Who is the father of entrepreneurship?

→ **Joseph Alois Schumpeter** is regarded as the father of entrepreneurship. He introduced the concept of entrepreneurship.

Concept of Entrepreneurship:

→ Entrepreneurship is the ability and readiness to **develop, organize and run a business enterprise**, along with any of its uncertainties in order to make a profit. The most prominent example of entrepreneurship is the starting of new businesses.

→ In economics, entrepreneurship connected with **land, labour, natural resources and capital** can generate a profit. The entrepreneurial vision is defined by discovery and risk-taking and is an indispensable part of a nation's capacity to succeed in an ever-changing and more competitive global marketplace.

Meaning of Entrepreneur:

→ The entrepreneur is defined as someone who has the ability and desire to establish, administer and succeed in a startup venture along with risk entitled to it, to make profits.

→ The best example of entrepreneurship is the starting of a new business venture. The entrepreneurs are often known as a source of new ideas or innovators, and bring new ideas in the market by replacing old with a new invention.

→ It can be classified into small or home business to multinational companies. In economics, the profits that an entrepreneur makes is with a combination of land, natural resources, labour and capital.

→ In a nutshell, anyone who has the will and determination to start a new company and deals with all the risks that go with it can become an entrepreneur.

What are the 4 Types of Entrepreneurships?

It is classified into the following types:

a. Small Business Entrepreneurship-

- These businesses are a **hairdresser, grocery store, travel agent, consultant, carpenter, plumber, electrician**, etc.
- These people run or own their own business and hire family members or local employee.
- For them, the profit would be able to feed their family and not making 100 million business or taking over an industry.
- They fund their business by taking small business loans or loans from friends and family.

b. Scalable Startup Entrepreneurship-

- This start-up entrepreneur starts a business knowing that their vision can change the world.
- They attract investors who think and encourage people who think out of the box.
- The research focuses on a scalable business and experimental models, so, they hire the best and the brightest employees.
- They require more venture capital to fuel and back their project or business.

c. Large Company Entrepreneurship-

- These huge companies have defined life-cycle.
- Most of these companies grow and sustain by offering new and innovative products that revolve around their main products.
- The change in technology, customer preferences, new competition, etc., build pressure for large companies to create an innovative product and sell it to the new set of customers in the new market.
- To cope with the rapid technological changes, the existing organizations either buy innovation enterprises or attempt to construct the product internally.

D. Social Entrepreneurship-

This type of entrepreneurship focuses on producing product and services that resolve social needs and problems. Their only motto and goal are to work for society and not make any profits.

Characteristics of Entrepreneurship:

Not all entrepreneurs are successful; there are definite characteristics that make entrepreneurship successful. A few of them are mentioned below:

→ **Ability to take a risk**- Starting any new venture involves a considerable amount of failure risk. Therefore, an entrepreneur needs to be courageous and able to evaluate and take risks, which is an essential part of being an entrepreneur.

→ **Innovation**- It should be highly innovative to generate new ideas, start a company and earn profits out of it. Change can be the launching of a new product that is new to the market or a process that does the same thing but in a more efficient and economical way.

→ **Visionary and Leadership quality**- To be successful, the entrepreneur should have a clear vision of his new venture. However, to turn the idea into reality, a lot of resources and employees are required. Here, leadership quality is paramount because leaders impart and guide their employees towards the right path of success.

→ **Open-Minded**- In a business, every circumstance can be an opportunity and used for the benefit of a company. For example, Paytm recognised the gravity of demonetization and acknowledged the need for online transactions would be more, so it utilized the situation and expanded massively during this time.

→ **Flexible**- An entrepreneur should be flexible and open to change according to the situation. To be on the top, a businessperson should be equipped to embrace change in a product and service, as and when needed.

→ **Know your Product**-A company owner should know the product offerings and also be aware of the latest trend in the market. It is essential to know if the available product or service meets the demands of the current market, or whether it is time to tweak it a little. Being able to be accountable and then alter as needed is a vital part of entrepreneurship.

Entrepreneurship and its Scope

The scope of entrepreneurship is far-reaching.

