***CHAPTER FOUR: PRODUCT AND SERVICE CONCEPTS***

***4.1. Product and service***

Pair of trainers, a Volvo truck, a mobile telephone, haircut, concert, vacation, advice from a solicitor and tax preparation services are all products. We define a product as anything that is offered to a market for attention, acquisition, use or consumption and that might satisfy a want or need. Products include more than just tangible goods. Broadly defined, products include physical objects, services, persons, places, organizations, ideas or mixes of these entities. Services are products that consist of activities, benefits or satisfactions that are offered for sale, such as haircuts, tax preparation and home repairs. Services are essentially intangible and do not result in the ownership of anything.

**4.2. Product technology**

For entrepreneurial convenience, product technologies are generally classified into three major classes. High – tech products, Mid-tech Products, Low-tech products

**High-tech products**: Such products tend to be more of “state of the art” products reflecting current levels of technological advancement. They are results of scientific research and experimentation, whose uses have managed to reach a business application for the market. Examples include; Semiconductors, Digital CD players, Computerized cameras, Satellite systems, etc.

**Mid-tech products**: This class contains a majority of the products that we are familiar with. This technology assumes the use of existing resources or methods of production that result in new products. Examples include; Cosmetics, Fertilizers and nutrients, Power supplies, etc.

**Low-tech products**: such products are ones that generally are understood to be developed as a result of small changes or improvements in existing products. However, development of low-tech products requires insight by entrepreneurs to see opportunities. Examples include; Office furniture, Paper supplies, Plastic toys, Clothing and textiles, Candy and Cookies etc.

* High technology markets exploit and create change rather than consolidate and defend, stable the existing conditions. And it is characterized by higher uncertainty in market, competition and technology.

***4.3. Product Development Process:***

Given the rapid changes in taste, technology and competition, a company cannot rely solely on its existing products to sustain growth or to maintain profitability. The firm can hope to maintain market and profit performance only by continuous product innovation. In the face of changing customer needs, technologies and competition, product innovation or the development of new products has become vital to a company's survival. Introducing new products, however, is not sufficient. The firm must also know how to manage the new product as it goes through its life cycle: that is, from its birth, through growth and maturity, to eventual demise as newer products come along that better serve consumer needs.

***New Product Strategy:***

Effective product innovation is guided by a well-defined *new-product strategy*. The new product strategy achieves four main goals: first, it gives direction to the new-product team and *focuses team effort*; second, it helps to *integrate* functional or departmental efforts; third, where understood by the new-product team, it allows tasks to be *delegated* to team members, who can be left to operate independently; and fourth, the very act of producing and getting managers to agree on a strategy requires *proactive*, not reactive, management, which increases the likelihood of a more thorough search for innovation opportunities.

There are eight familiar product development stages.

**1. Idea Generation:** The new product development process starts with search for ideas. Companies have to encourage any new idea coming from different source that are internal sources (top management, R&D, employees) and external sources (competitors, customers, distributors etc.) it can also use different Idea generating technique i.e. Attribute listing, Forced relationship, Brain storming etc.

# 2. Idea Screening: - In the 2nd stage the purpose is to minimize the number of ideas to few valuable ideas. The ideas should be written down and reviewed each week by an idea committee which should sort the ideas in to three groups: Promising ideas, marginal ideas, and rejected. Each promising idea should be researched by committee member. The net result of this stage is a body of ideas which are acceptable for further development.

# 3. Concept Development and Testing: Attractive ideas must be refined in to fast able product concepts. People do not purchase ideas but they buy concepts. Any product idea can be turned in to several product concepts. The questions asked include who will use the product? What benefits should the product provide? When will people consume the produced? Concept testing:- calls for testing product concepts with an appropriate group of target consumers, then getting the consumers reactions. At this stage the concepts can be in words or picture description.

# 4. Marketing Strategy Development: After testing the new product the manger must develop a preliminary marketing strategy plan for introducing the new product into the market. The marketing strategy will undergo further refinement in subsequent stages. The marketing strategy plan consists of three parts i.e. 1) Market size, structure, behavior. 2) Planned price, distribution strategy, and marketing budget of 1st year 3) Long run sales and profit goals, marketing mix strategy.

