Staples: A Year in the Life of a Start-Up

. . . In fact, the most creative ideas spring from long and intense experience with the components of the yet-to-be-created business.[1]

—Tom Stemberg

January 1985

In January 1985, Tom Stemberg, president of the eastern division of First National Supermarkets, and his CEO stood in the parking lot of a large supermarket warehouse site in West Springfield, Massachusetts. In spite of the chill in the air, their discussion was decidedly heated. Stemberg believed the site was ideally suited for another Edwards Warehouse store in his rapidly growing division. Stemberg was emphatic when he pounded his fist on the hood of his car. "This is the right move for the company! I'd stake my job on it." Differences about the company's growth strategy had been brewing for months and when his CEO replied, "You just did!" Stemberg realized that his relentless press for expansion had just cost him his job.

Tom Stemberg's entire career had been in retailing. After completing his education at Harvard (AB, 1971; MBA, 1973) he joined the Jewel Companies, a Chicago-based chain that operated both supermarkets and drugstores throughout the Midwest and New England. He started as what was unofficially, and somewhat irreverently, called a "Jewel Jet." In 1973, he was one of three graduates recruited from top-notch MBA programs. Though hired because of his senior management potential, Stemberg was expected to work in the trenches for approximately 18 months, learning every aspect of a store's operations, from cutting meat to culling produce. He spent his days bagging groceries, stocking shelves, and cleaning fish, but he had also had regular meetings with a senior officer who had agreed to be his mentor during the training period. Assigned to Jewel's Star Market division based in Boston, Stemberg quickly moved up the ladder. When he was named vice president of Sales and Marketing just before his twenty-eighth birthday, he was the youngest senior officer in Jewel's history.

[1]*Staples for Success*, Tom Stemberg, editor: Knowledge Exchange, Santa Monica, CA, 1996, p. 5.

This case was prepared by Professor Myra M. Hart as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. It is an abridgment of two earlier cases: Staples (A) HBS No. 898-157 and Staples (C), HBS No. 898-159 prepared by Barbara Feinberg under the supervision of Professors Myra M. Hart and Marco Iansiti.

Operating on proverbially razor-thin margins, supermarkets were in a constant war for market share, which they waged via advertising and pricing campaigns—the latter being especially important in the inflation-ridden late 1970s. Though Jewel dominated the Chicago market with a more than 40% share, Star Market battled in its primary Boston market with two formidable operators, Stop and Shop and Purity Supreme supermarkets. Purity, founded by Leo Kahn, had long been a major player in traditional supermarkets, but recently it had begun gaining ground with its Heartland warehouse food stores.

Entering this fray with flair, Stemberg relished the fight. He launched a string of successful advertising programs in Star's New England markets. On the merchandising side, he first successfully beefed up Star's private label lines, then introduced an even lower-priced alternative in generic brands. This concept was new, not only to Star but also to the supermarket industry as a whole. Greeted with skepticism by many of the experts, "No Name" (generic) brands were immediately embraced by consumers. Under Stemberg's guidance, Star was able to become #1 in what was a fierce battle for market leadership in Boston.

Stemberg's aggressive leadership in marketing and merchandising caught the attention of other major supermarket chains. In late 1982, he accepted an offer to become senior VP, Sales and Merchandising, for Ohio-based First National Supermarkets (FNS) Eastern Divisions—with the expectation that he would soon become the senior manager of its Connecticut-based operations. In 1983, he was named president of the Edwards-Finast unit.

At FNS, Stemberg concentrated his efforts on developing a network of Edwards Food Warehouse stores, a high-volume, no-frills operation that offered low-priced merchandise bearing the Edwards-Finast label. During his time with FNS, the company's stock rose from $4.50 to $15. Even as the staff back at the Ohio headquarters was preparing the company for sale, Stemberg continued to press for aggressive growth in his unit. In the end, his very successful strategy contributed to his undoing.

Leo Kahn

Coincidentally, Leo Kahn, founder, CEO, and chairman of Purity Supreme, had just sold his supermarket and drugstore businesses (retaining the underlying real estate interests) to Supermarkets General for $80 million. Though 64, Kahn was by no means retiring; instead, he planned to devote his attention to real estate development and to other business opportunities in retailing.

Stemberg's and Kahn's paths had crossed many times since the days when they were locked in the Boston "share wars" for their respective organizations, Star and Purity. They met for the first time in 1978, when they appeared on a local television show for a debate on warehouse stores and "no name" brands. While backstage, they discovered they shared an enthusiasm for basketball—Harvard basketball in particular. (Kahn was a 1938 Harvard University graduate.) Stemberg, who was president of the Friends of Harvard Basketball, a fund-raising group, immediately enlisted Kahn to join in some of the events that organization sponsored. Their friendship blossomed and the two stayed in touch even after Stemberg moved to Connecticut.

During his Purity Supreme days, Kahn had pioneered the food warehouse concept; Heartland Food Warehouses became a major contributor to Purity's success. The original Heartland stores soon spawned a second-generation warehouse store concept—those located in large, new shells rather than in converted ("second-use") supermarkets. Heartland's second-generation stores continued to evolve and were gradually upgraded into third-generation stores that offered greater variety in perishable goods and a broader range of "amenities" while holding to their rock-bottom prices.

At the same time that Heartland Food Warehouses were being rolled out, Kahn introduced Heartland Drug stores to the New England market. In addition to pioneering in the deep-discount drugstore concept, he built a convenience store chain called L'il Peach and was instrumental in the launch of several other highly successful retail operations.

Kahn had completed the sale of his supermarket and drug businesses to Supermarkets General (SGC) by January 1985, but was still working under a management contract with the company. Because he represented SGC's buying division, he was in frequent contact with all the major industry players. When he learned from Bob Samuels, First National's CEO, that Stemberg was not going to be part of the pending sale, Kahn's immediate response was, "Have Tom call me. I want to back him. . . ." Kahn respected Stemberg's boldness and competitiveness and he wanted to find out if there was an opportunity for the two of them to work together.

