LECTURE NOTES OF

ENTREPRENEURSHIP AND MANAGEMENT & SMART TECHNOLOGY

5TH SEMESTER ETC

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UNIT-1

ENTERPRENEURSHIP

The American Heritage Dictionary defines entrepreneur as a "person who organizes, operates and assumes the risk for a business venture". Oxford English dictionary (in 1897) defined entrepreneur simply as "the directory or manager of a public musical institution one who 'gets up' entertainments especially music performance." Not until its supplement appeared in 1933 did the dictionary recognize that the word had a place in business and would mean one who undertakes an enterprise especially as a contractor, acting as intermediary between capital and labour. In early 16^{th} century, the Frenchmen who organized and led military expeditions were referred to as 'entrepreneurs'. Later in the 17^{th} century, the term was used to other types of adventures, and civil engineering works like construction of roads, building, bridge etc. The word 'entrepreneur' has an interesting history starting from French language to till date which can be understood with the help of following definitions given by eminent entrepreneurs and economists.

NATURE AND IMPORTANCE OF ENTREPRENEUR

Entrepreneurs play a vital role in economic development. Economic development is essentially a process to increase the real per capita income of the country over a period of time. Entrepreneurs serve as catalysts in the process of industrialization and economic growth. He puts to use capital, labour and technology and acts as an economic agent. According to Joseph Schumpeter, the rate of economic progress of a nation depends upon its rate of innovation which in turn depends on rate of increase in the entrepreneurial talent in the population. According to Meir and Baldwin, development does not occur spontaneously as a natural consequence when economic conditions in some sense are right. A catalyst is needed which results in entrepreneurial activity to a considerable extent, the diversity of activities that characterizes rich countries, can be attributed to the supply of entrepreneurs. Thus, entrepreneurs are the key to creation of enterprises. They play a vital role for the economic development of a country in the following ways:

1. Formation of Capital

Entrepreneur's efforts to mobilise the capital result in motivating the investors to divert their idle savings to the industrial securities. Investment of public money in industrial sector helps the country to use such resources for productive purposes. The growth rate of capital formation will be increased which is highly essential for rapid economic development of a country. Robert Rostand has rightly said that entrepreneur is the creator of wealth. It is in the sense that entrepreneurs generate the capital at a rapid rate and capital formation increases which is vital for the industrial development.

2. Balanced Regional Development

Entrepreneurs in the public and private sectors help to remove regional disparities by setting up industries in the backward areas. It is because the government extends various concessions and subsidies to the entrepreneurs who take initiative to set up industries in the undeveloped regions. Thus, the central and state governments offer concessions and subsidies to the entrepreneurs results in balanced regional development.

3. Generates Employment

Entrepreneurs help in generating employment directly and indirectly. Entrepreneur becomes selfemployed and self-sufficient to lead an honorable life. They do not depend on the government jobs or private jobs and directly employ themselves by starting their own enterprise. Indirectly, they also provide jobs to many unemployed by setting up large and small scale industries. Thus, entrepreneurs play important roles to reduce the unemployment problem in the country and pave the way for economic development.

4. Improvement of Per Capita Income

Entrepreneurs have the skills of locating and identifying the opportunities to establish their own enterprises. They possess the capacities to convert the latent and idle resources like land, labour and capital into goods and services. This results in increased national income and wealth of a nation. The increase in national income is the indication of increase in net national product and per capita income of the country. The increasing tendency reflects the economic growth and industrialization that is taking place in the nation.

5. Improvement of Standard of Living

The initiative taken by entrepreneurs to set up industries helps in removing scarcity of essential commodities. New products, varied products and qualitative products would be manufactured to suit the requirements of different segments of market. Large scale production helps to offer goods at a lower costs and purchasing power of the consumers also increases. Further, the small scale industries set up by entrepreneurs help to avoid scarcity of goods and improve the standard of living of the consumers. Thus, the efforts of entrepreneurs to set up large scale and small scale industries, offer goods at affordable prices to consumers and increase variety to their consumption.

6. National Self-Reliance

Entrepreneurs are very much required for national self-reliance. It is because they help to manufacture indigenous substitutes to imported products which reduce the dependence on products manufactured in foreign countries. There is also a possibility of exporting goods and services which leads to earning of foreign exchange for the country. Hence, the import substitution and export promotion ensure economic independence and the country will become self-reliant.

7. **Planning Production**

Entrepreneurs are considered as economic agents since they unite all means of production. All the factors of production i.e., land, labour, capital and enterprise are brought together to get the desired production. This helps to make use of all the factors of production with a proper judgment, perseverance and with knowledge of the world of business. Thus, a true entrepreneur is skillful in organizing and coordinating the various factors of production to achieve optimum profit.

8. **Backward and Forward Linkages**

Always the entrepreneur initiates change and tries to optimize profits through innovations. Setting up of an enterprise in accordance with the changing technology, has several backward and forward linkages. For example, the establishment of textile unit generates several ancillary units and expands demand for cotton, chemicals, dyes, spinning mills etc. These are considered as backward linkages. By increasing the supply of textiles, the textile unit facilitates the growth of Ginning, Spinning, Machine building and other units which is considered as forward linkage. These backward and forward linkages are very much required for the long term sustainability of the enterprise.

9. **Dispersal of Economic Power**

The modern world is dominated by economic power. Economic power is the natural outcome of industrial and business activity. Industrial development may lead to concentration of economic power in few hands which result in growth of monopolies. The increasing number of entrepreneurs helps in dispersal of economic power into the hands of many efficient managers of new enterprises. Hence, setting up of a large number of enterprises helps in weakening the evil effects of monopolies. Thus, the entrepreneurs are the keys to wealth creation.

1.4 CHARACTERISTICS OF AN ENTREPRENEUR

Entrepreneurial qualities are in born. But, some of the qualities can be acquired by training and experience. Robert D. Hisrich identified adequate commitment, motivation and skills to start and build as some of the important qualities of an entrepreneur. An entrepreneur should be one who bears, innovates or initiates and organises the business. He is expected to combine all factors of production in a manner as to maximize output at minimum cost of production. There are various factors that influence the effectiveness of his entrepreneurial functions. Such functions are determined by how effectively he understands the nature of quality control, cost reduction scenario, significance of improved labour relations, profit earning etc. All these are possible if he has entrepreneurial competencies like capacity to assume risk, technological knowledge, alertness to new opportunities, willingness to accept change and ability to initiate, ability to leverage resources and ability of organisation and administration.

Professor David C. Mc Clelland of Harvard University found that entrepreneurs are likely to do well if they have the following traits:

1. **Innovation:** Entrepreneur is more than an inventor because, an inventor only makes invention, whereas, an entrepreneur goes much further by leveraging it commercially. He deals with complexities of business situations. He does not continue with the old ideas. He innovates.
2. **Risk Taking:** Any new business poses risk for entrepreneurs. They may succeed or fail. Nevertheless, they take risks. Successful entrepreneurs tend to launch ventures that fall between these two extremes, a middle ground in which the risk is neither too high nor too low. Moreover and contrary to popular belief, entrepreneurs

generally avoid ventures that are pure gambles. They would rather depend on themselves than on luck.

3. **Self Confidence:** Entrepreneurs believe in themselves. They firmly believe that they can excel in their field. They have the confidence that they can change the existing position.
4. **Smart Work:** Entrepreneurs are smart workers. They use more mind than muscles. Driven by their desire to excel entrepreneurs they put in longer hours of work.
5. **Goal Setting:** Entrepreneurs get happiness by setting and striving for goals. They may not always achieve those goals. What is more important for an entrepreneur is that of setting a meaningful goal. To entrepreneurs, merely choosing a new meaningful goal is self-renewing planning and carrying out the steps needed to reach their goal are stimulating. Reaching one goal set by entrepreneur will lead to the setting up of another goal.
6. **Accountability:** Entrepreneurs take success or failure to their stride. They take onus for success and failure. It is the profit that best tells entrepreneurs how well they are doing in the market. However, profits really serve as one of the major yard-sticks of performance, not as a goal.
7. **Leadership: Bert F. Hoselitz (1952)**, states that "a person who is to become an industrial entrepreneur must have additional personality traits to those resulting from expectations of profit, he must also have some managerial abilities and more important, he must have ability to lead." Leadership represents an abstract quality of a man. According to **Koontz and O'Donnell**, leadership is the ability of a manager to induce subordinates (followers) to work with confidence and zeal. It is the process of directing, guiding and influencing the people to do their best for the attainment of specified goals. The entrepreneur's leadership acts like a motive power to group efforts. It is an aid to authority and helps in better utilisation of manpower.

An effective leadership is able to attain good two-way communication and elicit co-operation from the working force. Hence, the entrepreneur must possess good leadership qualities to become a successful entrepreneur.

8. **Managerial Skills:** According to Hoselitz, managerial skills are the most important facets of entrepreneurship. Financial skills are only of secondary importance. He stated that a person who is to become an industrial entrepreneur must have the drive to earn profits and a mass wealth. Hence, the entrepreneur requires the following managerial skills for achieving the goals of the enterprises;

i) He must be able to formulate a clear and well thoughtout policy.

ii) He should be able to accept improvement whenever necessary and adjust the policies and programmes according to the dictate of the situation.

iii) He must ensure proper balance between the duties, responsibilities, rights and authority of different personnel.

iv) He must be able to place everybody in his assigned job according to his skills, knowledge, aptitude and experience to ensure efficiency and understanding.

v) He must offer proper training, wages and maintain human relations and healthy surroundings to increase the individual skills.

vi) He must make the functioning of his organisation as simple as possible. It means plant used in production, procedures followed in routine jobs and the way in which men and materials are used should be simple.

vii) He must be able to follow the principle of specialisation which increases the productivity. Quality of product improves on account of specialisation.

viii) He must be able to adopt standardisation which helps in marketing the product. Quota and quality production is ensured with the help of standardisation.

ix) He must be able to develop a plan of work which ensures smooth running of an enterprise. Plans decide as to what, when, how and of course, by whom a work is to be accomplished.

x) He must be able to supervise and control the activities of the people working in the Organization xi) He must be able to bring confidence and mutual respect which is possible by cooperation. He must have skills of bringing co-operation among all sections of the enterprise.

Thus, these managerial skills of an entrepreneur will help the enterprise to come out successful in the growing competition.

Various research studies reveal the following Entrepreneurial Characteristics

Capacity to assume risk, technical knowledge and willingness to change, total commitment, drive to achieve and grow, innovation, organising abilities, motivation, taking initiative and personal responsibility, persistent problem solving, seeking and using feedback, integrity and reliability, dynamism, aptitude, will power, creativity, self-confidence, self-control, realism and sense of humour, mental ability, business secrecy, human relations ability, effective communication, public relations, high degree of ambition, flexibility and sociability, ability to marshal resources, and will to prove superior to others.

FUNCTIONS OF AN ENTREPRENEUR

The literature available on functions of an entrepreneur does not give full understanding of functions of an entrepreneur. Classical economists were of the view that entrepreneurs are the owners of the business to which they supplied the capital. They did not distinguish between a capitalist and an entrepreneur. But in modern times, ownership is separated from control. Shareholders who bear risk do not exercise any control. The board of directors of a small group of insiders bears little risk, but receives huge perks and perquisites as remuneration even when no dividend is paid to the shareholders. Thus, the classical theory does not suit in the case of a large public company.

An entrepreneur must recognize commercial viability of the product or services formulating strategies for marketing, production, product development etc. Peter Kilby identified thirteen functions of an entrepreneur which also included some of the managerial functions. They are: (a) Identifying marketing opportunities, (b) Gaining command over scarce resources, (c) Purchasing of input, (d) Marketing of the products and facing the competition, (e) Dealing with public bureaucracy, (f) Customer and supplier relations,(g) Human resources management, (h) Financial management (i) Production management, (j) Factory control, (k) Industrial engineering, (l) Upgrading process and product quality, and (m) Introducing new product techniques.

Arthur H. Cole described an entrepreneur as a decision maker and described the following functions of an entrepreneur; (a) determination of objectives. (b) development of an organization (C) securing of adequate financial resources (d) requisition of efficient technology equipment, (e) development of a market for the products and (f) maintenance of good public relations.

Modern writers have emphasised that an entrepreneur is supposed to perform the following functions;

1. Innovation

The word entrepreneur is associated with innovation. Innovation means doing new things or the doing of things that are already being done in a new way. According to Schumpeter the basic function of an entrepreneur is to innovate. Innovation includes production of new products, creation of new markets, introduction of new method of production, discovery of new and better channels of supply of raw materials and creation of new organisational structure.

Innovation should be different from research and invention. Research gives us knowledge and innovation results in application of knowledge to produce objects. Innovation is not based on research. Innovation can be completely independent of research. More often innovations are not based on research but on ingenious combinations of existing materials and components.

Innovation is also different from invention. Invention implies discovery of new ideas, new articles and new methods, whereas, innovation means the application of inventions and discovery to make new and desired products and services that can be successfully sold in the market. It is also not true that only big firms can carry out innovations. Facts show that small and medium sized firms due to their intensive flexibility are making a very significant contribution to technical development.

2. Risk Bearing

Due to unforeseen contingencies like changes in consumer tastes, techniques of production, government policies and new inventions, there may be losses which are borne by the entrepreneurs. Entrepreneurs in the game of business wherein risks and rewards are a plenty will be ready to accept them. An enterprising person is willing to assume risks involved in inventions, new ventures and expansions. J.B. Say and others stressed risk taking as the specific function of the entrepreneur.

3. Organisation and Management

As rightly said by Alfred Marshall, organisation and management of the enterprise is the main function of an entrepreneur. The entrepreneur has to decide the nature and type of goods and services to be produced. He brings together the various factors of production. Land, labour, capital are separately owned and scattered all over the world. It is the entrepreneur who brings them together and harnesses them productively to yield results. He is a decision maker. In order to minimize the losses, entrepreneur allocates resources more judiciously. He makes required alternation in the size of the business, its location, techniques of production etc. Entrepreneur also undertakes the managerial functions like formulation of production plans, organisation of sales and personnel management.

4. Business Planning

An entrepreneur must provide a logical and scientific basis for planning the business operations, raw materials, people, production schedules, sales, inventory, advertising, budgetary allocation, customer needs, competitors strength and weaknesses etc. For a systematic business planning, the entrepreneur must be able to formulate goals, policies, procedures, programmes and budgets. If this function is properly discharged, the firm will be able to avoid chaos in production, marketing, purchasing, recruiting, selection and in many other activities.

Proper planning facilitates executions of various planned activities and minimizes the cost of production. It guides the business along predetermined channel and highly helpful in performance of other managerial functions. Hence, the entrepreneurs have to give utmost importance to this function as it pervades all other managerial functions.

5. Decision Making

Another important function discharged by entrepreneur is the decision making. He has to take decisions on various activities of the enterprise. He is expected to take a number of decisions on running and maintenance of the business concerned. According to **Arthur H. Cole**, *the entrepreneurs have to discharge many functions for the success of the firm.* But the function of decision making is considered as vital for the success and growth of any business entity. Hence, entrepreneur as a decision maker has to perform the following functions; i) Determining the objective of an enterprise;

ii) Making necessary changes or alterations or modifications in the objectives to suit the changed conditions;

iii) Development of suitable organisation;

iv) Developing good relations with all the employees for improving work efficiency; v) Securing adequate financial resources; vi) Maintaining good relations with existing and potential investors;

vii) Introducing the new technology to cope up with the changed manufacturing techniques; viii) Development of markets for the products *i.e.* Market penetration decision;

ix) Developing the new products or modifying the existing product to suit the changing consumer fashions, tastes and preferences;

x) Undertaking consumer surveys to study the consumer requirements;

xi) Maintaining good relations with public authorities to get the things done easily and smoothly;

xii) Maintaining cordial relations with society at large for improving firm's image;

Thus, the entrepreneur has to play an important role in taking all these decisions. Any delay in taking timely decisions will ruin the prospects of the firm.

TYPES OF ENTREPRENEURS

India has produced a large number of entrepreneurs. Many of them are active in social and cultural causes. Entrepreneurs can be found among various sections of society viz., farmers, arstisans, workers etc. In a study of American Agriculture, Danhof has classified entrepreneurs into four categories, they are *(a)* Innovating entrepreneurs; *(b)* Adoptive or imitative entrepreneurs; *(c)* Fabian entrepreneurs and *(d)* Drone entrepreneurs.

We find a large number of entrepreneurs contributing for the development of a country. A number of factors are responsible for driving a person to become entrepreneur. The entrepreneurs may be classified on various bases such as gender, age, area, scale of operation, skills, stage of development, growth, motives, motivation, technology, type of business and other factors.

SL.NO	BASIC OF CLASSIFICATION	TYPES OF ENTREPRENEURS
1	Gender	1. Men entrepreneurs 2. Women entrepreneurs
2	Age	3. Young entrepreneurs 4. Middle entrepreneurs 5. Old entrepreneurs
3	Area	6. Rural entrepreneurs 7. Urban entrepreneurs 8. National entrepreneurs 9. Inter-national entrepreneurs
4	Scale of operation	10. Micro unit entrepreneurs 11. Small scale entrepreneurs 12. Medium scale entrepreneurs 13. Large scale entrepreneurs
5	Skills	14. Skilled entrepreneurs 15. Unskilled entrepreneurs
6	Stage of development	16. First generation entrepreneurs 17. Modern entrepreneurs 18. Classical entrepreneurs
7	Growth	19. Growth entrepreneurs

		20. Super growth entrepreneurs
8	Motives	21. Managing entrepreneurs 22. Innovative entrepreneurs 23. Controlling entrepreneurs
9	Motivation	24. Pure entrepreneurs 25. Induced entrepreneurs 26. Motivated entrepreneurs 27. Spontaneous entrepreneurs
10	Use of technology	28. Technical entrepreneurs 29. Non-technical entrepreneurs 30. Professional entrepreneurs 31. Non-professional entrepreneurs 32. High-tech entrepreneurs 33. Low-tech entrepreneurs
11	Type of business	34. Business entrepreneurs 35. Trading entrepreneurs 36. Industrial entrepreneurs 37. Corporate entrepreneurs

		38. Agricultural entrepreneurs 39. Retail entrepreneurs 40. Service entrepreneurs
12	Others	41. Imitating entrepreneurs 42. Inherited entrepreneurs 43. Forced entrepreneurs 44. Bureaucratic entrepreneurs 45. Intrapreneurs 46. Immigrant entrepreneurs 47. Fabian entrepreneurs 48. Drone entrepreneurs 49. Individual entrepreneurs 50. Institutional entrepreneurs

1. Gender

On the basis of gender, the entrepreneurs are classified as men and women entrepreneurs.

a. **Men Entrepreneurs:** They are the entrepreneurs belonging to male population who initiate, organize and operate a business enterprise. They combine all the four factors of production i.e. land, labor, capital and enterprise for achieving the specific goal of the organization.

b. **Women Entrepreneurs:** Women entrepreneurs are those entrepreneurs who run an enterprise owned and controlled by female population. They should have minimum financial interest up to 51% of the capital and offer at least 51% of employment to women.

