Case 4–2

Harley-Davidson: Enterprise Software Selection[1]

> We were in McDonald's having our initial SiL'K planning meeting when a gunfight erupted in the parking lot. Bullets started flying through the restaurant. Someone said, "Everyone down, lock the doors." We all hid under the table. I'm lying on the floor looking at Dave and Pat—I'm thinking, Holy smokes, this is unreal. It was just incredible—a real bonding experience!
>
> *—Garry Berryman, vice president, materials management*

David Cotteleer, information systems (IS) manager of the supplier information link (SiL'K) project, smiled as he recalled the terror and subsequent camaraderie that had grown out of that unusual beginning. It had set the tone for the partnership that developed between Berryman; Pat Davidson, manager of purchasing, planning and control; and himself as they worked collaboratively to develop the specifications for an integrated procurement system to support the new supply management strategy (SMS).

Now he and the SiL'K project team were gathered in their "war room" on the top floor of the Harley-Davidson corporate headquarters to face another critical moment in the project's history. After three hectic months of meeting potential software suppliers, reviewing documentation, and evaluating software packages, the SiL'K team had to make a decision. Who should they choose as their supplier and partner in implementing an enterprisewide procurement and supplier management system? On what criteria should that decision be based? And had they done everything possible to enable them to make the right decision?

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The Harley-Davidson Motor Company

The Harley-Davidson Motor Company was founded in a shed in 1903, when young William Harley and Arthur Davidson began experiments on "taking the work out of bicycling."[2] By 1920 the company had become the largest motorcycle manufacturer in the world, with production of over 28,000 motorcycles per year and dealers in 67 countries. In 1998 Harley-Davidson shipped 150,818 motorcycles, a 14 percent increase over 1997 and a step closer to its ambitious Plan 2003—the vision to increase production capacity dramatically over eight years by the company's 100th anniversary. In 1998, the company also

- Acquired a majority share of the Buell Motorcycle Company (a maker of sport-touring motorcycles)
- Successfully brought two new manufacturing facilities online
- Introduced a completely new twin-cam 88 engine into its Dyna and Touring motorcycle models

Most of Harley-Davidson's revenues and income were derived from motorcycles and related products (see Exhibit 1). The company employed approximately 6,000 people and supported over 600 independently owned U.S. dealerships. Headquartered in Milwaukee, Wisconsin, the company

[2]See the Harley-Davidson website at http://www.harley-davidson.com.

EXHIBIT 1 Harley-Davidson Financial Highlights*

	1998	1997	1996	1995	1994
Revenues	**$2,063,956**	**$1,762,569**	**$1,531,227**	**$1,350,466**	**$1,158,887**
H-D motorcycles	$1,595,415	$1,382,809	$1,199,163	$1,038,335	$890,578
Parts and accessories	$297,140	$241,940	$210,229	$192,093	$161,928
General merchandise	$114,484	$95,055	$90,713	$100,248	$94,383
Buell motorcycles	$53,527	$40,305	$24,380	$14,154	$5,791
Defense and other	$3,390	$2,460	$6,742	$5,636	$6,207
Domestic sales as a percent of revenue	75.9%	74.0%	72.5%	70.3%	71.4%
International sales as a percent of revenue	24.1%	26.0%	27.5%	29.7%	28.6%
Gross margin	**$690,670**	**$586,217**	**$490,094**	**$411,399**	**$358,339**
Operating expense—motorcycles	$366,222	$320,731	$262,001	$226,923	$194,829
Operating expense—corporate	$11,043	$7,838	$7,448	$7,300	$9,948
Eaglemark income†	$20,211	$12,355	$7,801	$3,620	
Pretax income	$336,229	$276,302	$227,622	$175,989	$156,440
Net income	**$213,500**	**$174,070**	**$166,028**	**$112,480**	**$104,272**
Earnings per common share					
Basic	$1.40	$1.15	$1.10	$0.75	$0.69
Diluted	$1.38	$1.13	$1.09	$0.74	$0.68
Weighted-average common shares					
Basic	152,227	151,650	150,683	149,972	150,440
Diluted	154,703	153,948	152,925	151,900	153,365
Dividends per share	$0.155	$0.135	$0.11	$0.09	$0.07
Closing share price	$47.38	$27.25	$23.50	$14.38	$14.00
Cash and cash equivalents	$165,170	$147,462	$142,479	$31,462	$57,884
Total current assets	$844,963	$704,021	$613,129	$331,983	$334,127
Total assets	**$1,920,209**	**$1,598,901**	**$1,299,985**	**$1,000,670**	**$676,663**
Total current liabilities	$468,515	$361,688	$251,098	$233,210	$154,769
Finance debt	$280,000	$280,000	$250,000	$164,330	
Other liabilities	$141,783	$130,545	$136,167	$108,561	$88,662
Total liabilities	**$890,298**	**$772,233**	**$637,265**	**$506,101**	**$243,431**
Total shareholders' equity	**$1,029,911**	**$826,668**	**$662,720**	**$494,569**	**$433,232**

