**It's The Network, Not the Node**

*Steve Geary*. [**Area Development Site and Facility Planning**](http://proquest.umi.com/pqdweb?RQT=318&pmid=37274&TS=1292248336&clientId=29440&VInst=PROD&VName=PQD&VType=PQD). Easton: [Feb/Mar 2009](http://proquest.umi.com/pqdweb?RQT=572&VType=PQD&VName=PQD&VInst=PROD&pmid=37274&pcid=42532151&SrchMode=3&aid=1). Vol. 44, Iss. 1; pg. L4, 2 pgs

**Abstract (Summary)**

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| **[Headnote]** |
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Oscillating fuel costs over the recent past have made us all more sensitive to the cost implications of a site selection, and the overall implications for the bottom line. We just can't afford the risk of considering a site in isolation from all of the outside factors that should figure in the decision.

Consequently, it seems that every company is rethinking its distribution network. Volatile fuel costs fundamentally shift the arithmetic, so a location decision for a distribution center that was made just a few months ago might not be the right answer for today. Companies need to protect the bottom line, and the hunt is on for new locations that will help drive transportation costs out of the system.

According to Dr. Wes Randall at Auburn University, "In a retail supply chain, when you are the intermediary between the manufacturer and the customer, you really have to be very deliberate in your response when commodity prices are creating profit pressure. Before you just pass along the price increases to the customer, you really need to see if you can find a way to be more productive with your internal financial structure and performance. It might be economies of scale; it might be category management; it might be rethinking how often you ship, or how much inventory you push to retail. Fighting against the macro-economic environment is like shoveling against the tide. It Is what it is. Adapt, adjust to the current market, but be ready to respond when the market begins to turn back around."

Or, an option that Dr. Randall doesn't mention is a basic real estate play: rationalize the network and relocate the distribution centers (DCs). Get them in the right place to minimize transportation costs; find skilled labor with competitive costs; and inject some slick, state-of-the-art warehouse technology to make it efficient. Voilà: profit.

There is a profit opportunity for the executive who wants to make a case to develop a distribution center. Every company has a different situation, which means they have different requirements and different tradeoffs, but if you understand how to approach the distribution site selection problem, you can develop a winning proposition. And here is the key insight... the decision doesn't start with the specific location at all. The decision begins at the network level, so the opportunity lies in describing the location in a way that makes sense against the backdrop of a strategic network design.

How the Process Works

Before a company sticks a pin in the map and begins contacting the local chambers of commerce about available sites in industrial parks, it should first pause and reflect on the network implications. Today, supply chains span the globe. Third-party logistics companies are ubiquitous, customers are fluid, and markets can shift in the blink of an eye. Companies need a robust network, not a perfect site. Although the company may start looking in New Jersey, the optimal location from the standpoint of network transportation flows, fuel costs, and customer service could require that the next DC be built in Pennsylvania, Maryland, or Virginia - even as far away as Georgia. Put another way - you have to think about what works best for the network, not the node.

Times have changed, and the context matters. Today, more than ever before, site selection begins with network design. In the past, companies would choose a new warehouse location to serve a specific territory or even a single big customer, but that's just not our world anymore. Variable fuel costs require that a little more rigor and a lot more consideration of the overall network blend into the selection. The site must fit into a strategic, supply-chain context.

The Critical Factors

What matters most for a location is its ability to fit into the overall network flow. Ask yourself, what markets can you effectively serve from a location? This can be as simple as looking at a map, or as complex as hiring an industrial engineer to conduct a service area or cost-optimization study. One easy place to start is to talk to people in the region who already have distribution operations there. Understand why they are there, and you can gain insight on why you may want to join them. Ask them how the location's transportation infrastructure is laid out.

\* How close are you to the ports? This can matter both for inbound materials to put on the shelf, or for exports heading for international markets.

\* Do you have rail? Then get to know the industries and the players who distribute via rail. Food and food products, steel and other primary metal products, lumber, paper, and motor vehicle parts are all significant users of rail. And, more and more, long-haul shippers are revisiting multimodal as a cost-effective approach. There are service trade-offs, but as transportation costs continue to be top of mind, expect rail to become a more prominent discriminator.