Hence, women entrepreneurs are the lady entrepreneurs who initiate organize and operate a business enterprise with required amount of financial interest.

2. Age

According to the age of the entrepreneurs, they are classified as young, middle aged and old entrepreneurs.

a. **Young Entrepreneurs:** These are the entrepreneurs who initiate, organize and operate a business enterprise and fall in the age group of 18-30 years.

b. **Middle aged Entrepreneurs:** The middle aged entrepreneurs are those entrepreneurs who initiate, organize and operate a business enterprise and fall in the age group of 30-60 years.

c. **Old Entrepreneurs:** These entrepreneurs fall in the age group of 60 years and above and they take initiate, organize and operate a business enterprise.

3. Area

On the basis of area, the entrepreneurs are classified as rural, urban, national and international entrepreneurs.

a. **Rural Entrepreneurs:** These are the entrepreneurs who set up business enterprise in rural areas for utilizing the available resources. They set up the business at village level with the initiation from central and state government's schemes for educated unemployed belonging to rural areas.

b. **Urban Entrepreneurs:** They are the entrepreneurs who set up business at urban areas. They have the target of urban customers and promote their goods and services only for such customers.

c. **National Entrepreneurs:** These entrepreneurs set up their business within the boundaries of a nation. Their operations are confined to country level only and do not cross the boundaries of such nation.

d. **International Entrepreneurs:** These entrepreneurs set up their business at international level. They promote their goods and services in various countries to widen their areas of operation and cover the customers globally.

4. Scale of Operation

According to scale of operation, the entrepreneurs are classified as micro unit entrepreneurs, small scale entrepreneurs, medium scale entrepreneurs and large scale entrepreneurs.

a. **Micro Entrepreneurs**: Micro entrepreneurs are those entrepreneurs who invest capital in plant and machinery (manufacturing of goods) up to Rs 25 lakhs. In case of services sector, the investment in plant and machinery is up to Rs 10 lakhs made by entrepreneurs, and then they are considered as micro unit entrepreneurs. The number of employees must be less than 10.

b. **Small scale Entrepreneurs:** Small scale entrepreneurs are those entrepreneurs who invest capital up to Rs 5crores but more than Rs 25lakhs (In case of manufacturing units). In case of service sector, the capital employed in plant and machinery must be more than Rs 10 lakhs but less than Rs 2 crores. The number of employees employed must be less than 250. If these conditions are fulfilled, they are considered as small scale entrepreneurs.

c. **Medium scale Entrepreneurs:** Medium scale entrepreneurs are those entrepreneurs whose investment in plant and machinery in case of manufacturing unit is more than Rs 5 crores but less than Rs 10 crores. In case of service sector, the capital must be more than Rs 2 crores but less than Rs 5 crores. The number of employees employed must be less than 250 only.

d. **Large scale Entrepreneurs:** Large scale entrepreneurs are those entrepreneurs whose investment in plant and machinery is more than Rs 10 crores in case of manufacturing sector and more than Rs

5crores in case of services sector. The number of employees employed must be more than 250.

5. **Skill**

On the basis of skill, the entrepreneurs are classified as skilled entrepreneurs and unskilled entrepreneurs.

a. **Skilled Entrepreneurs:** Skilled entrepreneurs are those entrepreneurs who acquire skills and knowledge by experience or through Entrepreneurship Development Programs (EDPs). These entrepreneurs possess unique skills such as problem solving skills, persuading skills, negotiating skills, selling, proposing, strategic thinking, networking, convincing skills etc. These are useful to become a successful entrepreneur.

b. **Unskilled Entrepreneurs:** These are the entrepreneurs who do not possess specialized skills such as problem solving, negotiating, selling, persuading, networking etc. They acquire these skills only after gaining experience in the field.

6. **Stage of Development**

On the basis of stage of development, the entrepreneurs are classified as first generation, modern and classical entrepreneurs.

a. **First Generation Entrepreneurs:** These entrepreneurs do not possess any entrepreneurial background. They start an industrial unit by means of their own innovative skills.

b. **Modern Entrepreneurs:** These entrepreneurs undertake the business as per changing needs, tastes and fashions of customers.

c. **Classical Entrepreneur**: He is a stereotyped entrepreneur whose main aim is to maximize his economic returns at a level consistent with the survival of the unit but with or without an element of growth.

7. Growth

On the basis of stage of growth of entrepreneurs, they are classified as growth entrepreneurs and super growth entrepreneurs.

a. **Growth Entrepreneurs:** Growth entrepreneurs are those entrepreneurs who necessarily take up a high growth industry which has substantial growth prospects. The chances for improvement and growth of business are bright for such entrepreneurs.

b. **Super Entrepreneurs:** These entrepreneurs are those entrepreneurs who have shown high growth of performance in their business. The performance is measured in terms of liquidity, solvency and profitability.

8. Motives

On the basis of motives of entrepreneurs to act in a particular way, they are classified as managing entrepreneurs, innovation entrepreneurs and controlling entrepreneurs.

a. **Managing Entrepreneurs**: These are the entrepreneurs whose main motive is security in business. They undertake and manage only such business activities which ensure high security for them.

b. **Innovation Entrepreneurs:** Schumpeter's entrepreneur was of this type. He introduces new products, new methods of production and opens new markets. These entrepreneurs are aggressive in nature. Innovating entrepreneur experiments and converts the attractive possibilities into practice.

c. **Controlling Entrepreneurs:** These are the entrepreneurs who desire to have control and monitor the business activities. They try to fulfill their desire for power.

9. Motivation

On the basis of motivational factors, the entrepreneurs are classified as pure, induced, motivated and spontaneous entrepreneurs.

a. **Pure Entrepreneurs:** Pure entrepreneur is one who undertakes every activity to satisfy his ego. He is motivated to achieve or prove his excellence. He is status conscious and wants recognition.

b. **Induced Entrepreneurs**: These are induced or motivated by financial and other assistance, concessions, and subsidies, training etc by the Government or Non-Government agencies.

c. **Motivated Entrepreneurs:** These entrepreneurs are motivated to become entrepreneurs by their desire to make use of their knowledge and skills. They have confidence in their abilities, possess initiate and boldness. They are highly ambitious and not satisfied with the slow progress in their jobs.

d. **Spontaneous Entrepreneurs:** Spontaneous entrepreneurs are in quite contrast with induced entrepreneurs. They commence their business out of their confidence and talent. They are not induced by other agencies.

10. Use of Technology

On the basis of technology used, the entrepreneurs are classified as technical, non-technical, professional, non-professional, high-tech and low-tech entrepreneurs.

a. **Technical Entrepreneurs:** Technical entrepreneurs are more of a producer rather than a marketer. They develop new/improved goods and services out of their specialization and skills.

b. **Non-Technical Entrepreneurs:** These entrepreneurs are more concerned about developing alternative marketing and channels of distribution. They try to promote their business. NonTechnical entrepreneurs are not concerned with the product development. Their target is not to change the production techniques but to increase the demand for the product by alternate course of actions.

c. **Professional Entrepreneurs:** Professional entrepreneurs make it as a profession in commencing a business. They develop a business and sell it to somebody and start another business only to sell it to others.

They are not interested in managing or operating a business which is established by them.

d. **Non-Professional Entrepreneurs:** These are the entrepreneurs who are interested in managing or operating a business which is established by professional entrepreneurs.

e. **High-Tech Entrepreneurs:** These are the entrepreneurs who have more knowledge and high technical skills and they are capable of formulating a capital intensive project on their own.

f. **Low-Tech Entrepreneurs:** These entrepreneurs have less technical knowledge and they possess less technical skills. They conceive an alternative project of labor intensive and capital requirements are also less when compared to high tech project.

11. Type of Business

According to the type of business, the entrepreneurs are classified as business, trading, industrial, corporate, agricultural, retail and service entrepreneurs.

a. **Business Entrepreneurs:** These entrepreneurs conceive an idea for a new product or service and then create a business (small or big) to materialize their idea into reality.

b. **Trading Entrepreneurs:** These entrepreneurs identify market opportunities and stimulate demand for their products. They do not engage themselves in manufacturing activity. Trading may be national or international.

c. **Industrial Entrepreneurs:** Industrial entrepreneur through research or otherwise estimates customer needs and wants and manufactures the products to cater to their needs. He is essentially a manufacturer.

d. **Corporate Entrepreneurs:** Corporate entrepreneur is one who promotes a corporation. A corporate undertaking is formed and registered under a statute which gives a separate legal entity. A corporate entrepreneur may engage either in business or trade or in industrial activity.

e. **Agricultural Entrepreneurs:** Agricultural entrepreneurs are normally engaged in the activity of raising crops and marketing crops, fertilizers and other inputs of agriculture. They are also engaged in allied agricultural activity.

f. **Retail Entrepreneurs:** Retail entrepreneurs are those entrepreneurs who purchase goods from the producer or wholesaler to sell them to final consumers. They establish their business where consumers are located. These entrepreneurs create place and time utilities for goods and services.

g. **Service Entrepreneurs:** These are the entrepreneurs whose main aim is not to earn profit but to render valuable service to the members of society. They provide services through the establishment of educational institutions, hospitals etc.

12. Other Entrepreneurs

There are many entrepreneurs who do not fall under the categories discussed so far. These entrepreneurs are imitating, inherited, forced, fabian, drone, individual and institutional entrepreneurs.

a. **Imitating Entrepreneurs:** Entrepreneurs of this type are found in underdeveloped countries. This type of entrepreneurs instead of innovating new things they just adopt the successful innovations innovated by others. However, some of the innovations made by others may not suit to the needs of underdeveloped countries. In such cases the imitative innovators may make some changes in the innovations made by the innovative entrepreneur so as to suit their requirements.

b. **Inherited Entrepreneurs:** This type of entrepreneurs are found in India, where a person inherit the business of the family through succession. They are also called as second generation entrepreneurs, since they inherit the family business firms and pass it from one generation to another.

c. **Forced Entrepreneurs:** Circumstances force people to become entrepreneurs. Rich people from agricultural sector, unemployed youth; non-resident Indians may belong to this group. One finds more failure in this category because of not having proper training and understanding.

d. **Fabian Entrepreneurs:** These entrepreneurs neither fall in innovative entrepreneur category nor in adoptive entrepreneur category. These are very cautious people. These entrepreneurs are rigid and fundamental in approach. They follow the foot-steps of their successors. They are shy to introduce new methods and ideas. Fabian entrepreneurs are no risk takers.

e. **Drone Entrepreneurs:** Fabian entrepreneurs are lazy in nature in adopting new methods, but Drone entrepreneurs are more rigid than Fabian entrepreneurs. They resist changes. They are laggards. They may close down their business but they don't accept for changes. Drone entrepreneurs refuse to adopt changes.

f. **Individual Entrepreneurs:** These are found in small scale business firms. When an individual sets up an enterprise, arrange finance, bear the risk and adopt the latest techniques in the business with an intention to earn profits, he is called as an individual entrepreneur.

g. **Institutional Entrepreneurs:** In case of business organizations where complex decisions are required to be taken, group entrepreneurs or institutional entrepreneurs emerge to arrange finance, bear the risk and adopt latest technological changes with an intention to earn profits.

ENTREPRENEUR AND INTRAPRENEUR

Entrepreneur is one, who commences his own business with his innovative ideas. He works for himself and for profits. Intrapreneurs, on the other hand, work for entrepreneurs.

The term entrapreneur was put to use in America in the late seventies. In America some of the business executives left their jobs and started their own small businesses because they were not given chance to test and implement their innovative ideas. Later this group achieved a phenomenal success in their new ventures. In India, one may also find many of such cases; these executive turned entrepreneurs posed threat to the organizations they left.

Normally, ideas about new products and services come to the executives working in the organization. These persons have strong desire of personal achievement. If they are allowed to test and implement their new ideas in the organization, it will enable to organization to grow. There should be a system and organization structure/culture within a large organization that would allow the executives to operate like entrepreneurs. The companies should provide enough opportunities, financial and technical assistance to intrapreneurs necessary for the development and application of their ideas. The executives/managers inside the organisation should be encouraged to act as entrepreneur within the firm.

But, in most of the cases entrepreneurs like to run their own business rather than taking orders from others.

This led to lack of enthusiasm among the executives which results in the closure of such undertakings. Both the ‘entrepreneur’ and ‘intrapreneur’ are innovators and both perform the functions of management. Yet they differ in the following ways:

Distinction between Entrepreneur and Intrapreneur

Entrepreneur	Intrapreneur
Entrepreneur is the owner of the business.	Intrapreneur works for the business.
Entrepreneur is independent.	Intrapreneur is semi independent.

Entrepreneur raises the requisite capital himself.	Intrapreneur does not raise any capital.
Entrepreneur guarantees the money to suppliers.	No such guarantee is required to be given by the Intrapreneurs.
Entrepreneur is one who bears full risks of his business.	Intrapreneur does not bear any risks of business.
Entrepreneur operates from outside an organization.	Intrapreneur operates from within the organization. He is an organization's man.
Entrepreneur converts the ideas of intrepreneur into reality.	Intrapreneur creates new idea.

ENTREPRENEUR VS. PROFESSIONAL MANAGER

More often the terms entrepreneur and professional managers are used as synonyms. In the strict sense of the words, they are different. Entrepreneurs are persons who initiate, organise, manage and control the affairs of a business unit that combines the factors of production to supply goods and services.

According to Sachar Committee on Company Law, a professional manager is an individual who (a) belongs to the profession of law, accountancy, medicine, engineering or architecture or *(b)* is a member of a recognised professional body or (c) is a holder of degree or diploma in management from any recognised university and possesses not less than five years of experience in an executive capacity in a company, corporation or in the government, or possesses minimum of ten years experience in the same capacity and in the same institutions mentioned in the third category. A professional manager is one who specializes in the fields of planning, organising, directing, leading and controlling the efforts of others by the systematic knowledge.

Both the professional managers and entrepreneurs have similarities in their approach. They are equally responsible for results, they work with people, they follow sound principles like delegation of authority, responsibility, planning etc., and they also take strategic decisions. However, an entrepreneur is different from a manager in the following cases:

1. **Ownership:** Entrepreneur is the owner of the business and self-employed whereas professional manager is a paid employee and not independent.
2. **Innovation:** Entrepreneur works to change in accordance with his personal vision. Entrepreneur innovates the things, changes the factors of production and thereby increases productivity and profit, whereas, professional manager deals with day-to-day affairs of a going concern. He keeps running a business on established lines.
3. **Business:** While an entrepreneur launches a new business, a manager operates an existing business.
4. **Risk bearing:** Entrepreneur is a careful person. He takes a calculated risk and faces uncertainty whereas a manager does not share business risks. Manager is less tolerant of uncertainty of new venture.
5. **Profit:** Entrepreneurs work for profits, often they are uncertain and even negative. But a manager on the contrary gets a fixed salary and can never be negative.
6. **Qualifications:** Entrepreneur does not require any formal qualifications from any university or institution. He needs intuition, innovation, creative thinking etc., whereas a manager needs to have basic academic qualifications.

INTRODUCTION TO ENTREPRENEURSHIP

Entrepreneurship plays a vital role in the growth of our economy. Besides being the vehicle of industrial development, entrepreneurship can solve acute problems like unemployment, concentration of economic power in the hands of a very few, imbalanced regional development, increasing wastage of youth power in destructive activities etc. Recently, economists have shifted the emphasis from the growth of capital to the growth of high level man power such as entrepreneurship as a major determinant of the rate of economic growth of a country. Entrepreneurship is the ability to identify an investment opportunity and to organise an enterprise in order to contribute for the real economic growth. Entrepreneurship combines many qualities such as innovation, risk taking, combining factors of production etc. Entrepreneurship lies more in the ability to minimize the use of factors of production and to exploit them to maximum advantage. Entrepreneurship largely depends on personal qualities like accepting the challenge and bearing the risk. This is the reason as to why entrepreneurship is a complex subject. Entrepreneurship is the function of handling economic activity, undertaking risk, creating something new and organising and co-ordinating resources.

DEFINITIONS OF ENTREPRENEURSHIP

Like other concepts, the concept of entrepreneurship has long been debated. It has been used in various ways and various senses.

i) According to **A.H. Cole,** entrepreneurship is the purposeful activity of an individual or a group of associated individuals, undertaken to initiate, maintain to earn profit by production or distribution of economic goods and services.

ii) For **Peter F. Drucker,** entrepreneurship is neither a science nor an art. It is a practice. It has a knowledge base. Knowledge in entrepreneurship means to an end. Indeed, what constitutes knowledge in practice is largely defined by the ends; that are by practice. Entrepreneur is a potential and enterprising individual, endowed with special ability to innovate or imitate and for decision making, interested in advancing technology and willingness to assume risk involved in it. Entrepreneurship is meant for creating something new, organising and coordinating and undertaking risk and handling economic uncertainty.

iii) According to **B. Higgins** "Entrepreneurship meant the function of seeking investment and production opportunity, organising an enterprise to undertake a new production process, raising capital, hiring labour, arranging the supply of raw materials, finding site, introducing new techniques and commodities, discovering new sources of raw materials, selecting top managers of day-to-day operations of the enterprise."

iv) **Johnken and Howard Stevenson** defined entrepreneurship as "an attempt to create value through recognition of business opportunity, the management of risk taking appropriate to see the opportunity and through the communicative and management skills to mobilise human, financial and material resources necessary to bring a project to fruition."

