

HARLEY DAVIDSON CASE STUDY

With the growing global economy, companies are looking for ways to improve their market share. Many excellent firms have learned how to beat their competitors through the implementation of new management, marketing, and/or manufacturing techniques. Harley-Davidson is one of those excellent companies whom has challenged traditional ideas. We intend to show through this case study that any company can follow Harley-Davidson's techniques and lead themselves to *excellence*.

Company History

Harley-Davidson Motorcycle Company was established in 1903 by William Harley and Walter, William, and Arthur Davidson, who built their first three motorcycles in a shed in Milwaukee. In 1909, the company introduced its trademark bike; a 2 cylinder, v-twin engine (the fastest motorcycle at that time), able to reach speeds of 60 mph. However, a few years later the competition was becoming stiffer. During World

War I, the demand for United States motorcycles overseas grew tremendously. As a result, Harley-Davidson became a leader in innovative engineering in the 1920's. With the introduction of the front brake and "teardrop" gas tanks, Harley was quickly developing its mystic appearance. The industry, which was thriving after World War I, was diminishing quickly as a result of the Great Depression. As one of only two remaining motorcycle companies, Harley-Davidson survived because of exports and sales to the police and military.

Representative of the World War I motorcycle market, Harley-Davidson prospered from military purchasing during World War II. Over 90,000 cycles were built for the military which elevated their production to record levels and earned them the coveted Army-Navy "E" award for excellence in war time production. After the war, Harley went from producing military to recreational bikes. Harley developed and introduced the K-model (1952), Sportster ("Superbike", 1957), and Duo-Glide (1958) motorcycles. By 1953, Harley-Davidson was the last remaining major motorcycle manufacturer in the US.

Harley-Davidson was taken over by the American Machine and Foundry (AMF) in 1969. AMF put the company up for sale in the late 1970's due to a gross reduction in sales. The reduction in sales was representative of a poor level of quality in the Harley bike compared to their Japanese counterpart. In 1981, thirteen members of the Harley-Davidson management team purchased the company from AMF in a leveraged buy-out. But, within the first year, overall demand for motorcycles dropped dramatically and Harley's share of this market also continued to drop. This even greater reduction in sales for Harley resulted in a large inventory of unsold products. Harley was aware they would no longer be able to continue their business at their current production level and operating cost. Therefore, production was cut drastically, and more than 1,800 of the 4,000 employees were let go. In a move to help the floundering United States motorcycle industry in 1983, President Ronald Reagan increased tariffs on large Japanese motorcycles from 4.4 percent to 49.4 percent. But this increase was only effective for five years and would decline annually.

Minutes away from bankruptcy in 1985, CEO Richard Teerlink convinced lenders to accept a restructuring plan. Using management principles adopted from the Japanese, new marketing strategies, and manufacturing techniques, Harley improved quality and began the long battle to regain its market share. In 1987, one year before the tariffs on Japanese heavyweight motorcycles were scheduled to end, Harley announced they no longer needed special tariffs to compete with the Japanese motorcycle giants; showing confidence in the new system.

Today Harley-Davidson Inc., an employer of 4,694 workers, consists of Harley-Davidson Motor Company based in Milwaukee and Eagelmark Financial Services Inc. based in Chicago, Illinois. In addition, there are nearly 600 dealerships throughout the United States. Harley's commitment toward continuous improvement is exemplified in these contrasting financial statements in the table below.

1985 Corporate Results from Hoover's Company Profile Database

Net Sales - \$288 million
Net Income - \$3 million
Earnings per Share - \$0.09

1995 Corporate Results from 1995 Annual Report

Net Sales - \$1.35 billion
Net Income - \$112 million
Earnings per Share - \$1.50

THE THREE M'S OF HARLEY'S SUCCESS

MANAGEMENT MARKETING MANUFACTURING

Management

Although Harley was very profitable during World War I and World War II, this status quickly changed during the 1970's. After the leveraged buy-out, Harley's new owners realized that in order to make the necessary improvements, they had to determine what went wrong. After careful analysis, the management team developed the following list of practices which were main contributors to the problems previously experienced:

- Corporate management focused mostly on short term returns.
- Management did not listen to its employees or give them responsibility for the quality of what they made.
- High inventories of parts gobbled up cash and reduced productivity.
- Belief in quick fixes for problems, such as throwing in computers and state-of-the-art machinery to improve productivity.
- High break-even point that left the company vulnerable to unpredictable market fluctuations.
- Management that woke up too late to the threat of foreign competition because of the "it can't happen here" syndrome.

