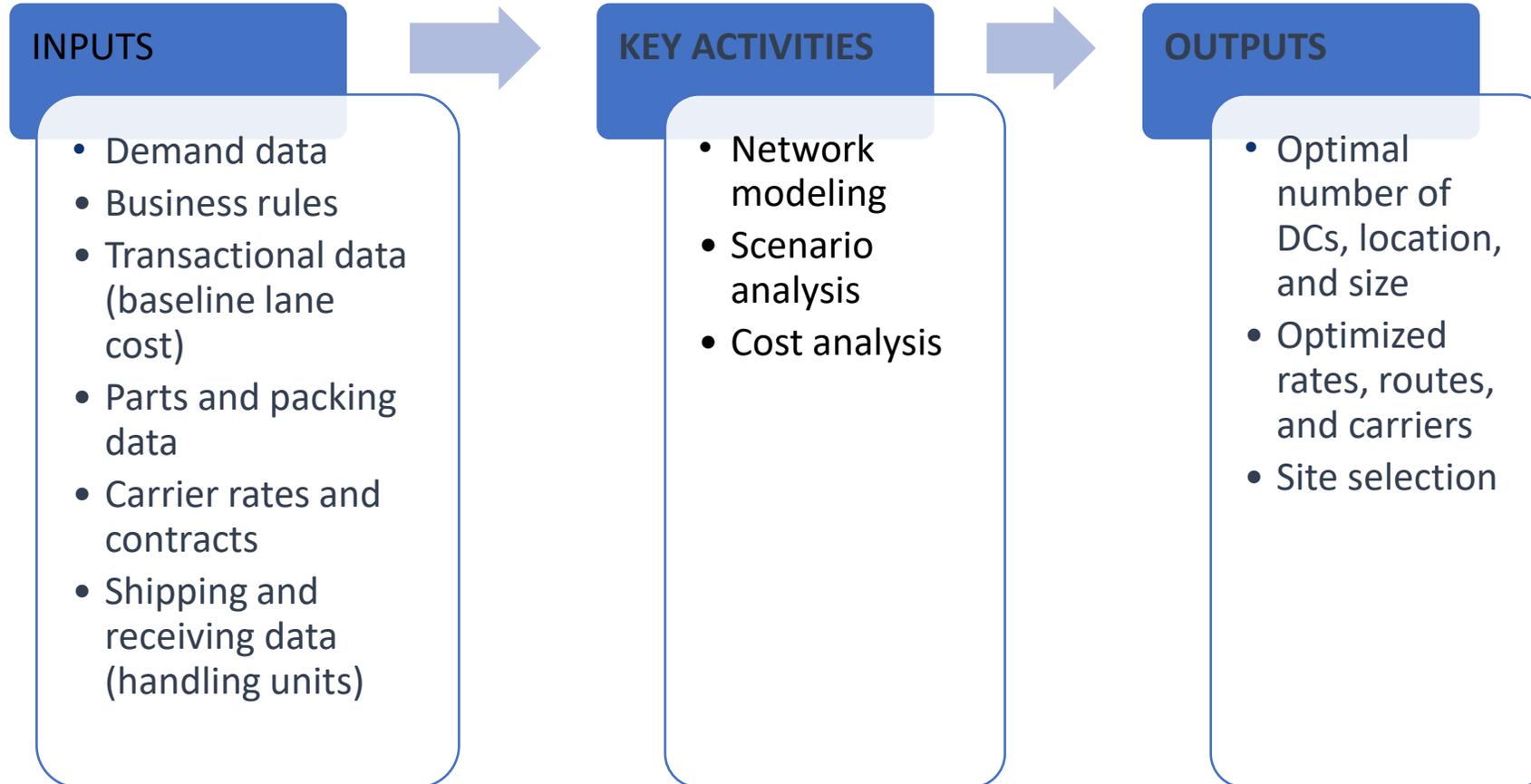
DESIGN CONSIDERATIONS

NETWORK STRATEGY DEVELOPMENT



- **Developing an effective network strategy involves the following:**
 - Determining the optimal distribution network to support the fulfillment and delivery of products
 - Determining the right locations for fulfillment/DCs based on regional demand profiles, production locations, total landed cost, logistics infrastructure, taxes, duties, and other regulations
- **Operating model considerations**
 - Vertical GBU or cross GBU
 - Size of the supply chain
 - Customer requirements
 - Speed versus cost
 - New technology
- **Market considerations**
 - Changing market environments
 - Political
 - Security
 - National policy changes
- **Location specific considerations**
 - Change in either supply or customer base
 - Increased focus in a geographic region
 - Anticipated demand in new region
 - New supplier development
 - Change in manufacturing locations
- **Other considerations**
 - Major corporate event
 - Structural cost changes
 - Acquisition/divestiture

