

Information system management strategies of daimlerchrysler essay

[Business](#), [E-Commerce](#)



Information system management strategies of

daimlerchryslerBACKGROUNDWhen German car manufacturer Daimler-Benz AG and American automotive giant Chrysler Corporation declared in May 1998 their intention to merge their resources to form into one corporation, they initiated one of the biggest industrial mergers in history. By November of that year, Daimler-Benz became the major shareholder of the Chrysler, becoming known as Daimler-Chrysler (Klein, 2006). With this merger, the company also became the fifth largest carmaker in the world. One of the objectives for the unification of the two automotive companies is to garner savings through the coalescence of their research and development, production techniques and technological innovation. The company believes in employing a four-pillar strategy: global presence, enhanced brand, extensive product lines and innovative/technological headship. (Klein, 2006). The company has four major segments namely, Mercedes Car Group, Chrysler Group, Commercial Vehicles Division and the Financial Services Division.

Its portfolio consists of luxury sedans, small automobiles, sports cars, SUVs and utility/heavy trucks. Among its flagship brands are Chrysler, Mercedes-Benz, Maybach, Dodge, Freightliner, Thomas Built Buses, Jeep, Western Star, American La France and Setra (Klein, 2006). DaimlerChrysler belongs to the top three automotive companies in terms of sales (Klein, 2006). Among its biggest competitors are General Motors Corporation, Toyota Motor Corporation, Ford Motor Corporation, BMW and Honda Motor Co. Ltd. As of 2005, DaimlerChrysler has reported total revenues of 149, 776 Million Euros

and its shares are listed and traded in all of the world's leading stock exchanges.

It also has a stake in Mitsubishi Motors Corporation (MMC) as of 2004. The company has modern manufacturing facilities in 17 countries and its brands are being sold in over 200 countries. Overall, the company employs 382,724 globally as of 2005 (DaimlerChrysler (a), 2006). Because of the merger, the company has run into problems related to the varying information systems and infrastructure in its business units. To address this, DaimlerChrysler has opted to focus on adaptability and pro-active infrastructure in its information system that will work hand in hand with the company's business strategy. The company tapped the assistance of International Business Systems (IBM) to develop a core framework based on a Service-Oriented-Architecture (SOA) (IBM, 2005).

DISCUSSION CHRYSLER'S INFORMATION SYSTEMS STRATEGY The importance of information systems is no new matter for the company, particularly the American segment of the company. Before the merger, way back in 1980, Chrysler has faced bankruptcy when it incurred \$2.8 Billion in debt. Because of the seemingly insurmountable financial crisis, its management convened and drafted a map to seek means to cut expenses, boost inventory yield and improve quality of its automotive lines. Its management then was led by Lee Iacocca, the point person who organized and implemented an aggressive management style which relied heavily on the use of computer based information systems (Turban et al, 2005). Because of financial difficulties, Chrysler then did not have the budget to invest in high technology alleys at

one go. To compensate for this, the company adopted a “rifle” approach: to produce product lines that will eventually give the most profitable returns without on the most financially feasible method.

With this, Chrysler began building systems that will work at all levels of the company: from its showrooms, manufacturing plants to its administrative and zone offices. (Turban et al, 2005). In essence, what Chrysler built was an integrated information system. When a product is ordered, the transaction is entered from the dealership and the same transaction is also a reference during production, inventory, until delivery. This vertical assimilation of information has placed the company in a healthier arrangement where it could focus on its core technologies (Turban et al, 2005). At the time, Chrysler functions as a car assembler than a full-time automotive manufacturer, so it has less need for high technology manufacturing assets i. e.

manufacturing robots, computerized controllers, visualization machines, etc. – assets that are highly significant in the production process of its competitors like GMC and Ford Motors (Turban et al, 2005). Chrysler invested most of its information system budget to enable a communication and inventory infrastructure that can be accessed corporate-wide.