As with anything in life, recognizing the problems to any given situation is only half the battle. The development of methods for improvements and gaining company wide support for implementation was the key. The first accomplishment was for management to learn the importance of relationships. Strong relationships with workers can aid in the advancement of new company practices. A good example can be seen in the following conversation between a machinist and the Vice President of the power train plant at Harley. "You are new here, aren't you?" asked the machinist. "Let me buy you a cup of coffee!" (Filipczak 38). It was a simple gesture which quickly taught the new VP how important "relationships" were in the workplace; one of the major components of Harley-Davidson's corporate culture.

Harley's new management realized to survive they needed to become a perpetual learning and improving organization. Open communication between all levels of employees was essential. Everyone needed to understand their roles and the consequences their roles contributed to the company. But to develop employees to a greater degree, management had to get them to understand the business environment of the corporation.

Harley-Davidson wanted the ability to develop processes and people which would ensure employees would have the capability for rapid, effective change based on an understanding of the whole business environment in which they operated. In order for that to happen, Harley-Davidson realized that individuals needed to have a shared vision of the company values: tell the truth, be fair, keep your promises, respect the individual, and encourage intellectual curiosity. Management needed to earn the respect and trust of their employees. Incorporating all of these high moral values into the entire company structure and expecting nothing less from employees, at all levels, helped emphasize Harley's commitment to its team of workers. Since Harley's workers were unionized, this could have been a major problem. But, because the unions stuck to Harley-Davidson when times were tough, Harley today sticks to them. The unions even censure their workers for shoddy performance. This commitment allowed for Harley to switch to "self-managed" teams. The plan was to create semi-autonomous workgroups, who were cross-trained and could set their own work schedules. Therefore, Harley-Davidson created the Harley-Davidson Learning Center. This is a facility dedicated to life-long learning. Its primary role is to serve employees who want to keep their skills current. In some cases, this means remedial training in basic skills, but mostly the Learning Center is a place to come with requests for specific job-training courses.

Continuous Improvement

Harley-Davidson is driven by a constant vision of what an excellent company should be: one that is never satisfied with the status quo but is always searching for ways to do things better. This is best exemplified by a manager's comment, "The day we think we've arrived is the day we should all be replaced by managers of greater vision" (Reid 38). All companies can and should learn from this position and adopt the idea of continuous improvement.

Continuous improvement demands involvement from employees. Management's dilemma was how to align employee motivation with company goals. In Harley-Davidson's case, all employees take part in a gain-sharing program and are paid cash incentives for attaining and maintaining quality, profitability, and product delivery goals. In 1995, more than 2,000 of Harley's 4,694 employees took training and education programs from the Harley-Davidson Learning Center. These courses helped the company to be more competitive and to foster employees' personal growth and development. Extensive team-building has taken place at all levels of the company, including team-building for union leaders, negotiation committees, and stewards. Open communication, at all levels, is used as a major key to achieving teamwork and employee participation. For example, engineers are located right in the plant, within walking distance of machine operators. The practice of open communication is also represented in the relationship between top management and the union.

Harley Davidson has an untypical relationship with the union. Continuous improvement techniques could have been stopped if the company did not have a good relationship with the union. The union viewed management as a partner instead of an adversary. Management's good-faith dealing's with the union was a factor in this special relationship. Harley-Davidson has a history of in-sourcing; it tries to bring as much work as possible into the plant to forestall any layoffs. The union has considerable control over what kind of work is outsourced to other companies. So the union is able to create a "job security" by choosing the work that is done in-house. Bob Klebar, the president of the union stated, "When times are good, we'd outsource it. But if things get tougher, we'd look at those projects and maybe bring them in-house to keep the employment" (Filipczak 41). He also mentioned that "instead of focusing on what we think we have a right to, his people work closely with the production department, and everyone concentrates on the final customer. It really binds us together and makes us go in the right direction" (Filipczak 41). Teerlink, Harley-Davidson's CEO, said that total employee involvement (EI) cannot exist until management and labor can agree that they have a mutual goal: the long-term success of the company (Reid 173). In this joint process, joint union-management study groups identify issues or problems and then research all possible solutions.