The Search for Opportunity

Stemberg was also receiving job offers. He decided to take his time to consider all options. He listened carefully when he received headhunter calls and even agreed to meet with some of the leading U.S. and global retailers to discuss options within their operations.

But echoing in Stemberg's head were some issues that Walter Salmon, a friend and HBS professor, had raised. These centered on what opportunities would be possible when state-of-the-art supermarket distribution techniques were applied to non-food areas. Toys "R" Us was an obvious success case, along with Home Depot. Salmon believed that experienced retailers would discover many of these opportunities, but that most would be exploited by start-ups rather than industry incumbents. Stemberg realized that his retail distribution, marketing, and merchandising skills could be used to push almost any product—provided there was a genuine market need for it. He added entrepreneurship to his list of options and began exploring whether to buy a business or start one from scratch. If he chose to create a start-up, what should the concept behind it be?

By early February, Stemberg and Kahn agreed to collaborate on a new business venture. They looked first at what both knew best—retailing. The retail landscape in the United States underwent dramatic changes from 1975 to 1985. Each had not only witnessed the revolution but also had contributed to it.

Both traditional downtown departments stores (e.g., Macy's, Jordan Marsh) and suburban operations such as Sears were feeling white-hot competitive heat from general-merchandise superstores, particularly Wal-Mart, dedicated-merchandise superstores (e.g., Toys "R" Us), and discount price clubs, including Costco, Price Club, and BJ's. These giants featured general merchandise but also offered packaged and fresh food items. Betting that consumers were willing to trade "amenities" for everyday lower prices, these operations forthrightly announced themselves as warehouses; in most instances the merchandise was piled high on industrial shelving, still wrapped in the original packing boxes. In exchange for rock-bottom prices, shoppers literally did the heavy lifting, with "service" and decor kept to the bare minimum. The distribution system that enabled these stores to thrive had undergone a sea change of its own.

The superstore concept had captured a share of the grocery business as well. In some cases (e.g., Purity Supreme's Heartland Food Warehouse), stores were already into so-called second and third generation operations. Drugstores, too, were moving into mass merchandising, with several chains focused on opening larger stores with low prices and comparatively few "frills."

Stemberg and Kahn's first pass at retailing was in the supermarket industry they knew so well. They briefly considered alternatives of founding or buying a food chain in New England, but the available properties were priced too high and they would have to contend with Kahn's non-compete agreement. They decided to look for other ways to use their expertise.

Stemberg continued to dialogue with his close friends in retailing, one of whom was another "Jewel Jet" of Stemberg's vintage, Bob Nakasone. The two became friends when Nakasone had been serving as president of Jewel's New England-based Brigham's (ice cream manufacturing, distribution, and food shops) during the early 1980s. The two had kept in touch after Stemberg had moved on to First National and Nakasone became president of Toys "R" Us, USA. He encouraged Stemberg to "think outside the food box," assuring him that there were more similarities than differences across product categories and that margins were much better outside the food business.

Though committed to partner with Kahn in some yet-to-be-defined venture, Stemberg continued to respond to inquiries from retailers interested in hiring him. One such inquiry came from two European companies collaborating on the introduction of warehouse stores in the United States. They approached Stemberg about becoming CEO of their U.S. operation. Since one of their stores was in Langhorne, Pennsylvania (midway between Princeton and University of Pennsylvania where Harvard's basketball team would be taking on its archrivals), Stemberg agreed to combine a site visit with his trek to see the games.

After cheering his alma mater on to a double victory (Harvard beat both Penn and Princeton for the first time in 20 years), an enthusiastic Stemberg continued on to take his store tour. He recalled that "within minutes" he "knew the store wouldn't work in the U.S. It was gigantic and the prices were good, but the store concept was a mess. Instead of focusing on a single type of product [the store] had everything: apparel, food, electronics, toys." However, while he was in the store, he noticed that one category of goods was "flying off the shelves"—office supplies. "That was the day the idea formed: could we create a Toys 'R' Us for office supplies?"[2]

Office Supplies: In Need of Overhaul?

What Stemberg suddenly saw at the end of his "basketball" tour was the possibility of creating what would amount to a new office supplies distribution channel and, with that, a whole new industry.

> A superstore was the answer because you had to create something with a cost structure that enables you to keep prices low. There's a reason why nobody had low prices in office supplies. If you sold the stuff the way the old guys did it—which is to buy in small lots and try to deliver it by your own trucks and so forth—it's obvious why stationers needed high prices to support those costs. The supermarket approach . . . seemed like a logical way to bring efficiency into the picture. Toys "R" Us was a supermarket. Home Depot was a supermarket, basically, for bigger, bulkier goods, but essentially a supermarket. My aim was to take the same approach and satisfy customers with lower prices.[3]

He envisioned a new industry that would offer much lower prices to almost everyone (except large corporations which already had them through bulk buying) and, in so doing, would change an entire way of doing business. Of course, capital requirements were very high and the market demand was unclear. There was hardly a hue and cry about the office supplies business as it was currently being operated. It was one thing to observe as an outsider, "this is a hugely inefficient way of selling paper clips." It was quite another to create a revolution on the buyers' side. He hadn't heard people clamoring for lower prices. Indeed, no one seemed to be aware of office supply prices at all.

[2] *Staples for Success*, p. 5.
[3] Ibid., p.3.

The Pricing Opportunity

Stemberg discovered just how little awareness there was about office supplies costs when he interviewed small-business people around him; no one had a clue. If he pressed for a dollar amount spent on them, it would be wildly off. For example, Stemberg and a lawyer friend actually tracked the invoices of a year's worth of office supplies and discovered that the latter's office was spending, per employee, more than twice what the lawyer had estimated.

