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KEYING INTO VERSATILITY

■
Simmons manages
siting decisions with
software
package ... and sleeps
a little easier.

When Len Smolinski came to Simmons Co. 10 years ago, the big mattress and box spring maker was already starting to shut down many of its warehouses and downsize its nationwide production network. But it wasn't until four years later that Simmons adopted a radical new way of deciding where the remaining plants should go.

Siting decisions used to be made by people working off complicated spreadsheets. Now the number-crunching is done entirely by computer. Human beings are still involved in the final decision, but state-of-the-art technology helps Simmons to manage the enormous number of variables involved in building a multi-million-dollar production plant.

The use of computer modeling became crucial as Simmons slashed the inventories and closed warehouses. Today the company supplies U.S. department stores, furniture stores and sleep shops directly from a given plant under its Make-To-Order program. As the name of the program suggests, production is keyed directly to retail orders. Turnaround time from order entry to production to

delivery is typically four to five days, but in some cases much less.

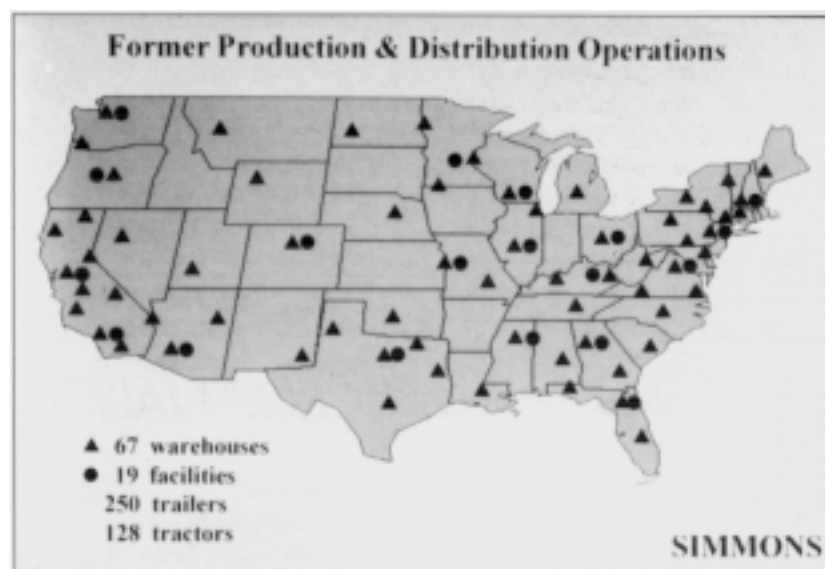
The company has embraced just-in-time in a big way. In the mid-1980s, it maintained 40 warehouses and eight large plants around the country. Not surprisingly, the system led to excessive inventory levels and poor service capabilities. With rival mattress makers breathing down its neck, Simmons undertook a massive efficiency program.

Through a good truck routing program, TruckStops 2, the company realized it could cut out warehouses and achieve the same high level of service for its customers. Today it

By Robert Bowman

has just 15 plants with minimal inventory at each-and no separate warehouses. Most mattresses come off the production line for immediate shipment to the customer. Approximately 1,200 finished units may be stored in a plant at any given time-versus 50,000 or more at the old-style facilities.

The Simmons set-up addresses a problem which mattress showrooms have faced for years: limited space. "Sleep shops in strip malls don't have much storage area," notes Smolinski. "They rely on their supplier to replenish inventory on the day they say they will."



Simmons' old system of relying on complicated spreadsheets to determine site selection led to excessive inventories. With site selection software, all number crunching now is done by computer.

It took about three years to get the whole program up and running. Now Simmons employs a variety of software packages which control everything from plant location through production, marketing and shipment. In a matter of days, the company can fill orders according to model, size, color and SKU. And it can gear up specially for dealer marketing events.

