International Academic Institute for Science and Technology

International Academic Journal of Business Management
Vol. 1, No. 1, 2014, pp. 95-100.

ISSN 2454-2768

International Academic Journal of Business Management

www.iaiest.com

Competitive Advantage Based on New Product Development

Hamid Reza Vazirzanjani[a], Alireza Hooshmand[b]

[a] PhD., *Faculty of Department of management, PO BOX 19395-3697,Tehran,Iran*

[b] *Msc Students, Department of Management, Payame noor University,Garmsar, Iran*

Abstract

Product development generally all activities that aim to improve or innovate products available Or new product is the basis of survival and success in all companies and is a key source of innovation in industry. Despite the fact that the process of developing and introducing new products most important processes in many organizations. New product development activities aimed at improving the general name or invent a new product or service is. People with different backgrounds and skills involved in this process: mechanical engineers, marketers, financial managers, planners and so on. The ultimate goal of developing new products, creating value through services or products. In this article we have tried An explanation of the integration of IT and guidelines in this regard will be To enable organizations to the device architecture and new product development And to gain competitive advantage.

Keywords: product architecture, new product development, sequential pattern, pattern compression, pattern a drop cloth and competitive advantage

Introduction:

The increasing flow of trade and successful development of new products and supply them to the market and the shortening life cycle of mass production orders will be (Ian and Barkley). Therefore, knowledge of product development strategy models, policy makers and planners will help companies compete in a much broader context strategies (Sarmad Saeedi). Therefore, companies rely on valid models should reduce the risk of selecting and implementing development strategies. In general, new product development, collection activities and ways of creating growth that integration of information technology as an important step in the context of the development of new products and achieving competitive advantage is.

Theoretical basis of research:

Product strategy, product architecture as one of the components has a decisive role in developing and promoting integrated product strategy, technology, operations and supply chain businesses while developing a new product. The configuration and architecture of products has played a significant role in the success strategies of production and supply, so in most cases and in different parts of the world as well as in most industries, this type of configuration and architecture are products that form the lines manufacturing and corporate office at the bedside of suppliers and industrial and technological poles are (Whitney, 2004). In many studies of architecture and product development as a factor for gaining competitive advantage referred (Jung et al., 2012). Product development process, the process by which a market opportunity and a set of assumptions about the technology into a commodity product available to the market. This process of development of the firm's competitive position in the market and enhance its performance, creating new industries, define new standards as well as the development of the market will follow (Vlrayt, 1992). In a general view in product development, there are six stages: planning product, concept development, product architecture, detailed design, testing, commissioning and development of production (Ulrich, 2012). Two types of integrated product development collaboration among stakeholders in an enterprise's mother (Morgan, 1999). In summary, product architecture, product features detailed descriptions of the categories, including the number and type of components, number and type of interface between these components as well as providing the basic structure of the product (Fikson, 2005). Continuous innovation and a broad and rapid technological changes that lead to shorter product life been, firms will have to use the technology in its out-of-bounds. Information technology outsourcing firms need to create good communication and integration with external sources including supply chain are those (optical, and Marcus 1990, 1980).

Fikson (2005) is one of the first researchers who are actively in the field of product architecture research. He uses a three-dimensional concurrent engineering, product architecture as a means to integrate the decisions of the three areas of product development, process development and supply chain and produce a three-dimensional model as the impact of product design decisions related to products, processes and supply chain the (Fikson, 2005). The concept of competitive advantage, direct contact with the target customer value So that in a comparable range Whatever values supplied by an organization closer to the customer values Or to be more consistent with it can be said that the organization, relative to its competitors on one or more criteria has advantages and competitive advantage (Mehri and Hosseini). Competitive advantages include factors or capabilities that drives the company to show better performance than the competition enables (Lees, 2001). In other words, competitive advantage factor or combination of factors that make organizations more successful in a competitive environment of other organizations and competitors can not easily imitate it (Barney, 1999). Therefore, to achieve competitive advantage, organizations must also consider the position of its foreign and domestic capabilities to consider (Applebaum, 2000).