Entrepreneurship is the de facto barometer of overall economic, social and industrial growth. It facilitates large scale production and distribution and increases the scope of marketing of goods and services.

DISTINCTION BETWEEN ENTREPRENEUR AND ENTREPRENEURSHIP

Most often the terms entrepreneur and entrepreneurship are used interchangeably, yet they are conceptually different. The following table may help us to understand the distinction between entrepreneur and entrepreneurship;

Distinction between Entrepreneur and Entrepreneurship

Entrepreneur	Entrepreneurship
1. He is a person	1. It is a plan of action.
2. He is an administrator.	2. It is an administration.
3. He is a risk bearer.	3. It is a risk bearing activity.

4. He is an innovator.	4. It is a process of innovation.
5.He combines factors of production.	5. It is the process of use of factors of production.
6. He is an initiator.	6. It is taking an initiative.
7. He is a leader	7. It is nothing but leadership.

INCORPORATION OF BUSINESS

Most entrepreneurs regard incorporation as a complex process that requires a lawyer's assistance. While it is advisable for the small business to enlist the services of a lawyer to assist in incorporating the business, some entrepreneurs with relatively uncomplicated businesses have incorporated their businesses successfully on their own. Incorporating a business has four steps:

1. Selection of a name for the business. This name must be submitted to and approved by the provincial government department that handles incorporations. The selection is facilitated by having a computer search done to ensure that no similar names are currently being used.
2. Development of the share structure, directors, and restrictions on share transfers, etc. The owner must determine the number of shares to authorize, the number of shares to issue, the number of directors, the timing of meetings and approvals required for shares to be bought or sold.
3. A description of company operations. This section describes what the business can and cannot do.
4. Acquiring the necessary supplies. This includes such items as the corporate stamp, the minute book, and the necessary journals and ledgers.

Advantages

- The continuity of the business exists even if owner dies

- The owners have limited liability
- May have a manager with professional training of expertise.
- Easier to raise finds as lending and equity investors usually look more favourably to incorporate companies
- The corporate tax rate on small business can be lower than one's personal rate. • Incorporation can assist in establishing commercial credibility
- Liability insurance may be less expensive.

Disadvantages

- There is greater reporting requirement to government.
- Flexibility may be reduced because of the binding procision of the corporate charter.
- Losses cannot be deducted from other personal income of the owner.
- Lenders often require a personal guarantee

FORMS OF BUSINESS ORGANISATION

Presently, we find a number of different commercial and industrial enterprises which are owned and managed in different forms. The development of trade, industry and commerce paved the way for developing the different types of business organisations. A number of forms of organizations exists to suit the requirements of different kinds of business. Broadly, there are three types of business organisations. They are:

i) Private Undertakings ii) Public Undertakings iii) Joint Sector Undertakings. The details of these undertakings are shown in the following chart:

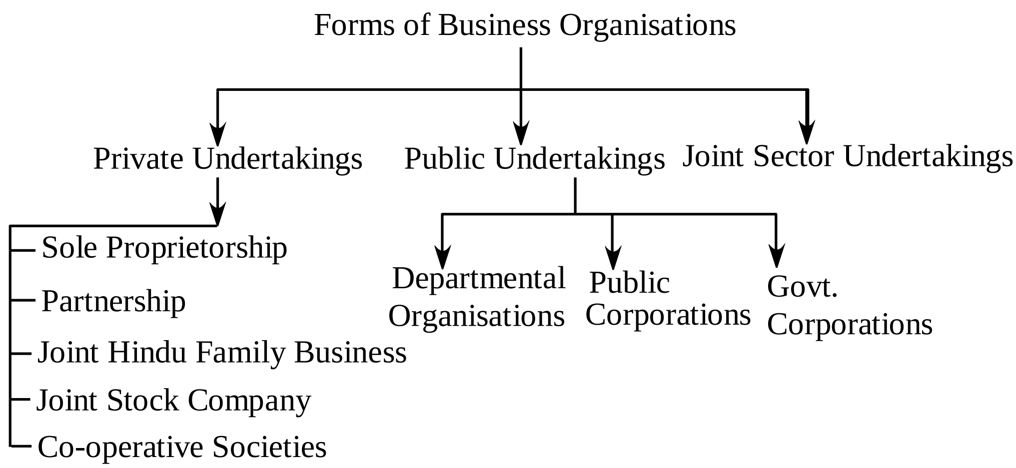


Chart 1.1: Forms of Organisations

A brief explanation of these undertakings is given in the following paragraphs:

Private Sector Undertakings

Private sector is usually comprises of organisations that are privately owned and not part of the government. This sector consists of business activity that is owned and run by private individuals. These businesses may be small firms owned by just one person or large multinational businesses that operate around the world (globally). In case of large businesses, there might be many thousands of owners involved. The goal of the businesses in the private sector is to make a profit. The business organisations may be owned and managed by an individual or group of individuals establishing a partnership firm or a Joint stock company. In India, the principal types of business organisation are as follows:

i) Sole Proprietorship

ii) Partnership

iii) Joint Hindu Family Firm iv) Cooperative organisation v) Joint Stock Company

The meaning of these types of business organisation is given in the following paragraphs:

i) **Sole Proprietorship:** Sole Proprietorship is that form of business ownership which is owned and controlled by a single individual, who receives all the profits and risks all of his property in the success or failure of the enterprise. Thus, a sole proprietor is an individual who establishes and carries a business or trade exclusively by and for himself.

Feature of the sole proprietorship

The main characteristics of sole-proprietorship are as follows:

1. **Single Ownership:** Sole-proprietorship form of organization is owned by an individual.
2. **Individual Management and control:** Such organization is managed and controlled by the sole proprietor. Competent people can be employed for the efficient management of such enterprises.
3. **Individual Accountability**: Sole-proprietor is the sole beneficiary of the profits. He has to bear the losses, if any. In this sense, the sole Proprietor and employed person are accountable to the sole proprietor.
4. **Unlimited liability:** The liability of sole- proprietor is unlimited. In other words if the business assets are not sufficient to meet the business liabilities, this private assets (after meeting private liabilities) are to used to discharge the business liabilities.

Advantages

- This can be started in small way lesser capital
- Organisation will be small and simple. Can be enlarged later on based on progress
- Decision making is centralized, fast and effective.
- Since owner gets all the profits, there will be lot of sincere and hand work put in.

- It is possible to keep costs, pricing, profit margins secret and price can be varied any time in competitive market.
- There will be least paper work, formalities and legal matters.
- This is ideally suited for small workshops, repair centres, provision stores, canteens, wholesalers, traders and various types of services.

Disadvantages

- If there is loss in business, the owner is likely to shift to some other activity which causes inconvernience to customers.
- Quite a few sole traders did not maintain proper account and this style of functioning does not help to get blank loans.
- The businessmen will face unlimited liability for debts and losses
- The employees job and job satisfaction entirely depends upon knowledge and attitude of the owner.
- Present and future of the organization entirely depends upon health and longevity of the owner. Hence business is relatively uncertain in the long run.

ii) **Partnership:** In sole proprietorship business, financial resources and managerial skills are limited. This has resulted in the need for partnership form of organisation. Further, the increasing demand for the products and reduced risk bearing capacity of the sole proprietor has resulted in the establishment of partnership firm.

Partnership is the relationship between two or more persons who have agreed to share profits of a business carried in by all or any of them acting for all.

Partnership deed is a document containing all the matters according to which mutual rights, duties and liabilities of the partners in the conduct and management of the affairs of the firm are determined. The deed must be signed by all the partners and duly stamped.

Advantages

- Pooling of funds will be easier
- Variety of talents and skills will be readily available.
- Formation of company is easy and there is legal binding to share profit/ losses.
- Income tax burden will be distributed on partners.
- This type better suited for polyclinics, engineering units, legal and firms and trading firms.

Disadvantages

- Management of firm is difficult if more than one person handles a division or responsibility.
- The difference of opinion and mistrust is likely to hamper work and progress of the firm.
- If the main partner is sick, injured or disinterested, it affects the organisation's functioning.
- Partners will be very keen and interested if business is doing well. They will keep away once business is down and losses increase. **Types of Partners**

1. **Active Partner:** An active partner is also called as working partner. The partner who participates actively in the day - to - day - operations of the business is called active partner. These partners may take active part in the business by performing different roles such as manager, organiser, adviser, and controller of business activities.
2. **Sleeping Partner:** Sleeping partner is also known as dormant partner. A sleeping partner contributes capital and shares profits and losses but do not participate in the day - to - day operations of the business. He is not knows to the public as a partner, but liable for all debts and obligations of the firm.
3. **Secret Partner:** A secret partner is he whose membership is kept secret. His liability is unlimited. He can take part in the working of

the business. Thus, the position of a secret partner lies between active and sleeping partner.

4. **Nominal Partner :** The partner who allows the firm to use his/her name as a partner but do not contribute capital nor share the profits of the firm is known as nominal partner. A nominal partner does not take part in the management of the business. The firm may get credit in the market due to the name and fame of such persons. This may help the firm in promoting the sales. However, a nominal partner is liable to third parties like any other partner.
5. **Partner in Profits:** A Person Who shares the profits of the business without being liable for the losses is known as 'partner in profits'. A partner may enter into special contract with other partners to become a 'partner in profiles'. He contributes capital and liable for third parties like any other partner. He is not allowed to take part in the management of the firm. Normally, partner in profits is allowed into the firm for their goodwill and capital contribution. However, this is applicable only to the minors who are admitted to the benefits of the firm and their liability is limited to their capital contribution.
6. **Sub-Partner:** A sub partner is one who enters into an agreement with the partner of the firm to share his profits. He cannot exercise any claim against other partners, or the firm. In the eye of law, he is not a partner of the firm. He is not liable for the debts of the firm. The contractual relationship is between the sub-partner and the partner but it is not between the sub - partner and the firm.
7. **Limited Partners:** Limited partners are those partners whose liability is limited to the extent of their capital contribution. These partners are found in Limited Partnership firms in some European countries and USA. So far, limited partnership concept is not prevalent in India.

However, the limited partnership Act is very much under consideration of the parliament.

8. **General Partners:** The partners having unlimited liability are called general partners or partners with unlimited liability. Every partner who is not a limited partner can be treated as a general partner.
9. **Minor Partner:** A minor is a person who has not yet attained the age of 18 years. According to Indian Contract Act and Indian Partnership Act, a minor cannot enter into a contract. But section 30 of the Indian Partnership Act reveals that a minor can be admitted to the benefits of a firm with the consent of all the partners. **iii) Joint Hindu Family Form of Business Organisation:** A unique form of business organisation that prevails only in India among the Hindus is known as Joint Hindu Family business. This kind of business organisation is run by Hindu Undivided Family. In this form of business, the family members of three successive generations own the business jointly. The head of the family known as

'Karta' manages the business. The other members are called co-partners and all of them have equal ownership right over the properties of the business. The membership of the JHF is acquired by virtue of birth in the same family.

Features of Joint Hindu Family Business

1. **Creation:** It arises by status or operation of Hindu Law.
2. **Membership:** A male member becomes a member merely by his birth. The membership is restricted to three successive generations
3. **Management:** The Joint Hindu family business is managed by the senior most member of the family called Karta. The other members may assist him in the management of business.
4. **Liability:** The liability of the Karta is unlimited whereas the liability of other members limited to the extent of their share in the property of the family business. Karta is personally

liable of business assets are not sufficient to discharge business liabilities.

5. **Right to accounts:** The member other then Karta do not have right to inspect and copy the account books and ask for the account of past dealings.
6. **Dissolution of Business:** The Hindu Undivided Family continues to operate even after the death of coparcener. Joint Hindu Family business comes to an end when the members so decide by mutual agreement

iv) Cooperative Organisation: In order to protect the interest of weaker sections of society, the concept of co - operation gained popularity. According to ILO, Co-operative organisation is an association of persons, usually of limited means, who have voluntarily joined together to achieve a common economic goal through the formation of a democratically controlled organisation, making equitable contributions to the capital required and accepting a fair share of risks and benefits of the undertaking.

Thus, a co-operative organisation is a voluntary association with open membership formed for rendering service and ensures social justice.

Advantages

- It is a kind of participative and democratic ownership.
- Common man is benefited by way of getting essential commodities at reasonable prices.
- Hoarding, black marketing is a avoided.
- Since materials are procured in wholesale and from manufactures the cost advantages can be shared by members.
- The office bearers are generally made to work on honorary basis and hence overhead costs are less.
- Individual domination is avoided as office bearers are elected by voting

Disadvantages

- Thought office bearers are elected, there could be possibility of non involvement and hence inefficiency.
- Some members in high position may dictate the office bearers
- Routine check and verification on quality and quantity is difficult due to some other occupation of office bearers.

v) **Joint Stock Company:** Owing to inadequacy of funds and unlimited liability, sole trading concern and partnership firm have failed to sustain and keep pace with the growth of industry and commerce. This has necessitated the need for establishment of a new form of business organisation, i.e., the joint stock company.

A company is a person, though artificial, i.e, unlike human beings, it exists only in contemplation of law and has no physical existence. It has an independent legal entity, a common seal and perpetual succession. It is an association of many persons who contribute money or money's worth to a common stock and employs it in some trade or business, and share the profit and loss.

Advantages

- A company can collect large sum of money from large number of shareholders. There is no limit on the number of shareholders in a public company.
- Due to its separate legal existence, it has perpetual existence.
- Large scale production of modern days is the result of company form of organization.
- The shares in a company are transferable and members can transfer their shares without the consent of other members of the company.

Disadvantages

- To act as a legal entity a company has to fulfill various legal and procedural formalities making it a complicated process.

- Company needs to pay tax for the earned profits and again the shareholders are taxed for the earned income.
- All the legal and procedural formalities which are required to fulfill before making policies of the company delay the policy decisions.

1.13.2 Public Undertakings

Business organizations owned and operated by public authorities are known as public or state undertakings. In these organisations, whole or most of the investment is made by the government. The objectives of these organisations are to provide goods and services to the people at reasonable prices though profit earning is not entirely ruled out. These undertakings have the following forms of organisation.

i) Departmental organisation ii) Public Corporations iii) Government Companies.

i) **Departmental Organisation:** This is the oldest forms of organisation for managing state enterprises. In this form,the enterprise works as a part of government and management is in the hands of civil servants who work under the control and direction of minister who is accountable to parliament. This form of organisation is suitable for public utility services and strategic industries. In India, railways, post & telegraphs , radio and television are the examples for this form of business organization.

ii) **Public Corporations:** These corporations are created by a special statute of a State or Central Government. A legislative act is passed by defining the sphere of worth and mode of management. It is a special legal entity created for a specific purpose. In india, the Reserve Bank of India, IFC are some of the corporations created by special act of parliament.

iii) **Government Companies:** A company owned by State Government or Central Government is called a Government company. In these companies whole of the capital or majority of the shares are owned by the government. Government companies are registered as public limited and private limited companies. However, the management of both of these companies remains with the government.

Difference between Private and Public Sector

The difference between private and public sector is that the public sector is usually composed of organizations that are owned and operated by the government, while private sector is usually composed of organizations that are privately owned and not part of the government .The public sector is not totally profit-driven, while this is the case with the private sector.

More specifically, the following are the differences between private and public sector undertakings

1.**Ownership**	A private sector undertaking is fully owned by the private entrepreneurs. It may be owned by one individual or by a group of individuals jointly. When owned by one person, it is called sole proprietorship. A group of persons may jointly own the firm in the form of Joint Hindu family business, partnership, Joint stock	In case of a public sector undertaking the ownership is vested with the state. It could be in the nature of Central, State or local government ownership or any instrumentality of the state too can have the ownership of a public undertaking.

	company or cooperative society.	
2.Control	These undertakings are fully controlled by private entrepreneurs. There is no participation of the central or State Governments either in the ownership or control of a private sector undertaking.	Public Sector undertakings are controlled by the Government both in its management and functioning. The government has the direct responsibility to manage the affairs of the enterprise through various devices and exercises control through a number of agencies.
3.Motive	The main motive of private sector undertakings is earning profits. Profits provide the reward for the risk assumed and the required return on capital.	Though profit making is not the sole motive of public sector undertakings, this objective need not be set aside totally.

4.Finances	The capital of a private sector undertaking is arranged by its owners. The sole trader contributes the capital of a sole proprietorship. In case of partnership, capital is invested by the partners. A joint stock company raises capital by the issue of shares and debentures. A private sector undertaking can also raise loans to meet its long-term and short-term needs of funds.	Public Sector undertakings are funded through public money.
5.Accountability	Private sector undertakings are not accountable to people. However, in case of partnership and joint stock company form of undertakings, they are accountable to partners and shareholders at large.	Public Sector undertakings owe accountability to people as they are funded through public money. This accountability is realized through legislature and its committees, ministers, audit institutions and other specialized agencies.

6.Management	A private sector undertaking is managed by its owners. In case of sole proprietorship and partnership, the owners directly manage the firm. The management of a joint stock company lies in the hands of directors who are the elected representatives of the shareholders.	Public Sector undertakings function with utmost autonomy under given situations. They are free from day-today interference in their affairs and management. They are managed by professional managers.
7.Coverge	Since profit making is the sole motive of these undertakings, the owners do not prefer to undertake the businesses that are highly risky and less profitable.	The public sector undertaking traverses all areas and activities. There is hardly any field of activity, which is not covered by the operations of public enterprises.