ELEMENTS OF NETWORK DESIGN



TYPICAL ISSUES



Scope and desired results not aligned

- This analysis is very detailed and rigorous efforts are made to ensure data is managed correctly.
- The results needs days to modify for minor changes
- Project Champions own communicating the;
 - Proper strategies to employ for customers and operations to the engineers
 - Scenarios that will help make the decisions
 - Realistic set of expectations to other executives for time and scope

Unavailable or poor-quality data

- There needs to be agreement on the timeframe of the data being used to model. It must be representative for the business.
- The data needs to be complete and accurate
 - Often freight payment data is used
 - The more granular the data the more likely to have an issue with quality
- Be diligent in looking for data gaps and avoid the temptation to “make it up”. A gap in the results is easier to work with than hidden flaws.

NETWORK DESIGN — CASE STUDY



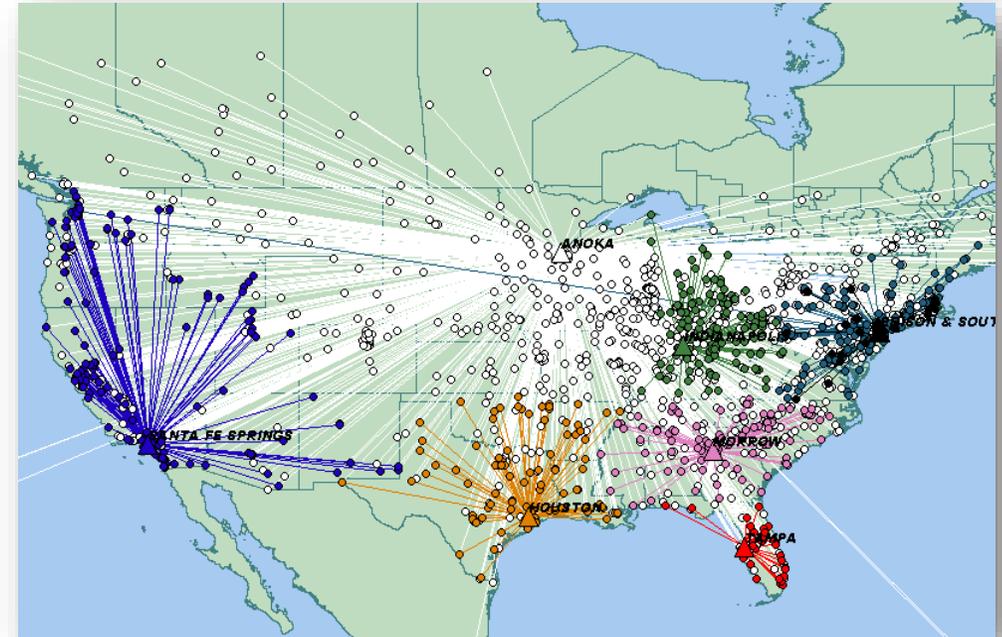
CURRENT STATE ASSESSMENT

• STEPS

- Write charter and scope
 - Minimum VP level of approval
- Hire or source an engineer with modeling capabilities
 - Typically from a 3PL
 - Smaller projects: \$30k
 - Large projects: \$100k
- Gather data
- Manage your scope well
 - You need dimensions and weights for the order file
- Establish the baseline and current costs
- Gain agreement on Current State

• DATA REQUIREMENTS

- Source location of the FG material
- Destination data
 - By Customer
 - By Order and Line
 - By SKU
 - Weight and Dimensions
 - Incoterms (PPD, PPD and Add, Collect)
- Transportation costs
- Distribution expenses
- Inventory levels
- Pallet/case/carton details
- Business rules



TIMELINE

Small projects: 5–6 Weeks
Large projects: 7–10 Weeks

NETWORK DESIGN — CASE STUDY

(CONT.)



CENTER OF GRAVITY (COG)

The COG finds the lowest number of miles of transport with a given number of DCs. While it is the not final answer, it provides directional guidance for locations. It is important to consider service level requirements.

