Dell Manages Profitability, Not Inventory

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Dell Computer was a second-tier PC provider--until it learned the secrets of just-in-time inventory. Here's an inside look at how Dell manages profitability.

by Jonathan Byrnes

In 1994, Dell was a struggling second-tier PC maker. Like other PC makers, Dell ordered its components in advance and carried a large amount of component inventory. If its forecasts were wrong, Dell had major write-downs. Then Dell began to implement a new business model. Its operations had always featured a build-to-order process with direct sales to customers, but Dell took a series of ingenious steps to eliminate its inventories. The results were spectacular.

Over a four-year period, Dell's revenues grew from $2 billion to $16 billion, a 50 percent annual growth rate. Earnings per share increased by 62 percent per year. Dell's stock price increased by over 17,000 percent in a little over eight years. In 1998, Dell's return on invested capital was 217 percent, and the company had $1.8 billion in cash.

Dell's transformation

Profitability management, coordinating a company's day-to-day activities through careful forethought and great management, was at the core of Dell's transformation in this critical period. Dell created a tightly aligned business model that enabled it to manage away the need for its component inventories. Not only was capital not needed, but the change generated enormous amounts of cash that Dell used to fuel its growth. How did Dell do it?

At the heart of Dell's profitability management was a seemingly impossible dilemma: the company had adopted a build-to-order system, yet it had to commit to purchase key components sixty days in advance. How did Dell manage this?

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The answer lay in Dell's tightly aligned business model, which had several key elements. (I am very grateful to Stuart Smith, who was Dell's vice president of materials and logistics during this transformation period, for sharing his experiences and observations.)

Account selection. Dell purposely selected customers with relatively predictable purchasing patterns and low service costs. The company developed a core competence in targeting customers, and kept a massive database for this purpose. A large portion of Dell's business stemmed from long-term corporate relationship accounts—customers having predictable needs closely tied to their budget cycles. For these, Dell developed powerful customer-specific intranet Web sites with predetermined custom specifications and budgets. The remainder of Dell's business involved individual consumers. To obtain stable demand in this segment, Dell used higher price-points and the latest technology products to target second-time buyers who had regular upgrade purchase patterns, required little technical support, and paid by credit card.

Demand management. “Sell what you have” was the phrase that Dell developed for the crucial function of matching incoming demand to predetermined supply. This occurred at several levels.

At a monthly MSP/MPP (master sales plan/master production plan) meeting led by CEO Michael Dell, top-level managers agreed on a five-quarter rolling forecast with a strong focus on “the current quarter plus one.” In this meeting, Dell's functional department leaders balanced and agreed on internal product strategies, competitive factors, and constraints. At the meeting, the sales commission plan was set to equal the production plan. Through this process, Dell synchronized the company every thirty days.

At a weekly Lead-Time Meeting, senior executives in sales, marketing, and supply chain collectively interpreted demand trends and supply issues to determine where component overages or underages were likely to develop. The meeting focused on a common variable: lead time for product delivery to customer. At this meeting, the group focused on managing product lead times to ensure that customers would not cancel sales, and that Dell would not be stuck with unsold components.

If a product lead time was climbing, purchasing could expedite component deliveries or shift to alternative sources of supply, or sales could try to induce customers to buy substitute products. If component overages were accumulating, sales could provide incentives for order-takers to steer customers toward the makeable set of products, or could bundle products with an attractive umbrella price. The order-takers could tell from their screens which configurations were available, and the dynamic incentives induced them to steer point-of-sale demand toward these.

Dell's pricing also reflected real-time demand management, and varied significantly from week to week. While its competitor's prices were stable with periodic adjustments, Dell's prices varied significantly from week to week as the company modified its prices to push products where component inventory was building beyond prescribed levels.

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The weekly Lead-Time Meetings had a very strong impact on Dell's culture. Once the sales executives agreed on a set of products to be made, they “owned” the task of ensuring that these products would be sold. The product lead times were posted daily for all to see, and this drove the daily profitability management process.

Dell's core philosophy of actively managing demand in real time, or “selling what you have,” rather than making what you want to sell, was a critical driver of Dell's successful profitability management. Without this critical element, Dell's business model simply would not have been effective.