- Entrepreneurship moves even beyond the closed system of an enterprise.
- Entrepreneurship in its capacity stimulates the economy which enables societal change not only for fulfilling a need but also to **generate revenue for the entrepreneur, entrepreneurship thus provides jobs** for the society and develops communities.
- Entrepreneurship instigates a lot more than the **mere creation of business**.
- Entrepreneurship promotes the **new business and provides opportunities** to improve the new business sectors.

Need of Entrepreneurship

The need for entrepreneurship is detailed down in the following section:

1.Passion, Perseverance & Persistence

Passion is a strong and uncontrollable emotion that is based on something higher to achieve than what the person is carrying within himself. Perseverance is a mature emotion that comes through experiences gathered and analyzed. While persistence is the sail that will row the boat of an entrepreneur through the toughest of climates.

2.Big Dreamer

Dreaming big further strengthens an entrepreneur with his ability to dream and see the wide picture. This is the very first step that sets the path to self-discovery.

3.Learning

Learning is never to stop irrespective of age and thus arming oneself with education does play a vital role in forming leadership qualities when needed.

4.Good Listener

The ability to contribute will only come once we have abundance in ourselves, and this comes by absorbing the words of others. The ability to truly listen to the customers and employees is actually what makes a difference. This very skill leads to a successful venture.

5.Financing Partner

Choosing a financing partner who understands the business needs is very much essential. This is as critical as choosing the business which the entrepreneur wants to pursue. Also, a business loan from the right lender will for sure play a pivotal role in realizing the dreams of becoming a successful entrepreneur.

Importance of Entrepreneurship:

Creation of Employment- Entrepreneurship generates employment. It provides an entry-level job, required for gaining experience and training for unskilled workers.

Innovation- It is the hub of innovation that provides new product ventures, market, technology and quality of goods, etc., and increase the standard of living of people.

Impact on Society and Community Development- A society becomes greater if the employment base is large and diversified. It brings about changes in society and promotes facilities like higher expenditure on education, better sanitation, fewer slums, a higher level of homeownership. Therefore, entrepreneurship assists the organization towards a more stable and high quality of community life.

Increase Standard of Living- Entrepreneurship helps to improve the standard of living of a person by increasing the income. The standard of living means, increase in the consumption of various goods and services by a household for a particular period.

Supports research and development- New products and services need to be researched and tested before launching in the market. Therefore, an entrepreneur also dispenses finance for research and development with research institutions and universities. This promotes research, general construction, and development in the economy.

What is entrepreneurial competency?

Entrepreneurial competency is a set of skills **and behaviour needed to create, develop, manage, and grow a business venture**.
It also includes the ability to handle the risks that come with running a business. Without a doubt, business owners and startup founders must possess most of the entrepreneur competencies to succeed.
The competencies could be technical, behavioural, attitude-based, or productivity-based.

Those with an entrepreneurial zeal need to play three prominent roles.

1. Creator
2. Organizer
3. Market maker

So the competencies for entrepreneurship are designed to help people perform in these roles effectively.

Core competencies in entrepreneurship

While there are a lot of **core competencies in entrepreneurship**, here are some basic ones you can look for in your employees the next time there is a competency evaluation process happening.

- Risk-taking abilities
- Out-of-the-box thinking and creativity
- Problem-solving abilities
- Taking initiative
- Persistence
- Persuasion and social skills
- Business management skills
- Critical thinking skills
- Networking skills
- Effective communication skills

How to encourage entrepreneurial competency skills in employees?

Developing **entrepreneurial competencies** offers two benefits –
→ It helps employees move from individual roles to management roles and allows the organization to flourish and take more giant strides ahead.
→ So, here are the innovative ways in which an organization can encourage **entrepreneurial competencies** in its employees.

Allow knowledge sharing

This is one of the most important ways you can groom entrepreneurs within the organization.

Make sure knowledge is available freely for those who pursue it. Diversity of knowledge is what makes a person holistically developed. Employees should have a basic idea of how most other teams and the organization's business function. Learning programs need to be offered regularly, without hesitation.

Initiate programs that faster creativity and fresh ideas

→ There are organizations that host town halls just to get fresh ideas and thoughts from employees. Employees are asked to speak their minds here, and new ideas are jotted down.

→ This makes employees feel like they matter. It also helps the organization to identify those with entrepreneurial skills easily and get smart ideas that may work.