The site selection software known as OptiSite, from MicroAnalytics of Arlington, Va., allowed Simmons to revamp its production system via personal computer. Without the need for space-hungry warehousing, the company was able to move to smaller and less expensive facilities. Through detailed computer modeling, OptiSite showed Simmons where it should be. Operations at Columbus, Ohio, for example, were shifted to a smaller site at nearby Grove City.

Simmons uses OptiSite in two ways. One is to assign each customer to a strategically located production plant. The other is to determine whether a particular region can support an additional facility.

In the Southeast, the company had been delivering to the Carolinas from Jacksonville, Fla. Recently it decided to build a plant in Charlotte, N.C., to service major customers in the Carolinas. The goal is to blanket the nation with reliable production and delivery capabilities.

OptiSite employs sophisticated graphics and color-coded maps to lay out the variables in a comprehensible format. Then it costs out various options and allows Simmons to compare such factors as labor rates, carrier availability and inbound movement of raw materials. The company can manipulate the data through a series of "what if" scenarios.

OptiSite can also establish optimum volumes for each plant. "We pretend the warehouse module is a plant module," Smolinski says. "We don't misuse the system. We just abuse it a little bit."

Theoretically, OptiSite could tell the company that a new plant isn't even necessary, although Simmons hasn't asked it to make such "reverse decisions," Smolinski says.

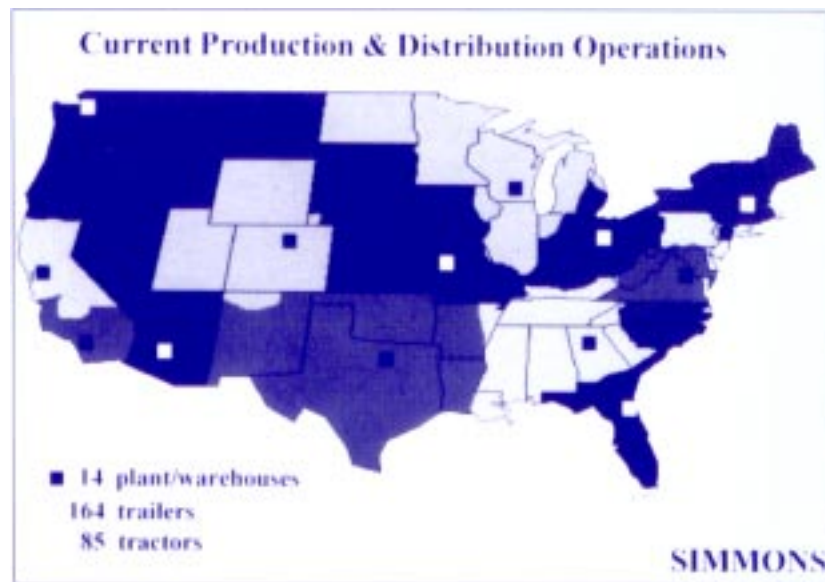
Smolinski doesn't make the mistake of confusing OptiSite with the real world. Sales figures can change overnight, rendering yesterday's computer model irrelevant. What the program does, says Smolinski, is "give a good indication where we ought to place a facility, and who should be serviced to meet specified delivery options."

A "sensitivity analysis" module shows how much transportation costs rise as Simmons gets farther away

from the spot designated by OptiSite. In any case, Smolinski says, there's plenty of room for human decisions. Often, generic rates fed into the program must be adjusted for specific lanes, as well as the precise mix of truckload and less-than-truckload, private fleet and commercial carrier.

Simmons' plant rationalization program appears to be providing excellent results. The company is eyeing gradual expansion in key markets, even as it continues to stress just-in-time deliveries. It expects to open three to five new plants in the next three or four years.

Simmons will continue to use OptiSite to reduce warehousing costs, transportation costs, and, most importantly, product cycle time. "That," says Smolinski, "translates into improved customer service and increased market share." ■



Through detailed computer modeling, Simmons reduced inventory. About 1,200 finished units may be stored at a plant, versus 50,000 or more at the old-style facilities.

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