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# Inbound Logistics Network Optimization



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## **Motivation / Background**

- 1. Suppliers charge a CPG company for both logistics and material costs
- 2. Savings opportunities may exist should the CPG control the logistics component



# **Key Question / Hypothesis**

How can the company minimize its total inbound logistics costs for raw materials?

Cost reduction opportunities exist if the company leverages:



EXISTING ECONOMIES OF SCALE



SUPPLY NETWORK DESIGN

### **Relevant Literature**

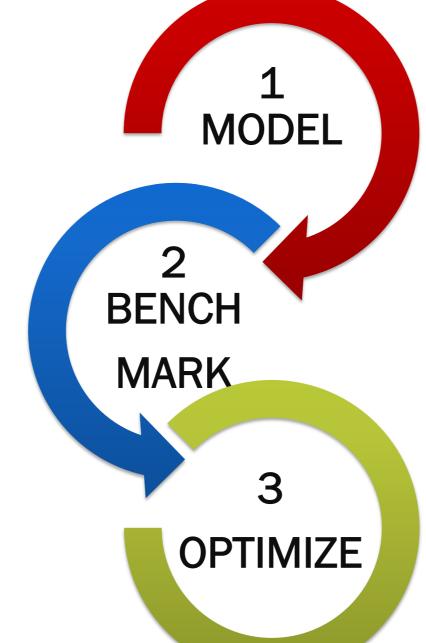
- Ford (2006). Inbound Freight Consolidation: A Simulation Model to Evaluate Consolidation Rules
- Nemoto, Hayashi, & Hashimoto (2010). Milk-run logistics by Japanese automobile manufacturers in Thailand
- Van Baar, C.M (N.D.). Improving Inbound Logistics: Summary



#### The Problem

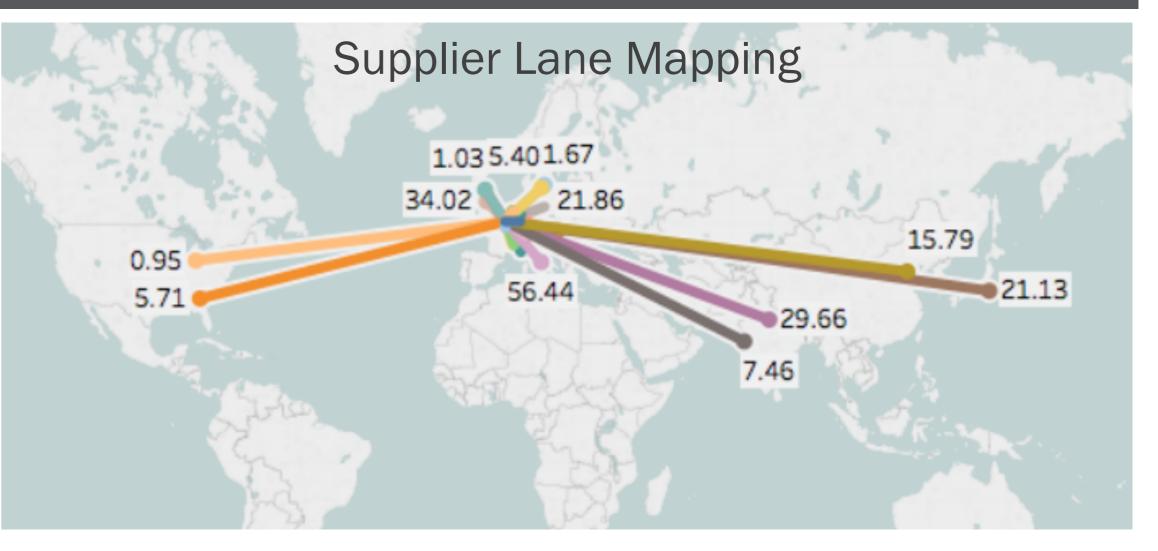
- 1. Low visibility on suppliers' logistics costs
- 2. Undefined and unquantified cost reduction opportunities

#### Methodology



- Determine relevant cost components
- Derive total logistics cost equation
- Compare company's logistics costs with market rates
- Identify areas with scope of logistics cost reduction
- Optimize current transportation network to integrate identified cost reduction opportunities

## **Initial Results**



- 1. Supplier lanes give total raw material volume and cost information.
- 2. These variables will be used to derive logistics costs, based on the following: distance, customs, transportation mode, overhead.

# **Expected Contribution**

1 Cost equation

2 Cost reduction opportunities

3 Proposed by-supplier strategy

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