*Amounts are in thousands except per share amounts and share price.
†Eaglemark Financial Services, Inc., is a Harley-Davidson subsidiary that provides wholesale and retail financing, insurance, and credit card programs to Harley dealers and customers.

had manufacturing facilities in Wisconsin, Pennsylvania, and Missouri (see Exhibit 2A) and wholly owned subsidiaries in Germany, the United Kingdom, Benelux, France, and Japan.

Harley-Davidson competed primarily in the heavyweight (>651 cc) motorcycle market against the likes of Honda, Yamaha, Suzuki, and Kawasaki. Strong Japanese competition, coupled with Harley-Davidson's rapidly expanding production and the accompanying quality problems, had brought the company to the brink of bankruptcy in the mid-1980s. The crisis had prompted a management buyout, followed by a renewed focus on quality and, subsequently, Harley-Davidson's successful initial public offering (IPO) in 1986. The company's renaissance during this period had been interpreted by some as symbolic reassertion of American manufacturing prowess and proof that U.S. industrial companies could hold their own against increasingly powerful competitors.

EXHIBIT 2A Company Sites and Functions

Sites	Functions
Wisconsin	
Milwaukee	Corporate headquarters; parts and accessories; general merchandise; sales; research and development
Wauwatosa	Product development center; XL engine and transmission production
Menomonee Falls	FL engine and transmission production
Franklin	Parts and accessories distribution center
Tomahawk	Fiberglass parts production and painting
Pennsylvania	
York	Parts production; painting; motorcycle final assembly (custom and touring motorcycles)
Missouri	
Kansas City	Parts production; painting; motorcycle final assembly ("Sportster" motorcycles)

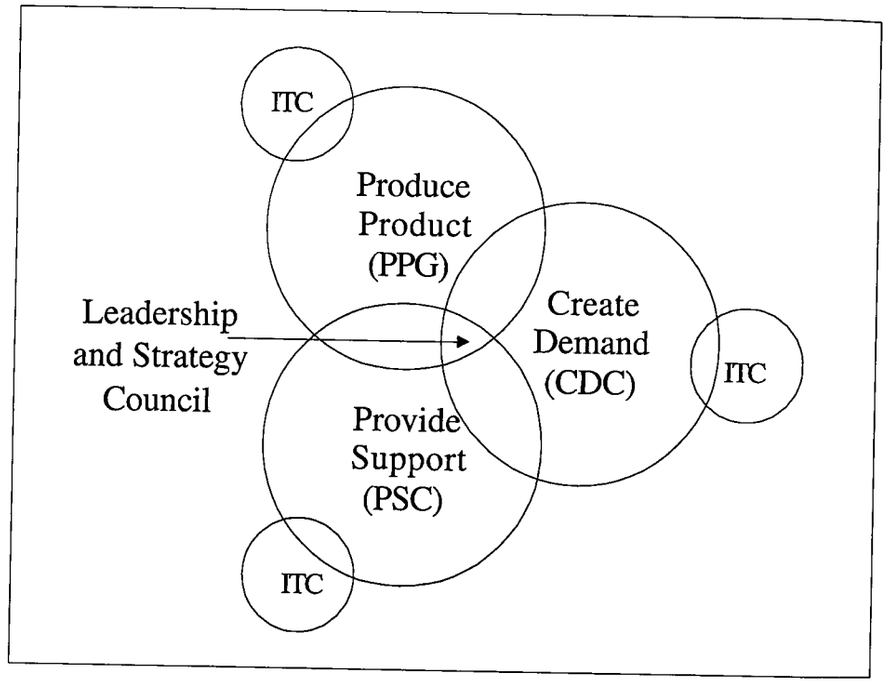
Although Harley-Davidson was still the largest motorcycle manufacturer in the United States, it was small by comparison with its Japanese rivals. Due to capacity constraints during sustained market growth in the 1990s it had been losing international market share. By implementing Plan 2003 to radically increase capacity, Harley-Davidson hoped to profit from the continued international growth of the heavyweight motorcycle market. Worldwide retail registration data through October/November 1998 showed that Harley-Davidson's target market grew by 13.8 percent over prior-year numbers. In the same period Harley-Davidson and Buell had grown a combined 14.3 percent. Favorable demand, however, had also encouraged competitors in the form of the new domestic rivals Polaris and Excelsior-Henderson.