Though often considered an "incidental expense" by the primary consumers, office products comprised an enormous market that was growing rapidly. In 1985, more than $85 billion were being spent annually on office supplies, which included such mundane items as paper clips, folders, paper, staples, pens and pencils, envelopes, as well as equipment (e.g., copy machines) and furniture (desks, file cabinets, etc.). The sale of office supplies in the United States had experienced approximately 13% annual growth from 1978 to 1983 and had increased 17% in 1984.

There were four principal office supply wholesalers in the industry, each issuing a catalogue with similar list prices for most items. Generally, business organizations with more than 100 employees purchased office products from dealers, who bought direct from manufacturers or through wholesalers—in either case, larger firms could negotiate on price, in some cases receiving discounts of up to 80% off list on specific items. "Dealers" in the office products industry ranged from small stationery shops to huge firms that sold through central warehouses and had no retail presence. The four wholesalers supplied virtually the entire spectrum of dealers.

In businesses with fewer than 100 employees, an office (or purchasing) manager was typically in charge of buying supplies and office-related products from the dealer. Availability, not price, was the key: it was more important to be *supplied* than to hunt for the lowest-cost supplies and potentially risk a shortage in the office. In firms with fewer than 20 people, it was the convenience of having supplies delivered from the dealer, or of finding them just around the corner at the local stationery shop that mattered, though the people in these firms were often more cost-conscious than those in larger organizations.

The small businesses were completely ignored by the big dealers. Stemberg proved this to himself by an interesting experiment in which he attempted to discover what Boise Cascade, which operated both as a wholesaler and a dealer, would offer him, as a potential "customer":

> First, he called on behalf of Ivy Satellite Network, a small company he owned that broadcasted events of Ivy League schools to alumni around the world. Boise Cascade, which had great prices, couldn't be bothered with sending a catalogue to Ivy Satellite, much less calling on the tiny company.
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> Next, he called Boise back, this time representing the 100-person office of Fred Alper, a food broker friend in Boston. This time, Boise was happy to trot out to Alper's office, and Stemberg was astonished by what they offered. A Bic pen from Boise would cost Alper just 85 cents. At the mom-and-pop stationery store that poor Ivy Satellite was forced to use, the price was $3.68. . . .
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> Further research confirmed Stemberg's discovery. Small companies were paying through the nose, while large companies could command huge discounts off the list price. An aggressive office manager of a company with 1,000 or more white-collar workers could obtain discounts of up to 50% from dealers. Small businesses with only 10 to 20 employees, on the other hand, were lucky to get a 10% discount. They often paid full price.[4]

[4] *Staples for Success*, p. 7.

By the mid-1980s, many of the country's largest corporations were reeling from foreign competition; there was massive restructuring and downsizing with millions of workers laid off. Many of these people either founded businesses themselves or joined small firms. It was estimated that of the country's 11 million small businesses, 10.8 million were "small"—and these businesses were fueling the growth of an increasingly important service component comprising, among many others, consultants, specialized lawyers, and computer technicians. Analysts began to tout small business growth as the locomotive that would pull America out of its competitive woes.

The introduction of the personal computer also provided a stimulus to small-business growth. Both Apple's Macintosh and IBM's PC made it technically and financially feasible for smaller firms to have access to powerful computing capabilities. Computers, faxes, copiers, printers, as well as standalone word processors created an enormous appetite for their own kinds of supplies (e.g., thermal paper) and equipment (e.g., printer stands).

While small businesses apparently were the wave of the future, they were unable to purchase office supplies and equipment inexpensively. Distributors and wholesalers focused both their service and their discounts almost entirely on big businesses. A "Toys 'R' Us" of office supplies and equipment began to seem like a slam-dunk concept to Stemberg.

Competition

It was, of course, possible at that time to purchase office supplies/equipment relatively inexpensively through mail order and at wholesale clubs, but it took substantial effort to get around the high-priced "mom-and pop" stationers "around the corner." Supermarkets, drugstores, variety stores, and a growing number of computer stores also offered these items, as did the fastest-growing mass-market channel—mail order catalogues. Moreover, as Stemberg had seen in his "basketball" visit, these items were flying off the shelves of the mass merchants and wholesale clubs.

Excepting stationery shops and dedicated catalogs, however, the other channels were focused in other directions (e.g., drugs and related products) or intent on offering a vast assortment of merchandise in multiple categories. Hence, even if the price "was right," the variety available, both in the range of items and the numbers of SKUs per item, was limited. Fast-moving items were cherry-picked and entire ranges of products were unavailable. In addition, most customers went to these stores for other reasons and their office-supply purchases were something of an afterthought. Stemberg also noted that the existing superstores and wholesale clubs (which charged an annual membership fee) provided very little service in general, much less expertise in individual categories.

Nevertheless, such operations represented formidable potential competition, even with their currently limited selection. Their aggressive growth, clout with suppliers, flexible pricing, and increasingly sophisticated information management systems posed significant barriers to entry. But this "bad news" was also "good news" because the existence and expansion of these alternative channels underscored the consumer's appetite for lower prices.

The Need for a Plan

Once he had done sufficient preliminary research to suggest that there indeed was an opportunity, Tom Stemberg began to discuss his idea of a chain of discount superstores for office supplies with Leo Kahn. Stemberg's enthusiasm kindled Kahn's interest and the two decided to forge ahead. Kahn and Stemberg each put up 50% of the seed fund that enabled Stemberg to devote the next six months to developing a business plan (with the aid of a market researcher) that could be taken to the venture capital community. To do so, the following interrelated issues, at a minimum, would have to be decided.

- Target customer: despite its being grossly under-served, was the small business the best customer to aim for at the outset?

- Category size: how big a surrounding population was needed to support an office supply superstore? Conversely, how big a store was needed to supply a particular population?

- Store format: how much self-service could be justified? A superstore was basically a self-service operation, but a superstore dedicated uniquely to office supplies and equipment would seem to need some kind of trained personnel; it would certainly require a careful, clear, and convenient layout for customers unfamiliar, by and large, with the breadth and depth the category offered.