Allow ownership

→ Having someone to monitor employees is a good idea. However, micromanagement can turn out to be negative for the employee's spirits.
→ Make sure you create the sense of ownership in employees, letting them take smaller decisions themselves and deal with clients with minimal monitoring.
→ Hire managers who believe in this process to ensure employees get the freedom that allows them to foster **entrepreneurial competencies.**

Create an atmosphere of security and protection

→ All entrepreneurs make choices and decisions and own them, whether they worked or not.

→ However, employees have the added pressure of being accountable to the management.

→ So, they would hesitate to do this unless they know that the management trusts them and would not shift blame if a decision didn't work.

→ If you want employees to develop entrepreneurial competencies, then let them know that making mistakes is alright and that the organization will back them up and help rectify damages.

→ Creating that kind of a psychologically secure atmosphere is very important.

Organization structure:

- Organizational structure is the **skeleton system** based on which an **organization function**.
- Organizational structure deals with the framework which defines the relation between **people and positions in the organization**.
- Organization structure is defined as the formal system of task and reporting relationships that **controls, coordinates and motivates employees** so that they cooperate and work together to achieve an organization's goals.
- Organizational structure supports **division of work, categorizing the tasks** and supervision in an organization.
- An effective organizational structure aids the efficient running of an organization.

Based on the arrangement of activities the organizational structures can be defined into three types:

1. Functional structure is the oldest and most common form of organizational structure.

→ An organization when divided into several sub-units based on the specialized functions, this structure would be called as functional structure.

→ In a functional structure grouping is done based on the specific functions like operations, production, finance and marketing.

→ The advantages of an organization possessing a functional structure are specialization, accountability and clarity.

→ Every sub-unit emphasizes on its own work, a member of the sub-unit is delegated with authority and responsibility.

2.The divisional structures are found in large scale industries which develop and deal with more than one product and operate in several markets across the globe.

The organization is divided into several sub units based on the **products, markets and consumer** needs in different geographical regions.

The sub-units are independent and work under a **divisional manager**, the divisional manager reports to the head **office** and **delegated** with powers of decision making on production, marketing functions.

This allows the managers to make decisions on the respective divisions in time. This model facilitates the sub-units to concentrate on the consumer needs, encourages competition among the divisions and improved regulation as every sub-unit acts as individual profit centre.

This also has few disadvantages, like replication of functions (a sub-unit may require different sales teams). The competition among the sub-units may lead to negative consequences and it would difficult to control and coordinate each sub-unit.

3.**Adaptive structures** are the organizational structures framed to handle the exclusive situations.

There are two types of structures in this they are:

a. Project Organization.

b. Matrix Organization.

Project Organization – The positive side of this structure is that the structural framework of the parent organization doesn't get interrupted and the project aims to accomplish its task within the time frame and to reach the expected standards.

There is a scope for better managing and control over the tasks, as the managers are delegated with authority and responsibility for results.

Matrix Organization – Matrix structure is a framework which allots resources from different functional sub-units to work on more than one project. There may be two diverse projects implemented in organizations simultaneously.

To encourage and develop innovation:

- Businesses are now paying more attention to the benefits of encouraging innovation than ever before.
- 63% of companies now have chief innovation officers to help drive new ideas and systems. However, **doing it effectively is challenging and time-consuming.**

I. Competitive advantage:

Companies **that invest time, effort and money** in finding new and better ways of doing things have an advantage over others in the market. It's that simple.

For example,

Look at Amazon's groundbreaking innovations in online purchase and delivery (and pretty much everything else).

LEGO - a great example of the competitive advantage through innovation.

LEGO is another great example here. The beloved block toy company was facing a tough financial situation in the early 2000s, but gradually reclaimed its status as

a market leader through a mixture of innovation, co-creation, and customer collaboration.

II. Customer centricity

Trialing new approaches to **services and products** ensures a constant focus on serving the needs of customers. This helps build a dedicated market base and ensures a company stays responsive to customer demand.

Example: Think about Apple's relentless customer focus. By keeping the company's goal improving people's lives through convenient and intuitive personal electronics, the company stayed on the path to market dominance.