Management Involvement

Management through its words and actions must demonstrate continuous improvement of quality and efficiency is a way of life, not just another "program". Management must be firmly committed to the people-building philosophy - the belief that employees are thinking, rational human beings and therefore should be encouraged to develop and grow. All management must be totally committed to the EI program and demonstrate that commitment by fostering a mutual trust between employees and management. Don't let management "Solutions" become the problem: their job isn't to hand down solutions to every problem. Management's obligation is to communicate the problem. When management and labor develop solutions together, they both have a stake in making those solutions work (Reid 172).

At Harley-Davidson, they believe being a leader in business includes contributing to the betterment of society. They support community causes as a corporation, and they encourage employees to get involved as donors or volunteers. Charitable contributors are investments in the quality of life, benefiting all their stakeholders: customers, employees, suppliers, shareholders, government, and the community at large.

Eagelmark Financial Services

Eagelmark Financial Services, a majority-owned subsidiary, provides private label financial services programs, including Harley-Davidson Credit. Harley-Davidson Credit, Eagelmark's largest division provides wholesale financing and insurance programs, including motorcycle floor-planning, parts and accessories trade acceptance and commercial insurance brokerage to Harley-Davidson's US dealer network. It also

provides the private Harley Card, an exclusive credit card for use in Harley-Davidson dealerships. In addition, Harley-Davidson offers its domestic dealers from time to time quarterly special discounts and/or 120 day delayed billing terms through Eagelmark in order to carry sufficient parts and accessories inventories and to counteract the seasonality of the parts and accessories business.

MARKETING

Harley-Davidson enjoyed a monopoly in the motorcycle industry for many decades. In the 1970's, Japanese manufacturers flooded the market with high quality, low priced bikes. From 1973 - 1983, Harley's market share went from 77.5% to 23.3% with Honda having 44% of the market by 1983. Harley-Davidson could not compete on price against the Japanese motorcycle producers, so it had to establish other market values and improve quality.

Simultaneously, the United States consumer base was undergoing a revolution which mandated consumer driven products. Harley had to change from a company which dictated what its customers could have to strategies based on direct input from customers. A marketing philosophy was developed based on the customers desires, gathered through surveys, interviews and focus groups.

Image

"The real power of Harley-Davidson is the power to market to consumers who love the product" (Executive Excellence 6). Harley-Davidson's President and CEO, Richard Teerlink says the bike represents to America, "the adventurous pioneer spirit, the wild west, having your own horse, and going where you want to go - the motorcycle takes on some attributes of the iron horse. It suggests personal freedom and independence" (Executive Excellence 6). Brand loyalty for Harley-Davidson is emotional. They are considered more than motorcycles-they are legends. It is an American icon brand. The Harley-Davidson symbol is based on a pattern of associations that include the American flag and the eagle; reflective of the passion and freedom Americans enjoy.

It is difficult to define an average Harley-Davidson buyer. The demographics range from a blue-collar worker to a high-power executive located all over the world. The common thread is

a desire to escape the routine and become anyone you like. While their competitors base their advertising on product technology and features, Harley promotes: a mystique appearance, individualism, the feeling of riding free, and the pride of owning a legend. With Harley, you can live out your fantasies, as well as experience camaraderie with fellow bikers.

Customer Relations

When a person buys a Harley-Davidson motorcycle, they receive a free 1-year membership to the Harley Owners Group (HOG), which was developed in 1983 as a program to keep people active with their Harley. Simultaneously, it keeps the company close to its customer. HOG has 295,000 worldwide members, 900 local chapters and is the largest company-sponsored motorcycle enthusiast group. They conduct four US national rallies, two touring rallies and 44 state rallies. These rallies encourage people to use their motorcycles and to share in the excitement of riding. The people are given demonstration rides, have the opportunity to ask questions, register their bikes and buy merchandise. According to Michael D. Keefe, director of HOG, these rallies are considered "more like customer bonding. If people use the motorcycle, they'll stay involved" (Berry, 104). *" What the Harley management crew, who are masters of marketing, do well is listen to their customers. The result is that Harley cannot keep up with demand at current production levels"* (Croghan 31). Company executives learn from their customers by maintaining a database to track consumer desires. Company officers spend almost every weekend from April through October at motorcycle events and dealerships accumulating this information.

