CHAPTER FOUR

PRODUCT AND SERVICE CONCEPT

Given the variety types of innovations these days, very few products require sophisticated scientific knowledge. Majority of new products tend to revolve around low-tech or no-tech innovations. For entrepreneurial convenience, product technologies are generally classified into three major classes.

1. High – tech products
2. Mid-tech Products
3. 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, Laser Instruments, 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, Desktop publishing, Power supplies, Fax machine, 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;

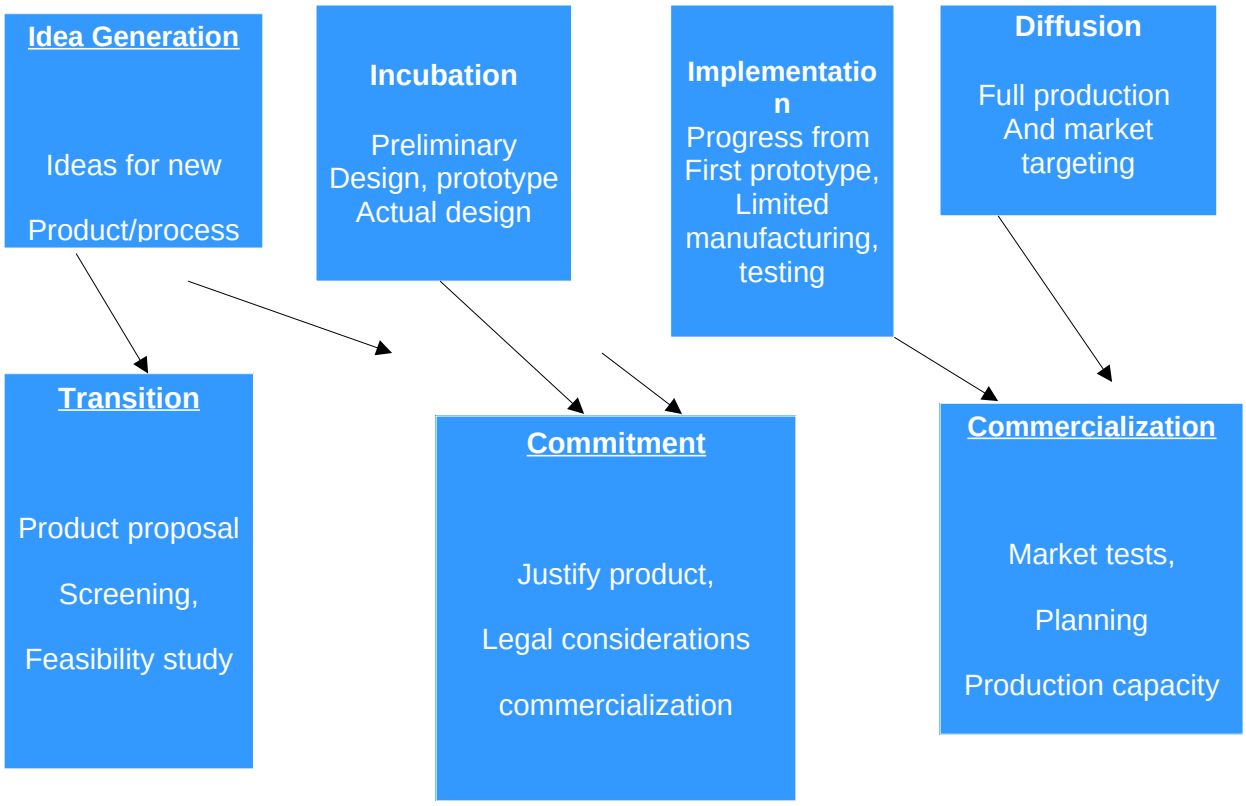
- Office furniture, Paper supplies, Plastic toys, Clothing and textiles, Printer ribbons, Candy and Cookies, Building supplies, etc.