The development of an effective inventory management system is crucial because seventy percent of its automotive parts are sourced from suppliers outside the company. The introduction of its just-in-time (JIT) inventory system enabled Chrysler to source its parts on a last-minute scenario, thus

lowering its factory inventory while maintaining a manageable production cost (Turban et al, 2005). With this system, the inventory turnover increased to thirteen percent in the first quarter alone. On the other hand, its communication system connected the company's varying computers (large and midsized), from dealerships to its engineering arm.

This system went in conjunction with its JIT system as it accelerated the transfer of data from one computer system, production stage, plant capacity into another (Turban et al, 2005). To aid its designers and engineers during production, Chrysler have seen the need to centralize its CAD operations wherein it can be access at all levels and stages of the production process. As early as 1981, a system has been installed to provide access to design/layout provisions at all its plants. What is notable is that managers, designers and engineers can all see the same design specification, improving production time management and information dissemination, especially if there are last minute changes and modifications which can impact the outcome of the manufacturing process. Using this tool, Chrysler also centralized its administrative and inventory files for easier, more secure access.

With this centralized information system, the coordination of inventory and the control over schedule concerns are easier to manage (Turban et al, 2005). When Chrysler merged with Daimler-Benz AG and became DaimlerChrysler, it was expected that there will be problems in relation to its information systems. Fortunately for the company, the assimilation of new and integrated information systems is not seen as a long-time problem,

notably in the design department, as both companies employ the same CAD software systems and SAP applications in its financial side of the operations.

The immediate challenge after the merger was the requirement to build an incorporated and strong exchange infrastructure which will bridge and unite the two organizations with its customers, suppliers and vendors. During its first year after the merger, the management has aimed to cut \$1.4 B in information systems costs by integration of the two existing systems (IBM, 2005). DaimlerChrysler's management is aware that to stay competitive in the global automobile industry, it needs to utilize efficiency mechanisms as well as develop the ability to adjust in the rapidly changing business environments. The management decided that in the course of these developments, the company's resources can be synergized, which is the primary objective of the merger.

With several of its business units running on different information systems/applications, it can lead to a major impediment in the integration across the company's segments (IBM, 2005). To stay ahead of its competition, DaimlerChrysler should be able to sense variables like shifting customer preferences, production schedule and delivery in order to respond in a cost-efficient and dynamic manner. An information system that is flexible, uses a sense-and-respond methodology is needed and should be applicable on all levels of the company. The management of DaimlerChrysler specifically wanted an IS which will not impede but rather enhance its current thrusts and business strategies, most importantly its application development (IBM, 2005). Before the development of the new framework,

non-standard information processes made operations and deployment time-consuming and inefficient because information needed to be converted.

This lack of standardized IS was prone to erratic performance and operational problems. On the other hand, personnel from both groups were more often unprepared with the configuration and management of each other's information systems, adding largely to time constraints, making the company less responsive (IBM, 2005). To address these growing concerns, the company tapped the assistance of International Business Systems (IBM) to develop a core framework based on a Service-Oriented-Architecture (SOA) that will restructure its information system across the whole enterprise. The type of SOA developed for DaimlerChrysler was called Pro-Active Infrastructure (PAI), a Java-based platform designed to be a proficient, tailored and adaptive environment for positioning and running applications and information systems on an enterprise-wide scale (IBM, 2005).

Its strength lies in its simplified approach – bundling aspects of the information systems process i. e. security, index/archiving and assimilation of already available processes into modules will enable developers and employees to access, accumulate and reuse information. With this new system, there was a significant reduction of necessary performance testing, enabling developers to focus on other tasks and high value responsibilities. Finally, the most inventive characteristic of PAI is its built-in flexibility that can add new and emerging modules, products and knowledge no hardly any impact on its fundamental system (IBM, 2005).