\* What about the inland waterways? Approximately one sixth of all freight (ton miles) moves by water routes. Often forgotten by those outside of the logistics trade, inland barges move critical commodities and bulk freight to many U.S. markets, including ports for export. While not appropriate for all goods, inland waterways have a place.

\* Is there an air hub nearby for critical shipments? While FEDEX has become ubiquitous (I've actually shipped from Baghdad in the past year!), it isn't always cost-effective. Proximity to air hubs can make a difference.

\* And, of course, what about the interstates? In dollar terms, approximately 85 percent of all freight moves over the highways. North/south and east/west matter. Know traffic patterns, know flows, and understand congestion issues. Factors like these can either drive you to - or away from - a potential DC location.

Next factor in how the business will be growing in the next five years. Take into account any long-term plans that might alter the mix of products and the concomitant impact on shipping method and delivery as well as storage requirements. For instance, if your company plans to market more products overseas or source more goods and components from international suppliers, then your new DC will require proximity to an international gateway like a seaport or major airport.

Don't just focus on your own operation, however. Be sure to give some thought to what your customers or suppliers are doing. You don't want to add a new warehouse to lower transportation costs only to find that your customers will be expecting deliveries in another region of the country or even the globe.

Keep in mind that one-size-fits-all isn't the only approach when it comes to warehousing. If your company has a range of products and some call for specific storage requirements, say cold storage, then it might be worth designating the new warehouse to carry just this one product line for all customers nationwide. That way, special equipment could be limited to one facility, and the training and resources to handle that equipment confined to one work force.

In looking ahead, it's important to think about reverse logistics. Maybe the new warehouse should be the designated returns facility that handles all goods being sent back to the DC regardless of origin. Setting up a warehouse for special handling or, as discussed earlier, to hold special products may change the anticipated locale for the new warehouse and the network design.

In essence, the decision isn't about bricks and mortar, or a green field opportunity. The decision is about how to make the overall network more effective, and that is a different way of thinking.

Making the Case

Run some case studies. Pick some target sectors, and start the network design process by examining how existing facilities currently meet customer requirements. Does the existing infrastructure have the ability to ship to key customers within their delivery timetables at an economical cost? Can you show how a new location might lower freight spending? Can a new location take advantage of multiple modes of transportation to preserve flexibility in shipping and to promote carrier competition?

Once you have an understanding of how a target area fits into the broader perspective, then it's time to employ all the traditional tenets of site selection. Conduct an initial screening of the targeted area and draw up a list of possible sites. Nothing beats firsthand reconnaissance. Make site visits, but maintain a low profile. Be sure to understand zoning and other legal requirements to ensure that the building can be constructed or retrofitted to meet prospective space and power needs.

Benchmark the local labor market: rates, skills, and availability. Don't forget to look at traffic flows and congestion, which is becoming a bigger impediment to shipping every year. Once the homework is done, narrow the list of possible sites. Finally, have a thorough understanding of the available incentives or tax breaks.

There are other issues that might seem secondary to DC operations but that may ultimately prove to be important. These tend to be highly specific, depending on the situation, e.g., access to public transportation, or proximity to vocational training, or access to the power grid. It varies.

But one consideration that always makes a difference is the area's political and business climate. Community relations matter. Some communities will accept a distribution operation handling hazardous materials, for example, while others will not. Some locations can quietly begin high-volume distribution without causing a ripple, while others face community opposition because of traffic volume and road safety concerns.

Key Lessons

Distribution networks must flex to adapt to the economic environment. Site selection decisions are driven by a cost-service tradeoff. How a company makes the tradeoff dictates the location decision. With volatile energy costs, revisiting DC location decisions creates an opportunity for those who can build a credible story.

No site is likely to have a perfect balance of attributes. Tradeoffs are inevitable. But careful consideration of costs, services, labor availability, and infrastructure capacity in light of current and future needs - all presented in the context of the overall network strategy will help your company to pick the right site for its next warehouse facility.

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