Joint Sector Undertakings

Joint Sector consists of business undertakings where in the ownership control and management are shared jointly by the Government, the private entrepreneurs and the public at large. According to the guidelines laid down by the Government of India, the share capital of a joint sector undertaking (without foreign participation) is to be divided as follows: government 26%, private business men 25% and the public 49%.No single individual or organization can hold more than 25% of the paid-up capital of a joint sector enterprise without the permission of the Central

Government. In case of foreign participation, the respective shares will be: Government 25%, Indian entrepreneur 20%, foreign investor 20% and the investing public 35%.In our country, Maruti Udyog, Cochin Refineries and Gujarat State Fertilizers are examples of joint sector undertakings.

The main characteristics of joint sector undertakings are as follows:

i. **Mixed Ownership:** The government, Private entrepreneurs and the investing public jointly own a joint sector undertaking.
ii. **Combined Management:** The management and control of a joint sector undertaking lies with the nominees or representatives of the Government, Private business men and the public.
iii. **Share Capital:** The shares of the Government, Private businessmen and the public in the capital are 26%, 25% and 49% respectively. The aim is to pool the financial resources and technical know-how of the State and the private individuals.

Thus, joint sector is a form of partnership between the private sector and the government. Management of these undertakings will be in the hands of private sector. The overall supervision will be with the Board of Directors with adequate representation to government representatives. Joint sector undertakings use development technology and resources of both government and private sector.

Characteristics of an Ideal form of Organization

Business organizations differ in ownership, control, size and in many other aspects. Each form of business organization has its own merits and limitations. As such, quite often, a businessman is confronted with the problem of selecting a suitable form of ownership for his business. The decision pertaining to the choice of a form of business assumes importance as the decision once taken cannot be reversed easily. Further, such a decision will have long run impact on the conduct of business operations. As such, the form of ownership should be selected carefully after due consideration and thought.

An ideal form of business organization possesses the following characteristics:

i. **Ease of Formation:** A business organization should facilitate its easy formation without lengthy procedures, hurdles and legal formalities. The formation should be less expensive. It should be easy to select proper business partners and associates. From this point of view, sole trader and partnership form of business organizations are preferable to company form of organizations.

ii. **Adequacy of capital:** In order to run the business effectively and efficiently, the firm should able to mobilize sufficient amount of capital and other resources. In order to attract investments, the type of business organizations should assure the investors safety for their investment and fair rate of return on their investment.

iii. **Limited Liability:** Depending on the form of business organization, the liability of the owners may be limited or unlimited. Since, business involves risks and uncertainties, The owners of the business prefer limited liability.. An ideal form of business organization is one which keeps the liability of the owners in proportion to the prospects of profits.

iv. **Transferability of Interest:** The degree of risk and liability can be reduced if the investment is transferable easily. An ideal form of business organization enables the owner to transfer his interest without obtaining the consent of other owners.

v. **Efficient Management:** An ideal form of organization is one which enables maximum possible efficiency in management and control of the firm. It permits division of labour and specialization. The effectiveness of management depends on three factors, namely, (a) motivation, (b) skill, and (c) flexibility. Motivation for effective management is highest where ownership and management go hand in hand.

vi. **Stability or Continuity:** An ideal form of organization enjoys uninterrupted existence over a long period of time. Stable firm alone can provide continuous employment to its workers and fair returns to owners. Society is also interested in the continuity of business as such ideal organizations alone can provide the consumers with quality goods and services at reasonable prices. From the point of view of Stability or Continuity Company form of organization is considered to be an ideal form of organization.

vii. **Flexibility of Operation:** Flexibility and adaptability to changes is yet another distinguishing feature of an idle form of organization. Changes may take place in market conditions, production methods, consumer preferences and in the conditions of supply of factors of production. There may be changes in government policies towards the industry. Depending on the circumstances, the policies of management should also be changed to enable the scope for expansion and grown of the firm. In view of this, the organization should permit to incorporate the changes in the environment. From this point of view, sole trader form of business organization is an ideal form of business. **viii. Retention of Business Secrets:** Usually, the form of organization which enables the retention of business secrets is preferred to the one wherein business secrets are difficult to preserve. From this point of view, the sole proprietorship is considered to be an ideal organization.

ix. **Management Needs:** Managerial and administrative requirements also influence the decision regarding the choice of a particular form of business organization. When the business caters to the requirement of local people, a single person known as sole trader can manage the affairs of the business. If the business caters to more number of areas, then more persons may be required to look after the business activities. Then partnership form of business organization may be more suitable. On the other hand when the business is run on a large scale, it requires specialized professional managers. Under these circumstances, company form of business organizations is desirable.

x. **Government Regulations:** The choice of a particular form of business organization may also depend on the rules and regulations governing that form of organization. Usually, sole trader and partnership form of organizations are free from the Government rules and regulations. On the other hand, company form of organizations and cooperatives are governed by several government controls and regulations. As such, if the persons desire to enjoy freedom from the rules and regulations of government, they have to prefer sole trader or partnership form of business organizations.

xi. **Impact of Taxation D**ifferent forms of business organizations are levied taxes in a different manner. Though taxes like excise duties, sales tax, and property tax are charged similarly for all types of businesses, Income-Tax rates are different for sole trader, partnership and companies. Companies have higher tax liability when compared to sole trader and partnerships. As such, the choice of a particular form of business organization is influenced by the impact of taxation. In practice, all the above mentioned features are seldom found in any form of organization. As such, no single form of organization fulfills all these conditions. Therefore, the best of form of ownership is one that enables the achievement of the business objectives in the most efficient manner.

ROLE OF ENTREPRENEURS IN ECONOMIC DEVELOPMENT OF COUNTRY

Entrepreneurship development is a prerequisite for an overall economic development in any country. Entrepreneurial development is a process in which persons are prepared to face business uncertainties and risks. Growth of an enterprise depends upon entrepreneurial development.

1. Employment opportunities
2. Balanced Regional Development
3. Mobilization of Local Resources
4. Optimization of Capital
5. Promotion of Exports
6. Consumer Demands
7. Social Advantage
8. Increase per capita income
9. Capital formation
10. Growth of capital market
11. Growth of infrastructure
12. Development of Trader
13. Economic Integration

1. Employment Opportunities

New businesses need to hire employees. Entrepreneurs employ labour for managing their business activities and provide employment opportunities to a large number of people. They remove unemployment problem. They create jobs and these economic opportunities uplift and support communities through increasing the quality of life and overall standard of living.

2. Balanced Regional Development

Entrepreneurs help to remove regional disparities through setting up of industries in less developed and backward areas. The growth of industries and business in these areas lead to a large number of public benefits like road transport, health, education, entertainment, etc. Setting up of more number of industries leads to development of backward regions and thereby promotes balanced regional development. When the new entrepreneurs grow at a faster rate, in view of increasing competition in and around cities, they are forced to set up their enterprises in the smaller towns away from big cities. This helps in the development of backward regions. 3. **Mobilization of Local Resources**

Entrepreneurs help to mobilize and utilize local resources like small savings and talents of relatives and friends, which might otherwise remain idle and unutilized. Thus they help in effective utilization of resources.

4. Optimization of Capital

Entrepreneurs aim to get quick return on investment. They act as a stabilizing force by providing high output capital ratio as well as high employment capital ratio.

5. **Promotion of Exports**

Entrepreneurs reduce the pressure on the country's balance of payments by exporting their goods they earn valuable foreign exchange through exports.

6. **Consumer Demands**

Entrepreneurs produce a wide range of products required by consumers. They meet the demand of the consumers without creating a shortage for goods.

7. **Social Advantage**

Entrepreneurs help in the development of the society by providing employment to people and paves for independent living They encourage democracy and self-governance. They are adept in distributing national income in more efficient and equitable manner among the various participants of the society.

8. **Increase per Capita Income**

Entrepreneurs help to increase the per capita income of the country in various ways and facilitate development of backward areas and weaker sections of the society.

9. Capital Formation

Entrepreneurs promote capital formation by mobilising the idle savings of public. They employ their own as well as borrowed resources for setting up their enterprises. Such type of entrepreneurial activities leads to value addition and creation of wealth, which is very essential for the industrial and economic development of the country 10. **Growth of Capital Market**

Entrepreneurs raise money for running their business through shares and debentures. Trading of shares and debentures by the public with the help of financial services sector leads to capital market growth.

11. Growth of Infrastructure

Entrepreneurs play a major role in the growth of infrastructural facilities such as roads, bridges, buildings, factories, etc., which are the cornerstones of economic growth. Establishment of factories and industries in a particular locality pre-supposes the growth of infrastructural facilities.

12**. Development of Trader**

Entrepreneurs play an important role in the promotion of domestic trade and foreign trade. They avail assistance from various financial institutions in the form of cash credit, trade credit, overdraft, short term loans, secured loans and unsecured loans and lead to the development of the trade in the country. **13. Economic Integration**

The modern world is dominated by economic power. Economic power is the natural outcome of industrial and business activity. Industrial development normally can lead to concentration of economic power in few hands. This concentration tiff power in few hands has its own evils in the form of monopolies. The increasing number of entrepreneurs helps in dispersal of economic power into the hands of many efficient managers of new enterprises. Hence, setting up of a large number of enterprises for the goods creates competitiveness and weakens business monopoly.

1.15 Start-Ups

Starting up of a new venture is not a small game to pay. It involves a strong need, and motivation seasoned with new ideas and to achieve something great. In the pursuit of setting up a new enterprise, an enterprise is expected to:

- Seek Opportunities
- Constantly scan environment
- Plan strategically
- Generate Ideas
- Create and sustain teams
- Arrange for source

Venture Capital

A venture can be an attempt experiment endeavor or a proposal developed with an aim to achieve certain predetermined goals and objectives as dreamt of by an entrepreneur. To establish an enterprise or create a venture an entrepreneur or the imitator has to follow the sequence of activities as given bellow.

- Conceptualization or developing a concept based on a sensed opportunity
- Initial strategic planning

A venture can take the form of either of the following

- Setting up a new division
- Integrating the new product in the existing operation structured
- Spinning of the new project into a subsidiary

A venture can be established by following "Spontaneous Team" or carrying out well structured formal process approach. Consigning on a will structured.

The Spontaneous Team

Pinchot identified four stages of spontaneous team development. These are illustrated in figures and described as follows.

1. **Solo Phase Stage**

In which a single innovator cautiously nature an idea to the point where he or she has sufficient confidence in the project to confide in one or two close associates, During the solo phase, innovators are likely to be reclusive, sipping into laboratories after hours, working at home on weekends, a and very quietly fleshing out their ideas. **2. Network Phase Stage**

The second stage evolves in innovators reach out for advice and support friends, experts, or sponsors who can find resources to back ideas, this is called "Network Phase" and it is process of gaining allies and sponsors.

3. **Bootleg Phase Stage**

When an informal team beings to take shape. The innovator is no longer insolated in the endeavor, and team members actually do work of a substantial nature such as helping to develop a prototype, gathering market information, lining up production resources and gathering essential information needed to write a proposal. The proposal is the business plan "in corporate terminology and it is and almost exactly the same documentation that an independent entrepreneur uses to attract investors. In this, the proposal is taken to corporate management of secure support and formal reorganization of the project.

4. **Formal Team Phase Stage**

When corporate support is given, the final stage is launched. This is the "Formal Team Phase" where team members are given authority to manage the project, budgets are allocated, and resources are lined up for a well defined commercial development process.

Four stage model of spontaneous team

Solo Phase	Individual consciences and innovative idea and works it to develop self confidence in the idea

Network Phase	Innovator looks towards sponsors, and experts for developing the idea.
Boot Leg Phase	The team work informally to develop the project to seek formal organizational approval.
Formal Team Phase	Formal approval is granted of the team is officially allowed to pursue the new venture.

Features of Venture Capital

1. It assumes a high degree of risk
2. It finances high-technology project.
3. The gestation period is usually high.
4. It is basically long-term investment.
5. It has previsions to have conditional financial assistance.

Merits of Venture Capital

- It helps in accelerating the pace of industrialization in the country.
- It helps in developing new technologies and new methods of production.
- It helps the first generation entrepreneurs in both small and medium scale to translate their ideas into reality
- It generates employment opportunities.
- It promises entrepreneurship in the country.

Source of Venture Capital

For starting a high-risk and high-return project, venture capital is instrumental and thus, entrepreneurs search for the sources from which venture capital can be obtained. Due to liberalization and privatization in the economy a number of companies have established venture capital divisions to assist the entrepreneurs. The important funds and the schemes by which the venture capitalists in our country provide financial assistance can be depicted as follows:

Programme for Advancement of Commercial Technology (PACT)

The first venture capital funding in India was US AID's Programme for Advancement of Commercial Technology which started in 1955 to provide finance to Indian firms in commercializing the innovative technologies by Indo-US joint ventures.

Technology Development and Investment Corporation of India (TDICI)

This was the first venture capital company of India and was promoted by CICI in 1986. The following are the salient features of its scheme:

- TDICI invests in companies with high earning and growth potential with a view to achieve longterm capital gains.
- The scheme spearheads towards assisting entrepreneurs involved in manufacturing products which are commercially viable by indigenously developed or ultramodern yet untested technologies on commercial scale.
- The financial assistance may be up to Rs. 2 cores in the form of equity or conditional loan and the equity would be held for a period of 5-8 years and then either sold to the promoter or disposed in the secondary market.
- The most important aspect of this type of assistance is in the developmental phase, the conditional loan would carry no interest, but after this period, the interest rate would depend upon the effectiveness of the project.

Risk Capital and Technology Finance Corporation (RCTFC)

This institution is independent body launched by Industrial Finance Corporation of India (IFCI) to enhance the purview of venture-capital operations. It assists the entrepreneurs especially those who engage themselves in technological development.

Venture Capital Scheme of lDBI

IDBFs venture capital fund has been set up with an initial corpus of Rs. 10 crores. This scheme of IDBI has been emerging as major source of venture capital funding. Its aims are the following:

- It is designed especially to assist projects which promote new and untested technologies in Indian conditions.
- The funding amount may vary between Rs. 5 lakhs and Rs. 250 lakhs which include both capital and operating expenses.
- This part of funding is usually 80 to 90 percent of the total project cost.
- The assistance may be in the form of equity or Joan.
- The equity component carries a service charge of 1 percent while the loan component carries an interest of 6 percent in the developmental phase and 14 percent thereafter.
- It enjoys a 3-year moratorium period and is repayable in about 10 years.
- If the project does not succeed, IDBI can insist or transfer of technology to some other promoter or the entrepreneur who is interested to take over the firm or mutually agreeable terms.

Apart from the above organizations, the following are some of the players in the venture capital finance in the country:

- ANZ Grindlays Bank
- Credit Capital Venture Fund (India) Ltd.
- 20th Century Venture Capital Corporation
- APIDC Century Capital Ltd.
- Canbank Venture Capital Fund
- Gujarat Venture Finance Ltd.
- Industrial Development Bank of India
- IL and FS Venture Corporation
- SBI Capital Venture Fund
- SIDBI Venture Capital Fund

- Pardeshiya Industrial land Investment Corporation of Uttar Pradesh Ltd. (PICUP).

Hire-Purchase Scheme

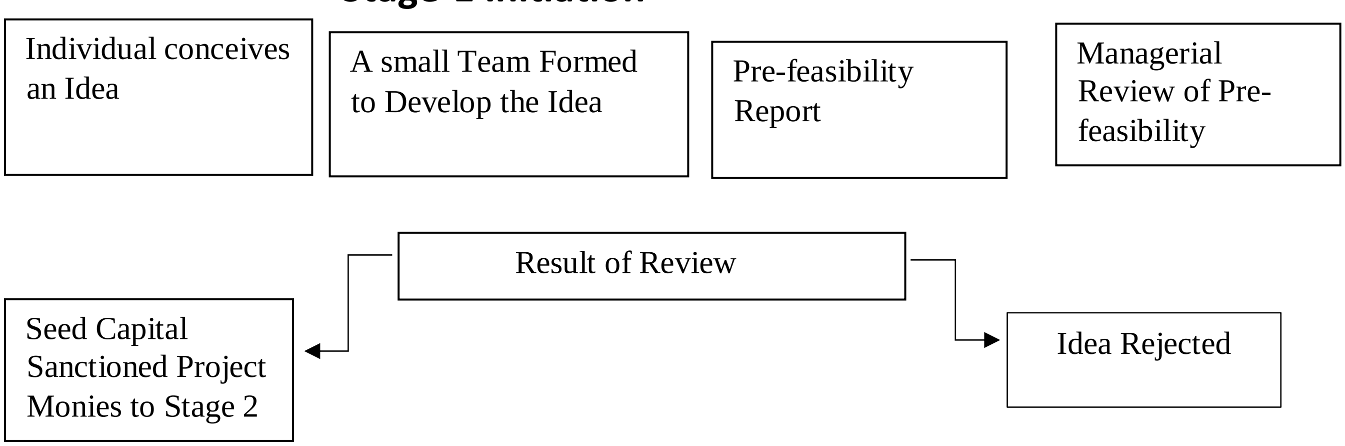
The type of loan which is advanced for the purchase of plant and machinery on hire-purchase basis is known as hire-purchase scheme. The organizations which provide hire-purchase loans are usually national small industries corporations, state small industries corporations, private finance companies and other financial institutions. The ownership of the plant and machinery is vested with the lender until the final payments are made. The interest is generally charge at a flat rate and the borrower has to furnish collateral security.

