Book The Lean Machine

How Harley-Davidson Drove Top-Line Growth and Profitability with Revolutionary Lean Product Development

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Recommendation

The Harley-Davidson Motor Company revels in the marketing image it has crafted and maintained for more than a century. Mere mention of the motorcycle giant conjures up visions of tattooed, muscle-bound renegades blazing an intimidating trail on the nation's highways. Harley's corporate environment exists in stark contrast to this image. Their staff features progressive, astute individuals who enjoy a stellar reputation for innovative business practices. Author Dantar P. Oosterwal, Harley's former director of product development, is eminently qualified to critique the organization's operation. To his credit, Oosterwal resists engaging in self-congratulatory back-slapping. Instead, he presents a backstage tour of Harley-Davidson, expounding on its philosophies, procedures and problem-solving methods. Oosterwal, who earned a master's degree in management at MIT, focuses on business theories and dynamics, not personalities. While the book is not necessarily geared toward novice professionals, *BooksInShort* nevertheless believes that Oosterwal's mantra should resonate loudly within corporations everywhere: Practice innovation and emphasize quality – or risk extinction.

Take-Aways

- At the Harley-Davidson Motor Company, rapid innovation is a necessity, not an option.
- Creativity flourishes in its "generative" learning environment.
- Harley-Davidson avoids panic by accepting constant change.
- Organizations that always are putting out fires will eventually get burned.
- Corporate success depends on the consistent development of new products.
- Project planning and execution must be fluid enough to respond to the unexpected.
- Talented people cannot overcome a flawed system. And a system is only as effective as its leadership.
- Learning demands evaluation, reflection and action.
- Genuine collaboration unites all facets of an organization.
- Visual representation enhances communication.

Summary

Product Development Holds the Key

Organizational success depends on product development. A recent survey revealed that top companies draw nearly 50% of their profits from new products. Product

development plays an even more critical role as upgrades, updates and technology shorten the life of goods and services. Organizations must innovate more rapidly and effectively.

> "Product development is the road that innovation travels on the way to market."

To their detriment, most companies are locked into antiquated thinking, believing they can apply yesterday's business practices and attitudes to today's environment. They might spend years developing products that can become obsolete in months. Fear of change, or an unwillingness to consider an alternative business model, will almost always guarantee failure. Dedication, hard work and loyalty – once a proven formula for prosperity – are no longer sufficient. Organizations determined to endure must restructure and reinvent themselves.

> "Harley-Davidson's success is the result of a seasoned management team deeply committed to and in tune with their customers' dreams."

Harley-Davidson's corporate culture reflects its commitment to its "beliefs and values." Passion permeates all levels of the organization. Fancy offices are nonexistent; it's hard to tell the managers from the employees. Harley-Davidson executives ride their bikes to work, wear jeans and seek to build relationships with customers at motorcycle rallies.

> "Any organization that wants to control its own destiny in a changing environment needs to continually improve its capacity to create and innovate."

The core values that sustain the company include being truthful and fair, keeping promises, respecting individuals and promoting intellectual inquisitiveness. Before implementing a policy, corporate leaders encourage input from everyone. Harley's leaders believe that if employees have a say in decision-making they are more likely to support a company initiative.

Building a Brand

The Harley-Davidson Motor Company, founded in 1903, may evoke images of outlaw bikers, but that's part of its charm. Consumers are attracted to the danger and allure, the promise of speed and independence on the open road. Harley-Davidson's branding penetrates far beyond the number of motorcycles it sells. Recognized worldwide, the Harley-Davidson name and logo appears on clothes, posters, beer cans and many other consumer products. Ultimately, what sustains Harley's customer base is it the firm's ability to come up with new, exciting products.

> "Product development at most organizations is crippled by the cancerous nature of firefighting and design loop-backs."