New Venture and Product development

- The development of new-ventures is the stage of entrepreneurial process that determines the level of success.
- This stage begins with the idea for the venture and followed by venture selection.
- Ideas are generally developed into venture start-ups.
- Ideally there are certain critical factors that should be taken into consideration while designing ventures.

Product Development Process

- Product development process is part of the overall new-venture creation process.
- Even though there are many models that advocate what the product generation process should look like, for this purpose we shall adopt four distinct stages.
- These stages can be referred to as:
    1. Idea Generation
    2. Incubation
    3. Implementation
    4. Diffusion



There are 8 stages of new product development process:

1. Idea generation
2. Idea screening
3. Concept development and testing
4. Market strategy
5. Business analysis
6. Product Development
7. Market testing
8. Commercialization

1. Idea generation

The new product development process starts with search for ideas. Companies have to encourage any new idea coming. Sources of new product ideas:

I**. Internal sources**

Employees: - successful companies have established a procedure that encourages every employee coming with new idea, Top management, Research and development etc.

II. **External sources**

Customers-may the best idea comes from asking customer to describe their problems with current products.

Distributers:- they are good sources of new product idea.

They have first hand exposure to customers' need and compliant

Competitors: - companies can also find good ideas by examining their competitors' product.

Idea generating techniques

Attribute listing: - calls for listing an existing products major attributes and then modifying each attribute in the search for improved product.

Forced relationship:- several objects are considered in relation to one another to create a new product. In this we also take two or more needs and the relationship between these needs is identified so that to develop new product that satisfy those needs.

Brain storming: - People from different sections (customers, dealers and others) are invited and in informal way asked to discuss on particular matter.

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 rejects: Each promising idea should be researched by committee member.

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

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.

Estimated total sales: - Management needs to estimate whether sales will be high enough to yield satisfactory profit.

Estimating cost and profits: - After sales forecast the management should estimate the expected cost and profit at various levels of sale.

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 and 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 effeteness, market potential & other matter.

Test Marketing yield several benefits

- ✓ More reliable forecast of future sale
- ✓ Pretesting of alternative of future sale

8. Commercialization

The new product if the company goes ahead with commercialization it will face its largest 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 three choices:

First entry:- The firm usually enjoys the "first mover advantage" of locking up key distributors & gaining reputation parallel entry:-

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.

The company can learn the size of the market.

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 be "heavy users
- ✓ They would be Opinion leaders
- ✓ Could be reached at low cost.

How (introductory markets strategy):- To sequence and coordinate many actives involved in launching a new product might can use network-planning techniques such as critical path scheduling.

Product protection Issues

Legal Issues for the Entrepreneur

One of the challenges the novice entrepreneur will face as she goes into business understands the regulatory environment which is made up of numerous laws and regulations. To operate as a legal businessperson and protect the business from

unnecessary suits and liabilities, the entrepreneur needs to understand the various laws that govern her Business. Following are the key legal issues for the entrepreneur.

Intellectual Property

'Intellectual property is a legal definition of ideas, inventions, artistic works and other commercially viable products created out of one's own mental processes. In the same sense that real estate titles establish ownership of tangible items, intellectual property is protected by such legal means as patents, copyrights, and trademark registrations. In order to enjoy the benefits arising from the exclusive ownership of these properties, the entrepreneur needs to protect these assets by the relevant law.

This is the reason why' experts strongly recommend that those in creative fields seek protection through official registration of their intellectual properties.

Patents

An entrepreneur who invents a new thing or improves an existing invention needs to get legal protection for her invention through a patent right. A patent is a contract between an inventor and the government in which the government, in exchange for disclosure of the invention, grants the inventor the, exclusive right to enjoy the benefits resulting' from the possession of the patent

Utility Patent: A utility patent protects any new invention or *functional* improvements on existing inventions.

