BUSINESS PROBLEM-SOLVING CASE

Home Depot Renovates Itself with New Systems and Ways of Working

When embarking on household improvement projects, you might very well start at Home Depot. This company is the world's largest home improvement specialty retailer, the fourth largest retailer in the U.S, and the fifth largest retailer in the world, operating more than 2200 stores in the United States, Canada, China, and Mexico as well as an online business. It also has been the fastest-growing retailer in U.S. history. Home Depot targets the do-it-yourself (DIY) and professional markets with its selection of some 40,000 items, including lumber, flooring, plumbing supplies, garden products, tools, paint, and appliances. Home Depot also offers installation services for carpeting, cabinetry, and other products.

Bernie Marcus and Arthur Blank founded Home Depot in 1978 as a source of one-stop shopping for both do-it-yourself homeowners and contractors seeking hardware and home renovation materials. The first two Home Depot stores opened on June 22, 1979, in Atlanta, Georgia. At around 60,000 square feet each, these stores were cavernous warehouses stocking 25,000 products, much more than the average hardware store at that time.

Trained Home Depot store associates could offer the best customer service in the industry, guiding customers through projects such as laying tile, changing a fill valve, or handling a power tool. The Home Depot revolutionized the home improvement industry by bringing the expertise and the tools to the consumer while saving them money.

Home Depot's initial success was based on a decentralized business model by which stores were almost independently managed and filled with highly knowledgeable sales people who had backgrounds in various building trades. Regional and store-level managers made the decisions about what merchandise to carry in each store and how much of each item to keep in stock. Individual stores were large enough (around 100,000 square feet, with annual revenues of $60–$80 million) to store huge inventories of building materials and supplies. Suppliers shipped merchandise directly to the Home Depot warehouse stores, which served as their own distribution centers.

During these early years, Home Depot was very low-tech. Every Monday morning, Home Depot department managers would mark up orders in an inventory list and hand the list to a data entry staff member, who would key the data into the computer. Items were often out of stock because the inventory system was so poor.

This business model and information systems strategy served Home Depot well up to a point. For its first 25 years, its management focused on growing the business, setting up as many stores as it could in prime locations. Eventually, Home Depot had saturated all the major metropolitan markets and turned to secondary markets to continue its growth. The company began building smaller stores whose size was more appropriate for those markets. These smaller stores lacked the space to warehouse large inventories, which meant they didn't have all items in stock when customers wanted to purchase them. Trucks carrying supplies to each store often arrived half-empty. Store employees spent 60 percent of their workday stocking and just 40 percent helping customers. Home Depot also had dozens of distribution centers for lumber, warehouses for storing imports, and carton distribution centers designed to handle bulky items such as lawn tractors. This was a very large and expensive logistics infrastructure to maintain for a company where 75 percent of deliveries went directly to individual stores.

When Marcus and Blank retired in 2000, Robert Nardelli from GE succeeded them. He became the company's chairman, president, and CEO. By the time Nardelli took over, Home Depot had lost its competitive edge to Lowe's. Its stores looked too much like lumberyards, whereas Lowe's stores were more modern and inviting. Nardelli pushed hard to make the company more efficient, instituting many metrics and centralizing operations while cutting jobs to meet quarterly earnings targets. Nardelli believed home improvement store-by-store sales were less important due to market saturation from competition such as Lowe's. He expected Home Depot's fastest-growing area of business to be in-home installation services, web retailing, sales to commercial contractors, and international operations.

Nardelli's information technology plans called for a large IT approach. In 2002, Home Depot invested $1 billion in overhauling its IT infrastructure, including replacing point-of-sale (POS) systems, creating a huge data repository for accessing sales and labor management information, and implementing software from PeopleSoft and SAP to provide a standard enterprise

software platform for all the company's basic operations, from financial reporting to inventory tracking. The enterprise software was expected to enable sales associates to access details on products for sale, their features, and availability and find information about customers they were serving, including their past transaction history with the company. This software promised to determine the right mix of products for retail outlets, set regional prices, and track inventory from manufacturers' assembly lines to store cash registers. Nardelli believed self-checkout systems could replace all the store cashiers.

Nardelli invested $2 million in workload management software to make work activities more efficient and help lower the overall costs of operating the business. The self-service checkout aisles and these other measures produced some savings, but not enough. Under Nardelli's leadership, Home Depot continued to lose ground to Lowe's, which paid much more attention to customers in its stores.

In January 2007, Frank Blake replaced Nardelli, and put more emphasis on serving and cultivating customers. Blake also began investing in information systems to help the company with competitive pricing. Home Depot purchased BlackLocus, a provider of competitive price intelligence software to help it find out how its prices compare with those of competitors and maintain its reputation for having the lowest prices.

Although Nardelli had made heavy investments in technology, Home Depot still had many outdated ways of working. In 2008, Home Depot hired CIO Matt Carey, who had been in charge of information systems at eBay and Walmart. Carey said that when he arrived at Home Depot, the company's retail technology was comparable to what other chains possessed in 1990. To determine which products were out of stock, sales associates still had to inspect shelves physically. When merchandise was determined to be running low, the store's manager re-ordered the items himself; inventory replenishment was still not fully automated.

Carey worked with Mark Holifield, Home Depot's Senior Vice President of Supply Chain, to make the process of managing suppliers more streamlined and efficient. Holifield turned the company's supply chain design on its head by calling for 75 percent of Home Depot inventory to move through regional distribution centers called rapid deployment centers (RDCs) that would take over inventory replenishment decisions formerly made by individual stores.