Formal Process Concept

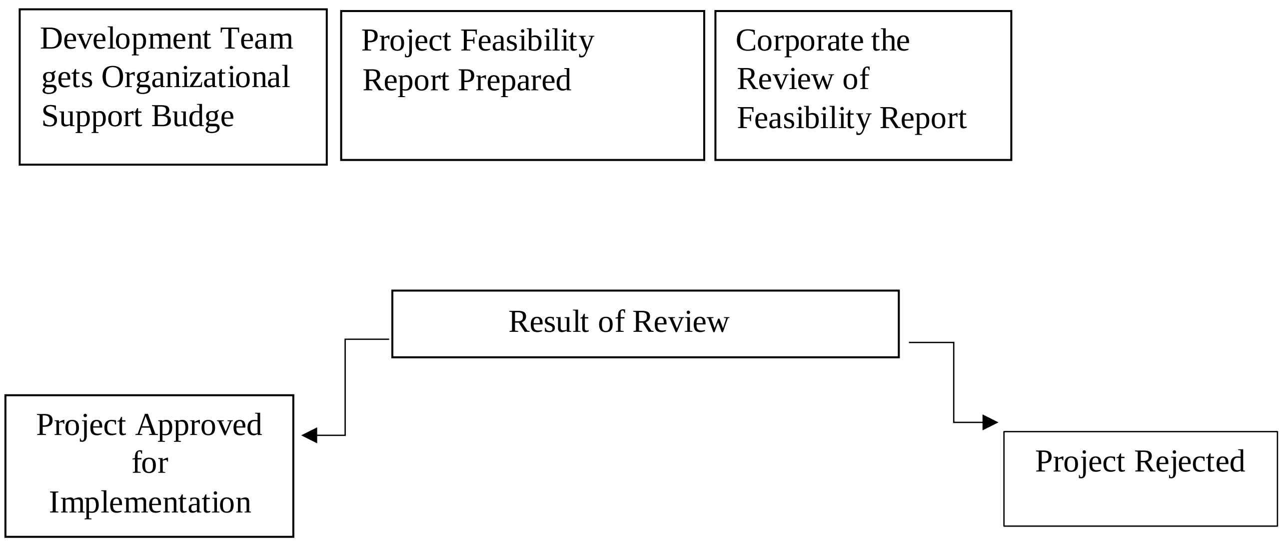
A formal team can be understood as an intentionally created group of people with some predetermined objectives to be attained through collective efforts.

Three stage model of formal team

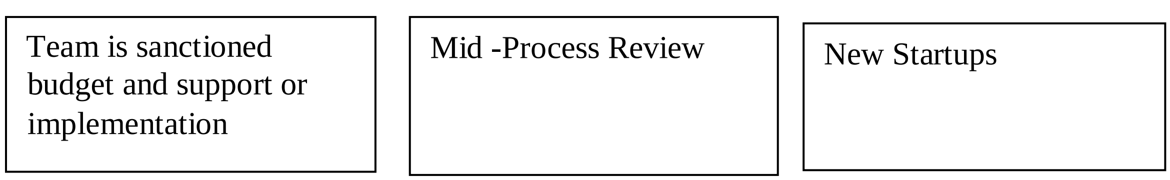
Stage-1 Initiation



Stage-2 Feasibility Study



Stage-3 Implementation



Opportunity sensing/ Opportunity Analysis

To be a successful entrepreneur, it is necessary to have an ability of sensing opportunities. For this, an entrepreneur constantly under takes the scanning of environment till a time he finds the most lucrative opportunity for preparation of his business plan, The process of opportunities sensing involves five Steps:

1. Scanning the Environment
2. Project Development and Selection
3. Project Report Preparation
4. Project Appraisal
5. Resourcing

1. Scanning the Environment

It refers to the understanding of socio culture economic, technological, fashion and even the change in lifestyle of local people. It's done by collecting information from various sources.

1. Personal Informal Sources
   a) Family
   b) Customers
   c) Friends
   d) Colleagues
   e) Salesman
   f) Social Contacts
   g) Employees
2. Personal Formal Source
   a) Bankers
   b) Business Councilors
3. Impersonal Written Sources
   a) Magazines

b) Journals
c) Books
d) (d)News letters
e) (e)News papers
f) (f) Internet

4. Impersonal Oral Sources
    a) Trade shows
    b) Seminar and workshops
    c) Professional organization
    d) Small business organization
    e) Suppliers and dealers

2. Product Development and Selection

There are number of ways of selection and development of new product and service.

a. Solving people's problem
b. Com lining two or more ideas
c. New ways of doing old things (gas lighters)
d. Improving the product and service (sachet/tetra packs)
e. Adding new value to an old product
f. Doing market research
g. Use of hobby
h. Turning waste materials into something useful
i. Talking and listening to people
j. Day dreaming
k. Yellow page directory

i. Changing fashion and lifestyle

3. Project Report Preparation

1. Brief Introduction of the proposed project
2. Brief History (why deal the entrepreneur decide to set up this particular project)

3. The unit (constitution - partnership Private etc., nature of the unit)
4. The promoter (Director, Proprietorship - names)
5. Product (Description)
6. Marketing and competition:
    a. General market trends
    b. Overall demand
    c. Segmentation of estimated demand
    d. How does the unit proposed to meet the competition
    e. Price and quality
    f. Marketing Strategies (direct selling or by agents) 7. Manufacturing process:
    a. Techniques
    b. Input/ Output ratio between raw material and finish goods
    c. Sequence of operations and time taken for each operation 8. Plant and Machinery capacity:
    a. Price of each machine
    b. Spare parts required
    c. Details of suppliers
    d. Procurement time and availability in market 9. Raw Material:
    a. Detail of various raw materials required
    b. Specifications of each type of raw material
    c. Availability (Where available, how easily available etc.)
    d. Names of suppliers
    e. Source.

10. Land and Building (in case own building is to be constructed):
    a. Total area and cost of land required.
    b. Cost of land development
    c. Covered and Uncovered area
    d. Estimate of building including utilities (water, electricity etc.) 11. General Management and technical staff:
    a. Duties of promoter(s)

b. Indirect staff such as sales-cum purchase assistant, accountant-cum store keeper etc.
c. Direct labour strength such as skilled workers, unskilled workers and semi-skilled workers
d. Salary or wages, incentives, bonus, etc. of each workers

12. Cost of the project

Land, building, plant and machinery, furniture and fixture, pre-oprative expenses, contingencies, working capital required.

13. Means of finance
    a. Term loan from Bank
    b. Government subsidy.
    c. Deferred payments.
    d. Loans from friends etc.
14. Working Capital required:
    a. Anticipated monthly sales.
    b. Cost of raw material consumed per month.
    c. Total monthly production cost.
5. Cost of production and profitability:
    a. Details of raw material content for each item.
    b. Details of monthly expenses.
    c. Bifurcation of monthly expenses into fixed and variable expenses. 16. Profitability and Breakeven point (BEP) 17. Project implementation schedule.

18. Repayment schedule as desired by promoters (s) 19. Internal rate of return.

20. Security offered.

4. **Project Appraisal**

A final view on the proposal is taken which is based on combination of factors like technical, financial, commercial, managerial and operational. Weakness or deficiency in any project does not prepare a ground for its rejection but care is taken to initiate suitable action to minimise its impact on the project.

1. Objective of Project Appraisal

Identifies and estimates the expected costs and benefits to a project appraisal undertaken by the financial institutions furnish necessary information on the following aspects:

- The specific and predicted results of a project
- The information necessary to determine the success or failure of a project
- The standard yard sticks to be applied while determining the rate of success or failure of a project

2. Aspects of Project Appraisal

A comprehensive appraisal of a project can be performed by covering the following perspectives :

- Technical appraisal
- Economic appraisal
- Operational appraisal
- Financial appraisal
- Management appraisal
- Organization appraisal

5. Resourcing

The implementation stage comprises all spade work required to set up the business venture:

1. Assistance may be sought from the following

- Small business club ' Supplies
- College/University business departments.
- Exhibitions, Trade fairs
- Entrepreneur's association
- Bankers
- Technical consultant • Research Laboratories
- Trade association.

- Chamber of commerce

2. **Categories of Resources**
   - Physical Resources: Premises, tools, equipments, machinery etc.
   - Technical Resource: Technical Know - How, designs, technical training.
   - Financial Resources: Funds needed for physical, technical facilities etc.
   - Human Resources: Workers/managers.
   - Marketing Resources

3. Resourcing Fund

Finally for the implementation of the venture, the financial resources have to be arranged. An entrepreneur may need a blend of both - fixed capital and working capital to actually transform his dream into reality.

Fixed Capital

Fixed capital is the money required to buy premises, furniture and fixtures, machinery tools, equipments and vehicles - assets that last long sources of such capital can be equity shares. Preference shares, debenture term loan, return earnings etc.

Working Capital

It is the money required to buy raw material and for turning it into finished goods for sale of customers - such sales may be on credit bases. It is the amount of funds necessary to cover the cost of operating the enterprise.

1.15 SUMMARY

Entrepreneurship development is significant for development of the nation. Entrepreneur is an individual who performs the task of bringing labour and material at a certain price and selling the resultant product at a contracted price. The entrepreneur play a commendable role in the formation of capital, balanced regional development, generation of employment, improves per capita income and standard of living, making nation self reliant, planned production, forward and backward linkages are established and dispersal of economic power. All these activities of entrepreneur lead to economic development of the country.

An entrepreneur is characterized by certain attributes. These attributes are innovation, risk taking, self confidence, hard work, goal setting, accountability, leadership and managerial skills. These attributes, indeed, impact his entrepreneurial functions.

The entrepreneurs are classified as innovating, adoptive, fabian, drone, individual, institutional, forced, business, trading, industrial, corporate, agricultural, pure, induced, spontaneous, technical, nontechnical, professional, first generation, and classical entrepreneurs.

An Intrapreneur is different fron and entrepreneur. Intrapreneur is an individual who works for the business. Both the entrepreneur and intrapreneur are innovators in their own ways and perform their respective functions. They, nevertheless, differ in number of ways. They differ with regard to various aspects such as ownership, innovation, business, risk bearing, profit and qualifications.

Entrepreneurs create value for society. They recognize business opportunity, undertake risk appropriate to business opportunity and through the communicative and management skills, they mobilize human, financial and material resources necessary to yield desired results.

Presently, there are a number of different commercial and industrial enterprises which are owned and organised for operation by different forms or types of business organisation. In India, the principal types of business organisations include sole proprietorship, partnership, Joint Hindu Family, cooperative organisation and Joint stock companies. Every form of organisation has its characteristics, merits and limitations. Usually, one form of organisation is more suitable in a particular business context and environment than the other. As such, the choice of the form of business depends on nature of business, ease of formation, scale of operations, adequacy of capital, limit of liability and risk, degree of control desired, continuity and stability, etc. of its operation.

UNIT-2 IDEA GENERATION AND OPPORTUNITY ASSESMENT

INTRODUCTION

Good answers are not always the result of brilliance and intuition, but the result of asking the right kind of question defining (a) what is our business? or (b) what it should be?. This facilitates emanation of fundamental strategy of business-OBJECTIVES. Indeed, this starts with ideation and opportunity assessment. This helps the business to create customer from which a series of objectives derives. Ideation requires certain techniques. Opportunities represent a wider area. The techniques for idea generation lead to realization of product or service specifications which become instrumental in converting into an entrepreneurial venture. These techniques for idea generation include conscious efforts and range from fairly simple and mechanical to highly complex processes. Opportunity evaluation is a key theme in entrepreneurship. An entrepreneur cannot simply expect that the opportunity and the organizational effort he plans to make in order to exploit it will be viewed by the market as attractive and in the right place at the right time. It is not certain that the market can and will fulfill the value that the opportunity and its organizational implementation represents. The opportunity may simply prove to be unprofitable. Therefore, the entrepreneurial process involves the evaluation of each opportunity, whereby the entrepreneur seeks to determine whether the idea that he or she intends to pursue, creates value in the eyes of the market and can thus be considered as a real, strong and feasible option. This unit elaborately discusses the significance of ideation and opportunity assessment for an entrepreneurial venture.

BUSINESS IDEA

The task of promotion begins with the search for a suitable business idea or opportunity. When a person wants to setup an enterprise the first action is to generate ideas for products or businesses. The business idea arises from an opportunity in the market. It originates from any need or wants for any product or service that an entrepreneur can identify. The idea may relate to the starting of a new business or to takeover an existing enterprise. The idea should be sound and workable, so that it may be exploited. It should yield a reasonable return on investment and the one which can be converted into a business.

SMALL SCALE INDUSTRY-.

Requires huge capital, technical skill and management abilities. These industries give large output for the capital invested and high rate of economic growth. But these industries cannot provide employment in the villages where more than 70 per cent of population lives. The sophisticated technologies adopted may make production complex and costly. They result in the emission of toxic fumes in the air and release of polluted water in the rivers and water bodies. The concentration of economic activity in the city due to large industries cause migration of village population resulting in social problems.

Entrepreneurs in small business have an advantage over large business. These small units are labour intensive and are often more efficient in the manufacture of certain goods. Small-scale industries can be classified into five main types as follows:

1. Manufacturing industries, i.e., industries producing complete articles for direct consumption and also processing industries.

2. Feeder industries specialising in certain types of products and service . e.g., casting, electroplating, welding, etc.

3.Servicing industries covering light repair shops necessary to maintain mechanical equipment.

4.Ancillary to large industries, producing parts and components and rendering services. Mining or quarring.

In order to promote small scale industries in India, the Government of India set up the Central Small Scale Industries Organisation and the Small scale Industries Board. The small scale industry was defined on the basis of investment in plant and machinery and employment criteria, i.e., maximum number Of workers employed. The investment criteria has revised from time to time and employment criteria was dropped. The small scale units fall broadly under four categories:

1.Small Scale Industries

The investment in fixed assets in plant and machinery, whether held on ownership terms or on lease or by hire and purchase does not exceed ₹ 1 crore.

The investment ceiling in respect of small scale industries undertaking manufacturing the items mentioned in Appendix-Il shall not exceed 5 crore.

The limit is fixed irrespective of the fact whether the small scale undertaking is producing articles for export or not.

2.Ancillary Units

An ancillary unit is one which sells not less than 50% of is manufacturers to one or more industrial units. The limit of investment is same for ancillary units and small scale industries.

3.Tiny Units

The investment limit for tiny industry is 25 lakh in plant and machinery.

There is no restrictive condition of the location of the unit in small towns. These enterprises would be entitled to preference in land allocations, power connection, access to facilities or skill/ technical upgradation. These would also have easy access to institutional finance, priority in Government purchases and re taxation in labour laws.

4.Service Sector Units

Three units provide services such as hotel and hospital services. The investment ceiling is fixed at 1.0 million (excluding land and building).

UNIT-3

Soon after the identification of a project, a project report is formulated after examining various relevant aspects such as economic, technical, financial, product and managarial aspects. The project report is submitted to financial institutions and commercial banks for getting loans. The report is analysed by these institutes to see how production should be organised for maximum returns. Project report is of great importance. It highlights the practicability of a project in terms of different factors like economy, finance, technology and social desirability. An important aspect of the report is in determining the profitability of the project and minimising risks in the execution of the project.

There are three stages of a project report.

1. Preliminary Project Report (PPR).
   A brief outline of the project justifying its viability.
2. Techno-economic feasibility assessment.
3. Detailed project report

PRELIMINARY PROJECT REPORT (PPR) -

The project report must be prepared by the entrepreneur himself to run the industry successfully. Even when he takes the help of a consultant, he must involve himself in the preparation of the project report.

Preliminary project report is simple brief data sheet which gives insight into the following aspects of the project.

- Requirement of amount of money, manpower and materials for setting up the project.
- Types of machines required.
- Sources of technology.

- Economic gains from the project.

. Advantages of Preliminary Project Report

An entrepreneur selects 3 to 4 items (and not one) initially. It is very costly and time constituting to prepare detailed project report for all the items selected. Therefore, prelin1inary project reports are prepared which are very short. There are other advantages also.

1. A preliminary project report has sufficient data to get provisional registration with the state government. The planning and execution can be started. At least action can be taken on activity requiring long periods.
2. Certain formalities can be completed on the basis of data in the preliminary project report. For example, production programme for an electronic unit can be approved by the state/ central government because this approval requires only projected production level and raw material requirements.

3.The data collected for preparing a preliminary project report can be used to start preparing detailed project report.

4. Preliminary project report helps identify infrastructural requirements for the project such as land or shed. Accordingly applications can be made to concerned government agencies in advance.

The preliminary project report instills confidence and motivation in the entrepreneur to start the time consuming process of collection of data for preparation of a detailed project report.

4. TECHNO-ECONOMIC FEASIBILITY REPORT

1. Location

- The location should be decided on the following basis:

—Availability of raw material

— Availability of labour

—Availability of market outlets

—Cost of transportation of raw materials and finished goods

—Place self- owned/ rented premises/ industrial area

—Requirement of size of land/shed.

2. Educational Qualifications and Experience

This information and background of entrepreneur will help in the acceptance of application by financial institution.

3. Production Programme

The production programme is worked out on the basis of data and information obtained from market survey and market research. The missing information may be obtained from the consultant.

Readymade project profiles are available with DIC (District Industries Centre), good libraries or consulting organisations. They can be good source of information. Visit can be made to an existing unit for collection of data.

4. Plant and Machinery

The list and specifications is based on data collected by market survey. The information collected should also include power requirements. The cost of machinery will include ex-works cost, transportation, handling, insurance etc.

DETAILED PROJECT REPORT

Detailed project report has to be prepared on the finally selected project. It is meant for entrepreneur himself and is an important document to process assistance from financial institutions and to fulfill other formalities for the implementation of the project. A well perceived, well report by the entrepreneur himself is helpful to him for running the industry Therefore, eventually he choses to take the help of a consultant, he must involve him self in the preparation of the project report.

UNIT-4

DEFINITION OF MANAGEMENT

Management has been defined as an art of getting things done through people Management is a distinct process consisting of activities such as planning organizing, leading and controlling to achieve the desired results.) The goal of the enterprise is fulfilled through the use of resources like men, money materials and machines. Managerial skills are required to exploit these resources and earn profit, face competition and ensure long survival a growth of an enterprise. Throughout the management function, the objectives must be kept in mind.