Design Patent: This patent protects the appearance of an object and covers new, original, ornamental, and unobvious designs for articles of manufacture. Like utility patents, design patents provide the inventor with-exclusive right to make, use and/or sell an item having the ornamental appearance protected by the patent. This patent is appropriate when the basic product already exists in the marketplace and is not being improved in function but only in style. These patents are particularly important to companies such as shoe producers and product package design firms that need to protect their ornamental designs.

- A patent provides the owner with exclusive rights to hold, transfer, and license the production and sale of a product/process.
- It is an intellectual property right.
- It is issued by government to the inventor.
- This exclusive property right can be granted for a number of years depending on the countries laws and type of property.
- Patents are property rights that can be sold and transferred, willed as well as licensed and at times used as collateral.

What can be Patented;

1. Processes: Methods of production, research, testing, analysis, technologies with new applications.
2. Machines: Products, instruments, physical objects.
3. Manufactures: Combinations of physical matter not naturally found.
4. Composition of matter: Chemical compounds, medicines, etc.

Rationale for Use of Patents

There are four primary incentives embodied in the patent system:

I. to invent in the first place;

II. to disclose the invention once made;

III. to invest the sums necessary to experiment, produce and market the invention;(post R and D costs are higher than conception)

IV. To design around and improve upon earlier patents.

Trademarks

These are distinctive names, marks, symbols or motto identified with a company's product or service and registered by government offices.

Trademarks unlike patents are periodically renewed unless invalidated by cancellations, abandonment, or other technical registration/renewal issues.

Copyrights

Copyrights provide exclusive rights to creative individuals for the protection of literary or artistic productions. It protects original works of authorship including literary, dramatic, musical, and artistic works, such as poetry, novels, movies, songs, computer software, and architecture. They pertain to intellectual property. Usually copyrights are valid for the life of the inventor plus a few decades.

How is a copyright different from a patent or a trademark?

Copyright protects original works of authorship, while a patent protects inventions or discoveries. Ideas and discoveries are not protected by the copyright law, although the way in which they are expressed may be. A trademark protects words, phrases, symbols, or designs identifying the source of the goods or services of one party and distinguishing them from those of others.

The Intellectual Property System In Ethiopia

Ethiopia became a party to the convention establishing the world intellectual Property Organization (WIPO) in February 1998. Ethiopia joined the Nairobi Treaty on the Protection of the Olympic Symbol in 1981. It is a member of the Treaty establishing the Common Market for Eastern and Southern Africa (COMESA) which was formed in 1994, the Partnership Agreement between members of the African, Caribbean and Pacific (ACP) Group of states and the European Union (EU).

The government established the Ethiopian Intellectual Property Office in 2003 in having the understated Objectives:

- To facilitate the provision of adequate legal protection for and exploitation of intellectual property in the country;
- To collect, organize and disseminate technological information contained in patent documents and encourage its utilization;
- To study, analyze and recommend policies and legislation on intellectual property to the government;

- To promote knowledge and understanding of intellectual property among the general public.

The existing laws and directives in Ethiopia in the field of Intellectual Property (IP) are the Patent Proclamation and the Implementing Regulation, the Copyright and Related Rights Proclamation and The Trademark Registration Directive.

According to the proclamation in order to be granted **a patent**, an invention must fulfill three conditions:

- It must be new- It should never have been published or publicly used before.
- It should be capable of industrial application -It must be something which can be industrially manufactured or used.
- It must be "non-obvious". It should not be an invention which would have occurred to any specialist working in the relevant field.

The proclamation excludes the following from patentability:

Inventions contrary to public order or morality,

- Plant or animal varieties or essentially biological processes for the production of plants or animals,
- Schemes, rules or methods for playing games or performing commercial and industrial activities and computer programs,
- Discoveries, scientific theories and mathematical methods,
- Methods for treatment of the human or animal body by surgery or therapy as well as diagnostic methods practiced on the human or animal body.

Rights of a patentee include making, using and exploiting the patented invention in any other way. Any person who wants to use the patented invention has to get the authorization of the owner. The patentee does not have import monopoly right over the products of the patented invention in Ethiopia.