Over the course of its 95 years the Harley brand had acquired an almost mystical power. Many customers were willing to wait up to two years for a motorcycle. Harley-Davidson bikers were traditionally perceived as young, reckless, and "born to be wild." However, much of the recent growth trend had been fueled by riders in their forties with grown children who were no longer at home. These customers were drawn to the dream of adventure and freedom that motorcycling offered and had the wherewithal to fund such recreation. Despite the gentrification of its customer profile, Harley-Davidson continued to revel in its image of being, in the words of the chief executive officer (CEO), Jeff Bleustein, "a little bit special, a little bit mysterious, a little bit bad."[3]

Harley-Davidson's ideals of individuality and independence were accompanied by a strong sense of community. The 400,000 loyal members of the worldwide Harley Owners Group

[3]Gina Imperato, "Harley Shifts Gears" *FastCompany,* no. 9 (June 1997): 104.

EXHIBIT 2B
Circles of Leadership



(H.O.G.) were considered part of the company. Many Harley-Davidson employees were also Harley owners and thus felt a close affinity to their customers. Harley-Davidson motorcycles in the parking lot and Harley-Davidson gear in the offices were a common sight. Pride of place near the headquarters entrance was reserved for motorcycles by the sign "NO CAGES."[4]

As a company that highly valued both individual participation and teamwork, Harley-Davidson applied the concept of self-directed teams from the factory floor to the executive level. Instead of employing a functionally separated hierarchy, the organizational structure consisted of three interlocking "circles": Create Demand (CDC), Produce Products Group (PPG), and Provide Support (PSC). CDC was responsible for sales and marketing issues; PPG handled development and manufacturing; PSC fulfilled legal, financial, human resources, and communications needs. Circles were headed by standing committees, or "Circles of Leadership," as they were known. A Leadership and Strategy Council composed of executives from each group provided oversight of the circles to ensure that an integrated vision of corporate direction was maintained (see Exhibit 2B).

The Information Systems Organization

Teamwork also played a role in the structure of the IS function at Harley-Davidson. Instead of a chief information officer (CIO), Harley-Davidson had an "Office of the CIO" in which three "directors" filled the role of providing IS leadership. Cory Mason, director of information systems for PPG, maintained that "in the collaborative culture of this organization it is acceptable

[4]Biker lingo for "no cars."

to share leadership." He elaborated on the need to have three people share CIO responsibility:

> Senior management looks to the CIO to be their internal consultant, to give them guidance and direction regarding technology's ability to create business value. The problem is that it's too much ground for one person to cover effectively. Instead, each IS director is tightly integrated in the business decisions of a circle and together, with the VP of strategic planning and information services, they are able to craft well-aligned business and enterprisewide IS capabilities.

