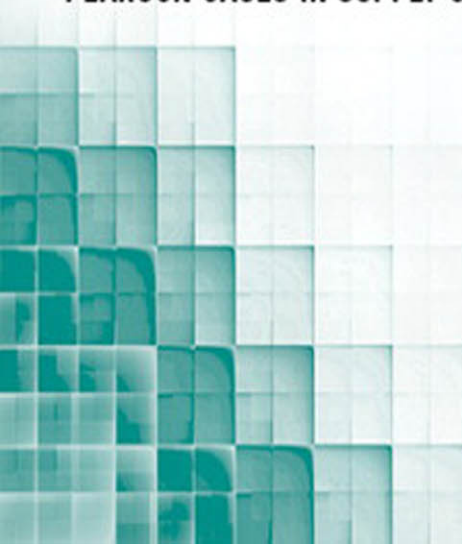# Inventory Management at Squirrel Hill Cosmetics

MATTHEW J. DRAKE

with Paul M. Griffin, Pennsylvania State University

PEARSON CASES IN SUPPLY CHAIN MANAGEMENT AND ANALYTICS

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Company Background

Founded in 1978, Squirrel Hill Cosmetics, Inc., is a privately held company that sells cosmetic products including eyeliner, mascara, lipstick, face powder, and nail polish. The company originally made its name with a popular medicated lip balm that it manufactured in Pittsburgh. In the 1980s and 1990s the company grew primarily through acquisitions and rapidly increased its product offerings. By 2003, most of its production was moved to China, and currently it contracts out all of its manufacturing.

Squirrel Hill Cosmetics now manages more than 1,200 SKUs; approximately 15% of the SKUs turn per year because of changing customer preferences. Last year the company made roughly $200 million in profit with approximately 900 employees. The two channels that it sells through are retailers, with Walmart and Target being the two key customers, and drugstores, including CVS and Walgreens.

In 2010, Squirrel Hill Cosmetics significantly redesigned its supply chain. More than 95% of its SKUs are sourced from China, and these products are now brought by container to a large central distribution center (DC) in Nanty-Glo, Pennsylvania. At the DC, some of

the products are packaged for specific customers, such as CVS. Products are then typically shipped to the regional DCs of its customers, although this does vary some by customer.

The containers brought to Nanty-Glo from China have approximately a 12-week lead time. The average cost per container is $6,800, and approximately 1,000 containers were shipped this past year. For key customers, namely Walmart, Nanty-Glo will emergency ship product by air. This reduces the 12-week lead time to 2 days, assuming that the Chinese supplier has available stock. Last year, expediting orders through air freight was done for roughly 20% of the backordered items. Shipping products by air costs 56.3% more. The average value of an item across all SKUs is $1.

Shortly after the supply chain redesign, Squirrel Hill Cosmetics updated its business management software to SAP. Although there were some significant hiccups in the implementation, the software was running smoothly in about six months. Squirrel Hill is now much better at tracking information and integrating it with its financial and operational systems.

Current Operations

Kim Deal was recently promoted to the position of Vice President of Global Supply Chain Operations. The promotion was due in large part to her successful modernization efforts of the Nanty-Glo DC. This included the design and installation of a large sortation process and supporting software, which will meet its payback period in about half the company standard of two years. She has also built a solid reputation as someone who is quite good at accurately estimating the financial impact of engineering changes.

Within two weeks of taking her new position, Kim felt that the biggest opportunity was to better manage global inventory and the related distribution costs, particularly for those items sourced from

China. To better understand the inventory operations, Kim set up a meeting with Tanya Donelly, inventory manager of the Nanty-Glo DC. Kim knew Tanya fairly well, as they had worked together on several projects in the past, although Kim had not directly worked on inventory-related projects.

During the meeting, Tanya explained the basic inventory management process currently in use. In particular, she walked through a specific example for SKU QED0001 (provided in the "Appendix: Inventory Example Given by Tanya Donelly" at the end of this case). Tanya pointed out that the beauty of the system is its simplicity; the same approach can be used for all the SKUs, and all that is really required is a good forecast.

Kim had several questions about the system. In particular, she was interested in why a four-week interval was chosen for the desired safety stock level for a SKU in each period. Tanya replied that this was something that they experimented with when they first implemented SAP, and they felt that a four-week interval gave the best performance results.

The financial performance of the system was another area about which Kim had several questions. In particular, she wanted to know the annual inventory holding cost, the backorder cost, the distribution cost, and the expediting cost for items that are backordered to key customers. Tanya replied that over the past year, there were 934 containers that had been shipped from China to the United States, resulting in a total shipping cost of $6,351,200. Further, there was a budget of $400,000 allocated for air freight of expedited orders for the past year, but the actual total was roughly $1.1 million (and roughly 14.73% of all items were shipped by air freight). Tanya also mentioned that they do not track holding or backorder costs, but only units; with the relatively new SAP system, they do not rely on such cost estimates to operate. She also pointed out that in her view, this was one of the benefits of their system; namely, only units need to be tracked, and costs do not need to be estimated.