Harley-Davidson hasn't always had a smooth ride. Though it's been the undisputed king of American motorcycle manufacturers for more than 50 years, the company nearly lost its crown when it almost went out of business in the early 1980s. At the time, Harley took a page from Toyota's playbook, focusing on "lean manufacturing principles," while also benefiting from the U.S. government's imposition of a temporary tariff on big imported bikes.

> "When a project fails, the project leader is chastised. There is little recognition that the environment we create establishes an unseen system – and a bad system will beat good people every time."

By 1987, the company had turned the corner, and its leaders asked the International Trade Commission to discontinue the special tariff. Harley's executives changed their governing philosophy, streamlined manufacturing processes, built better motorcycles and capitalized on their brand image. They integrated open communication, trust and employee engagement into the company culture.

> "Every business has two primary functions, manufacturing customers and manufacturing products."

In 1993, led by Rich Teerlink, Harley-Davidson created the Circle Organization, a senior leadership structure that identified three critical business areas, or circles: "manufacturing customers, manufacturing products and providing support." The "Leadership and Strategy Council (LSC)," which governs where the circles intersect, established "policy and strategic direction." To gain buy-in from Harley's workforce, Teerlink formulated a three-pronged approach that underscored the firm's operational philosophy: "values, issues and stakeholders."

Create a Learning Environment

With product development as Harley's number one priority, its senior managers created a Product Development Leadership Learning Team, consisting of representatives from sales, marketing, engineering and other departments. This mysterious group, which met monthly to talk about product development, didn't discuss its business in public, file reports or keep minutes. Staffers with a password could access its meeting notes online, but no one else could. The team's purpose was to "employ systems thinking and organizational learning principles" to gain greater knowledge of the product development structure and make it better. Ultimately, the intent was to encourage Harley-Davidson employees to think creatively and to drive innovation.

> "Actions that optimize individual projects generally serve to suboptimize the portfolio of projects as a whole."

Learning organizations are never stagnant. They are always looking for an edge and they value originality. Learning organizations are defined by their ability to master these elements:

- **"Systems thinking"** – Managers must consider the consequences of certain actions over the long run and view systems in their entirety. Reducing your sales force, for instance, may save money in the short term, but, over time, could cripple your company's ability to penetrate a competitor's market.
- **"Personal mastery"** – Individuals should be confident in their own abilities and acknowledge the expertise of others. Those who achieve personal mastery are not threatened by opposing views or strong opinions. They are proud of their strengths, accept their weaknesses and are open to improvement.
- **"Mental models"** – Organizational growth requires that individuals examine their "assumptions and generalizations." People view the world through mental models, interpretations of events and behaviors that comprise their view of reality. They must be willing to question those models and accept new ones.

- **"Building a shared vision"** – Your CEO's fantastic ideas are useless if he or she is unable to convince others to join in the adventure. A shared vision creates tremendous power and momentum. Employees united in pursuit of a common goal often succeed.
- **"Team learning"** – Team learning thrives in an open environment. Willingness to engage in dialogue is the first step in moving a group toward a shared objective. Individuals should strive to openly discuss sensitive or controversial issues without launching into personal attacks.

Burning Issues

The process of "putting out fires" creates one of the biggest impediments to product development. Important, unexpected issues inevitably arise during the course of a typical project. The problems can be annoying and disruptive, but in normal circumstances participants can resolve them without jeopardizing the project. In toxic situations, however, a problem of daunting size or complexity can cripple progress. Poorly managed companies appear to be in constant firefighting mode. The real danger comes when an organization reaches the "tipping point" from whence it cannot recover and begins an inexorable downward spiral.

> "Change begins with enlightenment. Changing the system starts with changing your vantage point so you can 'see' the system differently."

Some project managers are excellent firemen. They rescue projects using heroic measures and relish the feeling of accomplishment. They may even earn accolades and congratulations. But firefighting as a means to an end fails miserably in comparison to a well-thought-out, carefully executed plan. Firefighting can destroy morale and undermine performance. Eliminating the firefighting mind-set requires reversing "ingrained behaviors and tendencies."

