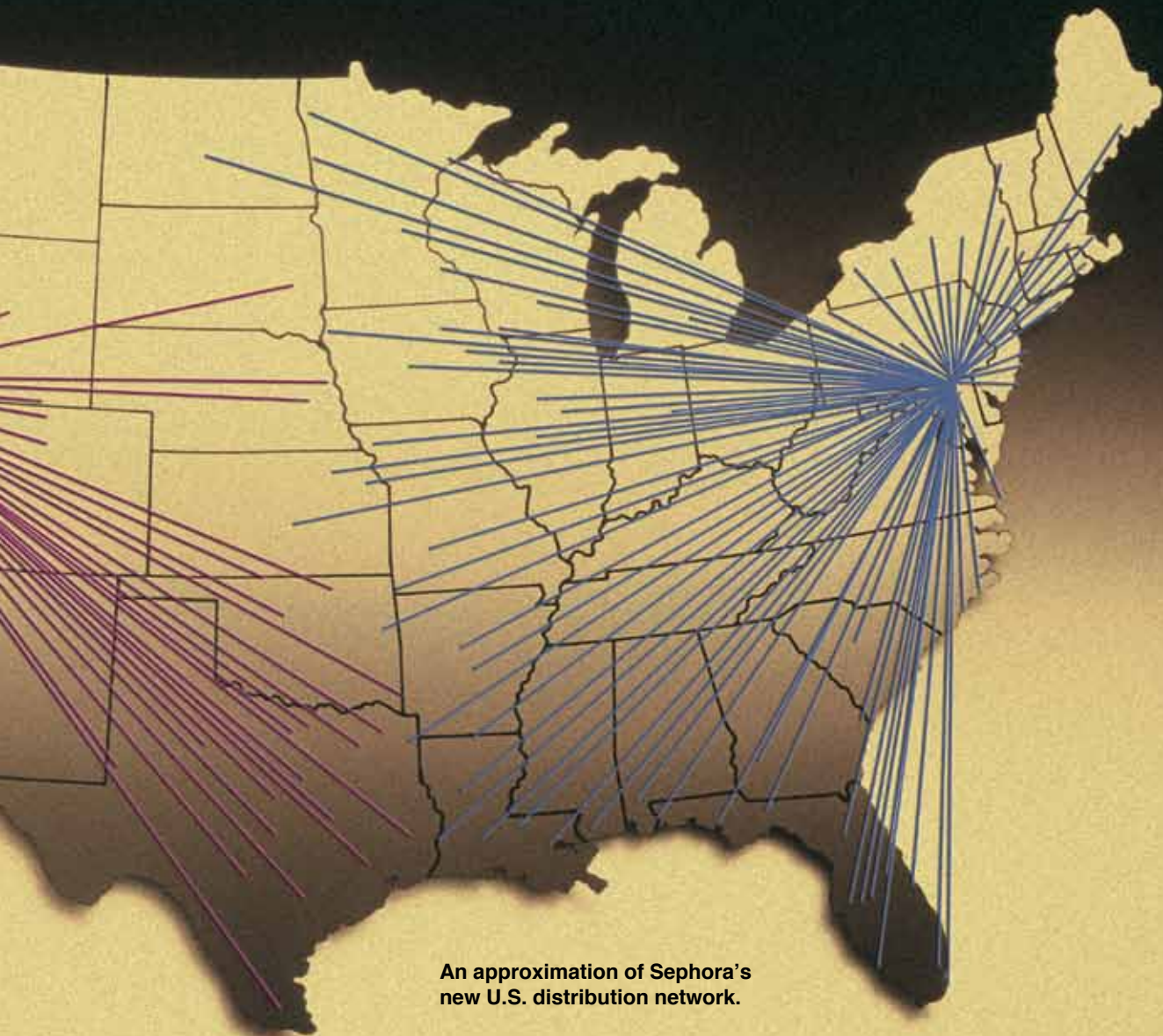




Sephora's gorgeous network reorganization

Our warehouse/DC engineer dives into the best practices and tools that the retailer put to work in order to expand its distribution network after it became the exclusive provider of beauty products for JCPenney stores.

By Maida Napolitano, Contributing Editor




**An approximation of Sephora's
new U.S. distribution network.**

When talking “beauty” at Sephora, it clearly isn’t skin deep. As a division of Europe’s premier luxury goods provider Moët Hennessy Louis Vuitton (LVMH), this retailer has carved a deep niche in the global beauty market, becoming a major presence in hundreds of retail centers across 24 countries and on the Internet.