There are certain limitations of rights of the patentee included in the proclamation:

- Acts done for non commercial purposes,

- The use of the patented invention solely for the purposes of scientific research and experimentation,
- The use of patented articles on aircraft, land vehicles or vessels of other countries which temporarily or accidentally enter in to the air space, territory or waters of Ethiopia,
- Acts in respect of patented articles which have been put on the market in Ethiopia by the owner of the patent or with his consent.
- The use of the patented invention for national security, nutrition, health or for the development of vital sectors of the economy, subject to payment of an equitable remuneration to the patentee.

The duration of a patent is 15 years which may be extended for a further period of five years if proof is furnished that the invention is properly worked in Ethiopia.

Trademark Directive is issued in the country in 1986 with the following objectives in that it helps

- To centrally deposit trademarks which are used by local and foreign enterprises to distinguish their goods or services.
- To distinguish the products or services of one enterprise from those of other enterprises and prevent consumers from being victims of unfair trade practices.
- To provide information on trademark ownership and right of use when disputes arise between parties;
- To provide required information on trademarks to government and individuals.

Protection is granted after publication of cautionary notice.

Copyright is protected on the basis of the copyright and related rights proclamation issued in 2004. The proclamation gives protection to literary, artistic and scientific works which include:

- books, pamphlets, articles, computer programmers and other writings;
- speeches, lectures, addresses, sermons, and other oral works;
- dramatic, dramatic-musical works, pantomimes, choreographic works, and other works created for stage production;
- musical works, with or without accompanying words;
- audiovisual works and sound recordings

- works of architecture;
- works of drawing, painting, sculpture, engraving, lithography, tapestry, and other works of fine arts;
- photographic and cinematographic works;
- illustrations, maps, plans, sketches, and three dimensional works related to geography, topography, architecture or science;
- derivative works;
- Collection of works, collection of mere data (databases) whether readable by machine or other form.

The Proclamation gives protection to:

- works of authors who are nationals of or have their habitual residence in Ethiopia;
- works first published in Ethiopia; or works first published in another country and published within thirty days in Ethiopia;
- audio-visual works whose producer has his headquarter or habitual residence in Ethiopia; and
- Works of architecture erected in Ethiopia and other artistic works incorporated in a building or other structure located in Ethiopia.

The author of a work shall be entitled to protection, for his work upon creation where it is an original work; and written down, recorded, fixed or otherwise reduced to any material form. Quality of the work and the purpose for which the work may have been created is not taken in to consideration.

The rights of performers, producers of phonograms and broadcasting organizations are also protected by law. Copyright is protected for the life of the author plus fifty years. Fifty years for the rights of performers and producers of sound Recordings and 20 years for the rights of broadcasting organizations

Challenges Facing the IP System in Ethiopia

As per the writing of Wondwossen Belete, Ethiopian Intellectual Property Office (December 2004), the following are some of the major problems related to IP system in Ethiopia.

- Lack of Institutional IP policies and management units

- Weak coordination between IP policies and other relevant government policies.
- Weak institutional capacity and in particular there is a lack of experienced and well- qualified officials for IP administration.

Product Safety and Liability

Countries have their own laws and regulations to protect consumers from potential hazards arising from the Product and practice of business. Failing to comply with these laws may result in severe penalty that could bring the business to an end.

Unsafe products and unethical business practices may bring hundred; millions of dollars of liability' suits from customers, environmentalists and law enforcing bodies. Product liability problems are often complex and continue to be an important consideration for the entrepreneur.

Negligence*:* Negligence, which covers all part of the production and Marketing process, involves being careless in the way a product is presented to a consumer. Using poor labels and false advertising are good examples.

Warranty: A business may be sued if it overstates the benefits or performance of its product.

Strict Liability: A business may also be sued by consumers if it sells defective products.