Principles of Management

1. **Division of Work**

It promotes efficiency; it ensures work to be executed in limited field.

2. **Authority and Responsibility**

Authority and responsibility should always go together.

3. Discipline

Poor performance is due to lack of discipline which means obedience, application, energy and respect.

4. Unity of Common

A subordinate should take orders from one supervisor only.

5. **Unity of Direction**

Each management objective should have one head and one plan.

6. **Subordination of Individual Interest to General Interest**

Interest of organization is higher than interest of individuals.

7. **Remuneration of Personnel**

Payment to workers should be fair. There should be a proper method of payment.

8. Centralization

There should be one central power in the organization with power and control of overall work.

9. Order

A place for everyone and everyone in place.

10. Equity

Kindness and justice create loyalty and devotion among employees for the management.

11. Stability

Stability ensures efficiency.

12.Initiatives

Planning before actual execution of work ensures success.

<u>Functions of Management</u>

Management is a function beyond planning, so as to ensure how far the pla are performed and whether these needs to be changed depending up changing environment and conditions. It reflects flexibility, adoptability understanding to act and take decisions according to need. Major tasks of management involve the following:

1.Planning

Planning is "thinking before doing". Before starting the work, it is decided what is to be produced, how much is to be produced, how to be produced when to be produced, and who will produce. The planning also aims at elimination of wastage of material, idleness of men, machinery and capital. Policies and objectives, programme of production and methods of production are decided beforehand.

2.Organizing

After completion of planning, the next step is to arrange the material, money and work for actual execution or production. This function consists of material organization and human organization.

3.Staffing:

Recruiting and selecting employees for positions within the company (within teams and departments).

4. Directing

The next step is directing the plan into operation. The person must have dynamic leadership for giving direction and guidance to the subordinates. The instructions must be simple, clear, complete and reasonable in writing. The staff must be made conversant with standard operating procedures.

5. Controlling

All the functions must be performed perfectly alright. The management must control so that actual performance matches with the plans without any defects. The shortcomings must be rectified and these should not be repeated. The following controls are needed: Quantity control, cost control, material control, production control. Some standards are needed for performance evaluation and control.

Levels of Management

- The term Levels of Management refers to the line of division that exists between various managerial positions in an organization. As the size of the company and workforce increases, the number of levels in management increases along with it, and vice versa. The different Levels of Management can determine the chain of command within an organization, as well as the amount of authority and typically decision-making influence accrued by all managerial positions.
- Levels of Management can be generally classified into three principal categories, all of which direct managers to perform different functions.
- In this article, we will explore the specific definition of these levels, as well as the roles and responsibilities of the managers that fall into these categories.

1. Administrative, Managerial, or Top Level of Management

- This level of management consists of an organization’s board of directors and the chief executive or managing director. It is the ultimate source of power and authority, since it oversees the goals, policies, and procedures of a company. Their main priority is on the strategic planning and execution of the overall business success.
- The roles and responsibilities of the top level of management can be summarized as follows:
    - Laying down the objectives and broad policies of the business enterprise.
    - Issuing necessary instructions for the preparation of department-specific budgets, schedules, procedures, etc.
    - Preparing strategic plans and policies for the organization.
    - Appointing the executives for middle-level management, i.e. departmental managers.
    - Establishing controls of all organizational departments.
    - Since it consists of the Board of Directors, the top management level is also responsible for communicating with the outside world and is held accountable towards an organization’s shareholders for the performance of the enterprise.
    - Providing overall guidance, direction, and encouraging harmony and collaboration.

2. Executive or Middle Level of Management

- The branch and departmental managers form this middle management level. These people are directly accountable to top management for the functioning of their respective departments, devoting more time to organizational and directional functions. For smaller organizations, there is often only one layer of middle management, but larger enterprises can see senior and junior levels within this middle section.

- The roles and responsibilities of the middle level of management can be summarized as follows:
    - Executing the plans of the organization in accordance with the policies and directives laid out by the top management level.
    - Forming plans for the sub-units of the organization that they supervise.
    - Participating in the hiring and training processes of lower-level management.
    - Interpreting and explaining the policies from top-level management to lower-level management.
    - Sending reports and data to top management in a timely and efficient manner.
    - Evaluating the performance of junior managers.
    - Inspiring lower-level managers towards improving their performance.

3. Supervisory, Operative, or Lower Level of Management

- This level of management consists of supervisors, foremen, section officers, superintendents, and all other executives whose work must do largely with HR oversight and the direction of operative employees. Simply put, managers at the lower level are primarily concerned with the execution and coordination of day-to-day workflow that ensure completion of projects and that deliverables are met.
- The roles and responsibilities of the lower level of management can be summarized as follows:
    - Assigning jobs and tasks to various workers.
    - Guiding and instructing workers in day-to-day activities.
    - Overseeing both the quality and quantity of production.
    - Maintaining good relations within lower levels of the organization.

- Acting as mediators by communicating the problems, suggestions, and recommendatory appeals, etc. of workers to the higher level of management, and in turn elucidating higher-level goals and objectives to workers.
- Helping to address and resolve the grievances of workers.
- Supervising and guiding their subordinates.
- Taking part in the hiring and training processes of their workers.
- Arranging the necessary materials, machines, tools, and resources, etc. necessary for accomplishing organizational tasks.
- Preparing periodical reports regarding the performance of the workers.
- Upholding discipline, decorum, and harmony within the workplace.
- Improving the enterprise’s image as a whole, due to their direct contact with the workers.

UNIT-5

What is Production?

Let's get started; We all know that production is the act of manufacturing items from raw materials, but it also has economic significance since, it results in an output that has value and will satiate human desires and requirements.

Simply defined, production generates goods that people want and will pay for, which stimulates the economy and enables producers to keep generating more and more outputs.

A company that creates items is referred to as a producer in economics. These companies generate commodities that customers will want to buy using the inputs like both material and immaterial, which are accessible to them.

What is Production Management?

Production management is the procedure of controlling a company's operations to provide the services and products it wants to produce. It comprises organizing, carrying out, and managing processes that transform raw resources into completed products and services.

The company's production strategy, which calls for the use of certain technologies and the accomplishment of pre-established goals relating to manufacturing mixes, unit costs, quality, and production capabilities, should be successfully implemented, according to the production management.

It usually coordinates, supervises, and regulates the individuals or teams in charge of the manufacturing process itself, equipment maintenance, quality control, and inventory control.

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Functions of Production Management

The 6Ms of production management fall under the functions of production management —Men, Machines, Money, Methods, Materials, and Market—which are used in an effort to meet better customer expectations.

Its primary objective is to create services and products in the appropriate amounts, with the best possible quality, on time, and at the lowest possible cost. Adopting new technology and creative workplace modifications is made easier by production management.

All personnel participating in the company's production processes must be monitored and controlled by production management in order to guarantee that the desired output is produced.

Choose Design and Product

- Production management aids in the organization's choice of the appropriate product for production as well as the appropriate design.
- It becomes crucial for businesses to have a thorough grasp of their customers to develop goods that completely meet them.
- To satisfy client expectations and still be cost-effective, products must undergo a thorough assessment.

Importance of Production Management

- **Reduces the possibility of product failure**
    - In order to appraise the market and lower the likelihood of failure, a clear roadmap should be prepared together with data and assumptions.
    - A product will be less likely to fail if its designers are aware of the demands and wants of the market.
    - Product management lowers failure, but it can't guarantee success like anything else.

How does inventory management work?

Inventory is the goods or materials a business intends to sell to customers for profit. Inventory management, a critical element of the supply chain, is the tracking of inventory from manufacturers to warehouses and from these facilities to a point of sale. The goal of inventory management is to have the right products in the right place at the right time. This requires inventory visibility — knowing when to order, how much to order and where to store stock. The basic steps of inventory management include:

1. Purchasing inventory: Ready-to-sell goods are purchased and delivered to the warehouse or directly to the point of sale.
2. Storing inventory: Inventory is stored until needed. Goods or materials are transferred across your fulfillment network until ready for shipment.
3. Profiting from inventory: The amount of product for sale is controlled. Finished goods are pulled to fulfill orders. Products are shipped to customers.

   Why is inventory management important?
   Inventory can be a company's most important asset. Inventory management is where all the elements of the supply chain converge. Too little inventory when and where it's needed can create unhappy customers. But a large inventory has its own liabilities — the cost to store and insure it, and the risk of spoilage, theft and damage. Companies with complex supply chains and manufacturing processes must find the right balance between having too much inventory on hand or not enough.

What is Financial Management?

In simple terms, financial management is the business function that deals with investing the available financial resources in a way that greater business success and return-on-investment (ROI) is achieved. Financial management professionals plan, organize and control all transactions in a business. They focus on sourcing the capital whether it is from the initial investment by the entrepreneur, debt financing, venture funding, public issue, or any other sources. Financial management professionals are also responsible for fund allocation in an optimized way to ensure greater financial stability and growth for the organization.

Importance of Financial Management

The financial management of an organization determines the objectives, formulates the policies, lays out the procedures, implements the programmes, and allocates the budgets related to all financial activities of a business. Through a streamlined financial management practice, it is possible to ensure that there are sufficient funds available for the company at any stage of its operations. The importance of financial management can be assessed by taking a look at its core mandate:

- Availability of sufficient funds
- Maintaining a balance between income and expenses to ensure financial stability
- Ensuring efficient and high ROI
- Creating and executing business growth and expansion plans
- Safeguarding the organization against market uncertainties through ensuring buffer funds

An Introduction to Marketing Management

Being an effective marketing leader is more complex than it sounds. Speak to any marketing management professional and they'll tell you that their work is equal parts strategy, planning, execution, and analysis. It's easy to see why. Marketing professionals with a documented strategy are 313% more likely to succeed when compared to their peers who do not have a documented strategy.

What is marketing management?

Marketing management is centered on creating, planning, and implementing strategies that will help achieve wider business objectives. These business objectives can involve increasing brand awareness, boosting profits, or entering previously untapped markets. When we begin to consider the field of marketing management, it's important to look to marketing experts Philip Kotler and Kevin Lane Keller, who, in their book "Marketing Management," offer a standard marketing management definition as "the development, design, and implementation of marketing programs, processes, and activities that recognize the breadth and interdependencies of the business environment."

These professionals need to study their customers, have a deep understanding of the methods and strategies that retain and delight them, and be active in measuring achievements and optimizing internal processes.

Think of it this way: a high school teacher does not just teach. They have to understand their students, create methods and strategies for passing on information, and track student progress through metrics and achievements.

In marketing, the right processes should elevate a brand, establish a strategic vision for an organization, and coordinate resources to get it all done.

human resource management

Human resource management (HRM) is the practice of recruiting, hiring, deploying and managing an organization's employees. HRM is often referred to simply as human resources (HR). A company or organization's HR department is usually responsible for creating, putting into effect and overseeing policies governing workers and the relationship of the organization with its employees. The term human resources was first used in the early 1900s, and then more widely in the 1960s, to describe the people who work for the organization, in aggregate.

HRM is employee management with an emphasis on those employees as assets of the business. In this context, employees are sometimes referred to as human capital. As with other business assets, the goal is to make effective use of employees, reducing risk and maximizing return on investment (ROI).

The modern HR technology term human capital management (HCM) has been used more frequently compared to the term HRM. The term HCM has had widespread adoption by large and midsize companies and other organizations of software to manage many HR functions.

The importance of human resource management

The role of HRM practices are to manage the people within a workplace to achieve the organization's mission and reinforce the culture. When done effectively, HR managers can help recruit new professionals who have skills necessary to further the company's goals as well as aid with the training and development of current employees to meet objectives.

A company is only as good as its employees, making HRM a crucial part of maintaining or improving the health of the business. Additionally, HR managers can monitor the state of the job market to help the organization stay competitive. This could include making sure compensation and benefits are fair, events are planned to keep employees from burning out and job roles are adapted based on the market.

UNIT-6

Motivation

Introduction

- Process of influencing or stimulating a person to take action by creating a work atmosphere wherein the goals of the organization and needs of the person are satisfied
- The word Motivation comes from the Latin word Moves, which means to move. When we see people working very hard we say they are motivated because we can see they are moving
- The person will work hardest to satisfy his motive. Motives are directed towards goals. Different people have different motive or needs
- The employers or managers have to understand what motivates their subordinates and provide an environment in which they will be motivated and will produce good quality work at the acceptance rate
- Internal and external factors that stimulate desire and energy in people to be continually interested in and committed to a job

Role of Management in Motivation

- Management role is to influence the employees and directing or stimulating them to follow the organization plans and objectives to work efficiently
- The primary task of a manager is the creation and maintenance of an environment in which individuals work efficiently towards realizing the objectives of the organization
- Management should involve employees in setting work goals for themselves and ensure their participation in planning, organizing, and reviewing of work leading to accomplishment of goals

- Management should provide the employees adequate information they need to solve problems, make decisions and understand plans, policies and programs formulated by top management
- The management should establish a sound wage and salary structure assuring adequate and equitable compensation to employees
- Management should create a conductive work environment for the best performance
- Management should organize work in such a way so as to make purposeful and interesting to the employees

Types of Motivation

There are basically two types of Motivation. Intrinsic Motivation and Extrinsic Motivation

1. Intrinsic Motivation o Means that the individuals motivational thoughts are coming from within
    - The individual is driven by an interest or enjoyment in the task itself, and doesn’t rely on the external rewards
    - Engages in completing the task willingly as well as to improve their skills
2. Extrinsic Motivation
    a. The desires to perform the task are controlled by an external source
    b. When someone else want you to do something in an organization, offering certain rewards, fear of punishment

Attitude Motivation

- Attitude motivation is about how people think and feel

- It is their self confidence, their belief in themselves, their attitude to life, be it positive or negative. It is how people feel about their future and how they react to their past
- If both employers and employees can maintain positive attitude about themselves, towards others as well as the towards the situation, it leads towards the better performance

Group Motivation

Teams are the life of any organization, productivity and success of an organization depend upon the performance of employees as a team Team leaders must understand how they can influence their team members motivation, and work towards the productivity and proficiency

- Bringing out the better of each individuals in a team and recognizing them for their performance can increase their motivation as well as the teams
- Team building exercises, trainings, incentives, social recognition, can help motivate the members of any team in an organization to increase and better their performances towards achieving organizational goals

Executive Motivation

- One of the key issues in an organization is motivating and keeping managerial talents in the company
- An organization and top level management should be able to identify and encourage all the talents they possess within the organization and motivate them to stay at the company to perform even better

- Profit sharing incentives, bigger and challenging responsibilities, share options, benefits(medical, vehicle), public recognition, better pay can help motivate executives to perform better

Techniques of Motivation

It is very important in an organization to keep their employees motivated to keep doing their best towards achieving the organizational goals

- **Provide Meaningful and Challenging work** o When employees feel the work they are doing are meaningful and challenging in some way, they feel internally motivated
  - If a employee feels the work they are doing are actually having a big impact in the overall operation of the organization, they generally become more engaged and energized.

- **Set clear targets, expectations and measure performance**
  - It is of no point for employees to perform better if they are not clear of the targets they are to meet, or about the expectations from them by the management
  - Management must be clear when they direct their employees about the objective of the organization and what expectation they have from their employees. Management should be able to bring the better performance out of everyone.

- **Give regular, direct and supportive feedback** o Giving regular feedback about the performance of each employees help them focus on their job better, make any improvements or changes when needed
  - Feedback needs to be timely, specific and presented in such a way that the individual is clear about what behaviors or skills

they need to modify (or continue using) in order to improve performance.

- **Value the employees** o In a workforce there are also those kind of people who motivates themselves to perform better and they value their responsibility
  - It is important for Management to value these individuals and make sure they are given credit for their work and respected.

- **Training and development Programs** o Regular training and development programs should be conducted on timely basis for employees to make themselves prepared for the future
  - Employees feel motivated when they know they have better future in an organization and they are being invested for.

- **Incentive Programs** o Rewards, promotions, benefits, profit sharing, freedom can be provided by managers to motivate their employee.

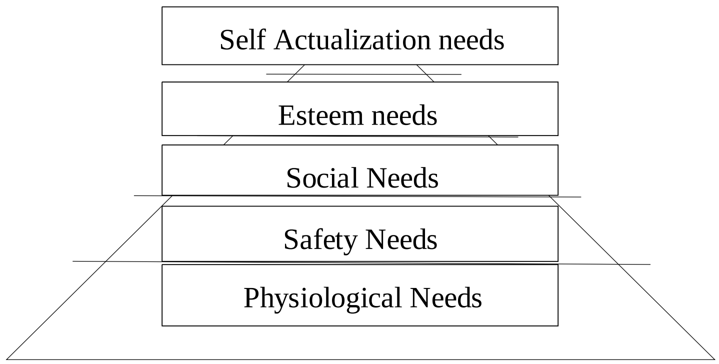
Theory of Motivation

- There are essentially two types of motivation theories

  Content theories of motivation: attempt to explain why people have different needs at different times

  Process theory of motivation: describe the processes through which needs are translated into behavior.