- Scalability: how could the concept be easily replicated? What were the implications for real estate, hiring and training, and the like?

- Distribution and retailing system: with the aim of offering deeply discounted prices, an office superstore had to keep its costs to a bare minimum. Would the current supply system, based on wholesalers and manufacturers, accommodate this aim? What kind of controls would be needed?

September 1985: Looking for Venture Money

Even as he constructed the plan to address each of these issues, Stemberg understood the risks he would be undertaking. He realized the biggest one was also the simplest: he could throw a "low cost" party, but no one might come. If potential customers were not aware that they were paying too much for office supplies and equipment, why would anyone fund a venture dedicated to offering great prices? How could he convince everyone—from funders, to vendors, to customers—that his idea was viable? Modifying buyer behavior would not be a trivial matter.

Another challenge would be building a highly credible management team. During the next six weeks, he recruited three senior managers—all of whom he knew during his years at Star Market. The team comprised retail "veterans." These included Myra Hart, an HBS MBA (another "Jewel Jet" who had gone through a training program like Stemberg's) and had been an executive at Star Market. Bob Leombruno was renowned in Boston-area retail circles for helping to pull operations, including Mammoth Mart, out of bankruptcy. Paul Korian, from Osco Drug, had been running East Coast merchandising for that company (now part of American Stores). Joining the team subsequently was Todd Krasnow, another Harvard MBA, Jewel Jet, who had worked with Hart at Star.

They all agreed to take salary cuts and to begin working on the funding process immediately. They could keep their "day jobs" while looking for money, but once VC money was committed, they would have to agree to report for work full-time—preferably no later than January 1, 1986. (For all three, that start date was something of a hardship, since retailers typically paid annual bonuses equal to 25% or more of base salary to employees at the close of the fiscal year, January 31.) In exchange for the lower wages, forgone bonuses, incredible hours, and potentially backbreaking work, the new officers received ownership in the company—to be called Staples.

Once the team was assembled, Stemberg and the officer group spent the bulk of their time trying to nail down the cash that would make the venture a reality. They found the Staples concept was easy to grasp and alluring to venture capitalists—it reeked of "opportunity." Unfortunately, the very scale of an enterprise needed to secure a return on investment was daunting—especially given a consumer trend toward convenience and "service." Ultimately, however, the economic logic inherent in offering dramatically lower prices finally convinced four VC firms that the Staples concept had merit. The problem was, none would commit until someone else did. And none of them seemed to want Stemberg's deal: $4 million for a 50% stake based on an $8 million valuation. They argued that Staples was worth $6 million after the money. They started out offering to consider $4 million for a 67% interest in the venture.

A friend more seasoned in the ways of the venture capital community provided some coaching for breaking the impasse; he pointed out to Stemberg what he called the VC "herd mentality" and encouraged him to maintain his position on the numbers ("Who knows the numbers better than the founder?"). Concentrating his efforts on two firms that seemed more outside "the herd," Stemberg convinced one of them to break away; once that happened, the remaining three fell in line. He then redoubled his efforts in showing how his valuation and terms were correct given what Staples had to accomplish. When that logjam was broken, Staples got its funding and on Stemberg's terms.

The Commitment and the Challenge

The $4.5 million that Stemberg and his management team secured gave the venture capitalists a 56% stake in the company and was premised on the team's commitment to the following:

- the opening of the prototype Brighton store on May 1, 1986;
- meeting a carefully planned rollout schedule for subsequent stores;
- hitting specific financial targets.

Subsequent stores would be located in New England, then in metropolitan New York (i.e., Westchester County and Long Island) and New Jersey. Philadelphia and Washington, D.C., would follow later.

The Staples concept, while drawing heavily from existing off-price merchandising concepts and operations, was new to the fragmented office supplies industry, whose suppliers were not set up to service this kind of distribution channel. Office product suppliers worked through distributors who had large central warehouses from which they serviced both very large customers and also shipped to local "mom and pop" stationers.

Vendors first had to be sold on the concept of Staples as a viable entity, and they also had to be educated to the idea of drop-shipping orders directly to individual Staples stores. Marketing Director Todd Krasnow reflected on some of the hurdles that had to be overcome: "Our vision was to totally mess up the existing channel of distribution, so [vendors] were going to fight us very hard."[5] Moreover, since Staples (if it succeeded) would drive many of the vendors' current customers out of existence, the challenge to get them on board was much greater than simply letting another player into the existing industry. Of course, the convincing could not be a long, slow dance. Given the May 1 deadline, merchandise had to be ordered, delivered, inventoried, priced, and shelved in a scant few months.

Ultimately, Stemberg and Korian aimed to convince suppliers, both individually and at industry meetings, that the wave of change was sure to engulf them—whether it was created by Staples or not. If a "Toys R Us of Office Supplies" concept didn't alter industry practices, superstores like Wal-Mart would. Further, Staples would "remember" its pioneering suppliers down the road—as well as those who failed to get on board.

[5] *Staples for Success*, p. 18.

Suppliers were not limited to those providing merchandise for retail sales. All store fixtures and furniture, signage, phones, paging systems and the like had to be secured, too, for Brighton headquarters, and for subsequent stores. And all advertising and promotional activities would have to be designed, "ordered," and delivered. Finally, an information system had to be developed, ordered, and installed to pull everything together.

Success also depended on the Brighton store space being renovated on time — itself a process sure to be filled with building permit snafus, construction obstacles, and other unseen horrors that could impede delivery. For example, when the crew began excavating for the loading dock, they found an auto graveyard beneath the surface and had to spend several days dredging up old bumpers, door panels, and frames. The building and operating teams had their work cut out for them.

Meanwhile, because of the long lead times required for lease negotiations, securing building permits, and construction, Stemberg and Hart had to commit to additional store locations immediately—even though there was, as yet, no proof of concept. Store management and staff had to be hired, then rigorously trained in a new approach to the business of selling office supplies—one for which there was no "manual." All this and more had to be accomplished roughly "on a dime"—and cost not much more than that.

