Business Competitiveness: Strategies for Automobile Industry

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Abstract

Peter Drucker has called the automobile industry as "the industry of industries". During the last few years, the production and management systems have been revolutionized worldwide in the automobile industry. One of the major changes in the industry has been the opening up and growth of several emerging markets. The automotive industry is now facing new and pressing challenges. Globalization, individualizations, digitalization and increasing competition are changing the face of the industry. In addition, increasing safety requirements and voluntary environmental commitments have also contributed to the changes ahead. Size of the organization is no longer a guarantee of success. Only those companies that find new ways to create value may prosper in the future. The purpose of this paper is to present a short overview of the automotive industry today and highlight challenges facing the industry. Based on this perspective, some strategic methodology which enabling them to transform into competitive enterprises has been discussed. The information and opinions presented in this paper are based on a series of interviews that held with automotive industry experts, who gave us the benefit of their extensive knowledge.

Keywords: Globalization, competitiveness, success, environment

Introduction

The automotive industry is facing new and pressing challenges. Globalization, individualizations, digitalization and increasing competition are pressing the face of the industry. In addition, increasing safety requirements and voluntary environmental commitments by the automotive industry have also contributed to the changes ahead. Size is no longer a guarantee of success. Only those companies that find new ways to create value will prosper in the future. The purpose of this paper is to present a short overview of the automotive industry today and highlight challenges facing the industry. Based on this perspective, some strategic methodology which enabling them to transform themselves for the competition.

The evolving automotive landscape

The global automotive industry is subjected to a range of factors that are increasing complexity and influencing the economic options available to automobile manufacturers. The majority of these factors interacts with one another and has strong interdependencies. However, some of these factors are market-induced and, consequently, cannot be influenced directly by the automobile manufacturers. These factors include:

• *Globalization, regionalization and market convergence* – Due to the effects of liberalization, national markets are increasingly globalized. This gives companies a chance to expand to new markets, but also increases the threat of new entrants or increased competition in traditional markets.

• *Increasingly diversified consumer aggregate patterns of behavior* – Consumers are no longer accepting standardized products, but want products that satisfy their individual requirements. Target groups thus have to be downsized by companies so customers will be attracted by the products offered. However, because of the increased global competition with a stronger focus on price and not on brand loyalty, consumers generally do not reward companies for their more

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individualized products. As a result of these factors, automobile manufacturers have new demanding requirements within their field of activity.

• *Accelerated modification and diversification of the product portfolio* – The companies have to shorten product lifecycles in order to react to the expectations of individualize and fast changing consumer demands with innovative products. In the past, an average product lifecycle in the automotive industry was eight years; today, lifecycles are much shorter, or at least the product's design is often modified after just two or three years on the market. With development costs for a new model remaining on the same level or even increasing, this concurrently means a shortening of amortization time for the OEM and, potentially, lower profits.

• *Pervasion of automobiles with digital technology* – In 2002, digital technology in cars already averaged 22 percent of the total value of a car, with a forecasted increase to 35 percent of the total value in 2010. The integration of hardware and software into automobiles represents the predominant accelerator of increased functionality coupled with increasing complexity. This complexity results in overstrained car development departments, product failures, a cost explosion with respect to guarantee and warranty costs, and impact on customer satisfaction.

• *Increased pressure for innovation and flexibility in development and manufacturing* - Development departments are not just overburdened by the complexity of digital technology, but also by the shortening of product lifecycles. Another aspect is the increasing number of parallel development projects since companies develop more and more niche models for special target groups. This certainly requires the use of new development techniques such as virtual reality. For example, this technique enabled BMW to shorten the development time of its Z4 model to just 30 months.

The Challenge of Competitive Environment
The most important question is how a company can remain competitive in the face of the turbulent transformations taking place in the automotive industry. The key to success lies in being *focused*, *responsive*, *variable* and *resilient*, which can be accomplished by converting to an on demand company. Adaptivity to an ever-changing environment has become the core business demand, requiring problem-solving tools and methods to be identified, selected and implemented quickly. *Focused, responsive, variable* and *resilient* are different behaviors required to become more adaptable behaviors whose features correspond with the exigencies of the business objective. If you are hungry at lunch time, you will *responsively* take a break so that you can afterwards again *focus* on your work. The vitamins in the salad you had for lunch make you *resilient* against influenza. Thus you can *variably* adjust to different weather conditions on the way back home without catching a chill. Transforming this analogy to business, a car manufacturer has seven major strategic levers to enable such adaptive behavior (see Figure 1):
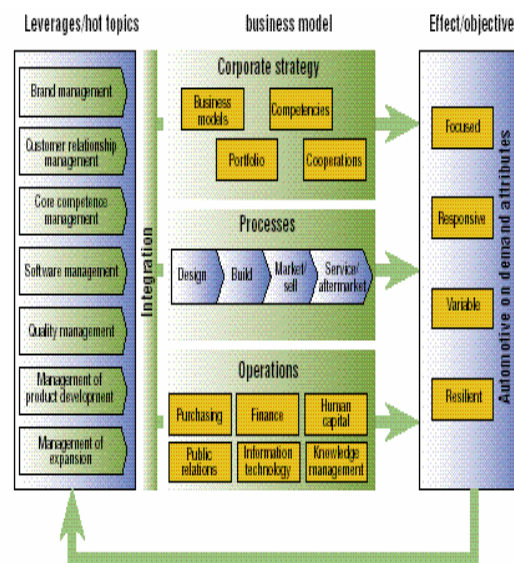

Figure 1

• *Brand management* – Brand management strategies help make companies more *focused* and able to differentiate its products from the competition.

• *Customer relationship management* – Customer relationship management (CRM) helps a company become *focused* on customer requirements and wishes and *responsive* to changes in aggregate patterns of customer behavior.