This plan called for Home Depot to construct 24 RDCs strategically located in the United States where each could serve about 100 stores. The RDCs are flow-through distribution centers designed for swift cross-docking of large volumes of merchandise. In flow-through distribution, inbound shipments are organized so that they are typically sent out to their delivery destination within the same day, thereby eliminating the need to store them. Most products leave for stores within 24 hours of their arrival at the RDCs. About 75 percent of Home Depot merchandise is now centrally ordered through these centers. About 20 percent of items, such as products from regional suppliers or trees and live plants requiring special handling, will ship directly from suppliers to the stores.

Inventory management became more automated so that Home Depot could replenish items by predicting depletion of stock rather than waiting for items to run out. The new, improved inventory management system took day-to-day general stock level decisions out the hands of local managers and automated those orders, allowing the managers to concentrate more on purchases for special store displays or other areas that are specific to an individual location. One tool for helping Home Depot manage inventory is demand-planning software from Demand Foresight, which uses a state-of-the-art forecasting engine to help manufacturers and distributors reduce forecasting errors and increase profitability. The software targets specific, measurable improvements to customer service, inventory performance, working capital levels, and supply chain efficiency.

Because of all these organizational and technological changes, inventory-forecasting errors have dropped significantly. The percentage of out-of-stock items has been cut in half, and customers are finding products available 98.8 percent of the time. For example, during the unusually harsh winter of 2010, Lowe's had run out of inventory, but Home Depot could respond immediately to an upsurge in demand for snow blowers, shovels, and other storm-related needs. Truck trips to make deliveries have been halved, and the job responsibilities of Home Depot store workers have shifted from the shipping docks to store aisles where they can help more customers. Savings on delivery, service, inventory, and transportation costs have increased Home Depot's annual cash flow by $1 billion. By the autumn of 2012, Home Depot had recaptured its lead over Lowe's.

Home Depot is now supplying sales people with 40,000 Motorola handheld devices called FIRST Phones. In addition to serving as phones and walkie-talkies, the handhelds allow sales associates to use scanners on the device to update and review inventory

levels continuously. Associates have instant access to product information, making them more helpful to customers, and they can check on the spot to see whether an item is in stock. The mobile devices also help speed checkout times, allowing employees to scan items for customers as they wait on line instead of waiting until they reach the cashier. Management expected the mobile investment to pay for itself within a year by reducing labor costs, but its true value may be in enabling employees to serve customers better with real-time information in store aisles.

Home Depot has also redesigned its website to be more appealing, customer-friendly, and competitive. The company had initially operated the website as a separate business that sold items such as Xbox video games that its retail stores did not carry. The website lacked the capability to enable customers to order online and pick up merchandise in stores, as was possible at Lowe's. The website now sells what its stores do, allows in-store pickups, and features do-it-yourself videos to help customers with their home projects.

Sources: Christine Kern, "Home Depot Rolls Out New 'Line-Busting' Technology for Spring," *Integrated Solutions for Retailers*, February 17, 2015; www.homedepot.com, accessed March 4, 2015; "An Update on Home Depot's Supply Chain Transformation Project," *SupplyChainBrain*, January 16, 2014; Shelly Banjo, "Home Depot Lumbers into E-Commerce," *Wall Street Journal*, April 16, 2014; "Home Depot Looks to Offer Same-Day Shipping," *Wall Street Journal*, December 11, 2013; Paula Rosenbloom, "Home Depot's Resurrection: How One Retailer Made Its Own Home Improvement," *Forbes*, August 21, 2013; Home Depot FORM 10-K Annual Report for the Fiscal Year Ended February 3, 2013; Bob Ferrari, "Home Improvement Retailer Wars: August 2012 Update," *Supply Chain Matters*, August 28, 2012; "Can Home Depot Close Its Supply Chain Gap?" *Supply Chain Matters*, March 1, 2010; Miguel Bustillo, "Home Depot Undergoes Renovation," *Wall Street Journal*, February 24, 2010.

Case Study Questions

1-13 What problems and challenges did Home Depot experience?

1-14 Describe the relationship among people, organization, and technology at Home Depot. How did this relationship change over time?

1-15 How much was Home Depot's management responsible for its problems? What about the role of technology and organizational factors?

1-16 Mark Holifield, Home Depot's Vice President of Supply Chain, has noted that the company didn't have the most leading-edge technology, but it could make a major change in its supply chain. Discuss the implications of this statement.

MyMISLab

Go to the Assignments section of your MyLab to complete these writing exercises.

1-17 What are the strategic objectives that firms try to achieve by using information systems? For each strategic objective, give an example of how a firm could use information systems to achieve the objective.

1-18 Describe three ways in which information systems are transforming how business is conducted.

Chapter 1 References

Brynjolfsson, Erik. "VII Pillars of IT Productivity." *Optimize* (May 2005).

Bureau of Economic Analysis. *National Income and Product Accounts*, www.bea.gov, accessed August 19, 2014.

Chae, Ho-Chang, Chang E. Koh, and Victor Prybutok. "Information Technology Capability and Firm Performance: Contradictory Findings and Their Possible Causes," *MIS Quarterly* 38, No. 1 (March 2014).

Dubina, Kevin. "*Job Openings Reach a New High, Hires and Quits Also Increase*," Bureau of Labor Statistics Monthly Labor Review (June 2015).

eMarketer. "Chart: U.S. Digital Shoppers and Buyers, 2013–2019 (Millions and % of Internet Users), (June 2015).

FedEx Corporation. "SEC Form 10-K for the Fiscal Year Ended 2015."

Friedman, Thomas. *The World is* Flat. New York: Picador, 2007.