BAHRIA UNIVERSITY, (Karachi Campus)

Department of Software Engineering

Assignment 3 - Spring 2022

COURSE TITLE:	Engineering Management	COURSE CODE: **MGT-423**	
Class:	**BSE-IV (B)**	Shift:	**Morning**
Course Instructor:	**ENGR. TALHA BIN SAEED**	Time Allowed:	**1 Week**
Submission Date:	**08/06/2022**	Max. Marks:	05

[CLO4: 5 Marks]

QUESTION #01

Evaluate the R&D process that is required to develop a better product?

Solution

Inquire about and improvement is the foremost essential step that a firm takes at the beginning of any venture to improve and offer modern things into the commercial center, which has appeared to be a long-term advancement that's tough to compete with. It is the foremost critical angle of product innovation or the creation of a modern item. It helps within the advancement of modern usage through plan that work particularly and stay within the advertise for a longer sum of time. It is planning to include to a company's long-term victory instead of creating speedy benefits. For its investigate and advancement strategies, enormous tech businesses like Intel contract a devoted R&D staff.

R&D may be an unsafe try since it involves huge entireties of cash with no or moo desires of return in case the venture comes up short for anything reason. Fundamentals inquire about and connect inquire about are the two categories of investigate accessible. The firm doesn't have any applications in essential investigate, so they construct an item from the ground up and learn modern things around it.

Connected investigate, on the other hand, alludes to an item that has as of now been created and is accessible on the showcase, and on which inquire about is conduct in arrange to present development into an existing framework. Since it's an unsafe industry to contribute within, the consider is being done by experienced engineers who may have past ability.

Improvement is the organize in which contemplations and concepts based on research are connected to form products. Inquire about produces plans and data for fabricating, and these inquiries about are in the long run changed into models, which are early, test models of research-based concepts.

Arranging, investigate, improvement, promoting, and item discharge are all stages within the investigate and improvement handle. Representatives must make recommendations for challenges in their range and merchandise amid the arranging handle, which might lead to the closure of escape clauses or the presentation of advancement in a item. The R&D group at that point starts to ponder which of their thoughts can be executed in a reasonable way and can help them succeed in creating something unused.

A showcase inquire about is additionally takes put to urge an thought of people's desire from unused advancement with respect to a item, it is fundamental to do so since an innovation with no demand isn't an advancement, due to which it'll be rejected by the community since of superior item has still possessed the commercial center, or how well an thought is being acknowledged by clients and the clients, so It makes a difference to limit down the thoughts that have been proposed within the prior stage to more center on the request of alter individuals anticipate in your item and presently investigate and advancement handle continues to following stage.

The researcher and development teams collaborate closely during the development phase to comprehend and agree on how a concept may be transformed into a tangible product. As the development process progresses, concerns like as mass manufacturing and sales methods emerge. When a new product is introduced to the market, it is necessary to draw buyers' attention to it. To do so, various campaigns are undertaken, such as advertising, branding, and so on, to strengthen the product's portfolio.

When a product is ready to debut into the marketplace after a long period of research and development, there are some preliminary actions that must be performed to inform the target audience about the new launch. The marketing team will assist in the promotion of the product to create revenue by developing marketing strategies based on the characteristics of the new product. The marketing team also assists the R&D team in developing a better product and speeding up the development process. They also devise various techniques to assist increase product sales, such as pricing, sales, and distribution. Prices may be kept low in the early phases, or a minimal profit is maintained to allow the business to establish itself in the market. The company is continuously focused on increasing product sales, which might help them get more clients.

