

CHAPTER 14

NEW PRODUCT DEVELOPMENT: STEPS AND ITS IMPORTANCE

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Factors such as innovation stories, testing consumer trends and exploring technology have driven companies to spend valuable resources to develop new products. Field of product development facing many factors that results in failure of product development such as shortage of new ideas, long duration of development, high cost, fragmented or small market etc.

New and innovative products often face various obstacles during the product development phase. Even when an organisation has clear intentions and an excellent team, there are many factors that can cause projects to be called off. There are numerous challenges that every new product face in the market. The design process is complex and challenging due to various factors like time constraints, budget limitations, lack of expertise, etc. However, all these challenges can be overcoming with the help of a strong team and the right innovation strategy. There are a few steps to be applied to ensure that the product is successfully developed and marketed.

Generally, every new product starts with the idea generation where creative thinking is used to produce large amount of ideas for new products. Basic internal and external SWOT (strengths, weaknesses, opportunities and threats) analyses can be employed and examined market trends to generate potential product ideas. Internal ideas can be sourced through Research and Development (R&D) activity, while external ideas tend to come from studying and communicating with stakeholders such as customers.

The next stage involves brainstorming ideas based on researches conducted earlier (interviews, surveys, and customer studies etc.). Concept studies are important to determine whether it is feasible or not for the product to be manufactured. The study will also analyse customers' needs, current market trends, expected ROI, as well as affordability.

Depending on types of product, during this stage, another crucial steps to consider is laboratory testing. This to ensure the quality, safety and conformity to a diverse set of national and international standards. The tests to be conducted will depend on what standards the product is being measured against. Laboratory tests are generally carried out once during design and pre-production, and once more during production, to ensure that the products meet the mandatory specifications before mass production is started. Findings obtained from the test could be a benchmark to the quality and safety of the products.

After an idea is finalised, the next step is to develop a product concept based on it. This product concept should be an innovative solution that will be sold in the marketplace and satisfied customer needs. At this stage, one should continue conducting analysis to make sure these products fit into the competitive landscape which later will produce revenue. Questions such as “Does the product solve a problem?”, “Does the process is simplified?” or “Is it redundant with other products in the market?” should be answered.

In addition, the concept can be refined via prototyping where a small and simple version of the product, made with minimum resources and used to test the possibility of the product to drive sales. A physical prototype is produced to ensure that the product idea can indeed function as a safe, effective and workable market offering. If the prototype fails, it is needed to consider other product options as identified in the earlier plans. Concept and product testing studies and

customers' feedbacks are useful to validate all the initial ideas during the process and minimise the risks when developing a product. Hence, it will help to build consumer-oriented products which is the key to product success.

On top of that, test marketing involves placing an actual finished product for sale in one or multiple sample market settings and observing how well (or how poorly) it sells under the pre-determined marketing plan. A sample size of authentic potential consumer is selected, and their feedback recorded and evaluated carefully. The goal of the test marketing stage of the new product development process is to validate the entire concept behind the new product before the full investment is made and ready the product for its imminent commercial launch.

Once the product concept has been finalised, the next step is to figure out the development cost, potential revenue expected once it is launched, and marketing strategies. Customer segmentation can be an ideal tool to assess the market and determine which of the concepts will be most profitable.

Then, the new product is ready to be tested commercially. The final stage is where the product is manufactured and made available for commercial distribution. It is time to implement a full marketing plan and production process.

Agriculture and agro-based industry currently listed are one of the first industries that humankind undertook in order to survive, and it is still considered as the primary industry. Just as an example, processing of food stuffs produced by agricultural activity is considered as a secondary industry. Thus, new agro-product development is important to various stakeholders, not only the customers, but also manufacturers, distributors, etc.

The new product will definitely provide value to the customers. Customers tend to attract to the product or service that offers great value. The increasing demands of customers for innovation, and

new technologies directly keeping the companies growing when anticipating the values of the customers will boost retention.

Furthermore, every year, a lot of new or improved products are introduced to the customers. In this case, innovation helps companies to keep up with the market. Businesses that introduce new products earn higher profits than those that do not. Besides, products with a certain life cycle will eventually phase out. Therefore, producers and innovators need to keep pace with technological developments and changing customer tastes. Customers perceive if a business is constantly innovating, then the business is relevant or up-to-date with the current trends as well as the customers' and markets' needs.

Diversity of product innovation drives expansion by opening up new market opportunities. It indirectly also helps businesses diversify their scopes and tap into totally different customer groups. Variety of products in the market will drive companies to produce best products to attract customers to buy. Moreover, the event will also give opportunities to the customer to choose products that suit their intention and needs.

Just as consumer trends drive new products, advances in technology drives companies to invest in new products. If a company has not upgraded its technology, it can be perceived that the business is irrelevant and out of date. The use of technology is crucial nowadays to develop products, to improve, conduct related testing to verify its quality and safety, as tools for promotion and marketing, as well as to get feedbacks from customers.

By making more and creative items available for people in a community to buy, it will indirectly improve the society. Many new products are simply an incremental improvement over the previous version with only some new features or slight faster performance. These products may sustain the company by offering enough new value to generate additional revenue but they are sometimes unfavourable to the society. Also, with the need for new product development practice,

companies hire new resources which help the society in terms of employment and income generation.

Therefore, preliminary data from these studies will lead to further research consisting of wider population and probably, will enable industries to innovate new agro-based products as well as replacing the existing products. Not only that, the studies also can provide a framework that helps to improve the performance as well as increase the quality of the products.

By conducting the empirical research on product development, researchers can adjust the research methodology including the data sample size, data collection methods and the data analysis methods, while trying to understand how the research outcomes can be influenced by different research factors and conditions. Besides, researchers can validate the hypotheses before concluding the findings. Furthermore, the studies are beneficial to develop relevant skills such as the analytical and observation skills, as well as could control multiple research variables to achieve the most relevant research outcomes.

As a conclusion, bringing a product to the market may requires a lot of steps as well as the time consuming, while a knowledge core and continuously create new knowledge is critical to the success of product development.