Promotion

The primary promotional tool for Harley-Davidson motorcycles are the HOG activities. Not only does it serve as a customer relations device, but as a way to showcase and demonstrate new products. As discussed in the image section, Harley develops a strong impression within consumers. In 1983, the company developed a trademark licensing program which provides income for dealers and the factory while expanding the total Harley experience. The company program put a stop to bootlegged Harley Davidson merchandise and offered priceless advertising.

Harley has capitalized on the fact its product/image is chic. There are numerous examples of fashion models draped over the bikes and wearing company T-shirts. The company is starting to advertise in magazines geared to the general public. Twice a year, a Fashions and Collectibles catalog is produced with various Harley merchandise. Clothes sold in stores such as Bloomingdales and J.C. Penny exposes Harley-Davidson to people who may not have thought about visiting a dealership. Another marketing strategy, Harley-Davidson Cafes, have been opened in or near many dealerships to lure people into the showroom. In fact, the Harley-Davidson Cafe in New York City won one of the 1994 Restaurant and Institutions Interior Design Awards for its American appearance. Also, Harley-Davidson's advertising techniques are so successful they were one of the 1995 finalists of the Kelly Award for advertising. The company is able to promote the sale of its motorcycles by the financial services offered by Eagelmark, a wholly owned subsidiary. The dealerships are becoming a one stop shop for bikes, accessories, clothing and financing.

Product

Harley found its strength was in the heavyweight division. They also identified and exploited mini niches, such as customized, touring, sport/touring and sport/street motorcycles, in the heavyweight end of the market. When Harley-Davidson was formed, it only offered one color of motorcycle - gray and three basic styles. The company learned it needed to give the customers a choice and now offers a variety of models, including Sportsters, Super Glides, Low Riders, Softails, Sport Glides, Tour Glides and Electra Glides, in numerous vivid colors. Many of these models and changes were developed when Harley realized their customers were customizing the bikes and none of the revenue from the work was going to the company. When a style is changed or developed, Harley always develops it around their signature image to make sure that the product is not only a high quality piece of equipment but is also charismatic.

Price

Harley-Davidson quickly learned it could not compete with the foreign manufacturers on cost. Not only did Honda have a low priced product, it was able to defeat Harley in advertising 40-1. Therefore, Harley developed a strategy of value over price. This was created through the development of mini-niches and the heavy construction of the parts. Japanese manufacturers used plastic while Harley used steel, which is able to be rebuilt and rebore. Harley was careful not to exceed demand in production of their motorcycles. Currently, people must wait six to eighteen months for a new motorcycle and the price for a year-old Harley is 25% to 30% higher than a new one. By not being able to meet demands, an attitude of *must-have* has developed. Therefore, Harley has plans to double capacity to 200,000 motorcycles annually by 2003.

Distribution

Harley-Davidson motorcycles are sold by 1,065 dealers worldwide. The company owns 54 percent of the market share in the USA, 16 percent in Japan, 10 percent in Europe, and 38 percent in Australia. The foreign markets could be larger, but the company has an agreement with American dealers not to sell more than 30 percent of the bikes overseas, if the domestic demand is not met. The company implemented in 1983 a program to concentrate on helping its dealers develop the up-to-date business skills they need to sell motorcycles more effectively. The headquarters sponsored training programs are dubbed "Harley-Davidson University". The dealers are considered to be business partners and the headquarters plays an active role in developing programs, financing improvements, implementing support and management consultants. The dealers also invest their own money into these programs which allows them to feel like apart of the company. Harley-Davidson treats the dealers not only as partners, but also

as customers. Harley has developed a very effective marketing strategy, but it is the responsibility of manufacturing to produce high quality and reliable motorcycles.