The product is eventually launched in this phase or admitted into the market against its rivals after marketing and the whole R&D life cycle. This phase will demonstrate the sort of R&D that has been applied to the product; if the R&D has been done in an efficient manner, the product will undoubtedly become a revolutionary product; otherwise, it will fail to stand out in the market, resulting in a significant loss for the company. If the marketing team completes new product development with commercialization, post-launch evaluation, and correct pricing, it may be a win-win situation for the product and the firm.
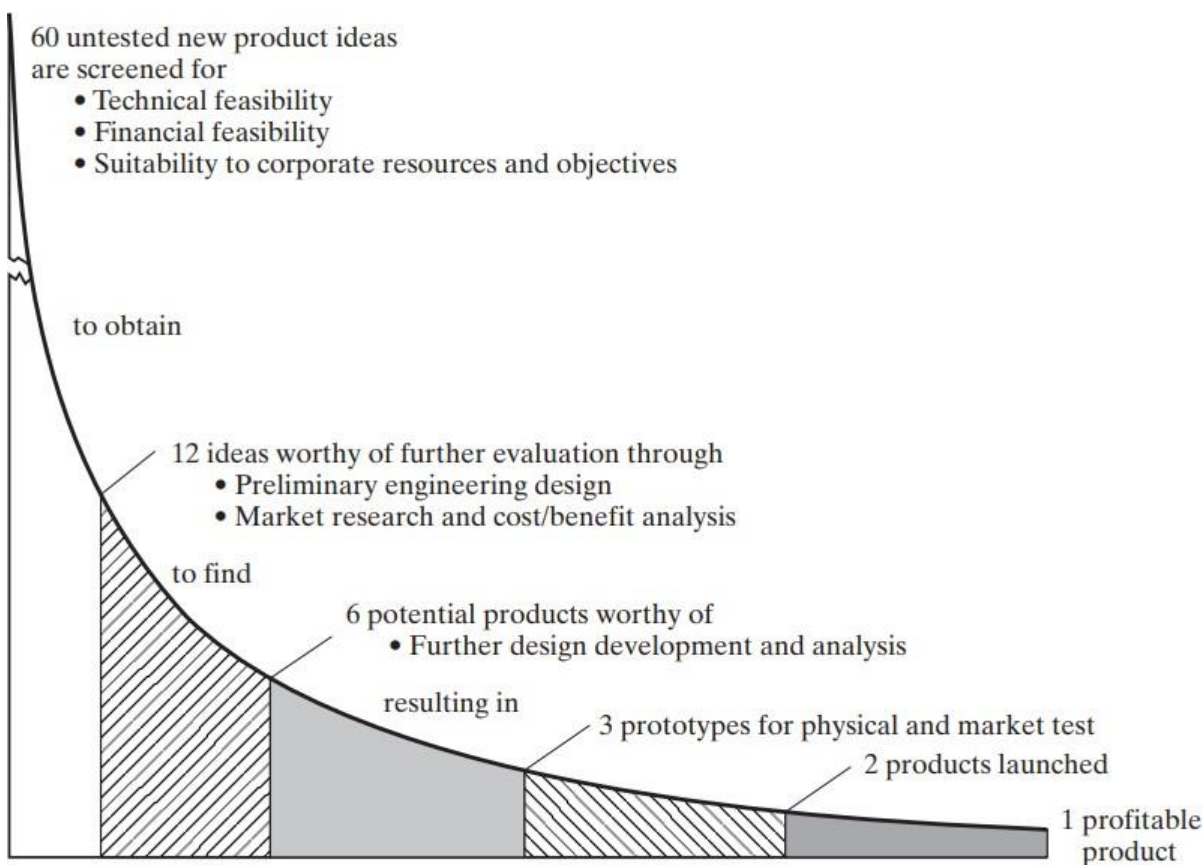
It is usually a good idea to do product R&D, but it may be much more helpful to a company if the R&D proves to be productive. It provides a lot of value to any company. It has the potential to greatly contribute to organizational growth and market share retention. Here are a few items to consider doing efficient R&D: Assess client needs, set goals, define, and develop a process, and assemble a team.

It will be a good practice to examine the market on a daily and regular basis, maintain track of data regarding rivals' products that are performing well in the market, and encourage staff to discover reasons for their success while reviewing the market. Employees are also urged to spot flaws in rivals' products so that they may address them in their own, making it stand out in the market.

Determine the employee's objectives so that they have a set of objectives for the company where they work. They must be given goals to improve the organization's earnings while also meeting the wants of customers, which will motivate them to work in that direction.

A project management approach aids in the timely completion of official and informal research projects. Goals and targets that are reasonable serve to concentrate the work and ensure that relevant and realistic timetables are established. The aims and objectives are written down so that formal and informal study may be done on them. Each module has a set of deadlines that must be met within a certain amount of time.

Create teams with specialized team members for each aspect of the product, which must include a research and development team, a marketing team, and a market analysis team, because when they all work together in their respective fields, they will generate a greater understanding of the product they want to make and will contribute according to the role assigned to them. This will aid each team in being better equipped to support one another with their own ideas.

60 untested new product ideas
are screened for
  • Technical feasibility
  • Financial feasibility
  • Suitability to corporate resources and objectives

to obtain

12 ideas worthy of further evaluation through
  • Preliminary engineering design
  • Market research and cost/benefit analysis

to find

6 potential products worthy of
  • Further design development and analysis

resulting in

3 prototypes for physical and market test

2 products launched

1 profitable product

Sources:

[1] Investopedia. 2022. Why Research and Development (R&D) Matters. [online] Available at: <https://www.investopedia.com/terms/r/randd.asp> [Accessed 4 June 2022].

[2] business, S., generator, B., maker, L., name, D., photography, S., sell, P., themes, S., everywhere, S., Instagram, F., Marketplace, W., business, M., marketing, E., automation, M., groups, C., chat, B., Ads, F., everything, M., Pay, S., Protection, F., automation, E., in, L., Center, H., Courses, B., Community, S., tools,

F., encyclopedia, B., Events, C., in, L., Articles, L., Idea?, N., Products, S., Store, S., Marketing, S., Stories, F. and Updates, P., 2022. What is Research and Development (R&D)? Definition and Guide. [online] Shopify. Available at: <https://www.shopify.com/blog/what-is-research-and-development#:~:text=Research%20and%20development%20%E2%80%93%20R%26D%20%E2%80%93%20is, to%20the%20company's%20bottom%20line.> [Accessed 4 June 2022].

[3] Cleverism. 2022. Research and Development (R&D) | Overview & Process. [online] Available at: <https://www.cleverism.com/rd-research-and-development-overview-process/> [Accessed 4 June 2022].

[4] 2022. What is the R&D Process? (With pictures). [online] Available at: <https://www.wise-geek.com/what-is-the-rd-process.htm> [Accessed 4 June 2022].

[5] Vistage Research Center. 2022. New Product Development Process: The Role of Design, R&D, And More | Vistage. [online] Available at: <https://www.vistage.com/research-center/business-leadership/business-innovation/new-product-development-process-role-design-rd/> [Accessed 7 June 2022].