Of course, once the first store was built, customers would have to be "convinced" that shopping in a superstore was the best way to do their office supply purchasing. There was plenty of evidence to suggest that people would go to great lengths to save money on their personal purchases, but there was no assurance that they would inconvenience themselves to "save for the office."

January 1986

From January 2 to 4, 1986, Stemberg, Hart, Korian, Leombruno, and two assistants gathered at the Harvard Club in Boston for a "seminar" on the office products business. Hart recalled:

> On the first day, the consultant sat down with an office products catalog and walked us through it. Someone would ask, "What's the difference between a Number 2 pencil and a Number 3 pencil? What are the key issues in paper? Is it perishable?" And she would answer, "Yes, it actually does dry out—you can't keep it forever. . . ." We also talked about the industry structure and the individual players in the field. As far as office supplies were concerned, we were all novices.

A few days later, the team arrived at their newly leased headquarters. Hart turned her key in the lock at 7:00 a.m. and flipped on the lights. She took one look at the 5,000-square-foot slice of a cavernous old mill building in Newton, Massachusetts, switched the lights back off, and headed for CVS to purchase paper towels, rubber gloves, and the gallons of Mr. Clean needed to scrub off years of grunge. When she got back, the rest of the team had arrived. They rolled up their sleeves and began the cleanup campaign to make headquarters livable. For Hart had no doubt that "living" was what she and her colleagues would be doing in the Newton headquarters.

They quickly settled into a routine of 80-hour weeks while they geared up for Brighton and the next string of stores—always keeping the vision of a superstore chain and a future IPO squarely in mind.

Simple Lines . . . Multiple Hats

"The officers' responsibilities were divided into simple lines," recalled Hart. Korian was responsible for selecting, purchasing, and pricing merchandise—getting it into the store. Hart, in turn, would get it out of the store. She would set up the facilities (headquarters and stores), staff them, and ensure that requisite equipment, people, and procedures were in place. Leombruno, as CFO, would cover the financial end: bill paying, transaction handling, and management reporting; he would also develop the information system to support these functions. Stemberg would be responsible for everything external: financial, legal, and promotional. And he would coordinate everyone else's activities.

Simple lines, perhaps. But Staples, not only as a concept but also as a looming reality, demanded an infrastructure with which no one had direct experience. In the coming few months, this infrastructure would have to be invented, implemented, and documented so it could be replicated—in the midst of a frenetic rush to open Brighton and two other stores by year end.

"It was like building a building before the plans are really done and you're doing modifications as you go along in terms of what you want; or you're doing modifications because the plans can't quite do what you want." This is how Bob Leombruno described the bootstrapping process in the first few months of 1986. Working continuously, following an almost hour-by-hour plan created by Hart and rigorously adhered to by all, the team forged its way. She outlined the routine:

> . . . We always started by 7:30 a.m. [at headquarters] with an update by Stemberg and then individual officer reports on the issues of the day, the week, etc. Any problems that could threaten the overall timeline had to be surfaced immediately and a resolution or contingency had to be discussed. We returned to our own offices by 9:00 a.m., and tackled our individual "to-do" priorities. . . .
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> We met again at noon in our all-purpose conference/board/lunchroom. We ate together and, though we tried to take a break, we always ended up talking business. It was always pretty informal and discussions were open to anybody who happened to be in the room. It was the time when we really began to get to know each other on a more personal level and to build the friendships that eventually held everything together regardless of the magnitude of the crises.
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> Afternoons were devoted to individual project work unless a formal meeting had been scheduled. . . . We often ordered in food again about 7:00 p.m. and were likely to end up in Stemberg's office on our way out the door—8:00 or 9:00 p.m. We didn't have formal meetings, but somehow one or another would drop by to brief Tom on what was or wasn't happening, and pretty soon, we would all be there.

"Individual project work" and "to-do priorities" began to span multiple areas, beyond the simple lines originally articulated. Hart's activities, for example, spanned real estate, in-store vendor relationships, personnel, and more—under the rubric of "getting it out of the store":

> [They involved] construction and outfitting the stores . . . everything from working with architects, getting building and sign permits...competitive bids and overseeing construction. . . . They also involved lease negotiations, oversight of all corporate space upgrades, phone systems, utilities, security, construction and wiring [particularly for computer systems]. . . . My responsibility for setting up the stores [also] included establishing ongoing vendor relationships for store fixtures [etc.] . . . and developing customer delivery services programs.
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> I worked with personnel consultants . . . to recruit senior managers, develop training programs, and set up employee benefits. I worked with the store management team to develop the store operations model with detailed receiving and product handling procedures, pricing and display packages, customer service

standards, and all store opening and closing procedures. Budgeting and control for all store operations and corporate headquarters expenses were also my responsibility.

Bob Leombruno, meanwhile, was grappling with the "systems issue," which also grew beyond original expectations. "My goal was to have a system that would operate without one live person in corporate, [yet] it would support every single person in the stores," said Leombruno. As originally conceived, the system aimed to accommodate the financial needs of the Staples organization, the merchandising needs of ordering and reordering, the operating needs of individual stores. It had to support a large chain of stores. Leombruno insisted that the system be able to calculate cost of sales for each item sold. As if to complicate matters, Stemberg insisted an one additional feature—the ability to capture individual customer purchase data so that targeted marketing could be developed and a real estate/demographic model could be built.

These complex systems demands had to be thought through. There were important decisions to make about whether and how to develop the software package that would run it—and, of course, it had to be fully functional by May 1. (In fact, it had to work in time for "April First," since Brighton was to have a "soft opening" on April 10, a kind of dress rehearsal for investors, friends, and family.)

The combined aims of the system were far more complex than anything off-the-shelf software packages could provide in 1986. Consequently, Leombruno soon found himself knee-deep in the programming end of systems development—in addition to setting up payroll and other procedures both for Brighton and subsequent stores.