In the U.S. and Canada, Sephora has grown to over 280 stores in a little more than a decade. Its unique open-sell store environment, staffed by a team of beauty experts, provides customers—who the company calls its “clients”—direct access to a broad range of product categories including skincare, color, fragrance, bath & body,

(CHART COURTESY OF ST. ONGE, WWW.STONGE.COM)



smile care, and hair care. Launched in 1999, Sephora.com is now one of the Internet's foremost beauty shopping sites, making it its largest North American "store" in terms of sales and selection of products and brands.

With such rapid growth over multiple channels, its logistics and supply chain team knew it needed to keep a close watch on its lone 316,000-square-foot distribution center (DC) located in Belcamp, Md. All through 2005, it periodically conducted capacity surveys with Pennsylvania-based supply chain consulting firm St. Onge to determine whether this one-facility distribution operation could continue to support such a high rate of expansion—each time, the facility seemed to hold its own.

But 2006 ushered in a new challenge for the logistics team. Sephora became the exclusive provider of beauty products for JCPenney stores across the country, offering the same

signature Sephora look in hundreds of JCPenney stores, but within a smaller footprint. For the first time, serious doubts were raised on whether the Belcamp DC could support this new marketing push.

In addition, the lease for the DC was about to expire. The team was left sitting with some difficult questions: Was it best to stay in its existing Belcamp facility or should it move to a new, larger building at an optimal site? Should it open a second facility? If so, where should it be and what should its mission be?

Management needed to weigh all of its options and plan the best strategy going forward. To do this, it decided to engage St. Onge in an in-depth network study aiming for a distribution network that could support its expansion while continuing to provide a superior client experience and maintaining a balance of costs.

To the beauty retailer, the key has always

6 tips for optimizing the distribution network

Tip #1: Involve high-level management. Traditionally, in many DC projects, business owners and stakeholders don't get involved until the very end when they give their approval on the overall output. But, engaging high-level management early on is a must.

Tip #2: Ask the right questions. A good distribution network redesign encompasses a number of key areas of the business that all need to be considered and questioned. Some critical questions that need to be answered: What are the storage and throughput capacity constraints associated within my existing distribution network? What perceived service level requirements are required for major markets being served in order to be competitive? If the delivery lead-time is changed then what is the anticipated impact on sales revenues for a given market? What are the logistics operating expenses, one-time expenses, inventory assets, and capital investments required for the baseline scenario? How do these compare to alternative scenarios?


Tip #3: Use an effective network modeling tool. Up to a certain scale, modeling your network in house using home-grown spreadsheets and databases can get cumbersome—if not impossible. Choose one of many commercially available network modeling tools.

Tip #4: Perform an inventory optimization study. One of the most overlooked areas in many network designs is inventory. While adding more DCs may reduce transportation costs, it also requires you to carry more inventory—and many times this inventory is far from optimal. After the modeling tool identifies the number of facilities needed and roughly where they should be located, use algorithms to determine the right amount of inventory to achieve a specific level of service that can be customized for each of the facilities.

Tip #5: Make sure there is labor. Certain areas have become hotbeds for distribution primarily because of their proximity to the U.S. population. However, these popular areas that companies gravitate toward means that there could be fierce competition for the labor force. Turnover rates become high because workers would rather work down the street for another DC that's offering 25 cents more per hour.

Tip #6: Take your time. Depending on the complexity of the network, the availability of the data, and the experience of the project team, a typical network study can take up to six months.

—Maida Napolitano, Contributing Editor



been client satisfaction. “We want to delight our client,” says Martin Flaherty, vice president of logistics for Sephora. “At the same time, we’re also looking at improving profitability, adaptability, and velocity. We want to align our resources to drive success across the enterprise.”

In the span of about 14 weeks, the project team built a model of the new distribution network, tested different scenarios using the latest software, and put together the best solution: a

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two-facility network with the existing DC in Belcamp and the selection of Salt Lake City as the optimal site for a second facility.

In June of 2008, Sephora opened its second DC in Salt Lake City, Utah, which has not only relieved the capacity in Belcamp, but also increased its customer service capability by being physically closer to its clients in the western half of the country, reducing its cost per unit shipped.

Over the next few pages we’ll dive into the best practices and tools the Sephora team put to work to transition to a two-facility distribution network that would shrink its order cycle time, getting products to stores quicker and reducing stock-outs.

Drawing up the plan

Determining the best strategy required a systematic approach, the analysis of mountains of data using the latest database and network optimization software, the input of experienced team members with first-hand knowledge of the business and its future trends, along with some good, old-fashioned due diligence.

And it all didn’t happen overnight. The first two months were geared towards building a baseline model that mimicked Sephora’s current distribution network, followed by a

few weeks of testing different logistics scenarios, culminating with a site-selection period of six months that winnowed the selection to the “perfect” site for the second DC. Here, the Sephora project team shares the steps to their success:

1. Form an integrated team. First, a project team was assembled. It was led by Flaherty and his internal logistics team and worked closely with St. Onge’s network study team led by

Bryan Jensen, vice president for the consulting firm. Input from key personnel from finance, transportation, operations, information systems, and marketing departments was then periodically required to provide the data, establish assumptions, and offer direc-


tion for future trends.