Manufacturing

"Vroom, Vroom" this was the sound of the first Harley-Davidson motorcycle that came off the assembly line in 1909. As we have already discussed, Harley-Davidson started off as a family business but was bought by AMF in 1961. However, during the late 1970's Harley was losing all of its business to Japanese competitors. Harley was unsuccessful at making a reliable, quality product. After going public in 1981 and losing the financial backing of AMF, Harley was forced to make a change. Harley could no longer improve quality through expensive technology. "The traditional US management view of the relationship between quality and productivity, as well as the view of many managers throughout the world, was that they were inversely related" (Mefford 137). However, quality experts such as Deming and Crosby have researched these principles and learned the important relationship between quality and productivity, "Productivity is a measure of output divided by the inputs required to produce it.....for every unit of defective output produced that must be scrapped or reworked inputs are wasted. Labor hours, machine time, material and energy inputs are wasted on poor quality product" (Mefford 138). Realizing the validity of Deming and Crosby's theories and the complementary relationship between quality and productivity, Harley had to learn to simplify and master their production process. With this revelation and through hard work and intense commitment, Harley's production process has become a source of renowned excellence.

Original Process

Initially, Harley's manufacturing plants were designed to use a batch process in the flow of material on its plant floor and the frequency of products made. "The batch format has neither inflow or outflow of materials while the process is running, and has the disadvantage of high labor costs per unit production and is difficult with large-scale production" (Folger 8,15). Harley's batch operation was illustrated by its grouping of machinery. "Harley's production system was a huge, maze-like operation in which parts were tooled in large batches and moved from one machine to another all over the plant" (Reid 156). As illustrated in figure 1 in appendix (Reid 156), operators had to use forklifts to move the materials around the facility. There was no straight flow process; therefore, setup times were very high and output rates were very low causing financial concerns for AMF. With Harley's transition from a privately financed company into a public company, they were forced to seek an alternative method of production to achieve quality and productivity. The first step was to determine the specific areas which needed improvements. It was important for Harley to understand all aspects of the business would need to be examined for flaws in order to develop an effective flow process. An improved process was determined and implemented, successfully, only after the synergy of what is known as the productivity triad was conceived.

Just-In-Time

Although all three methods are not new concepts in the business world, just-in-time inventory (JIT), employee involvement (EI), and statistical operator control (SOC) are the attributes of the productivity triad. Just-in-time inventory "was the driving force of Harley's quality-improvement program. Very simply, as you operate with lower and lower inventories, it becomes essential that all your inventory is usable. If you're only going to get a few parts, they all have to be good ones" (Reid 150). Suppliers of Harley had to implement JIT into their production process in order to compliment Harley's system. Previously, Harley utilized a complex, computerized inventory system, Material Requirements Planning, which was based on maintaining high levels of stock, to offset any manufacturing problems, so the assembly line would not be halted. This system was inefficient because it did not address the manufacturing process problems, instead "it was a little like sweeping dirt under the rug" (Reid 151). But with JIT, "as each problem is exposed, you are forced to identify its cause, fix it, and move on to the next problem that is revealed" (Reid 151). After being renamed MAN (materials as needed-to differentiate from ineffective JIT's processes implemented by other companies.) and concentrating on "setup reduction, focus flow processing, containerization, parts control and operator preventive maintenance" (Reid 151), Harley recorded impressive improvements:

1. Inventory turns up from 5 to 20.
2. Inventory levels down 75 %.
3. Percentage of motorcycles coming off the line completed up from 76 % to 99 %.
4. Scrap and rework reduced by 68 %.
5. Productivity up by 50 %.
6. Space requirements down by 25 %. (Reid 148)

Although MAN had top management support, without full employee participation in the planning and implementation, Harley's JIT would not have been effective.

Employee Involvement

Successful implementation of any company program occurs when there is a commitment at all levels of the organization. Top management must not only direct but take direction from the lower level employees. In order to feel comfortable with this, top management must encourage education for employees of company objectives and develop a trust that employees will execute the right decisions. Simultaneously, employees must learn that their job stability is dependent on the overall health of the company. Their dedication must be expressed in learning techniques to continuously improve the quality of Harley's manufacturing processes. Harley has set the following nine guidelines to follow for successful employee involvement (Reid 163).