> "The oobeya process was a vehicle to visualize the product development system."

T**he Lean Motorcycle Machine** Harley-Davidson enjoyed phenomenal growth from the mid-1980s through the early 2000s. The company's ability to release new products rapidly and consistently created an enthusiastic consumer base. Because demand exceeded supply, customers had to wait for their motorcycles – up to two years, in some cases. Such excitement in the marketplace pleased many executives, who saw little need to tweak the system. Others were concerned that the development process was too slow to enable the company's growth ambitions. Hiring more workers and adding equipment was not the solution. Harley-Davidson concluded that its entire product development mechanism required restructuring. The decision to apply "lean, knowledge-based product development" vaulted Harley-Davidson to unprecedented heights.

> "Experiential learning cycles are the essence of product development."

In analyzing their old system, Harley executives zeroed in on its single biggest problem: Certain project dynamics thought to be "feasible" proved unworkable during development. Some projects could be saved in the redesign process and successfully launched. Other ventures proved unsalvageable, ultimately wasting enormous financial resources and thousands of work hours. The shift to knowledge-based product development placed the emphasis on "learning cycles" and the creation of "reusable knowledge" that benefited subsequent endeavors. The new system replaced relying on feasibility with anticipating all the variables before launching a project.

Leaders Set the Tone

Knowledge-based development requires leaders to adopt a different methodology to institute fundamental change and create a unified vision. The four principles of the "Leadership Learning Change Model" are:

- **"Observation"** – Patterns reveal the structures of a system. Examining and charting the actions within an organization's system is the best way to discern its behavioral patterns so leaders can explain them to everyone involved and seek improvement.
- **"Assessment"** – Frank, open discussion of these patterns will help participants understand how people in the organization behave and assess their effectiveness. Compare the results of their actions with the objectives the system set out to achieve.
- **"Collaboration"** – Comparisons, trials and tests can be beneficial, but ultimately leaders must act together decisively to bring about change. This requires collaborating to create "new visions and mental models."
- **"Implementation"** – Transforming an organization requires altering its "working habits and culture." Employing new techniques and strategies will once again produce observable patterns that participants and managers can scrutinize and modify. This is the "cycle of continuous improvement" that fuels any successful system.

> "Applying new tools to a system that has not changed may provide some momentary benefit, but will not change the system itself. When this happens, improvements are subpar and often short-lived."

Many firms are guilty of regimented planning that leaves little room for revisions or corrections. Planning in a knowledge-based system means preparing for shifting conditions and accepting situational reality. The goal remains constant, but the execution is fluid and flexible, not rigid.

The Sum Is Always Greater than the Parts

Takashi Tanaka, who once worked with Toyota, had the credentials to help Harley-Davidson; he embodied the vital role of collaboration. He explained how *oobeya* , a process he helped develop at Toyota, boosted the auto giant's product development system. Oobeya, or "big, open office" in Japanese, brings every department – engineering, marketing, design – together to concentrate on new product development. Individuals are encouraged to offer input, regardless of their area of specialization. Team members create a mental image of the project, then formulate an action plan. They consider obstacles and solutions. Perhaps most importantly, oobeya requires a visual representation of "targets, objectives and progress," which participants create using Post-it Notes on a board. This helps everyone easily and quickly understand a strategy and its goals.

> "It is ultimately the combination of a vision and a need that fuels innovation."

Initially, many Harley executives and managers strongly resisted the oobeya concept. But its eventual implementation – and the overall success of the knowledge-based product development system – soon proved itself. In 2005, Harley-Davidson launched six new motorcycle models, a feat unprecedented in company history. For some

30 years prior, Harley had barely managed to introduce one new motorcycle per year. The average now is four new motorcycles a year. If that's not barreling down the highway, what is?

About the Author

Dantar P. Oosterwal was director of product development at Harley-Davidson and vice president of innovation at Sara Lee.