The development of the system required that the highly preoccupied management team take time to step back and assess assumptions about how they envisioned their work—individually and together.

Devising a System

"Systems driven" was the magic buzzword of the mid-1980s. Though no one could give a precise definition of the term, it implied, at a minimum, that "systems" were independent of people, their foibles and politics. A systems-driven operation, freed from human intervention, would run smoothly and profitably under the capable watch of an MIS department that selected and installed the right hardware and, with any luck, the right software.

From the beginning, Staples described itself as being systems-driven; as a new venture, it had the opportunity to devise what that system would be. What Staples wanted to do and what the state of the art actually offered, however, were two different things.

The Systems "Wish List"

A very early set of assumptions about how Staples would operate focused on control. First, individual stores would not be able to change retail prices; that would be handled centrally. In addition, the goal was that each cash register in every store would stand alone, rather than being linked to a store controller box in the backroom of that store, as was the rule in the supermarket industry at the time. Thus, if one register went down, the entire system wouldn't collapse. Further, each register would be able to be individually uploaded (sending sales data, e.g.) to a central point and downloaded (receiving price updates, e.g.) from that point, daily.

Another set of issues concerned inventory turns. Leombruno firmly believed that Staples should work with vendors' money. "If you pay in 30 days and have (at least) 12 inventory turns," he said, "you essentially don't have to worry about anything else—financing or payroll—if profit margins are reasonable." For that to work, however, the information for managing inventory had to be precise and complete and had to be relayed reliably to the merchandising group.

A third set of issues related to calculating gross profit. Leombruno explained:

> In my experience [with "cleaning up" stores that had gone bankrupt], those businesses failed because they didn't understand gross profit. The buyers didn't know whether they had made 25 cents on an item that sold, or whether they made 2 cents. They knew, instead, only gross profit on average. I was determined to avoid that situation [with Staples]. We had to know the cost of an item when it was sold so that the gross profit on *that* item could be calculated, not just the average margin of the inventory mix. This, however, was not part of existing software capability at the time.

A fourth set of issues concerned shelf-space allocation. Staples' superstore concept maximized floor (selling) space and minimized backroom (storage) space; the goal was for vendors to drop-ship orders to individual stores on a "just-in-time" basis, operating on systems-generated purchase orders. This automatic reorder system would have to be particularly "alert" to stockouts, as these resulted in empty shelves. Not only did stores look bad when merchandise was missing (something venture capitalists could not fail to notice), but even more important, the all-important customers would be frustrated if what they planned to purchase was not there. The reorder system would also have to accommodate anomalies, like "one-time-only" sales spikes. An obvious example was certain back-to-school items that peaked in late summer but were flat to nonexistent at other times. Because Staples had no sales history, beyond such commonsense merchandise as certain back-to-school items, it was not clear which other items would spike and when.

Added to the systems "wish list" was Stemberg's dream of showing on each sales receipt a "retail" price (based on manufacturers' list prices or local competitors' retail prices), the Staples price, and the computed savings on each transaction. The reinforcement of the savings message on every sales receipt was an important selling tool. It was a constant reminder to each customer of the Staples value statement—providing small businesses and home offices with dramatically lower prices—the kind that large businesses, under the "old regime," were able to negotiate for themselves with office supply wholesalers.

To add to the complexity, a third retail price (for Staples members only) would be assigned to approximately 100 items per store to encourage use of the member "tracking" card. Leombruno knew the challenge that this pioneering effort to provide three separate retail prices to a single item would present for a systems designer. When each new order was started, the sales associate would first have to ring in the Staples member ID number. The number would trigger the membership savings capability and would enable the transaction to be tracked. If Staples captured individual customer data—including purchase frequency, preferred merchandise, and geographic draw areas—it could develop sophisticated marketing, merchandising, and real estate models.

Finally, Leombruno was developing a financial package that would allow a monthly presentation of financial activities and cash flow as well as allowing easy preparation of budgets and comparison of actual results to budget. He wanted the merchandising system to be separate from the financial system, so if one failed or performed inadequately, the other would not be affected.

The State of the Art

In early fall 1985, Staples' consultant, one of the then Big Eight accounting firms, began to focus on "systems." Staples had not been funded at this point, but the VCs were making positive noises and things looked increasingly hopeful. The business plan laid out "Systems Requirements" (see **Exhibit 1**), stressing "flexibility" and "ease of support" as key "general" goals, along with specific applications and functions (and projected costs) at both hardware and software levels. The choice had basically boiled down to creating a system from scratch or modifying an existing package. Based on the requirements laid out in **Exhibit 1**, the consulting team searched the market. Meanwhile, Leombruno quickly became aware of the discrepancy between what the team needed and what was then current "state of the art." Though there were solutions that could meet each of the individual needs on the "wish list," none could address all of them in an integrated system.

For example, many of the functions included in existing software (including the package that Staples had purchased, based on the consultant's recommendation) were available, but were reported at the store level only. Staples, however, was to become a chain of more than 25 stores before going public. And the inventory for that chain had to be managed centrally. Moreover, as Leombruno noted: "The system had to support those [additional] stores from day one, without a hiccup. You can't try to change something once it's in place, because you can't find programs that can do something outside of an operating system and keep the operating system working at the same time. That's a disaster waiting to happen."

In the process of developing the system that met most of the criteria on the "wish list," Leombruno discovered that the appropriately modified software product would require two different hardware systems: IBM's, on which the software was originally designed to run, plus a DEC system to handle customer tracking. If this decision were made, the computer "clean room" at corporate would need enlarging: a $50,000 unbudgeted expense. Modifying the software itself would be no trivial task. Leombruno elaborated: "We would be attempting to put bells and whistles on it, to do things that no other retailer was doing in quite the same way. For each of the things, you could say "somebody's doing it." Somebody's doing customer tracking, somebody's doing multiple pricing, somebody's doing discount pricing. But nobody was doing it all."