- Management, through its words and actions, must demonstrate that continuous improvement of quality and efficiency is a way of life, not just another "program."
- Management must be firmly committed to the people-building philosophy-that is, the belief that employees are thinking, rational human beings and therefore should be encouraged to develop and grow.
- All management must be totally committed to the EI program and by demonstrating that commitment foster a mutual trust between employees and management.
- Employees must be thoroughly trained in specific problem-solving and quality-control techniques.
- Managers must encourage participation from everyone.
- Employees must be given responsibility and authority for production, quality, preventive maintenance, and other aspects of their jobs.
- Individual employees must help each other develop and grow.
- Employees must attack problems, not each other-that is, there must be no finger-pointing when things go wrong.
- Creativity must continuously be encouraged through a free, non-threatening atmosphere.

Statistical Operator Control

In the beginning Harley-Davidson believed that their present machinery was unable to produce quality products. But, with the implementation of the Statistical Operator Control (SOC) process they soon realized that it was not their equipment but their methods. "SOC involves using simple statistical techniques and control charts to monitor the variation in a work process" (Reid 179). Harley realized that this process would only work if the responsibility of quality was placed upon the persons who had direct contact with the materials (operators). Therefore, Harley decided to hand the SOC approach down to its employees on the floor. However, it took some time for Harley to understand that they also needed to provide their employees with extensive training in mean charts, histograms, and other statistical methods in order for their efforts to be a success.

With statistical methods , the operator was now able to answer two crucial questions about the process as it was going on: Is the process in control (operating in a stable, predictable range of variation)? and Is the process capable (able, consistently, to remain within the specifications) (Reid 179)?

The employees eagerly took on the "ownership" of quality in order to make improvements they have long thought necessary. With the combination of Employee Involvement and Statistical Operator Control these workers were able to successfully monitor the process. If they found problems they could immediately

stop the process and fix or quickly inform management about the problem. All of these concepts together lead to an improved quality in Harley motorcycles. Over time, these old techniques, synergized, led Harley to a production method that has turned the company around.

Improved Process

Harley's continuous flow process proved wrong the belief that "continuous improvement in quality and productivity was an attractive concept but likely to be uneconomical" (Mefford 137). Moving from a batch process to a continuous flow process can be difficult. However, Just-in-time inventory, Employee Involvement, and Statistical Operator control combined to make it possible. For Harley's continuous flow process, U-form lines were used as illustrated in figure 2 in appendix (Reid 157). These lines consisted of 1-4 people working together to produce a finished part. The group had containers at the starting end which held the raw materials/ products and were taken through the "U-line", eliminating a need for a stock room. In the example shown, you can see how the different stages of machinery are all arranged in a "U" shape making access easier and taking up less floor space. Each manufacturing department has a number of these "U-lines" arranged on its manufacturing floor as illustrated in figure 3 in appendix (Reid 157). Therefore, many different types of products can be made at one time. The original "batch" took six weeks to four months to produce a product, now it can be accomplished in just minutes with the continuous flow methods. A reduction in lead time, inventory, and defects greatly improves the quality of the merchandise. The new system also allowed engineers to improve methods more rapidly and effectively. These new methods have led to a source of renowned excellence. Harley-Davidson's techniques were proven to work when their productivity levels rose to record levels. Other companies realizing "The Story of Harley's Success" wanted to learn these new tactics. Therefore, Harley holds training seminars to teach other company management personnel their improved manufacturing techniques which enabled them to overcome stiff Japanese competition and lead themselves to excellence.

Summary

Good relationships, continuous improvement, employee and management involvement, team building or employee training and empowerment are not just words out of a management book for Harley-Davidson. Only by adopting those management techniques and building a solid base between the management and the Unions/employees made it possible for Harley-Davidson to improve its management processes. While management's responsibility is to build relationships with the employees, marketing's responsibility is to build relationship with the potential and existing customers. The realization of the importance of customer feedback led Harley to develop new marketing techniques. But, marketing strategies would not be enough if quality and reliability did not improve. Therefore, we can clearly see the impact Harley's improved manufacturing process which consisted of: JIT, EI, and SOC had on their continuously improving environment.

The three M's to Harley's success (management, marketing, and manufacturing) can be implemented into any company. The key is to understand that all companies are different and the specifics which may have worked for Harley may not work for another. However, the concepts will be the same. If management can grasp the ideals that Harley thrives on, today, any company can learn to compete in this newly developing global economy.