

NEW PRODUCT DEVELOPMENT AS A CUSTOMER-DRIVEN PROCESS

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ABSTRACT: The success of the new product, some fit between the new product and the company's present business is required. Thus, the supply chain, manufacturing process and customer base would have to be adjusted for the new product.

KEYWORDS: *Facilities New Product Development; New Product Planning*

1.0 INTRODUCTION

New product development is the lifeblood of an organization for a long-term survival. New products provide growth and future profit streams yet able to gain new markets and market share. New products defend against competitive pressures and provide satisfaction to changing customer needs and requirements. At the same time, the complexities, expense, and risk involved in managing such new products create huge challenges for organizations (Perks, 2000). It takes time, costs, and requires the collaboration, communication, and coordination of cross-functional and cross-regional teams (Ozer, 2000). However, in today's fiercely competitive business world, growth through radical transformation is often the best route towards survival and prosperity.

Certainly, the organizations that could not prepare themselves to develop new products that meet customer needs better and faster than their competitors do soon find themselves in declining and facing survival pressures (LaPlaca, 1996).

2.0 RESEARCH METHODOLOGY

A new product development (NPD) process is covered from being conceived, tangibly developed, produced, and launched into the marketplace (Fredericks, 2005). According to McAdam and McClelland (2002), the concept of the innovation process can be adapted to four stages that are idea generation, screening, feasibility, and implementation (Figure 1). Here, innovation is seen as a process where ideas are generated and transformed into implementing able business products. The process also requires knowledge creation and sharing, as such, it involves difficult decisions (Ozer, 2000). Finally, the new product development process must also generate superior products. Thus, the success of a new product may hinge on the successful implementation of these activities.

The idea generation is the first step of new product development processes. It is in the front end where the organization formulates a concept of the product to be developed and decides whether or not to invest resources in the further development of an idea. The most difficult step in NPD process is idea generation (Koc & Ceylan, 2007). This is because the remaining steps just cannot take place without ideas to progress. There are many organizations in their NPD programs appear not to appreciate the importance of the idea generation stage (Coates et al., 1996). The idea generation stage must be conducted as effectively as possible because the cost of executing the stage within this process is much lower than that of later stages, but the effects can be large (Kramer et al., 2015; Coates et al., 1996). There are several idea generation techniques to enhance the creative process by overcoming blocks caused by emotional, cultural, perceptual and environmental factors; such as attribute listing, brainstorming, blue slip technique, forced relationships and free association, lateral thinking, and mind mapping.

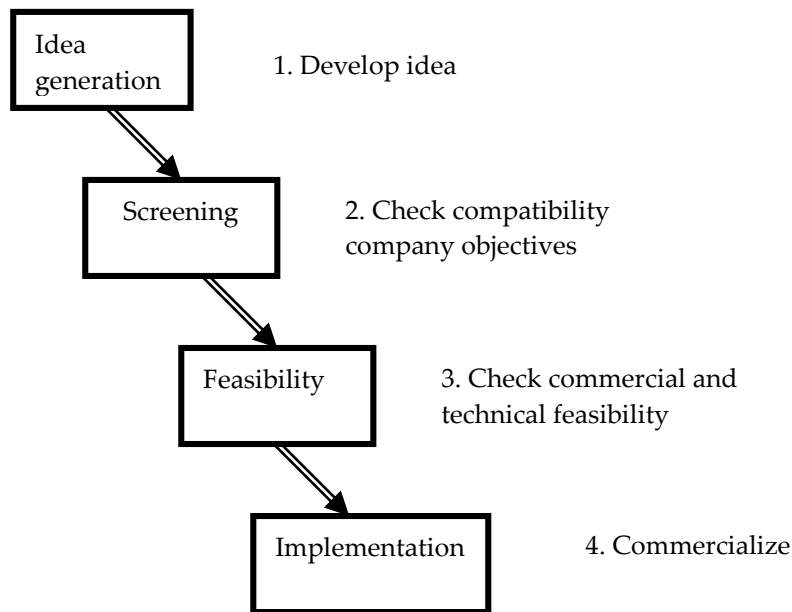


Figure 1: The innovation process (McAdam and McClelland, 2002)

The objective of idea screening is to eliminate unsound concepts prior to devoting resources to them. The compatibility of new product with company objective is a very important factor that can determine the success of the product. Suomala and Jokioinen (2003) grouped the factors that related to NPD success as strategy, company business, technology, and customer and competition. The strategy is one of the core issues related to the success of NPD. The management of NPD has to take into account the corporate strategy and its implications. Projects that are consistent with the strategy are likely to receive the most support from top management. On the other hand, the strategy should be flexible enough to enable the initiation of projects that seem to be very promising, but that may not yet be at the core of corporate strategy.

In addition to corporate level strategy, an R&D strategy may provide arguments for internal marketing of a project, thus facilitating, e.g. a sufficient resource allocation for the project. Second, a product's relative position with respect to the target market seems to be an important determinant of success. Timing of the product launch is one of the things that affect the product's competitive position. The third perspective affecting the product's success is technology. The new technology must be matured enough to be manufactured and delivered. The customer also must have the ability to adopt the new technology in order to gain the additional value of innovation. The fourth area is company business. A development project may have synergies with other projects, or it may lead to cannibalizing some existing business. Thus, the business impact of the new product should also be considered.

In this stage, the management must decide either to begin or to abort the product development project. The development of new product consists of various technical activities, and continuing interaction among R&D, marketing, operations, finance, and legal functions. Product specification describes what the product purpose (i.e. Intent to use). The R&D technical team will design the product according to specification. The product specification guides the technical team to produce prototypes. The prototypes are evaluated before commercial production and marketing. During the prototype evaluation, process development, such as machine to be used, raw materials (quantity and costs), and labor hours utilize are determined. Thus, the feasibility of new product to be produced in manufacturing plant depends on the prototype evaluation outcome (Cravens and Piercy, 2006).

3.0 SUMMARY

Introduction the new product into the market requires finalizing the marketing plan, coordinating market entry activities with business functions, implementing the marketing strategy, and monitoring and control of the product launch. The successful strategy included offering new technology, new packaging and attractive margins for retailers, and innovative commercials. The marketing plan should be coordinated with salespeople, sale and marketing managers, and managers in other functional areas such as operation, distributions, finance, and human resources.

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