The question was, could it be done for May 1 (which, as Leombruno always insisted was really April First)? Indeed, were all the "bells and whistles" needed?

Introducing the System

During the first few weeks at corporate, the "systems issue" remained in the background, as officers tackled their ever-lengthening to-do lists. The general consensus was that this part of the business was being taken care of: Not only was the CFO focused on it, so was the highly paid consultant. The information systems assumed center stage, however, in early February, with Leombruno's call for an all-afternoon meeting to be attended by the entire senior management team and run by the consultant. The meeting would describe the system as it was being developed. Leombruno had just hired the programmer who worked on the original software and he would be attempting to modify the package to incorporate Staples' IT goals. Hart recalled: "At first I thought we were devoting an awful lot of very valuable time to these group discussions about "the system." It was, after all, Bob's job. . . . It seemed self-evident to me how it should work. I didn't see what was so hard about making it work the way we expected it to work!"

After a general discussion of the many stated goals, the consultant got down to details--describing the registers that would be required to run the intricate software. Hart reacted immediately:

> Wait a minute! The register system you've chosen is way too complicated! I want McDonald's-type registers, simple ones that anyone can operate. They have to work reliably, easily, and, most of all, fast. People hate waiting in line; they'll be on lunch hours or on their way to work. I don't care what kind of bells and whistles you add as long as the checkout process is clean and simple. I don't want customers waiting while cashiers are trying to figure out "what next" or have to call for a supervisor to help them get "unstuck."

As the meeting wore on, it became clearer that the real issue wasn't the registers, or the detailed sales receipt filled with information, or the daily up/downloading by standalone equipment; it was what all these represented when taken together. In essence, the management team began to realize that they were not "simply" selling pencils and paper as opposed to potatoes, soap powder, or aspirin; they were pioneering a new *form* of retailing. There was no manual for what they were attempting.

At the same time, the collective experience of the management team weighed in. Hart's cry about simple registers "that anyone can operate" *was* a major concern. Leombruno himself had argued that the system should be able to run essentially without human intervention: that was the whole point of being "systems-driven," in fact. The seamless, "hiccup-less" move from store to store also presupposed system simplicity—and not merely at the register level. Staples obviously wasn't planning to hire "just anyone," but it would have to hire and train large numbers of people, for Brighton and subsequent stores. The team had already been burned with the original marketing director, who hadn't understood the level of commitment needed to get Staples going. That didn't imply a trend, but the sheer numbers of people to be hired and trained certainly argued for "ease of support"—as did the business plan.

Korian worried about vendors—who didn't have basic bar coding. That meant that every piece of merchandise would require visual inspection at both the receiving and selling ends. More important, vendors weren't set up to deliver to Staples as a major chain. Korian realized that merchandise could be delivered every which way, making the backroom process chaotic. At the same time, he wasn't convinced that—despite this ingenious system of inventory control—there would be sufficient inventory *to* control. After all, Staples, from a vendor's point of view, didn't exist: it hadn't even sold a paper clip. He and Stemberg were still trying to convince many suppliers about *the concept*.

Stemberg, for his part, agonized over the absolutely-positively-we-will-open-May 1 commitment he had made to the VCs. He believed that, even though Staples had yet to sell a paper clip, the concept of office superstore would be irresistible to other venture capitalists; he already knew something of their "herd mentality" and he realized that it could work again—in the opposite direction. His "slam-dunk" concept could be cloned—and funded—in short order. Thus, opening on May 1 was essential not only to make his commitment to the VCs stick but also to ensure that if competitors were to spring up, Staples would be ahead. But it wasn't just opening the doors on May 1; it was having a fully stocked store with all systems *go.*

Finally, as he listened to his colleagues wrestle with "the system" and its implications, Leombruno thought hard:

> When you begin to put stuff together, you have to think about another side of the issues: Where is everyone coming from in how they look at all the "fancy" algorithms in the calculations of how you reorder merchandise? You think you want to go out and get the fanciest computing process done within the system, drawing upon the highest level of "intelligence." But will anyone understand the algorithm? Because if they don't, who will fix it? And, if this system doesn't work, if we don't make our May 1 commitment, everyone will say, "Who were those guys? They put all their eggs in one basket."

Exhibit 1 Deep Discount Office Supplies

I. Business Overview

The deep discount office supply business will provide stationery, office furniture, software and other supplies at discounts of 35% to 50% from retail pricing. The business will consist of a chain of stores of approximately 15,000 square feet and a corporate management organization. The stores will stock about 3,000 SKUs, with average annual sales of S3.5 to S4.0 million.

Each store will be a profit center. Stores will stock their own inventory and will reorder merchandise through corporate or, in some cases, directly from the supplier. There will be no credit sales or deliveries.

Corporate headquarters will manage and administer operations. Accounting, merchandising, publishing, and data processing will be centralized at corporate. There will be no company-owned warehouses or distribution center.

II. Systems Requirements

Software

General Requirements

The key requirement for software is flexibility. The business will be market-driven, and the software must be able to accommodate changes in the business dictated by expansion or performance issues.

Another general requirement for software is ease of support. The software must be modified by the company and must be written in a well-known language that is in common usage on the selected computer. Additionally, the software must be supported by a local vendor, particularly in the early stages of the company's development.

Store Systems

As currently envisioned, the stores will need the following applications and functions:

- Point of Sale
  - sales by SKU
  - price look-up by SKU
  - price file download from headquarters
  - negative credit authorization against bad check file
  - store opening and closing procedures
  - sales transactions and store receivings to corporate headquarters
- Store Administration
  - inventory management for 3,000 SKUs
  - receiving against purchase orders
  - support for store transfers
  - input for timekeeping and labor scheduling

Corporate Systems

Corporate systems must provide the following functions on a centralized basis:

Accounting:

Provide a general ledger system with at least a three-digit profit center number. Accept both manual journal entries and automated interfaces. Provide financial reporting by store and for entire company.

