Product Development

The Need

- A key aspect of a firm’s success
- Halts product’s slow growth
- Customer base is increased
- Faster to market
- Reputation of the firm is enhanced

Product development- A complex process

- Risky as huge investment of time and money is needed
- No guarantee of commercial viability/acceptability
- A sound process needed to lessen investment loss in R & D, market research and testing
- Examples are Tata Nano, DuPont’s Corfam substitute for leather

Product Development process (PDP)

The basis of PDP should be

- The need of the customer
- Position of the competitors
- Technology to be used/ available
- Suppliers

The Need of the customer

- Customer’s need is critical to be considered at every stage of PDP.
- Needs are not only to be identified, but also anticipated.
- The customer is influenced by the economic, social and political environment.

Position of the competitor and Technology

- Stay abreast of advances being made in technology and by competitors

- Remain aware of researches conducted in private and public labs

- Keep a tab on the researches conducted by competitors

Suppliers

- Suppliers are a strategic resource to be included in the PDP
- A valued source of input for each stage of product development
- Working closely with suppliers may eliminate unnecessary costs

Product development stages

The stages are

- Opportunity Identification and Idea Generation
- Concept Development
- Concept Testing
- Design and Engineering
- Prototype Development & Testing

1. OPPORTUNITY IDENTIFICATION AND IDEA GENERATION

Customers are an Important source of unmet needs while the suppliers and employees may skim through better opportunities and ideas

Nuances and challenges in determining customer attributes

- No firm opinion of customers about the preferences and may keep changing
- Difficult for customers to articulate and express preferences
- The questioning process can be unpleasant and
- The bias of the information seeker may “filter” the customer

2. PRODUCT CONCEPT DEVELOPMENT

The ideation methods includes

- Brainstorming
- Incentive-compatible ideation
- Systems approaches
- Varied perspectives and
- Archival analysis

3. CONCEPT TESTING

Concept definition is a statement which tells that

- the firm appreciates customers' needs
- the firm is better positioned to address such needs
- it provides a rational for the customer to try the product, and
- key benefits of the product based are highlighted

Product screening

Screening by potential customers on

- Consumer relevance
- Consumer purchase interest
- Discontent with existing product

to prioritize ideas for further testing and evaluation.

4. DESIGNING & ENGINEERING PRODUCTS

The concepts have to be designed and engineered using Conjoint Analysis and Value Engineering to meet customer needs at a reasonable cost.

Conjoint Analysis

The goal of conjoint analysis is

- to determine the level of each feature most acceptable to customers
- to infer the relative importance of each feature on the utility of the product
- to assess the contribution to utility of each feature at various levels.

Value Engineering (VE)

Value Engineering is a set of steps to deliver the required functions of a product at lowest cost while meeting quality, performance and reliability.

To implement VE it is imperative to know

- the value placed by customers on each function and
- the cost of the parts and manufacturing to provide that function.

Design for Manufacturing and Assembly (DFMA)

The reduction in unit manufacturing costs can increase profitability as

- lower prices, improves market share
- greater volume reduces channel costs
- simplified designs lead to quality improvements
- strategic benefits due to competitive disincentives.

5. PROTOTYPE DEVELOPMENT AND TESTING

Several prototypes are developed and tested.
In testing new products and concepts it is often necessary to place potential customers in new information states with new perspectives.

THANKS