NEXT STEPS

Establish number of sites to support

More sites = faster delivery, but more inventory = more factory to DC transportation and less DC to customer transportation spend

Review location for the following:

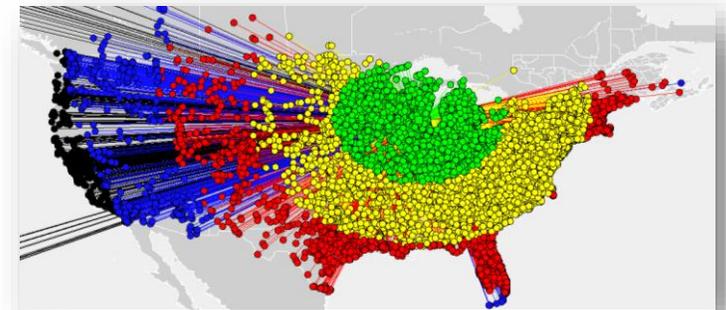
Good distribution market

Easy access to transportation

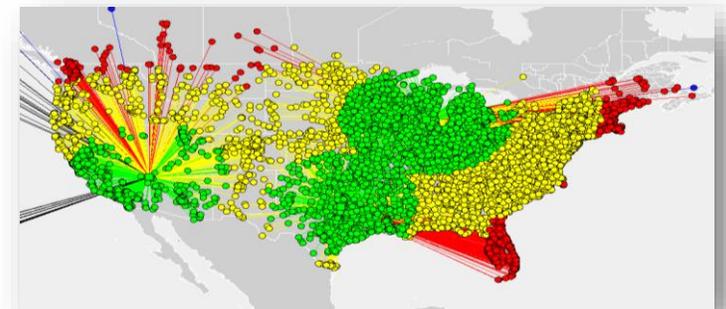
Favorable tax structures

Lock in COG and begin to model transportation costs

CURRENT STATE



DESIRED STATE



TIMELINE

Small Projects: 2–4 Weeks

Large Projects: 5–8 Weeks

NETWORK DESIGN — CASE STUDY

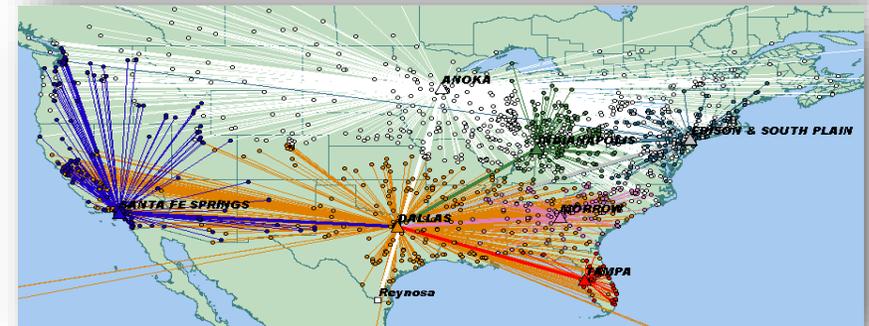
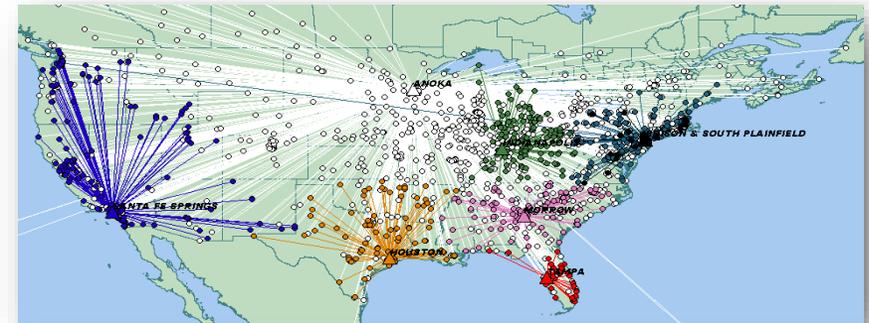
(CONT.)



OPTIMIZED SOLUTION DEVELOPMENT

- **OPTIMIZED SOLUTION**
 - Develop transportation and distribution baseline
 - Identify lowest cost transportation solution and compare it to the baseline
 - Develops a forecast of distribution expenses
 - Evaluates Corporate Tax implications
- **NEXT STEPS**
 - Finalize cost rollup with engineer
 - Begin high-level engineering effort of DC layout
 - Refine site recommendation after input from Corporate Tax
 - Project startup costs and begin CER pro forma
 - Obtain approval of business leadership

ADDITION OF A DALLAS, TX DC



TIMELINE

Small projects: 2–4 Weeks

Large projects: 5–8 Weeks

Discussion



Douglas Bley

Principal

Leveraged Logistics Resources, LLC

10912 Whitetail Rd
Rogers, MN 55374

Phone: +1 (612) 327-5072

Email: Douglas.Bley@LevLogRes.com

www.LevLogRes.com