In the competitive advantages that should be considered are two important points: First, this is a continuing process route that leads to excellent performance and competitiveness of the organization This means that if the organization is able by her own, create sustainable competitive advantage for customers is valuable And will always be superior to the competitors, indeed worthy of their performance and competitiveness has brought the left (Barney, 1999). Second, because of increased environmental complexity and intensity of competition, competitive advantage or easily be imitated by competitors or customers soon will fade away and be replaced with new advantages (Lees, 2001). The organization should think about finding your competitive advantage is. Create and maintain sustainable competitive advantage requires competencies that are relying on the capabilities of the organization, creating value for customers. Company resources include a variety of assets, capabilities, organizational processes, information, knowledge and ... is that they are so controlled that develop and implement strategies for value creation. These three categories of tangible, intangible and organizational capabilities can be seen (Plyam, 2000).

History presents new product development models

For most companies that want to be innovative and generally in the field of new product development activities Are the starting point for creating a stroller new product development or revision of this is. Although Baby Structured to guarantee product development organization for innovators not being a very important role in Military organizations to improve the rate of new product introduction and increase profits of the company's product portfolio are In articles and books, as has been pointed out many models of new product development. One of the biggest influence on how Western companies approach product development from concept was developed by NASA To make it easier to manage large-scale complex projects will pay defense The initial version of the plan called Project was divided
A sequential approach pays explanation consists of four phases.
The primary analysis) the first phase
Definition) Phase II
Design) Phase III
Operations) Phase IV
In addition to establishing checkpoints to ensure that the transition to the next phase of getting wrong. Although this approach Originally used for complex projects and large-scale extreme extent, but its principles soon The most cases were presented for new product development. This is a basic principle phases and points Among them were investigated and is still used today are valuable. Rasvl in his 1882 paper a useful summary of the changes over time and wander the product development You can see in the table below **:**

Model specification	Type model	Generation
Even a simple linear process, emphasis on research and development as well as market fund For the fruits of research and development.	Model Pressure Technology	First

Even a simple linear process, the emphasis is on the market, market research source for ideas and Development, research and development role has a reaction.	The elasticity of demand	Second
Uniform but has a feedback loop) Feedback (, stretching or compression or a combination of tensile / compressive strength, balance between market and research and development, emphasis on market integration / research and development.	The hybrid model	Third
Uniform but has a feedback loop) Feedback (, stretching or compression or a combination of tensile / compressive strength, balance between market and research and development, emphasis on market integration / research and development.	Integrated model	Fourth
Fully integrated parallel development of expert systems and simulation models in research and development, strong relationship with customer demand, Strategic integration with the main suppliers, links horizon, the practice of joint research and joint marketing setting, emphasis on adaptability and speed of development, emphasis on quality and other factors come without a price.	systems Integrated and Network Model	Fifth

Conclusion:

Product development projects generally of a program or procedure to follow more or less conscious style. These models to help developers make products to achieve the demands of the stakeholders and end-users And achieve successful results in terms of time and budget is allocated. The commercial success of an organization in today's rapidly changing world of variables and, as such racing car racing Is most commercial businesses depends on their ability to identify customer needs and quickly create products to meet those needs with the lowest costs. Find the solution to this problem Not only problem is marketing units or units of product design problem or dilemma unit of output. This issue is related to problems of product that contains all the functional units. Perhaps more than any other issue that any organization should be given to it Consolidation of new product development processes on the one hand and proper communication between sets of new product development processes and the organization's current processes. The attention to analyzing the competitive environment, a variety of trends, including technological process (product, production, ...) on the market, the development of current and potential competitors, and some of the issues that smart organizations to development opportunities the increases and helps to advance the organization.

As mentioned in the text of new product development process for different types of product / service organizations is now competitive advantage, What percentage of your organization spend the organizational activities of research and development activities and new product development to outshine its rivals The current status and strategic topic that is related demand in the market.