Product lifecycle management. Because Dell's customers were largely high-end repeat buyers who rapidly adopted new technology, Dell's marketing could focus on managing product lifecycle transitions. The company's direct marketing provided real-time customer feedback, which led to the rapid rounds of learning essential to product development and crisp lifecycle timing. Dell became expert at curtailing the end-of-life tail of its six-to-nine-month product cycle.

Supplier management. Although Dell's manufacturing system featured a combination of build-product-to-order and buy-component-to-plan processes, the company worked closely with its suppliers to introduce more flexibility into its system. Dell concentrated its supplier base into 50 to 100 suppliers accounting for 80 percent of its purchases. Supplier selection was based only 30 percent on cost, with the other 70 percent on quality, service, and flexibility.

Forecasting. Dell's forecast accuracy was about 70 to 75 percent, due to its careful account selection. Demand management, in turn, closed the forecast gap. When in doubt, Dell managers over-forecast on high-end products because it was easier to sell up, and high-end products had a longer shelf life.

Liquidity management. Direct sales were explicitly targeted at high-end customers who paid with a credit card. These sales had a four-day cash conversion cycle, while Dell took forty-five days to pay its vendors. This generated a huge amount of liquidity that helped finance Dell's rapid growth and limited its external financing needs. This cash engine was a key underlying factor that enabled Dell to earn such extraordinarily high returns.

Genesis of Dell's process

How did Dell create its tight profitability management process? The answer is very telling.

The seeds of Dell's success were sown in its failures of an earlier time. In 1994, Dell created two important products that were deficient due to quality problems. Sales plummeted and Dell faced a serious cash shortfall. At the same time, the company realized that it had to accelerate its growth in order to move from the list of declining Tier 2 manufacturers (Commodore, Zeos, etc.) to the group of prospering Tier 1 producers (IBM, Compaq, etc.), and this required even more cash.

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The executives met to decide how to generate the funds to keep the company alive. The decision was made to dramatically reduce inventories. The heads of manufacturing and marketing were charged with devising a way to run the business without component inventories. At first they resisted. Then they developed a way to meet this goal.

The new Dell business model developed over a period of time. The first set of objectives focused on lowering inventory by 50 percent, improving lead time by 50 percent, reducing assembly costs by 30 percent, and reducing obsolete inventory by 75 percent.

The new system was phased in, with component inventory dropping from seventy days to thirty to forty days, then to twenty days, then to nearly zero. At the same time, the sales force was trained to “sell what you have.” As the new profitability management system emerged and proved viable, Dell moved aggressively to refine it and to bring the other functional activities into tight alignment.

Dell used the freed-up cash to fuel its growth, chiefly in major corporate accounts. These accounts were originally hard for Dell to penetrate because they were generally buying from resellers. In order to win this business from the resellers, Dell had to convince the accounts that its products were of comparable quality, and that it could meet the necessary service and delivery requirements.

It was widely thought that Dell's build-to-order model could not meet the delivery requirements of major accounts. Once Dell demonstrated that it could build to specific customer orders and meet delivery and quality requirements, growth followed. This dynamic enabled Dell to catapult to first-tier status.

Two surprises greeted the Dell executives who were creating this new process.

First, as inventory dropped, lead-time performance improved. The reason was that Dell was not simply carrying component inventory against forecasted sales, but rather was aligning inventory and sales, managing profitability on a daily, weekly, and monthly basis.

Second, as inventory disappeared, the company's returns grew disproportionately. Not only did Dell avoid carrying costs and obsolete stock, but importantly, it was saving enormous amounts of money on purchasing components because the component prices were dropping 3 percent per month.

Profitability, not inventory

The inventory in a channel is determined by the variance in supply and the variance in demand. Unless these variances are reduced, channel inventory can only be moved around, not eliminated. I think of this as the “waterbed effect.” When you sit on a waterbed, it sinks in one spot and bulges in another. The water is redistributed but the amount stays the same.

Through its use of profitability management, Dell matched supply and demand on a daily, weekly, and monthly basis. It sharply reduced the variance, and the need for inventories simply disappeared.

In many companies, inventory substitutes for profitability management, tying up valuable capital and preventing the company from focusing on day-to-day business alignment. In most companies, managers face a choice between managing inventory and managing away the need for it.

By the way, are you managing profitability or inventory? If the answer is profitability, you can have your cake and eat it too!

See you next month.

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