# 5. Business Analysis: after management develops product concept and marketing strategy, it can evaluate the proposals business attractiveness. Management needs to prepare sales, cost and profit projections to determine whether they satisfy the company's objective. the company can use other financial measure to evaluate the merit of a new product proposal. the simplest is breakeven analysis.

# 6. Product Development: If product concept passes the business test, it moves to R&D or engineering to be developed to one or more physical version of the product concept. Its goal is to find a prototype that the consumers see as embodying the key attribute described in the product concept statement, Scientists must not only design the products required functional characteristics but also know how to communicate its psychological aspects through physical cues. How will consumer react to different colors, sizes, weight & other physical cues?

When the prototypes are ready, they must be put through regroups functions and consumer test. Functional test are conducted under laboratory & field conditions to make sure that the product performs, safely and effectively (Durability, speed, cost etc.) Consumer testing can take variety of forms, from braining consumers in to laboratory to giving them samples to use in their homes.

# 7. Market Testing: After management is satisfied with the products functional and psychological performance, the product is ready to be dressed up with the brand name. The goals are to test the new product is more authentic consumer settings and to learn how large the market is and how consumers and dealers react to handling, using and repurchasing the actual product.

Most company know that market testing can yield valuable information about buyers, dealers, marketing program effectiveness, market potential & other matter.

# 8. Commercialization: The new product if the company goes ahead with commercialization it will face its larges cost to date. The company will have to contract for manufacture or build or rent a full scale manufacturing.

* When (timing):- In commercializing market entry timing is critical. If the company hears about a competitor nearing the end of its development work, it will face following choices: first entry, parallel entry or late entry. Each decision has its own advantage and disadvantage for the company.
* First entry: - The firm usually enjoys the "first mover advantage" of locking up key distributors & gaining reputation.
* *Parallel entry*—the firm might time its entry to coincide with the competitor’s entry. The market may pay more attention when two companies are advertising the new product.
* Late entry: - This strategy has three advantages. The competition will have borne the cost of educating the market. Competition product may reveal fault that the late entrant can avoid.
* Where (Geographical strategy):-The company must decide whether to launch the new product in a single locality, a region, several regions, the national market or international market.
* To whom (Target-market-prospect):- Within the rollout markets, the company must target its distribution and promotion to the best prospect group. Prime prospects for a new consumer product would ideally have the following characteristics: They would be early adapters; they would “heavy users could be reached at low cost.

***4.4. Product Protection:***

Intellectual property, very broadly, means the legal rights which result from intellectual activity in the industrial, scientific, literary and artistic fields. Countries have laws to protect intellectual property for two main reasons.

* One is to give statutory expression to the moral and economic rights of creators in their creations and the rights of the public in access to those creations.
* The second is to promote, as a deliberate act of Government policy, creativity and the dissemination and application of its results and to encourage fair trading which would contribute to economic and social development.

Generally speaking, intellectual property law aims at safeguarding creators and other producers of intellectual goods and services by granting them certain time-limited rights to control the use made of those productions.

***4.3.1 Patents***

A patent is a document, issued, upon application, by a government office (or a regional office acting for several countries), which describes an invention and creates a legal situation in which the patented invention can normally only be exploited (manufactured, used, sold, imported) with the authorization of the owner of the patent. “Invention” means a solution to a specific problem in the field of technology. An invention may relate to a product or a process. The protection conferred by the patent is limited in time (generally 20 years).

It should be emphasized, however, that while the State may grant patent rights, it does not automatically enforce them, and it is up to the owner of a patent to bring an action, usually under civil law, for any infringement of his patent rights. The patentee must therefore be his own “policeman.” Simply put, a patent is the right granted by the State to an inventor to exclude others from commercially exploiting the invention for a limited period, in return for the disclosure of the invention, so that others may gain the benefit of the invention. The disclosure of the invention is thus an important consideration in any patent granting procedure.