1.**Maslow’s Hierarchy of needs theory**



Leadership

 Leadership is the process of influencing people and providing an environment for them to achieve team or organizational activities

 The activity of leading a group of people or an organization or an ability to do so

 An art of motivating a group of people to act towards achieving a common goal

 The leader is an inspiration and director of the action

 Process of influencing people and providing an environment for them to achieve the team or organizational goals

 Leaders arrange the work environment such as allocating resources, defining organizational goals

 For an organization to run smoothly, the top level management who are responsible to make decisions, create infrastructure should have sharp leadership skills

 Without better leadership skills, the company will struggle to sustain in long run

- Great leaders should possess the ability to adapt their behavior and styles according to the situation

- There is a difference between leaders and managers
- All leaders shouldn't necessarily be managers
- All managers to be successful must possess great leadership skills
  - In simple words, a good manager is a leader, but a good leader is not necessarily a manager
  - A manager holds a higher position, may lead a team, his functions vary from planning, directing to controlling, whereas a leader might be any one of the team members with strong influence over the others

Qualities of a good Leader

- **Honesty and Integrity**
  - A leader must be trustworthy, and be known to live their life with honesty and integrity

    A person of honesty and integrity is the same on outside and the inside
  - A leader must have ethical behavior thus the trust of the follower
- **Personality/Confidence**
  - A good leader is confident, in order to lead and set direction, a leader needs to appear confident in person and in leadership roles
  - A leader who conveys confidence towards the proposed objective inspires the best effort from team members
- **Human Skills**
  - Should know how to treat and talk to his members
  - Give respect, give credit to people when due
    - When people feel they that are being treated fairly, they reward a leader with loyalty and dedication

- **Initiative**
    - A good leader must always take an initiative
    - He/she must be able to construct and implement his own plans
        - He/she must do the right thing at the right time without being told by others
    - Must have a good imagination and visualization skills
        - Must be able to combine new ideas with old ones and develop new tactics to solve problems
- **Communication skills**
    - A good leader must be an effective and excellent communicator
        - must be a good speaker and writer, must use simple language to give information, instructions and guidance to his followers
- **Discipline**
    - A good leader must be a disciplined person
        - must have respect for the rule and regulations of the organization, this is because his followers will follow his example
- **Committed to excellence**
    - The good leader not only maintains high standards, but also is proactive in raising the bar in order to achieve excellence in all areas
    - there is no greater motivation than seeing the boss down in the trenches working alongside everyone else, showing that hard work is being done on every level

Leadership style

Democratic Style/Participative Style

- A democratic leader is one who gives orders after consulting the group
- Researchers have found that this leadership style is usually one of the most effective and lead to higher productivity, better contributions from group members, and increased group morale

- Policies are worked out in group discussions, and praise and blame will be shared by the group members
- Members of the group feel more engaged in the process, group members are encouraged to share ideas and opinions, even though
  the leader retains the final say over decisions

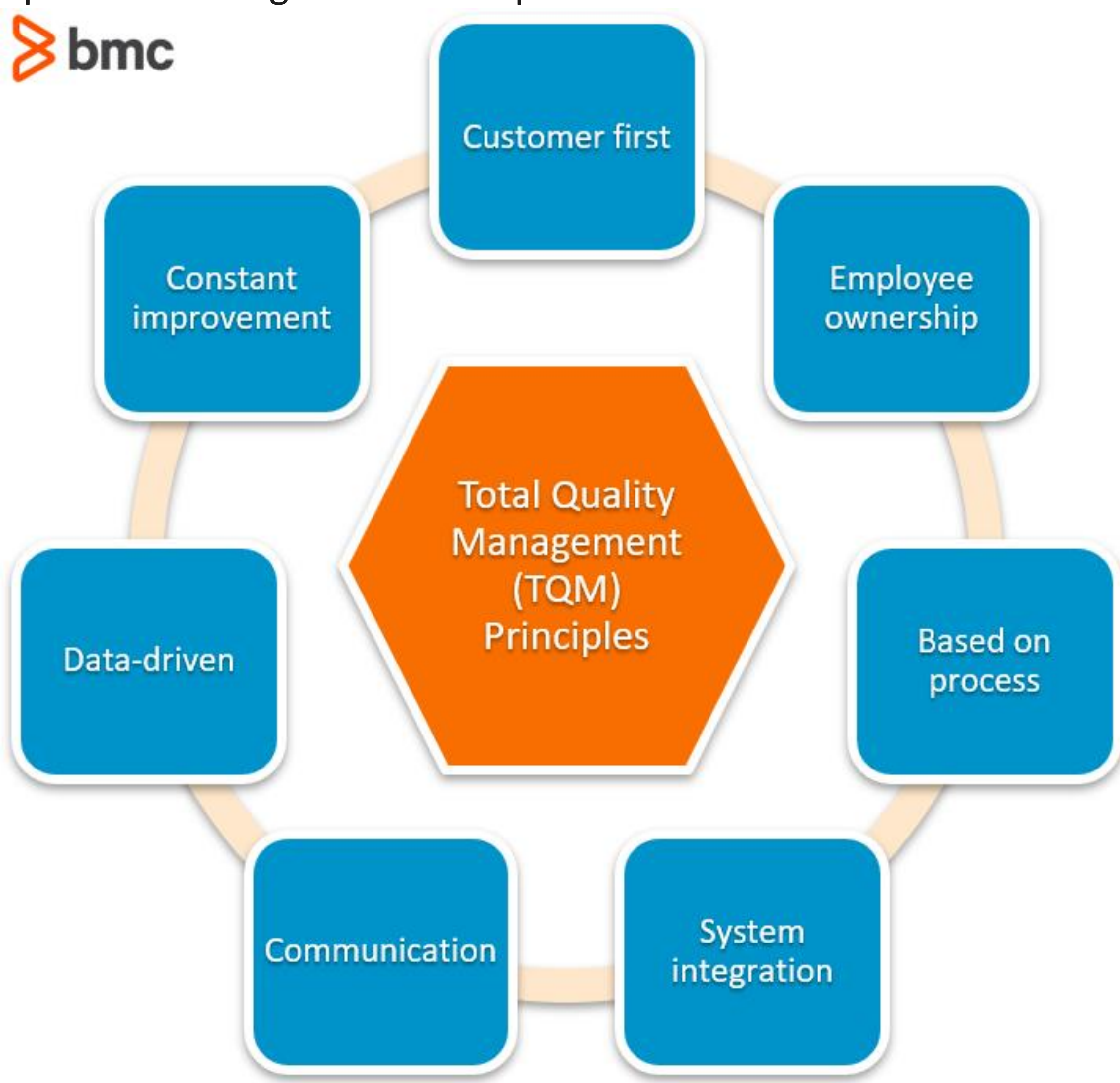
- **Laissez Faire Style/Free Rein Style**

- A free rein leader doesn't lead, but leaves the group entirely to itself
  - the leader provides little or no direction and gives employees as much freedom as possible, even though the leader is responsible for the final outcome
  - Depends largely upon the group to establish its own goals and work out its own problems
- Group members work themselves and provide their own motivation
  - Not ideal in situations where group members lack the knowledge or experience they need to complete tasks and make decisions.

UNIT-7

What is Total Quality Management?

Total Quality Management (TQM) is a management approach that seeks to provide long-term success by providing unparalleled customer satisfaction through the constant delivery of quality IT services. To properly execute on TQM methods, the entire organization needs to operate as a single unit in the pursuit of excellence.



Achieving this is accomplished with a laser-focus on the principles of TQM:

- **Customer first.** TQM's first and foremost pillar of success is an unwavering focus on the customer's experience in all interactions with the organization. From first contact through purchase and continued support, the customer should always be the main priority.
- **Employee ownership.** TQM requires the involvement of every team member to ensure that complete quality control is offered at every level. TQM doesn't focus on a single department because the goal is to provide customers with a great experience from every level of the organization.
- **Process-based.** TQM focuses on the creation and implementation of processes that provide organizations with the ability to find success and repeat it. Quantifying success and defining the steps taken to get there are essential for successful implementation of TQM.
- **System integration.** TQM strategies revolve around leveraging every asset available to the company. This is best achieved through system integrations that combine disparate parts of the organization into a single, well-oiled machine working in complete synergy.
- **Communication.** TQM requires every team member to be at their best and to function as a value-adding member of that team. This means communication and transparency is a core tenet of successful TQM practices.
- **Data-driven.** TQM doesn't employ guesswork. Instead, data is leveraged for the improvement of the organization and decisions are made based on quantifiable facts.

- **Constant improvement.** TQM isn't a one and done process. Perfection is impossible, so it must always be pursued to get the organization as close as possible to it.

These pillars of TQM act as a framework for every decision made within the methodology. Whenever your organization feels lost, the TQM ideals are your guiding stars for righting course.

Implementing TQM making company-wide changes for how work is done.

How to implement TQM

The first step for implementing any new system is an honest assessment of the organization as it is today. Implementation of TQM is something that has to be applied to the current structure of the organization; there is no step-by-step guide that will tell you how to do it for your business. Each business is unique and requires its own approach, but the core tenets of TQM can guide each decision.

Then, you can proceed with these areas of opportunity.

Emphasize customer satisfaction

Creating an emphasis on customer satisfaction will change the way departments think about their duties. If something they are doing isn't aiding in the improvement of the quality of the product or increasing the customer's experience, they aren't headed in the right direction.
Each employee should take ownership of their role and be ready to consider ways in which they can improve their own department and outputs.

Communicate with everyone

Communication throughout the organization is essential for educating everyone about the changes that are coming while also providing an avenue for receiving feedback. As they say, communication is a two-way street. Employees will have a much easier time establishing a feeling of ownership over the process when they know their voice is heard and they had a hand in guiding the changes.

Manage errors

One of the most important aspects of delivering quality is managing errors. No matter how focused everyone is on driving quality, IT organizations will always run into one issue or another.

Creating processes that mitigate issues is essential for TQM success. Errors should be addressed and dealt with as quickly as possible of course, but they should also be recorded and tracked.

Recurrent issues could be indicative of a deeper issue, requiring large-scale changes to current procedures. An error is an opportunity to assess a problem, but it’s also a chance to discover what is working. Total quality management practitioners should take advantage of errors as a chance to learn from their mistakes and find ways to avoid them in the future.

TQM is everyone’s responsibility

TQM requires that all parties take ownership of the part they play and this applies equally to admitting fault and giving out praise. A focus on improving the quality of products and services requires accountability.

Learning to snatch victory from the jaws of defeat is the pursuit of quality management when it comes to dealing with incidents and outages.

Tracking metrics and comparing the results of operations before and after changes is the best way to learn what works and what doesn't. It's also imperative that systems are structured and followed to ensure that success can be replicated and then improved. The process of improvement should never stagnate, ensuring that the pursuit of perfection never ends.

UNIT-8

INTELLECTUAL PROPERTY RIGHTS

Intellectual property (IP) pertains to any original creation of the human intellect such as artistic, literary, technical, or scientific creation. Intellectual property rights (IPR) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period of time.[1] These legal rights confer an exclusive right to the inventor/creator or his assignee to fully utilize his invention/creation for a given period of time. It is very well settled that IP play a vital role in the modern economy. It has also been conclusively established that the intellectual labor associated with the innovation should be given due importance so that public good emanates from it. There has been a quantum jump in research and development (R&D) costs with an associated jump in investments required for putting a new technology in the market place.[2] The stakes of the developers of technology have become very high, and hence, the need to protect the knowledge from unlawful use has become expedient, at least for a period, that would ensure recovery of the R&D and other associated costs and adequate profits for continuous investments in R&D.[3] IPR is a strong tool, to protect investments, time, money, effort invested by the inventor/creator of an IP, since it grants the inventor/creator an exclusive right for a certain period of time for use of his invention/creation. Thus IPR, in this way aids the economic development of a country by promoting healthy competition and encouraging industrial development and economic growth. Present review furnishes a brief overview of IPR with special emphasis on pharmaceuticals.

Types of Intellectual Properties and their Description

Originally, only patent, trademarks, and industrial designs were protected as 'Industrial Property', but now the term 'Intellectual Property' has a much wider meaning. IPR enhances technology advancement in the following ways:[1–4]

- (a)

  it provides a mechanism of handling infringement, piracy, and unauthorized use

- (b)

  it provides a pool of information to the general public since all forms of IP are published except in case of trade secrets.

IP protection can be sought for a variety of intellectual efforts including

- (i) Patents
- (ii) Industrial designs relates to features of any shape, configuration, surface pattern, composition of lines and colors applied to an article whether 2-D, e.g., textile, or 3-D, e.g., toothbrush[5]
- (iii) Trademarks relate to any mark, name, or logo under which trade is conducted for any product or service and by which the manufacturer or the service provider is identified. Trademarks can be bought, sold, and licensed. Trademark has no existence apart from the goodwill of the product or service it symbolizes[6]
- (iv) Copyright relates to expression of ideas in material form and includes literary, musical, dramatic, artistic, cinematography work, audio tapes, and computer software[7]

- (v) Geographical indications are indications, which identify as good as originating in the territory of a country or a region or locality in that territory where a given quality, reputation, or other characteristic of the goods is essentially attributable to its geographical origin[8]

A patent is awarded for an invention, which satisfies the criteria of global novelty, non-obviousness, and industrial or commercial application. Patents can be granted for products and processes. As per the Indian Patent Act 1970, the term of a patent was 14 years from the date of filing except for processes for preparing drugs and food items for which the term was 7 years from the date of the filing or 5 years from the date of the patent, whichever is earlier. No product patents were granted for drugs and food items.[9] A copyright generated in a member country of the Berne Convention is automatically protected in all the member countries, without any need for registration. India is a signatory to the Berne Convention and has a very good copyright legislation comparable to that of any country. However, the copyright will not be automatically available in countries that are not the members of the Berne Convention. Therefore, copyright may not be considered a territorial right in the strict sense. Like any other property IPR can be transferred, sold, or gifted.[7]

Role of Undisclosed Information in Intellectual Property

Protection of undisclosed information is least known to players of IPR and also least talked about, although it is perhaps the most important form of protection for industries, R&D institutions and other agencies dealing with IPR. Undisclosed information, generally known as trade secret or confidential information, includes formula, pattern, compilation, programme, device, method, technique, or process. Protection of undisclosed information or trade secret is not really new to humanity; at every stage of development people have evolved methods to keep important information secret, commonly by restricting the knowledge to their family members. Laws relating to all forms of IPR are at different stages of implementation in India, but there is no separate and exclusive law for protecting undisclosed information/trade secret or confidential information.[10]

Pressures of globalisation or internationalisation were not intense during 1950s to 1980s, and many countries, including India, were able to manage without practising a strong system of IPR. Globalization driven by chemical, pharmaceutical, electronic, and IT industries has resulted into large investment in R&D. This process is characterized by shortening of product cycle, time and high risk of reverse engineering by competitors. Industries came to realize that trade secrets were not adequate to guard a technology. It was difficult to reap the benefits of innovations unless uniform laws and rules of patents, trademarks, copyright, etc. existed. That is how IPR became an important constituent of the World Trade Organization (WTO).[11]

Rationale of Patent

Patent is recognition to the form of IP manifested in invention. Patents are granted for patentable inventions, which satisfy the requirements of *novelty* and *utility* under the stringent examination and opposition procedures prescribed in the Indian Patents Act, 1970, but there is not even a *prima-facie* presumption as to the validity of the patent granted.[9]

Most countries have established national regimes to provide protection to the IPR within its jurisdiction. Except in the case of copyrights, the protection granted to the inventor/creator in a country (such as India) or a region (such as European Union) is restricted to that territory where protection is sought and is not valid in other countries or regions.[1] For example, a patent granted in India is valid only for India and not in the USA. The basic reason for patenting an invention is to make money through exclusivity, i.e., the inventor or his assignee would have a monopoly if,

- (a)

  the inventor has made an important invention after taking into account the modifications that the customer, and

- (b)

  if the patent agent has described and claimed the invention correctly in the patent specification drafted, then the resultant patent would give the patent owner an exclusive market.

The patentee can exercise his exclusivity either by marketing the patented invention himself or by licensing it to a third party.

The following would not qualify as patents:

- (i) An invention, which is frivolous or which claims anything obvious or contrary to the well established natural law. An invention, the primary or intended use of which would be contrary to law or morality or injurious to public health
- (ii) A discovery, scientific theory, or mathematical method
- (iii) A mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine, or apparatus unless such known process results in a new product or employs at least one new reactant
- (iv) A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance

- (v) A mere arrangement or re-arrangement or duplication of a known device each functioning independently of one another in its own way
- (vi) A method of agriculture or horticulture
- (vii) Any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products
- (viii) An invention relating to atomic energy
- (ix) An invention, which is in effect, is traditional knowledge

Intellectual property rights are customarily divided into two main areas:
(i) Copyright and rights related to copyright.back to top

The rights of authors of literary and artistic works (such as books and other writings, musical compositions, paintings, sculpture, computer programs and films) are protected by copyright, for a minimum period of 50 years after the death of the author.

Also protected through copyright and related (sometimes referred to as "neighbouring") rights are the rights of performers (e.g. actors, singers and musicians), producers of phonograms (sound recordings) and broadcasting organizations. The main social purpose of protection of copyright and related rights is to encourage and reward creative work.

(ii) Industrial property.back to top

Industrial property can usefully be divided into two main areas:

- One area can be characterized as the protection of distinctive signs, in particular trademarks (which distinguish the goods or services of one undertaking from those of other undertakings) and geographical indications (which identify a good as originating in a place where a given characteristic of the good is essentially attributable to its geographical origin).

The protection of such distinctive signs aims to stimulate and ensure fair competition and to protect consumers, by enabling them to make informed choices between various goods and services. The protection may last indefinitely, provided the sign in question continues to be distinctive.

- Other types of industrial property are protected primarily to stimulate innovation, design and the creation of technology. In this category fall inventions (protected by patents), industrial designs and trade secrets.

  The social purpose is to provide protection for the results of investment in the development of new technology, thus giving the incentive and means to finance research and development activities.

  A functioning intellectual property regime should also facilitate the transfer of technology in the form of foreign direct investment, joint ventures and licensing.

  The protection is usually given for a finite term (typically 20 years in the case of patents).

While the basic social objectives of intellectual property protection are as outlined above, it should also be noted that the exclusive rights given are generally subject to a number of limitations and exceptions, aimed at fine-tuning the balance that has to be found between the legitimate interests of right holders and of users.