Demands and requirements of our customers, which is always encouraging factor for innovation and organizational creativity in their business processes will be And will force them to retain existing

customers and potential customers to encourage their development process to spend more investments. Having an appropriate model process for such organizations is the prerequisite and driving And the speed and flexibility, as noted in the process of new product development will increase. New product development activities aimed at improving the general name or invent a new product or service is People with different backgrounds and skills involved in this process: mechanical engineers, marketers, financial managers, planners and so on. The ultimate goal of developing new products, creating value through services or products

References:

Acemoglu, D., Aghion, P. and Zilibotti, F., Distance to frontior, selection and economic growth, journal of the european economic association, 4:1, 37-74. (2006).

American Productivity & Quality center (APQC), Process Classification Framework (PCF), Version 4, 2005.

Barney, J. B. , "Firm Resources and Sustained Competitive Advantage", Journal of Management, Vol. 17, No. 1, 1999.

Beal, R. M., & Yasai-Ardekani, M. (2000). Performance implications of aligning CEO functional experiences with competitive strategies. Journal of Management, 26(4), 733e762.

Beath, J., & Katsoulacos, Y. (1991).The economic theory of product differentiation. Cambridge University Press.

D. E. Whitney, Mechanical Assemblies: Their Design, Manufacture, and Role in product Development, Oxford University Press, 2004.

Fixon and clark, (2005), "Product Architecture Assessment a Tool to link Product, Process and Supply Chain Decision, "Journal of Operation Management, Vol. 23, No. 1, pp, 345-369.

Fourt, L. A, Woodlock, J.w., (1960), Early prediction of market sucssess for new grocery products., Journal of marketing, 25: 31-58.

Khorasani, S. T. (2014, August). Design-Driven Integrated-Comprehensive Model CDFS Strategic Relationships. In ASME 2014 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (pp. V004T06A020-V004T06A020). American Society of Mechanical Engineers.

K. T. Ulrich and S. D. Eppinger, Product Design and Development, 5 ed., Mc Graw-Hill, 2012.

Makadok, R., & Ross, D. G. (2009).The strategic logic of product differentiation. Atlanta competitive advantage conference paper.

Miguel Pina e Cunha and Jorge F.S. Gomes, Order and Disorder in product innovation models, Journal of creativiyu and innovation management, Volume 12, Number. 3, 2003.

Robert G. Campbell & Edward S. Roth, Integrated Product Design and Manufacturing Using Geometric Dimensioning and Tolerancing, Marcel Dekker. Inc, 2003.

Robert G. Cooper & Scott J. Edgett, Overcoming the Current Crunch in NPD Resources, Working Paper No. 17, Product Development Institute Inc, 2003.

Sadri, Golnaz & Lees, Brian, "Developing Corporate Culture as a Competitive Advantage", Journal of Management Development, Vol. 20, Issue 10,2001.

Sihem Ben Mahmoud-Jouini, Christophe Midler & Gilles Garel, Time to market vs. time to delivery Managing speed in engineering, Procurement and Construction Projects, international journal of Project Management, No. 22, 2004.

Stefan Strohmeier, (2013), Employee relationship management—Realizing competitive advantage

Sun, H., Wing, W. C. Critical success factor for new product development in the Hong Kong toy industry, Techovation, 25, 293-303. (2005).

Swink and Morgan, "Threates to New product Manufacturability and the effects of development team integration processes, Journal of Operations Management, No. 17, pp. 691-709.

through information technology, Journal of Human Resource Management Review, Vol. 23, pp. 93-104.

Yin, R., Case Study Research: Design and Methods. Sage Publication, London. (1994).

YoungWon Park, Takahiro Fujimoto, Paul Hong (2012), Product architecture, organizational capabilities and IT integration for competitive advantage, Journal of International Journal of Information Management 32, pp. 479– 488.

Zhang, S., & Markman, A. B. Overcoming the early entrant advantage The role of aligable and nonaligable difference. Journal of marketing Research, 35 (4), 413-426.

Zhou, K. Z., Yim, C. K., & Tes, D. K. The effect as strategic orientations on technology- and market-based breakthrough innovation. Journal of marketing, 69. 2. 42-60.