CHRYSLER'S INFORMATION SYSTEMS APPROACH VS. GENERAL

MOTORS General Motors, like DaimlerChrysler have invested in information systems and technology. However, compared to DaimlerChrysler, its information systems were as streamlined as that of DaimlerChrysler, for it has no central system that link or coordinate various functions for each of its different divisions and segments. In every division there were assigned hardware and software which could not be accessed by other divisions (Wenger et al, 2002). Because of the obvious problems resulting in this segmented information system, the company purchased Electronic Data Systems (EDS) of Dallas in order to supply and manage its data and communication system needs.

EDS, for its part updated and standardized GM's overall information systems and consolidated its divisions' computing centers. With these, GM started to update its knowledge database and integrated its system to manage its records, inventory, production and financial information under one application (Wenger et al, 2002). This new system enabled factory managers to produce a manufacturing schedule whenever there was an order assigned which could be use by its vendors/suppliers.

Aside from this, the system also generates delivery schedules for the particular manufacturing stage. GM also invested heavily in robotics (\$40B) to address and decrease its unionized labor force. However, this proved to be unproductive because proper training of its workforce was not conducted and there were frequent breakdowns (Wenger et al, 2002). However, in 1999, both GM and Ford pioneered the electronic revolution in the car

manufacturing industry when both companies set up its separate e-business divisions in a bold endeavor to reinvent the industry. On August 1999, GM incorporated e-GM to handle its electronic business efforts – i. e. online car shopping information (Wenger et al, 2002). RECOMMENDATIONS Michael Porter is well known for tool/framework which best analyze an organization's competitiveness using five major forces as a model.

This model can also be utilized to demonstrate how information systems and information technology can increase the competitive edge of corporations. The five major forces identified by the model represent factors that could jeopardize or put into peril a company's standing in the industry. The forces are: threat of entry of competitors, bargaining power of suppliers, bargaining power of customers, and threat of substitution of products or services and existing rivalry in the industry (Porter, 1985). Utilizing this model with regards to the profile of DaimlerChrysler, in terms of the threat of possible competitors, it has been reported that current quarter sales of DaimlerChrysler (specifically its Chrysler segment), are on a decline (37% drop in quarterly sales), resulting in losses, as compared to Japanese car manufacturers i. e. Honda. Analysts analyzed that these drastic change can be attributed to changing market preference, as most buyers are veering away from SUVs and trucks due to high oil prices. Notably, trucks and SUVs are the main lines of DaimlerChrysler's Chrysler segment (Moore and Kageyama, 2006).

To maintain competitiveness, it is highly recommendable for the company to shift its production lines into a “ fuel-economy” paradigm – i. e. hybrid cars,

fuel efficient cars. Currently, the company is conducting research and development on BlueTec, developing diesel-powered engines with very low nitrogen and harmful gas emissions. Honda is currently posting revenues because it tapped a niche for small to mid-range automobiles that are fuel-efficient. For its part, Chrysler may use its BlueTec project (DaimlerChrysler (b), 2006) to stay at par with other manufacturers in the production of compact and environmentally-friendly cars.

In terms of bargaining power of suppliers, DaimlerChrysler have been successful in controlling the inventory and maintaining manageable operational costs by adapting a JIT approach and integrating this with its new system. (Turban et al, 2005). Because of the present information systems installed, DaimlerChrysler can perform designing, simulation and testing on a virtual scale, thus minimizing the need for aggregate parts and supplies (DaimlerChrysler (b), 2006). Under the bargaining power of the customer, the earlier scenario could be use to illustrate this force.

Competition in the automobile industry is fierce and the taste and preferences of the customers are constantly shifting, easily affected by price sensitivity issues like brand identification, quality performance implications, etc. Bargaining leverage is further enhanced by the customer's access to information on the particular product in mind, especially over the internet. Web-based technologies can sway customers in deciding to buy their product from the competitor/s. In this instance, DaimlerChrysler has greatly addressed this factor because its electronic commerce website is well-designed to provide the best information to the customer: from its range of

products to financing schemes available (Turban et al, 2005). Under substitution of other products and services, other alternative means of transport are potential threats to the car manufacturing industry.