Misrepresentation*:* A product is said to be misrepresented when a false label, advertisement and/or information about the material facts relating to the product's character or quality is provided by the producer.

TAX

Tax is one of the legal concerns of the entrepreneur as there are many kinds of taxes the entrepreneur will have to withhold and/ or pay to the concerned agency. The major taxes existing in Ethiopia can be classified as direct and indirect taxes. Direct taxes include personal income tax (tax on -income from employment), business profit tax, tax on income from rental of buildings, tax on interest income on deposits, dividend income tax, tax on income from

royalties, tax on income from games of chance (e.g. Lottery), tax on gains from transfer of certain investment property, tax on income from rental of property, tax on technical services rendered outside Ethiopia, agricultural income tax, and land use tax. Indirect taxes include turnover tax, excise tax, value added tax (VAT), and customs duty.

The entrepreneur needs to know which of the taxes apply to her business and to which category of tax payers her business belongs. The_ entrepreneur also has to update herself with the latest tax law amendments the government introduces.

Insurance

Another important thing the entrepreneur needs to consider is buying insurance for the potential risks to which the bustles is exposed. Insurance may also be a legal requirement to conduct certain businesses. The entrepreneur may find it very important to insure the business against fire, burglary or product liability. Life, medical 'and accident insurances may also be required for the employees of the entrepreneurs the entrepreneur has to be careful while identifying the types of insurance needed. The entrepreneur should also identify if any kind of insurance is required by law for the kind of business she wants to run.

Contracts

While doing business, the entrepreneur will be engaged in a number of business negotiations with customers, suppliers, and competitors and other

The Ethiopian Civil Code defines a contract as "... an agreement...whereby " two or more persons ... as between themselves create, vary or extinguish obligations of proprietary nature." A contract is a legally binding, agreement between two or more natural or legal persons that normally gives both rights and duties to the parties involved. For example, in a contract wherein Ms A promises to sell something to Mr. B, Ms A is expected to deliver the promised item to Mr. B and that will give her the right to expect payment from Mr. B.

The entrepreneur has to be knowledgeable about contracts for a number of

reasons. First, not all agreements will amount to legally binding contacts.
Second, even though business deals are often made with a simple handshake, without any written agreement, certain deals cannot be made without a written contract.

Third, as a business person the entrepreneur should be well informed about the legal consequences and remedies in case one of the contracting parties fails to abide by the agreement.

The dishonest or fraudulent" practice amounts to unfair competition so long as it is enough to mislead the general public or deceive an innocent purchaser. In other words such acts that adversely affect an innocent consumer are prohibited under the law. In Ethiopia, the scope of unfair competition is dealt with under Art 132-134 of the Commercial Code.

The entrepreneur has to know what amounts to unfair competition/what is regarded as 'unfair' may differ from country to country.' Some countries are furious about unfair competition and the slightest practice may result in a huge lawsuit and millions of dollars of fine to a business.

Hiring a Lawyer

Now, you may ask, "Does the, entrepreneur have to know all the laws related to her business?" Well, not really. While some idea about crucial aspects of the law such as contracts is obviously advantageous, the entrepreneur can do very well still in the absence of any information -by hiring a lawyer. For interlace, an Ethiopian entrepreneur who would like to start a business in Sudan will need to consult a lawyer familiar with the Sudanese business.

Entrepreneurs are not usually equipped with the legal skills and knowledge when it comes to business. In this regard, three major legal issues in relation to entrepreneurial ventures fall in the following three classes;

1. Issues relating to inception of the venture.
2. Issues relating to the ongoing venture.
3. Issues relating to growth and continuity of the venture.

Issues relating to the inception relate to the formation of the enterprise, form of ownership, start-up proceedings, registration – more specifically to legal entity issues. But similarly we have issues relating to intellectual property laws.

Issues relating to the ongoing venture are usually related to accountability issues, tax issues, disclosure etc.

Growth and continuity is more related to liquidation and bankruptcy issues. More focus for the case is for intellectual properties.