**Conditions of Patentability**

An invention must meet several criteria if it is to be eligible for patent protection. These include, most significantly, that the invention must consist of patentable subject matter, the invention must be industrially applicable (useful), it must be new (novel), it must exhibit a sufficient “inventive step” (be non-obvious), and the disclosure of the invention in the patent application must meet certain standards.

* ***Patentable Subject Matter:*** In order to be eligible for patent protection, an invention must fall within the scope of patentable subject matter. Patentable subject matter is established by statute, and is usually defined in terms of the exceptions to patentability; the general rule being that patent protection shall be available for inventions in all fields of technology.

Subject matter which may be excluded from patentability includes the following

* Discoveries of materials or substances already existing in nature;
* Scientific theories or mathematical methods;
* Plants and animals other than microorganisms.
* Methods of treatment for humans or animals, or diagnostic methods practiced on humans or animals (but not products for use in such methods).
* ***Industrial Applicability (Utility):*** An invention, in order to be patentable, must be of a kind which can be applied for practical purposes (not be purely theoretical). If the invention is intended to be a product or part of a product, it should be possible to make that product.
* ***Novelty:*** Novelty is a fundamental requirement in any examination as to substance and is an undisputed condition of patentability. It must be emphasized, however, that novelty is not something which can be proved or established; only its absence can be proved. An invention is new if it is not anticipated by the prior art. “Prior art” is, in general, all the knowledge that existed prior to the relevant filing or priority date of a patent application, whether it existed by way of written or oral disclosure.
* ***Inventive Step (Non-Obviousness):*** In relation to the requirement of inventive step (also referred to as “non-obviousness”), the question as to whether or not the invention “would have been obvious to a person having ordinary skill in the art” is perhaps the most difficult of the standards to determine in the examination as to substance.

The expression “ordinary skill” is intended to exclude the “best” expert that can be found. It is intended that the person be limited to one having the average level of skill reached in the field in the country concerned. It should be noted that novelty and inventive step are different criteria. Novelty exists if there is any difference between the invention and the prior art. The question, “is there inventive step?” only arises if there is novelty.

***4.3.2 Trademarks***

Trademarks started to play an important role with industrialization, and they have since become a key factor in the modern world of international trade and market-oriented economies. Industrialization and the growth of the system of the market-oriented economy allow competing manufacturers and traders to offer consumers a variety of goods in the same category. Consequently, the goods must be named. The medium for naming goods on the market is precisely the trademark.

“A trademark is any sign that individualizes the goods of a given enterprise and distinguishes them from the goods of its competitors.”

For practical purposes one can even simply rely on the distinguishing function of the trademark, and define it as “any visible sign capable of distinguishing the goods or services of an enterprise from those of other enterprises.”

**Signs which May Serve as Trademarks**

If we adhere strictly to the principle that the sign must serve to distinguish the goods of a given enterprise from those of others, the following types and categories of signs can be imagined:

* *Words:* This category includes company names, surnames, forenames, geographical names and any other words or sets of words, whether invented or not, and slogans.
* *Letters and Numerals:* Examples are one or more letters, one or more numerals or any combination thereof.
* *Devices:* This category includes drawings and symbols.
* *Colored Marks:* This category includes words, devices and any combinations thereof in color, as well as color combinations and color as such.
* *Audible Signs (Sound Marks):* Two typical categories of sound marks can be distinguished, namely those that can be transcribed in musical notes or other symbols and others (e.g. the cry of an animal).

The requirements which a sign must fulfill in order to serve as a trademark are reasonably standard throughout the world. Generally speaking, two different kinds of requirement are to be distinguished. From that function it follows that a trademark must be distinguishable among different products. The second kind of requirement relates to the possible harmful effects of a trademark if it has a misleading character or if it violates public order or morality.

**4.3.3 Copyrighting:**

Copyrights provide exclusive rights to creative individuals for the protection of literary or artistic productions. They pertain to intellectual property. Usually copyrights are valid for the life of the inventor plus a few decades.