To guide IS results, each Circle of Leadership had an Information Technology Circle (ITC) made up of pairs of senior IS people and end users representing each site and function. The role of the ITC was to understand group processes and interactions and to decide from a business perspective where the group should focus its technology efforts. In PPG, the ITC was fully empowered to make technology investment decisions. Management considered the ITC to be in the best position to understand the needs of the business, since it was closer to the action.

The Purchasing Organization

As part of PPG, the purchasing organization was tightly integrated with the engineering and manufacturing operations. A purchasing development group was colocated with the engineering community at Harley-Davidson's Product Development Center (PDC). Purchasing operations groups were located with their manufacturing counterparts at plants and facilities. A centralized purchasing planning and control group was located at corporate headquarters in Milwaukee. Leadership for the purchasing function was provided by the Purchasing Unity Group (PUG), which was composed of purchasing managers representing the different Harley-Davidson sites. The PUG also included members representing the company's maintenance, repair, and operations (MRO), original equipment (OE), parts and accessories (P&A), and general merchandising (GM) purchasing activities.[5]

Over the years, site independence had been encouraged, resulting in different methods for handling procurement, including the acquisition and/or development of different information systems for purchasing. Not only were there separate systems for MRO and OE, but systems provided by the same supplier had been modified to meet specific needs at local sites. For example, the OE system at Harley-Davidson's York, Pennsylvania, site was different from the OE system in Kansas City, and both differed from the OE systems at powertrain sites.[6]

Supply Management Strategy: Setting the Stage

When Garry Berryman joined Harley-Davidson in 1995, he became an important force for change in the purchasing organization. Drawing on prior experiences at John Deere and Honda, he sought opportunities to develop purchasing's role within the corporate vision of Plan 2003. Berryman's assessment was that the supplier relationship "wasn't viewed as a strategic opportunity to speed time to market, reduce costs, and improve product quality." Since purchased parts constituted 55 to 60 percent of a motorcycle's value, Berryman was convinced that if the purchasing organization could initially influence cost, everything else would follow in terms of the internal support needed to change the way the company interacted with its supplier community. Berryman envisaged the purchasing organization becoming a common

[5]MRO deals with items to be consumed during manufacturing, such as machine tool components and cleaning equipment. OE concerns components to be included in the product: bought-in motorcycle parts. P&A deals with aftermarket accessories and service parts, and GM deals with clothing, collectibles, and other licensed products.
[6]Powertrain refers to the motorcycle engine and transmission components.

enterprisewide point of contact with suppliers who would be real partners in Harley-Davidson's business.

Under Berryman's direction, the purchasing organization began the development of a corporatewide supply management strategy (SMS) in 1996. The goal of SMS was "to ensure that Harley-Davidson is provided with the right product, at the right time, with the best quality, for the lowest possible cost."[7] A key element was articulating the distinction between a vendor and a supplier. Berryman elaborated on the difference:

> A vendor is what you'll find on a street corner. You're simply going to get the product that you see; you're not going to get anything behind that product in terms of innovation, creativity, and commitment to your business success. A supplier is an extension, is an opportunity to extend our primary business within organizations that can bring a competency to product development and innovation.

Throughout 1996 Berryman and the PUG engaged other functions and Harley-Davidson supplier organizations, articulating the SMS vision and enlisting participation in the refinement of the strategy. When it was published at the end of 1996, Berryman was confident that it truly incorporated the contributions of all stakeholders.

At the heart of SMS was the need to shift the organization from a short-term transaction mentality to a long-term focus on supplier relationships. Colocation of suppliers with production facilities and their integration into Harley-Davidson's development process were important parts of long-term relationship development but could not be achieved by purchasing alone. Berryman remarked how platform teams[8] developing new products slowly became aware that purchasing could not leverage supplier resources single-handedly and that they themselves were responsible for developing a work plan to convince suppliers of the value of colocation.