Salient features of Factories Act, 1948

The important features of the 1948 Act are as follows:

- The word “factory” has been expanded by the Factories (Amendment) Act of 1976 to include contract labour when determining whether a factory has a maximum of 10 or 20 employees.
- The Act increased the minimum age for children to work in workplaces from 12 to 14 and reduced their daily working hours from 5 to 4 and a half.
- The Act forbids women and children from working in factories from 7 p.m. to 6 a.m.
- The difference between a seasonal and non-seasonal factory has been abolished by the Act.
- The Act, which has provisions for factory registration and licencing.
- The state government is required to make sure that all factories are registered and also have valid licences that are renewed from time to time.
- The Act gives state governments the authority to enact rules and regulations that ask for management and employee association for the benefit of employees.
- The state government has the authority to apply the Act’s requirements to any establishment, regardless of the number of employees inside and regardless of whether the establishment engages in manufacturing operations.
- In *Rabindra Agarwal v. State of Jharkhand (2010),* the Jharkhand High Court held that the Factories Act, special legislation would prevail over the Indian Penal Code

Objectives of Factories Act, 1948

The important objectives of the 1948 Act are as follows:

- The major goal of the Factories Act of 1948 is to establish adequate safety measures and to enhance the health and welfare of workers employed in a factory. The Act also protects workers from various industrial and occupational hazards.
    - **Heath:** According to the Act, all factories must be kept clean, and all essential safeguards must be taken to safeguard the health of workers. The factory must have a sufficient drainage system, adequate lighting, ventilation, temperature, etc. There must be clean water supplies. Separate restrooms and urinals must be built in convenient locations for males and females. These must be freely accessible to employees and kept clean.
    - **Safety:** The Act requires that machines be properly fenced; that no young adults work on any dangerous machines in enclosed places, and also that appropriate manholes be provided so that employees may escape in an emergency.
    - **Welfare:** The Act specifies that appropriate and suitable washing facilities for workers must be provided and maintained in every factory. There must be storage and drying facilities, as well as sitting areas, first-aid equipment, shelters, restrooms and lunch rooms.
- The Act also imposes some restrictions on the employment of women, small children, and teenagers, such as working hours, intervals, holidays, etc., as well as on annual leave with pay, etc.
    - **Working hours:** The Act sets working hours for all workers, and no adult worker must be permitted to work in a workplace for more than 48 hours per week. Weekly holidays need to be granted.

- The Act also imposes specific restrictions on owners, occupiers, or the manufacturer's head in order to safeguard employees and ensure their health and safety precautions.
- The Act protects workers from exploitation and improves working conditions and the environment within factory premises.
    - **Penalties:** The Act also specifies specific rules created with provisions under the Act, and written orders that are violated. It is an offence, and penalties will be imposed, imprisonment for up to a year; a fine of up to one lakh rupees; or both fine and imprisonment. Any employee who misuses equipment related to the welfare, safety, and health of other employees, or those connected to the performance of his duties, suffers a Rs.500 fine.

Salient Features of the Act:

A. **Obligations of Employers:**

Every employer is responsible for the payment of wages to all the employees that he employs. Additionally, apart from the Employer, all the person so named / person so responsible to the employer / the person so nominated shall also be responsible for such payment.

B. **Wage Period:**

Every person responsible for Wage Payment shall fix periods in respect of which such wages shall be payable. No wage-period shall exceed one month.

C. **Time and Mode of Payment of Wages:**

Every establishment having employees in excess of 1,000 person shall pay the wages before the expiry of the 10^{th} day. All other employers shall make the Wage payment by the expiry of 07^{th} day.

Employers shall make the payment of wages in current currency notes i.e. cash or via Bank transfer.

D. **Deductions from Wages:**

Employers shall ensure that wages are paid to all employees without deduction of any kind except those authorized by or under this Act. Deduction includes the reduction of wages for the following:

- Fines
- Absence from duty
- Damage to or loss of goods including loss of money where such damage or loss is directly attributable to employee’s neglect or default
- Recovery of advances / loans and the interest due in respect thereof
- Adjustment of over-payments of wages
- Payments made by the employed person to the employer or his agent shall also be deemed to be a deduction from wages.

Deductions **does not include** following penalties (provided the rules w.r.t. penalty are in conformity with the requirements as specified by the State Government):

- Withholding of increment or promotion
- Reduction to a lower post
- Suspension

A. **Compliance Requirements:**

Maintenance of Registers:
Employers shall maintain Registers and records giving the following details:

- Particulars of persons employed
- Work performed by Employees

- Wages paid to employees and deductions made from their wages

All these Registers are required to be preserved for a period of 03 Years.

Display of Notice of Abstracts:

All Employers shall display Notice containing such abstracts of this Act and of the rules made thereunder in English and in the language of the majority of the persons employed in the factory. It includes the following:

- List of acts and omissions approved under Rule 12
- Rates of wages payable to employees (excluding those in supervisor / manager positions).

A. **Penalties for Offences under the Act:**

   If Employers fails to maintain registers required under this act or wilfully refuses to furnish such information or return or wilfully furnishes false information shall be punishable with fine up to Rs. 1,500 and may extend to Rs. 7,500.

   Additionally, If Employers fails to pay the wages by the date fixed by the authority shall be punishable with an additional fine which may extend to Rs. 750 / Day.

B. **Un-disbursed Wages in event of Death of an Employee:**

In case the Wages cannot be paid on account death of an employee or non-availability of details of his / her whereabouts, such amounts is required to be paid to person nominated by him in this behalf. In case employee has not nominated anyone, such amount shall be deposited with the prescribed authority.

UNIT-9

What is IoT?

The Internet of Things (IoT) describes the network of physical objects—“things”—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet. These devices range from ordinary household objects to sophisticated industrial tools. With more than 7 billion connected IoT devices today, experts are expecting this number to grow to 10 billion by 2020 and 22 billion by 2025. Oracle has a network of device partners.

How do IoT devices work?

Smartphones do play a large role in the IoT, however, because many IoT devices can be controlled through an app on a smartphone. You can use your smartphone to communicate with your smart thermostat, for example, to deliver the perfect temperature for you by the time you get home from work. Another plus? This can eliminate unneeded heating or cooling while you’re away, potentially saving you money on energy costs.

IoT devices contain sensors and mini-computer processors that act on the data collected by the sensors via machine learning. Essentially, IoT devices are mini computers, connected to the internet, and are vulnerable to malware and hacking.

Machine learning is when computers learn in a similar way to humans — by collecting data from their surroundings — and it is what makes IoT devices smart. This data can help the machine learn your preferences and adjust itself accordingly. Machine learning is a type of artificial intelligence that helps computers learn without having to be programmed by someone.

That doesn’t mean your smart speaker will discuss the key points of last night’s big game with you. But your connected refrigerator may send you an alert on your smartphone that you’re low on eggs and milk because it knows you’re near a supermarket.

COMPONENTS OF IOT

- **Sensors**: Sensors are electronic devices that produce electrical, optical or digital data derived from a physical condition or event. The data thus produced is electronically transformed by another device into an output of information which helps in decision making by intelligent devices and people.
- **Networks**: Signals assimilated by sensors are transmitted over networks with all the different components of a typical network including routers, bridges in different topologies, including LAN, MAN and WAN. Connecting the different parts of networks to the sensors can be done by different technologies including Wi-Fi, Bluetooth, Low Power Wi-Fi , Wi-Max, regular Ethernet , Long Term Evolution (LTE) and the recent promising technology of Li-Fi (using light as a medium of communication between the different parts of a typical network including sensors).
- **Standards**: Data is available, it has to be aggregated and analyzed for effective usage of the technology and decide the action of the device. That is done through standards followed to get the best desired results. In case of the standards not followed, the final outcome can get adversely affected.
- **Intelligent analysis:** Data is aggregated and then there is need for analysis. This is done though various standardized analytic procedures. A very important part of the whole process.
- **Intelligent actions:** Last stage is the intelligent action, which is the goal of IoT. If the action is not as desired, the purpose fails. This is the component which is the result of all other components.

Companies involved with the research and development of Internet of Things (IoT) are working on a fine evolution of IoT. The course of the world is waiting to be changed . But they need to be vary and cautious about the security and privacy concerns, ethical usage of the technology and the world good.

Characteristics of the Internet of Things :

There are the following characteristics of IoT as follows. Let’s discuss it one by one.

1. **Connectivity –**
   Connectivity is an important requirement of the IoT infrastructure. Things of IoT should be connected to the IoT infrastructure. Anyone, anywhere, anytime can connectivity should be guaranteed at all times Without connection, nothing makes sense.

2. **Intelligence and Identity –**
   The extraction of knowledge from the generated data is very important. For example, a sensor generates data, but that data will only be useful if it is interpreted properly. Each IoT device has a unique identity. This identification is helpful in tracking the equipment and at times for querying its status.

3. **Scalability –**
   The number of elements connected to the IoT zone is increasing day by day. Hence, an IoT setup should be capable of handling the massive expansion. The data generated as an outcome is enormous, and it should be handled appropriately.

4. **Dynamic and Self-Adapting (Complexity) –**
   IoT devices should dynamically adapt themselves to the changing contexts and scenarios. Assume a camera meant for the surveillance. It should be adaptable to work in different conditions and different

light situations (morning, afternoon, night).

5. **Architecture** –
   IoT architecture cannot be homogeneous in nature. It should be hybrid, supporting different manufacturers ' products to function in the IoT network. IoT is not owned by anyone engineering branch. IoT is a reality when multiple domains come together.

6. **Safety** –
   There is a danger of the sensitive personal details of the users getting compromised when all his/her devices are connected to the internet. This can cause a loss to the user. Hence, data security is the major challenge. Besides, the equipment involved is huge. IoT networks may also be at the risk. Therefore, equipment safety is also critical.

What are categories of IoT?

6 Leading Types of IoT Wireless Tech and Their Best Use Cases

- Cellular (3G/4G/5G) Well-established in the consumer mobile market, cellular networks offer reliable broadband communication supporting various voice calls and video streaming applications. ...
- Zigbee and Other Mesh Protocols. ...
- Bluetooth and BLE. ...
- Wi-Fi. ...
- RFID.

The Five **Types of IoT**

What is Consumer Internet of Things (CIoT)?

Consumer IoT (CIoT) refers to the use of IoT for consumer applications and devices. Common CIoT products include smartphones, wearables, smart assistants, home appliances, etc.

Typically, CIoT solutions leverage Wi-Fi, Bluetooth, and ZigBee to facilitate connectivity. These technologies offer short-range communication suitable for deployments in smaller venues, such as homes and offices.

What is Commercial Internet of Things?

While CIoT tends to focus on augmenting personal and home environments, Commercial IoT goes a bit further, delivering the benefits of IoT to larger venues. Think: commercial office buildings, supermarkets, stores, hotels, healthcare facilities, and entertainment venues.

There are numerous use cases for commercial IoT, including monitoring environmental conditions, managing access to corporate facilities, and economizing utilities and consumption in hotels and other large venues. Many Commercial IoT solutions are geared towards improving customer experiences and business conditions.

What is Industrial Internet of Things (IIoT)?

Industrial IoT (IIoT), is perhaps the most dynamic wing of the IoT industry. Its focus is on augmenting existing industrial systems, making them both more productive and more efficient. IIoT deployments are typically found in large-scale factories and manufacturing plants and are often associated with industries like healthcare, agriculture, automotive, and logistics.

The Industrial Internet is perhaps the most well-known example of IIoT.

What is Infrastructure IoT?

Infrastructure IoT is concerned with the development of smart infrastructures that incorporate IoT technologies to boost efficiency, cost savings, maintenance, etc. This includes the ability to monitor and control operations of urban and rural infrastructures, such as bridges, railway tracks, and on- and offshore windfarms.

Technically speaking, infrastructure IoT is a subset of IIoT. However, due to its significance, it’s often treated as its own separate thing.

What is the Internet of Military Things (IoMT)?

The last type of IoT is the Internet of Military Things (IoMT), often referred to as Battlefield IoT, the Internet of Battlefield Things, or simply IoBT. IoMT is precisely what it sounds like — the use of IoT in military settings and battlefield situations. It is chiefly aimed at increasing situational awareness, bolstering risk assessment, and improving response times.

Common IoMT applications include connecting ships, planes, tanks, soldiers, drones, and even Forward Operating Bases via an interconnected system. In addition, IoMT produces data that can be leveraged to improve military practices, systems, equipment, and strategy.

Applications of IoT in Smart Cities

When cities face issues brought on by population density, a plethora of problems can arise, such as air pollution, freshwater scarcity, mountains of garbage, and an increase in traffic. How can we deal with these challenges? According to Finextra, smart cities can leverage IoT and smart technologies in the following ways:

1. Smart Infrastructure

Digital technologies are becoming increasingly important for cities to have the conditions for continuous development; buildings and urban infrastructures must be planned more efficiently and sustainably. Cities should also invest in electric cars and self-propelled vehicles to keep CO_2 emissions low. In fact, intelligent technologies to achieve an energy-efficient and environmentally friendly infrastructure. For example, to reduce the need for electrical power, smart lighting only gives light when someone actually walks past smart lights; setting brightness levels and tracking daily use are both important components of smart lights.

2. Air Quality Management

Smart cities also are implementing tools that can capture pollution data in real time and forecast emissions. Being able to predict air pollution accurately allows cities to get to the root of their emissions problems and brainstorm strategic ways to limit the amount of air pollution they put out.

3. Traffic Management

One of the greatest challenges facing large cities is finding ways to optimize traffic. Yet, finding a solution is not impossible. For example, Los Angeles is one of the busiest cities in the world and has implemented an intelligent transport solution to control the traffic flow. Pavement integrated sensors send real-time updates of traffic flow to a central traffic management platform, which analyses the data and automatically adjusts traffic lights to the traffic situation within seconds. At the same time, historical data is used to predict where traffic can go – and none of these processes require human involvement.

4. **Smart Parking**

Cities are also leveraging intelligent parking solutions that identify when a vehicle has left the parking area. Sensors are built into the ground and report the location of free parking spaces via a mobile app the driver downloads. Others use vehicle feedback to precisely pinpointing the location of openings and guide waiting cars down the path of least resistance. Smart Parking is a reality today and does not require complicated infrastructure and a high investment, making this smart city application ideal for a mid-sized smart city initiative.

5. **Smart Waste Management**

Waste management solutions help to optimize the efficiency of waste collection and reduce operational costs while better addressing any and all environmental issues associated with inefficient waste collection. In these solutions, the waste container receives a level sensor; when a certain threshold is reached, the management platform of a truck driver receives a notification via their smartphone. The message helps them avoid half empty drains by appearing to empty a full container.

We'll work with you to transform your city services using IoT technologies. Learn more here!

Stefanini is Making Cities Smarter

Smart City projects are always running and are in need of a 24/7 solution that is non-stop, offers complete liability, and full availability.

We offer a variety of solutions, deploying the most modern communication and network technologies and promoting world-class stability. In real-time, we select the most modern and high-performance technologies and deploy them under certified excellence.

Through deeply-studied models, we leverage the excellence of cognitive computing and artificial intelligence in the solution. Finally, accuracy is our middle name; from the most modern sensors and IoT components to the Decision-Making outcomes, Stefanini delivers high rates of accuracy within the Smart Solution.

Ready to get started? Click here!

Five applications of IoT technology in transportation

These benefits of IoT technology in transportation can be applied through a number of applications within the sector. Here are five of the most common applications:

Traffic Management

Roading is by far the biggest segment within transportation when it comes to the adoption of IoT technologies and this is expected to grow as we head towards 2023. Within cities, data can be collected from CCTV feeds which transmit vehicle-related data to traffic management centres. Applications using IoT technology include:

- Smart parking
- Traffic lights
- Smart accident assistance

Toll and Ticketing

Conventional toll systems are becoming rapidly outdated. With the increase in vehicles on the roads, queues at toll booths have become a common sight, not to mention the manpower needed to operate toll booths on busy highways. Whilst automated tolls, using a RFID tag, have improved the flow of traffic, further improvements have been made possible by the use of IoT technology.

Many of today’s modern vehicles are equipped with IoT connectivity. A vehicle can be detected up to a kilometre away from a tolling station, correctly identified and the barrier lifted for the vehicle to pass through. Alternatively, for older vehicles, a registered smartphone could serve the same purpose, taking automatic payment from the digital wallet linked on the phone.

Connected Cars

As mentioned above, cars today rely on connectivity and a key part of that is many new cars are now equipped with internet connectivity, sensors and actuators, all monitoring a wide range of applications from brakes and engine to the control of tyre pressure and exhaust gas composition.

In the future, connected cars will use the in-vehicles networks, radar and cameras to help detect and communicate with one other, prevent collisions and to help promote smooth traffic flow.

Vehicle Tracking Systems

Vehicle tracking systems are typically used within the freight segment to help companies manage their fleets effectively. They also help to monitor driver behaviour and can collect data which informs on idling time and driving style. Examples of IoT-powered functionality include:

- Trip scheduling
- Fleet tracking
- Driving times and driver rest break scheduling
- Alerts for speeding, harsh cornering, acceleration or braking
- Monitoring of vehicle load
- Distance travelled and fuel consumption

Public Transport Management

One key area in which NEC has been operating is smart transportation, with a focus on the public transport segment. IoT technologies are already in wide use in this segment and our solutions, including integrated ticketing and automated fare collection, passenger information systems, passenger information display systems and advanced vehicle Logistics solutions, all utilising IoT technology to help solve social and economic issues such as traffic congestion in public transport.

IoT technology for connected public transport systems provides the following benefits:

- **Real-time vehicle tracking** – this helps public transport agencies better communicate with customers and provide accurate arrival times through both mobile devices and passenger information displays at transit stops and stations
- **Data analysis and real-time management** – the technology allows transit agencies to monitor progress in real-time and make adjustments for unpredicted incidents such as accidents, roadworks, emergencies etc., helping to re-route and make journeys more efficient
- **Personalised travel information** – transit agencies can track and monitor commuter behaviour and travel patterns and deliver personalised information direct to their smart phone on key changes such as delays, station closures or re-routing