In the past few years, because of increasing fuel prices, motorcycle sales are on the rise. Worldwide sales of Harley Davidson motorcycles alone increased to \$8.9 percent for third quarter of this year. The increases in motorcycle and scooter sales are attributed to high gas prices. As mentioned earlier, Chrysler's BlueTec project, once in production, can be used to address this market niche (DaimlerChrysler (b), 2006).

Lastly, with regards to its existing rivals in the industry, DaimlerChrysler, if current information systems and processes are sustained and further enhanced, can continue to reap successes in the future. It's equipped with the best tools that will enable it adjust in a rapidly changing market under various financial climates. As compared to GM, DaimlerChrysler has an edge it-wise because it was immersed in information technology as early as the 1980s. Technology and knowledge-wise in reference to car manufacturing, it greatly benefited from the synergy of the two companies that led to its merger (Turban et al, 2005). Though DaimlerChrysler was cautious to build its e-commerce infrastructure, it in part made a good judgment because the company was spared from the flak produced during the dotcom hype. It later saw the efficiency gains which could be achieved, eventually the company compensated by building an electronic commerce infrastructure which addressed B2B, B2C, B2E, BI and Telematics through DCXNET (Klein, 2006). The core competencies of DaimlerChrysler lie in its simplified

but highly efficient information system infrastructure which not only bridged the systems of two distinct companies but at the same time enhanced its flexibility to make the most out of new and emerging technologies while concurrently reducing time and management expenditures within its major segments (IBM, 2005). Through its strong thrust in standardizing its base applications, DaimlerChrysler have transformed, simplified and restructure its application and management processes.

On a positive note, DaimlerChrysler look forward to significantly save overall cost over time because the applications that were specifically developed can be modular and used on countless number of lifecycles (IBM, 2005).

Production-wise, the ability of the new system to be integrated with legacy programs and systems ensured speed and increased efficiency levels, enabling other resources to concentrate more on the installation, configuration and supervision of the manufacturing and deployment process.

So far, these enhancements have enabled the company to reduce its total cost by thirty percent (IBM, 2005). REFERENCES DaimlerChrysler (a), 2006 , DaimlerChrysler Factsheet. DaimlerChrysler AG, Auburn Hills, USA DaimlerChrysler (b), 2006, HighTech Report, DaimlerChrysler AG, Auburn Hills, USA IBM. 2005 “ Daimlerchrysler Builds A “ Proactive Infrastructure” To Become More Flexible And Responsive”, On Demand Business, IBM Corporation Corporate Marketing, New York.

Klein, A., 2006, “ DCXNET: e-transformation at DaimlerChrysler”, Journal of

Information Technology, Vol. 20 No. 21, pp. 52-65 Lawless, Grant W., 2000, “

Information Technology (IT) For Manufacturing: Where Has It Been, Where Is It Heading?" Journal of Industrial Technology , Volume 16, Number 4, pp 2-4.

Lucas, H. C. Jr, 1997, Information Technology for Management. Sixth Edition. Leonard N. Stern School of Business New York University, McGraw-Hill Companies, Inc, New York.

Moore, Matt and Kageyama, 26 Oct 2006, Yuri. GM, Chrysler Group Post 3Q Losses. <http://abcnews.go.com/Business/wireStory?id=2606420> [November 3, 2006]. Porter, M. E.

, 1985, Competitive Advantage: Creating and Sustaining Superior Performance, Free Press, New York. PRNewswire, 12 October 2006, Harley-Davidson Sets Record for Quarterly Revenue and Earnings, http://money.cnn.com/services/tickerheadlines/prn/200610120700PR_NEWS_USPR____CGTH030.htm [November 3, 2006].

Turban, Efraim, Leidner, Dorothy, McLean, Ephraim, Wetherbe, James, 2005, Information Technology for Management: Transforming Organizations in the Digital Economy, Fifth Edition, Wiley, New York. Wenger, Etienne, et al, 2002, Cultivating Communities of Practice: A Guide to Managing Knowledge. Boston, Harvard Business School Publishing, Boston.