



## Profit From Managing Your Product Flow

HBSWK Pub. Date: Mar 3, 2003

*Jonathan Byrnes looks at how artful product flow management can lead to improved earnings and happier customers in Part VI of his series on improving profitability without major capital investment.*

by Jonathan Byrnes

### Part VI

How can you increase the profitability of your business without the need for major capital investments? By thoughtful management of the details of the business, which I call profitability management. The theme of this monthly column is that surprisingly large profit increases lie latent in most companies' existing businesses. Product flow management is an important *profit lever* that managers can use to raise earnings and benefit key customers at the same time.

The case of a leading industrial supply company illustrates the power of product flow management. I gratefully acknowledge Harvard Business School professor Roy Shapiro who co-developed and co-authored this material.

#### The case of the industrial supply company

Faced with the apparent need to build several facilities and with customer pressure for quantum improvements in performance, the industrial supply company's executive committee authorized its vice president of operations to conduct a "challenge everything" study of its business operations. In order to look at the company's business in a new way, the vice president shifted his focus from the company's internal operations to the product flow through the whole channel, including suppliers and customers.

What he saw was surprising. The end-users consumed virtually all of his high-volume products steadily—with very little fluctuation from day to day, or week to week. Yet these same products were characterized by a surprisingly erratic order pattern. This forced the company to carry high inventory as well as excess capacity, and often to interrupt manufacturing schedules to accommodate unexpected peaks. (The overall order pattern for a representative product in a typical region is displayed in [Exhibit 1](#) figure 1a; national factory output for the same product is displayed in Figure 1b; and national inventory levels for the product are shown in Figure 1c.) The company's suppliers were similarly affected.

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When the vice president analyzed each customer in a representative region, he found that fluctuations in orders from a few large customers dominated the order patterns, causing most of the problem. (This is shown in Exhibit 1, Figure 1d.) These customers' large, infrequent orders created spikes in product demand that were amplified as each organization in the channel ordered from the next. With end-customer demand being, in fact, very steady, these erratic orders were costly for the customers as well.

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When this became clear, the vice president realized that everyone in the channel had been focusing on responding as efficiently as possible to a fundamentally illogical replenishment pattern, rather than on fixing the underlying problem. But because the problem lay *between* the companies rather than within a company, it had remained hidden.

#### The Solution

The solution seemed startlingly simple: Coordinate the channel so that, for the few large customers who

accounted for most of the fluctuations, product would flow smoothly and steadily from the beginning to the end of the channel. The vice president developed a "standing order" arrangement with these targeted customers to provide weekly deliveries of their high-volume products. Delivery quantities were reset in periodic meetings with supplier and customer operations managers. And contingency plans were put in place allowing customers to order increased quantities if unexpected needs arose.

This steadied the channel product flow, allowing the vice president to reduce inventories and reorganize the manufacturing process. (Exhibit 1, Figure 1h shows the new order pattern for both large and small customers. The overall order pattern is displayed in Figure 1e. The newly steadied factory output is shown in Figure 1f; Figure 1g shows the reduced inventory levels.)

The operating costs of the channel fell by over 35 percent. Inventory levels were cut in half, the company was spared a multi-million dollar capital program, and stockouts dropped substantially. Logistics-related labor costs per unit of product decreased greatly due to a more stable workload at warehouses, increased flowthrough transshipments, and newly standardized work practices.

The company became able to ship steadily and pack in a standard format that was very easy for the customers to receive and put away, significantly reducing customers' costs and inventory levels. Because product delivery patterns now were predictable, the company was able to stabilize manufacturing schedules. The new stability also allowed the company to issue firm, long-range forecasts to suppliers, with commitments to purchase the materials on a "take or pay" basis, in return for significantly lower prices and supply certainty. Everyone in the channel gained substantially.

The company found as well that its sales process changed in unexpected ways. The efficiency of the new system freed the sales reps from the need to respond to customer service complaints, which had taken a substantial amount of their time, and allowed them to focus on end-user selling. In newly created periodic operational review meetings between the company's regional operations managers and the customers' purchasing and operations managers, new relationships and trust developed. The combination of the increased sales focus on more productive selling and the enhanced efficiency of product flow led several large customers to broaden their purchases of the company's product line.

### **Why did it take so long?**

Even though the company was well recognized for its sophisticated management, and had a number of well-managed customers and suppliers, it took years for the company to discover this deceptively simple, and seemingly obvious, solution. In the past, a major competitor had tried and failed to implement such a standing order system.

This raises two related questions: (1) Why did it take so long for operations management to recognize the problem? and (2) Why did the company succeed while competitors failed? The vice president of operations faced three problems that are common to the process of profiting from product flow management.

First, there was no previous awareness of the root causes of the problem or the opportunity for improvement. The company had measured performance in terms of its cost efficiency and service levels in responding to its customers' orders, rather than its ability to create new efficiencies for both sides, while significantly raising service levels, by *altering* customers' order patterns.

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Manufacturing and distribution simply had taken the order and replenishment pattern as a given, not within their control, and had sought to optimize the company's response. All previous operations' improvement efforts were conducted within this traditional introspective framework. The possibility of dramatically improving performance through product flow management simply did not surface as an issue in either the company, its customers, or its suppliers—over 500 companies in all—until this vice president of operations had the vision to "challenge everything."