2. Understand business issues. The entire team had to understand and agree on how Sephora did business. How did replenishment to stores work? What did the stores need in terms of service? Was there a dollar value associated with having a same day service time to its clients?

“Internal to the Sephora organization, we needed to make sure we got information, forward-looking expectations, and desires for the operation from the store managers,” explains Jensen. “That determines the boundaries in which the network analysis will examine how they might get their product to the marketplace.”

3. Develop baseline model “as-is network.” Over a four-week period, the team collected data from different areas of the business. Some of this data included a year’s worth of transactional history for its direct-to-consumer (Sephora.com) business and its store business, inbound and outbound freight costs, warehouse operating costs, shipment volumes, and store locations. For most of the preliminary data analysis, St. Onge used SQL query tools that allow the users to manipulate massive data files.

St. Onge then spent the next four weeks



building a baseline model of the existing network. It used leading-edge software specific for distribution network optimization to bring all the above data and assumptions together. The goal was to validate the baseline model by replicating the current distribution network, applying the appropriate transportation costs and volumes, and comparing it against last year's actual historical costs. The costs determined by the model had to come within a very close one percent.

4. Establish logistics objectives. After the baseline model was validated, the team began to establish the objectives for the future network. According to Jensen, trying to nail down predictions for Sephora's future was the most challenging step. The team needed to understand not just the percentage growth in new stores per year, but where they were going to open these new stores as well as the plans for growth of their direct-to-consumer operation.

Would it geographically follow the store patterns and the store population throughout the country? Typically the standard is to look

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five years ahead, but Sephora also provided St. Onge with a 10-year outlook. "Clearly the further out you look the fuzzier your visions gets," says Jensen, "but at least you can understand directionally how things will trend beyond a normal five-year horizon. This can be important in a network analysis because implementing the solution can take considerable time."

5. Identify logistics modeling scenarios. Once growth projections and other future logistics requirements were entered into the model, the team then identified two main scenarios that they wanted to test. Scenario 1: What's the best East Coast site if Belcamp is closed? Scenario 2: If Belcamp is fixed, what's

our best second site?

For each scenario, the model was populated with statistical data regarding candidate locations. This data includes the average cost per square feet of a DC at that location and all the freight rates to and from that location. The model then rates the candidate sites and ranks them based on the cost to service.

6. Model scenarios and evaluate. With Scenario 1, the model was run with a clean slate to determine whether or not Belcamp was indeed the optimal site. It turned out that the absolute optimal location was just outside of Philadelphia on the New Jersey side of the Delaware River near Cherry Hill, which is only about 80 miles from Belcamp. "When you're that close you don't bother relocating for the amount of transportation costs that would actually be saved," says Jensen. Management then decided to extend Belcamp's lease.


In Scenario 2, with Belcamp fixed, the team then re-ran the model with an eye towards optimizing transportation, lead time, and expenses with a second site. "It put us in the

general area of Nevada, New Mexico, Colorado, Arizona, and Utah," says Sephora's Flaherty. "From there, we reviewed a variety of secondary criteria: the demographics; the cost of doing business such as business licenses, permits, tax credits, incen-

tives from the state; and utility costs." In the end, Salt Lake and Reno were neck and neck.

7. Prepare an implementation plan. Over six months, Flaherty began the task of implementing this two-DC network solution, personally travelling to both areas, checking out different buildings, and weighing out strengths and weaknesses of each site.

"While both cities looked very promising, Salt Lake City not only optimized our transportation costs, but the local and state governments were very responsive and eager to work closely with us to ensure that our facility was brought online in the shortest amount of time possible," says Flaherty. He adds how the Salt



Lake City's entire business community never wavered in its support to bring Sephora to the city along with the jobs that it offered the area residents.

A network with benefits

It's been three years and Sephora's two-DC network has significantly improved its customer service cycle time. "Because I'm closer to my stores," says Flaherty, "I could get replenishment faster, making it less likely to go out of stock on a particular item." It has also achieved freight economies, while relieving capacity at the Belcamp DC.

Jensen points out another "priceless" advantage with the opening of this second DC. "When you have only one building, it's a critical point of failure if

a fire or a flood devastates it," says Jensen. "Having two facilities engenders a level of business continuity or additional redundancy to the network."

And Sephora continues to grow. "Last year we purchased the largest beauty retailer in Brazil, and we have plans to expand Sephora into that country beginning in 2012," says Flaherty. "Towards the end of this year, we will be expanding into Mexico."

Ever vigilant, the logistics team has just completed another network study to determine the need for a third facility—and so the cycle continues.

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