Harley-Davidson's values and willingness to experiment were instrumental in facilitating the shift to the supplier relationship perspective. Berryman acknowledged that being an equal player with engineering and manufacturing was also key to achieving the vision of a new role for supply management. Finally, the involvement of each functional area was essential in selling the strategy. Berryman commented:

> It's simply having a presence in each one of the major segments of the company so you've got a voice there and people don't forget about the role of supply management. You've got to have a strong voice in every major forum and discussion that goes on around the company to make certain [the strategy] isn't forgotten.

Berryman argued that a slow and steady approach was necessary to build the necessary trust, enthusiasm, and engagement in SMS. He insisted that the new way of thinking become institutionalized before process and technology changes were addressed. He emphasized his point by quoting from his pocket copy of *The Art of War*:[9]

> "When your strategy is deep and far reaching, what you gain by your calculations is much. So you can win before you fight." And I think that's what we are driving home. Too many times, we do just the opposite. "When your strategic thinking is shallow and nearsighted, what you gain by your calculations is little. So you lose before you even do battle." We can afford to take the time to do it right. You're better off being a little slow, a little deliberate to make certain you get it right because you don't have a second chance. For me, the key is building a depth of understanding around the strategy.

[7] SiL'K newsletter 1998, no.1.

[8] A platform team is a multifunctional new model development team which includes representatives from engineering, manufacturing, purchasing, and marketing.

[9] Sun Tzu, *The Art of War,* (Penguin Classics, 1974), p. 10.

Time for Transformational Thinking: Let's Get Wild!

> After a year of indoctrination and a couple of revisions, we finally said this thing is rock solid. We started to hear across the company people talking about the supply management strategy as their own. We knew then it was time to begin to create a change in our process and the tool sets that we had to manage that process.
>
> —*Garry Berryman*

Mason foresaw two main hurdles to introducing changes in purchasing processes and systems. The first was Harley-Davidson's absolutely overriding concern with unmet demand and a resulting wariness of any change that might affect production. He commented:

> We have people that are *passionate* about making sure the lines continue to run. When you've got that kind of "I'm not going to bring the line down" attitude, there are some really interesting barriers that you're going to have to go through when you are trying to convince somebody to, in some cases, radically change their processes and procedures.

Mason's second hurdle, a common problem faced by project teams, was the company's "natural proclivity to continuously improve rather than to transform business functions."

Davidson explained why change did not come easily to the company:

> We're rooted in our heritage. I think part of it is the way our product line has evolved. We've got these big long life cycles on our products.[10] They don't change frequently. We always have continuous improvement, but larger-scale, sweeping changes haven't occurred unless significant events presented reason to change.

The combination of huge potential value and the change effort likely to be incurred made IS management wary of this strategic initiative gravitating toward a continuous improvement project. Given Harley-Davidson's historical functional autonomy, Mason knew that if transformational change was to take place, it was imperative to get purchasing leadership excited and committed before asking it to provide resources for a major systems project. In an effort to get the organization to "think out of the box," Mason took the PUG off-site for a brainstorming session and encouraged its members to "get wild" in thinking about radical changes to their procurement processes. Reflecting on the results of the day, Mason commented, "That discussion with the procurement leadership was a good foundation to start getting them to really think about procurement differently."

Supplier Information Link

While Berryman and Mason were building commitment to SMS among Harley-Davidson's leadership, Cotteleer and Davidson started investigating the possibilities for new systems and processes. There was a high degree of dissatisfaction with the existing systems as well as a mismatch with the SMS, which depended on people having the skills, resources, and time to focus on building supplier relationships. In October 1997 the pair made a presentation to the PUG that laid out a "value proposition" for instigating significant changes in terms of people, processes, and technology.[11] Elements of the value proposition included estimated purchasing cost reductions over five years on the order of $34 million as well as a number of intangible benefits (see Exhibit 3).

[10] For example, the design of the original V-twin engine, first produced in 1909, is still used in motorcycles produced today. It should be emphasized that Harley-Davidson product evolution is strongly influenced by enduring customer loyalty and attachment to tradition.

[11] All Harley IS projects were framed around these three elements—processes, people, and technology—which constituted its business integration (BI) model.