Second, despite the company's sophisticated computer capabilities, it lacked the data needed to understand many of the costs of intercompany product flows. The vice president had to gather new data and build new cost models to analyze intercompany order patterns and their costs. The company's customers and suppliers had similar blind spots in their views of operations analysis, and in their cost accounting systems.

Third, implementing the standing order system required organizational changes in the company. Several managers in the company were affected: Regional operations managers began to meet periodically with key customers to review service and adjust standing order levels; regional warehouses were reconfigured and downsized; materials managers began to track products beyond the company's boundaries; the procurement organization worked to develop long-range purchase commitments for its suppliers in return for price reductions and supplier guarantees of priority service and contingency backups; and manufacturing schedules and procedures were altered to draw new efficiencies from the new, more stable, demand pattern.

It is not surprising that a major competitor failed, because it approached the standing order arrangement purely as a new marketing program. Its program had three fatal flaws: (1) the competitor had failed to isolate the key customers and products that had relatively steady consumption but erratic ordering patterns, and instead it developed an unfocused system that tried to do too much; (2) it neglected to establish frequent meetings with customer operations managers, and had no contingency mechanisms to monitor and adjust delivery levels, or to quickly react to unforeseen problems; and (3) the competitor failed to reconfigure its distribution facilities, and reorganize its manufacturing and supply processes in order to gain new cost efficiencies.

### **Powerful profit lever**

Product flow management is a powerful profit lever that can increase earnings while raising customer service levels. To succeed, a manager must identify the points of opportunity and put in place a process to systematically manage day-to-day results.

In last month's column, I wrote on the importance of matching customer service intervals to real product needs and customer relations. Product flow management ties closely with service interval management because the most costly product flow variance occurs in the core product/core customer quadrant of the customer service matrix. And order pattern variance is one of the primary drivers of high inventories and costly operations.

By developing a strong operations-to-operations relationship with your core customers, you can manage product flow to reduce variance and costs, even with very tight service intervals. This creates a win-win for both your company and your best customers, and it provides a natural opportunity to develop the strong working relationships and bonds at the operating level that lead to strong sales increases in your best accounts.

By the way, how can you profit from managing your product flow? By seeing the hidden opportunity and managing your business to its fullest profit potential.

See you next month.

[Part I: The Bottom Line: Who's Managing Profitability?](#)

[Part II: Which Customers Don't Fit?](#)

[Part III: The Bottom Line: The Hunt For Profits](#)

[Part IV The Bottom Line: Profit from Customer Operating Partnerships](#)

[Part V The Bottom Line: The Dilemma of Customer Service](#)

The case example is partially excerpted with permission from "Intercompany Operating Ties," HBS Working Paper No. 92-058, by Jonathan Byrnes and Roy Shapiro.

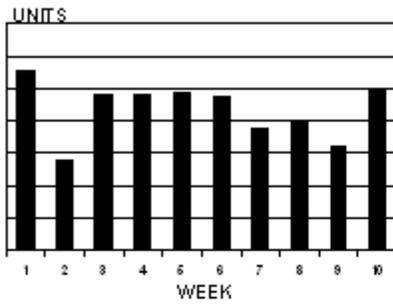
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### Exhibit 1

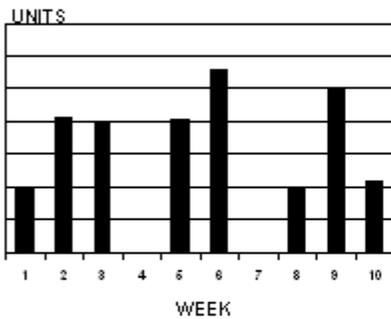
## CHANNEL DYNAMICS OF A TYPICAL PRODUCT

#### PREVIOUS CHANNEL FLOW

(1a) TYPICAL ORDER PATTERN



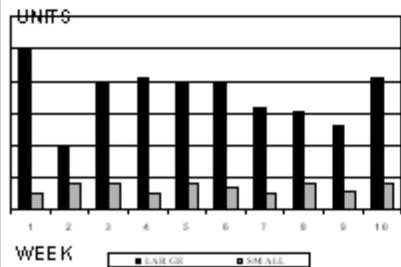
(1b) FACTORY OUTPUT



(1c) INVENTORY LEVELS

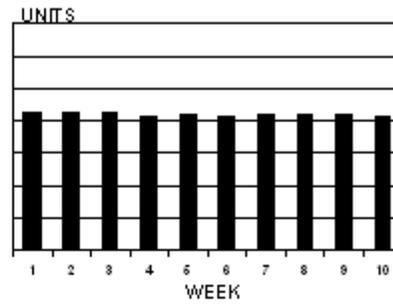


(1d) TYPICAL ORDER PATTERN  
LARGE VS. SMALL CUSTOMERS

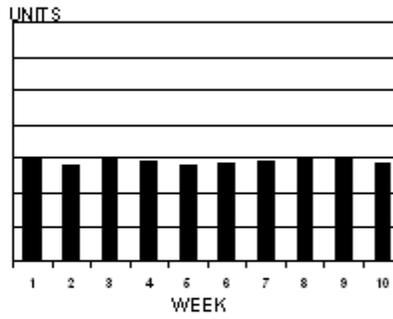


#### STANDING ORDER CHANNEL FLOW

(1e) TYPICAL ORDER PATTERN



(1f) FACTORY OUTPUT



(1g) INVENTORY LEVELS



(1h) TYPICAL ORDER PATTERN  
LARGE VS. SMALL CUSTOMERS

