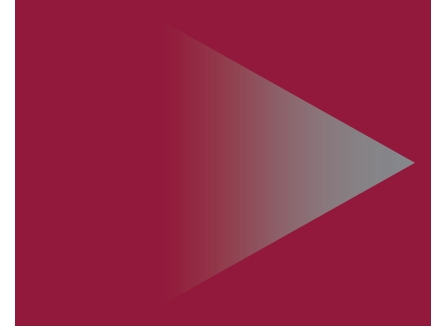


Real Estate Decisions Affect Supply Chain: Understanding the Long Term Impacts

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Introduction

Real Estate decisions significantly impact your Supply Chain and vice versa. The challenge is that the needs of the supply chain can change rapidly and frequently while real estate decisions can require a long lead time. In this month's Innovations, we will look at how you can develop a facilities/real estate plan that both fully accommodates your supply chain strategy and can adapt to change.

Real estate is a strategic asset that commits a company to a property, investment and a way of doing business for a set period of time. In addition to its impact on supply chain flexibility, your decisions have direct implications for operational cost structure, workforce availability, regulatory, taxation, and government / public relations exposure. The high capital spend and lack of liquidity inherent in real estate decisions require companies to look at a wider and longer-term scope of issues to truly understand the impact on supply chain flexibility and performance.

The analysis needs to look beyond the logistics network to all of the elements that affect the supply chain and the people, functions and facilities that make it up. Fortunately, there are existing analytical techniques and tools that can be employed to perform this type of analysis. Supply chain network optimization ("SCNO") tools allow the entire supply chain network and all of its components – from real estate (facilities), to products (inventory locations and strategies), to operational methodologies (transportation modes, etc) – to be represented in varying degrees of detail.

When properly applied, quantitative analysis tools such as network modeling and optimization techniques may be used to determine the impact of your real estate selection on the entire network operation and efficiency. They also help you understand the trade-offs between competing objectives and determine the "optimal" balance. A few software solutions that incorporate these techniques include:

- Sails
- LogicNet
- SmartOps
- SimFlex
- Supply Chain Guru
- and many others (future editions of Innovations will look at some of these products in more detail)

Before the network analysis, you will want to review the best practices for a general approach to assessing and planning the network. The outline below takes you through the step-by-step process.

- Understand the business situation:
 - Get all the stakeholders together
 - Understand the key players' concerns
 - Understand and confirm key assumptions and project drivers (key issues to be resolved)
- Identify the flexibility demands and constraints of the type of industry you are in:
 - Physical and location constraints
 - Labor constraints
 - Logistics constraints
 - Local / Regional government focus
 - Others
- Assemble a project team
 - Internal staff
 - Outside expert consultant/firm (if needed)
 - Define specific goals and develop a project plan
 - Determine the model scope and level of detail required
 - Complete a requirements document
 - Set realistic expectations and schedule
- Develop the network
 - Select an appropriate analysis tool and configure model
 - Perform network analysis to narrow down regions
 - Determine mix of modes and need for flexibility
 - Perform sensitivity analysis on alternatives
 - Other external factors
- Find sites to meet the network demands
 - Evaluate effects of specific sites on the network
 - Site requirements
 - Labor Availability
 - Government, regulatory, and tax impacts
- Develop a Financial Strategy
 - Identify "lifespan" of the asset and its role in the company's value chain
 - List the benefits and drawbacks of each of the following - Lease / Own / Sale Leaseback / Build to Suit –
 - GAAP and tax – Cash and accounting factors - impact on shareholder value
 - Incentives, credits, grants, and preferential financing
 - Utilities programs and assistance

Key questions to include in your network analysis:

- How is what we do in the box (inside a distribution facility) going to affect what our needs for space are going to be?
- Is our need for people, and what they need to be able to do (workforce demographics such as education, skills, and mobility) going to change?
- What are the benefits and drawbacks of owning and leasing our facilities?
- Are there situations where we might find that location factors (labor, regulation, tax) make a good logistics decision - a bad business decision?

The key to understanding the impact of the constraints placed upon a business by specific real estate decisions can be understood and analyzed using a full featured network modeling tool that will allow the analyst to represent these factors in a single model of the company's supply chain and operation.

Factors include: labor costs, facility costs, taxation and tariff rates, transportation costs, port of entry alternatives, and – very important – estimates of sensitivity of the viability of the network decision to variation and change over time of these factors is essential to the analysis.

The goal is to analyze all of these factors in a single, dynamic model that allows us to understand how the network performs as these factors change – either singly or in combinations.

After the network analysis, you will want to perform a sensitivity analysis. This process involves fixing most of the network analysis input constraints and varying a limited number (ideally just one) of related parameters over a range of projected values. You will then make successive model runs using different estimates within the range and analyze the results to see if the specific performance measures change significantly. Repeating this for all key input constraints will allow the analyst to build up an understanding of how the supply chain will perform over time, what it is most sensitive to, and provide critical information to decision makers involved with the real estate issues. With the dynamic nature of businesses and the ever changing requirements and challenges, your team will want to repeat the analysis annually or even quarterly to reconfirm the results and determine if new strategies are needed.