• *Core competency management* – Core competency management allows a company to *focus* on its internal strengths and become more *variable* and *resilience* by entering into strategic partnerships with suppliers with competencies in new technologies or niche operations.

• *Software management* – Software management is a key to making a company *focused* on software standardization and strategic partnerships, which, in turn, help the company to become *variable* and *resilient*.

• *Quality management* – Quality management (QM) will, by becoming a cross functional and cross-company concept over the whole value-add chain, help ensure that companies grow their maturity in *resilience*.

• *Product development management* – Managing product development together with a *focus* on broadening competencies in new technologies will help enable organization to become more *variable* by the optimization of collaborative engineering. Increased *resilience* can be achieved by standardized processes and the extended use of virtual testing. Decentralized and regionalized development activities will help to increase *responsiveness* to customers' desires.

• *Expansion management* – Management of expansion into new geographies and cultures require that are *focused* on the requirements in these new markets and *responsive* to changing market conditions and requirements.

Strategic steps toward the competitive business

Based on experience with the seven areas of strategic action, several conclusions can be drawn and recommendations are given for further action. The automotive industry has developed into a complex network of interrelations across the entire value system, where decisions at any level often impact various other levels. Integration with customers, for example, affects not only sales but also product development or expansion into new markets. Therefore, increased business and cost efficiency can result from focusing on one's own core competencies and strengths. Vehicle manufacturers must define and focus on those features and characteristics that differentiate them from competitors and outsource those non-core design, manufacturing, supply, marketing and administration tasks that can be better handled by suppliers. The integration of strategic partners with more responsibility into the value chain should be intensified. By doing so, the supplier interaction, organization, process and IT are addressed. SRM has to be supported by collaborative engineering, pay-on-supply, risk-sharing models and alignment of the suppliers' QM. On demand CRM requires a seamless, single view of the customer with consistent cross-channel interaction models. Therefore, we recommend that companies bundle all internal CRM strategies into one comprehensive multi-channel strategy. On this basis, customer data can be systematically gathered and evaluated for later use at multi-channel customer touch-points from dealership to profitable value-add activities, such as financial services. The selective use of comprehensive customer data will drive more personalized communication and thus help increase both customer loyalty and customer sales.

To increase loyalty even further, companies should create customer awareness and build or defend a strong brand image that rightly balances the brand's cognitive and emotional aspects. If they integrate CRM with SCM, then product design and production planning can be aligned with the customer information available. Dealers will remain the most important customer touch-point. To enhance dealers' efficiency and service, OEMs can streamline channel orders' processes and warranty claims through coherent dealer management systems and simplify dealer access to content, applications, people and processes. Therefore, opportunities must be identified on demand with improved data analysis and insights. And, once in the market, supplier and dealer

networks have to be developed with reliable local partners. For their integration, vehicle manufacturers have to install virtualized learning solutions and increase communication solutions. This requires technologically consolidated, virtual and local applications and infrastructure management consistent with the internal standards.

Where development cycles and the final product do not conform to increasingly complex market requirements, product development parameters for cost, quality, time-to-market and processes have to be optimized. A set of coordinated actions will help improve efficiency, quality and cost. Companies design departments should be very responsive by using
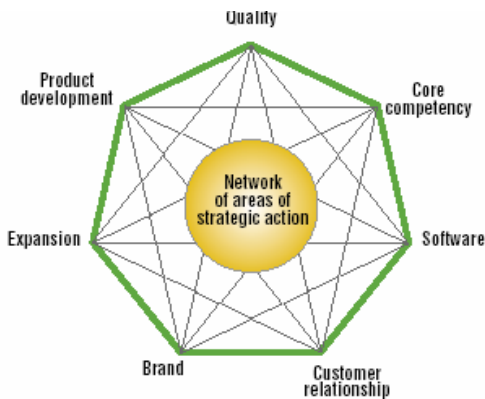

Figure 2 Integration of Seven Levers

collaborative tools that define and control standardized processes and distribute knowledge. These tools should also feed lessons learned from manufacturing and service into reliability, design failure and diagnostic models. Web-based design, simulation, tooling, virtualized testing and product lifecycle management capabilities all need to be built on a common infrastructure. Where design centers are globally distributed and collaborative engineering works across company borders, those will need a real time system for tracking, managing and communicating engineering changes and defects. Since automotive electronics and software are influencing product development, quality, core competency and brand management alike, the respective actions recommended above also pertain to automotive E/E and software. Successful software management is the entry gate to innovation, one of the main market differentiators. Open standards contribute to more reliable functions, allowing company and suppliers to develop their applications based on a standard architecture and platform. Thus companies should acquire and set up architecture and integration competencies in embedded systems lifecycle management. This help enables definition, organization and implementation of a standardized software development and tracking process. This enlargement of internal capacities will allow the specification of requirements, effective outsourcing and surveillance of partners' design processes, and exertion of integration competency. In addition, manufacturers should separate software from hardware to develop a software release policy that helps them control both product quality and innovation flow. With all these activities, organization can use the extensive opportunities of automotive digitalization for innovation and quality enhancement. Vehicle manufacturers have realized that the interconnectedness of business design and technology capabilities is making businesses more *focused, responsive, variable* and *resilient*.

It is anticipated that managing the seven areas of strategic action depicted here, they will successfully move forward to strategic excellence. By focusing on these seven strategic levers, automobile manufacturers will increase their potential to successfully cope with the challenges of globalization, individualization, digitalization and increasing competition.

Conclusion

Today's tough challenges in the automotive industry require to find new ways to create value if they are to prosper. To successfully adapt these levers companies will be able to respond to changes with *focus, responsiveness, variability* and *resilience*.

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