Provide accounts payable system with various parameters for selecting items for payment, for both merchandise and expenses payable. Maintain vendor file with at least 300 vendors and produce vendor payment analysis. Provide automated interface to general ledger.

Sales:

Provide sales audit application allowing reconciliation by register, by store. Provide flexible sales analysis reporting, identifying sales by SKU by store, and relative performance. Provide automatic interface to general ledger.

Merchandising:

Provide purchase order management functions, including stock levels and sales reports to support purchase order generation. Provide replenishment system for user-selected SKUs. Distribute orders to stores. Maintain open purchase order files and purchase order history files. Download open purchase order information to stores, and process store receiving files to update purchase order status.

Track inventory at each store. Produce inventory worksheets for periodic physical inventories. Accept updates from store receivings and sales. Provide merchandise reporting, including items movement by SKU, fast/slow movers, and gross margin by SKU/category/store. Allow comparisons to prior periods and to budget.

Other Applications and Functions:

Provide maintenance capabilities for bad-check file. Provide nightly store polling for purchase order transactions and other store transactions. Provide word processing capability.

NOTE: Payroll has been excluded from these requirements. The payroll application should be provided by a service bureau to simplify maintenance and update.

Hardware

General Requirements

Given the expansion plans of the company, hardware installed at corporate must be capable of expansion without requiring a software conversion. Therefore, the central computer system should be selected from the low end to middle of line with easy upward computability. Additionally, the hardware should be selected from a vendor with a strong support organization and available software package for the retail industry.

Store Systems

Store systems should be capable of handling the normal purchase order transactions locally with a file transfer capability to the central computer. The store system must also have the capability to handle administrative functions, such as store receiving and inventory control. An expected configuration would consist of:

- 5 POS registers
- 1 administrative CRT
- 1 character printer
- 1 communications controller/central processor
- 20 MB of disk storage

Corporate Systems

The corporate system must he capable of processing all corporate applications and handling dial-up data communications with 2 stores initially, and up to 10 stores within two years. The likely systems will be a small to medium-sized minicomputer with the following configuration:

- Central processor with 1 to 4 MB of main memory (depending on software)
- 1 high-speed line printer
- 4-8 CRTs
- 2 character printers
- 200-500 MB of disk storage
- 1 tape drive for backup
- Communications controller and modem for store polling

Other Considerations

Site Preparation

Corporate headquarters will require a secure computer room with adequate electrical service, air conditioning, and storage.

Support

Routine operations of the computer systems requires a support staff of three to five people, depending on the hardware and software selected and the amount of growth. The staff could be composed of:

- 1 Data Processing manager
- 2 Operators/technical support personnel
- 2 Programmer/analyst or user-support personnel

III. Systems Cost

Many vendors offer turnkey retail systems that include hardware, software, installation and first-year software maintenance. These cost estimates assume a turnkey approach and are based on list prices quoted by selected vendors.

Start-Up Costs

Store Systems

Store systems described in Section II are likely to cost $50K to $75K per store for hardware, software, and installation.

Additional programming for the store administration functions is likely to cost $35K to $40K for all stores, not per store.

Corporate Systems

Based on vendor turnkey systems, corporate systems are likely to be priced in the $200K to $300K range. Additionally, $40K to $60K should be allowed for custom software, or communications equipment and other start-up expenses.

Site Preparation

Preparation of the corporate computer room is likely to cost $l00/square foot. Assuming a small computer room (e.g., 250 sq. ft.), site preparation costs should be in the $25K to $35K range, depending on the current condition of the space.

Ongoing Costs

Hardware and Software Maintenance

Hardware and software maintenance will cost from 6% and 10% of the original purchase cost. So, annual maintenance costs are likely to be $3K to $7K per store and between $15K and $30K for corporate systems.

Communication Costs

Assuming dial-up communication for store polling communication costs are likely to range from $100-$200 per month per store, depending on the methodology used.

Personnel

Assuming staffing of three to five people as described in Section II, data processing personnel costs are likely to be in the range of $100K to $150K per year, including 20% for fringe benefits.

IV. Consulting Assistance

Consulting assistance is required to define system detail requirements, select appropriate vendors, and implement systems. Tasks required and the fee range are:

—*Define Requirements* Develop detailed requirements for software and hardware to use to evaluate vendors	$15K to $25K
—*Select Systems Vendors* Develop requests for proposals, evaluate hardware and software vendors, identify appropriate vendors and negotiate contract	$15K to $25K
—*Design Software Modifications* Work with selected software vendor to design program software changes and provide quality assurance over programming	$10K to $30K
—*Provide Implementation Assistance* Resolve software set-up issues, coordinate site preparation and equipment site preparation and equipment installation, assist with user training, assist in hiring staff	$20K to $40K
Total Consulting Fees	**$60K to $120K**

Note: Consulting fees will vary depending on the completion of business operations, amount of software modification, and capabilities of the software vendor to provide implementation and support.

V. Cost Recap

Start-Up Costs

Store Systems	$ 50K to $75K/store
Store Software Development	35K to 40K
Corporate Systems	200K to 300K
Site Preparation	25K to 30K
Total Start-Up Costs	$260K to $360K plus 50K to 75K/store

Note: In addition, $16K to $20K should be allowed for expansion of the corporate system for each store added to cover new equipment costs, set-up costs, etc.

Ongoing Costs

Hardware/Software maintenance	
• Per store	$ 3K to $7K/store/year
• Corporate	15K to 30K/year
Communications Costs	$ 1K to $2.5K/store/year
Personnel	100K to 150K/year
Total Ongoing Costs	$115K to $180K/year plus $4K to $10K/store/year

Consulting Costs

Systems Selection and Implementation	$460K to $120K

TOTAL COST

Start-Up (includes consulting)	$320K to $490K plus $60K to $95K/store
Ongoing	$115K to $180K/year plus $4K to $10K/store/year

Exhibit 1 (continued)

Attachment B

Organization Chart

Accounting and Finance Department

Two to Six stores