III. Employee satisfaction and retention

An innovative working approach appeals to employees with higher levels of creativity and lateral thinking, helping companies to hold on to their best talent.

Example:

Google-The tech giant's approach to staff-driven innovation keeps its people engaged, happy, and motivated.

Southwest Airlines is another great example. The air carrier company has a great culture of social development, due in part to its commitment to involving all levels of its staff in innovative "blue-sky thinking" exercises.

Techniques to encourage innovation in the workplace:

- Leadership & management
- Innovation strategy
- Willingness to experiment
- Open communication
- Staff well-being
- Workplace design & layout
- Tools & software

UNIT -2

Specialized Financial Institutions:

1. Industrial development bank of India-IBDI

- It was set up as a wholly owned **Subsidiary of Reserve Bank of India** in July, **1964 by an act** of Parliament.
- It serves as an **apex level National Institution** for providing term finance to the industry.
- In 1976, the ownership of Bank was transferred to the government and it was interested with the additional responsibility affecting as Principal financial institution for coordinating the activities of institutions engaged in the financing promotion or development of the industry.

Functions of IDBI

I) It provides **direct financial assistance** to Industrial concerns by giving them long-term loans.

II) It provides **Technical and administrative assistants** for promotion and expansion of Industry.

III) These loans raised by industrial concerns from other financial institutions.

IV) It accepts bills of exchange of industrial concerns and also discounts and rediscounts them.

V) It provides **refinancing facilities**.

2. Small industries development Bank of India (SIDBI)

It was set up by an Act of parliament i.e. **Small industries Development** Bank of India Act, 1989 as a wholly owned subsidiary of IDBI **for refinancing bills, rediscounting and equity support** to the small-scale sector.

It started functioning on April 2, 1990. SIDBI was de-linked from IDBI w.e.f. 27th March 2000. It serves as an Apex level national institution for promotion, **finance and development of industries** in small sector.

Functions of SIDBI

a) It provides **financial assistance** through term loans and working capital.

b) It provides finance through discounting and re discounting of bills arising from the sale of **machinery** to small units.

c) It provides **venture capital support**.

d) It provides services like **factoring, leasing** etc.

3. National Bank for agriculture and rural development (NABARD)

- NABARD has been set up for promotion of **agriculture, small scale industries, Cottage and village industries, handicraft** etc.
- In the rural sector this is an **Apex Bank for agriculture finance**.
- It came into existence on July 12, 1982. It provides refinancing facilities.
- It has **initiated microfinance program** under with millions of poor people have been provided access to credit.
- It has created special funds like **watershed development funds, tribal development funds, research and development funds, Pharma innovation funds, Micro Finance development** and equity fund to support innovations in the neglected areas.

Objectives of NABARD

1) The National Bank will be an apex organization in respect of all matters relating to policy, planning operational aspects in the field of credit for **promotion of Agriculture, Small Scale Industries, Cottage and Village Industries, Handicrafts** and other rural crafts and other allied economic activities in rural areas.

2) The Bank will serve as **a refinancing institution** for institutional credit such **as long-term, short-term** for the promotion of activities in the rural areas.

3) The Bank will also **provide direct lending** to any institution as may approve by the Central Government.

4) The Bank will have **organic links with the Reserve Bank** and maintain a close link with in.

Schemes Supported By NABARD:

- Dairy Entrepreneurship Development Scheme.
- Commercial production units of organic inputs.
- Agri clinic and Agribusiness Centers Scheme.
- National Livestock Mission.
- GSS-Ensuring End Use of Subsidy Released.
- Interest subvention Scheme.
- New Agricultural Marketing Infrastructure.

4. Regional Rural Banks (RRBs)

- The objective of setting up regional rural banks was **to bring the banking services to the doorstep of rural masses**.
- In these banks were provided funds to **target group comprising weaker section** of the society at concessional rate of interest.
- 1997 the RRBs have been allowed to land outside the target group also by classifying their advances into priority sector and non-priority sector.

In view of the above preamble of the Act the objects and activities of RRBs can be briefed as under:

1) Bridging the **credit gaps** in rural areas.

2) To develop such measures this could restrict the outflow of **rural deposits to urban areas.**

3) To reduce regional imbalances and increase **rural employment generation** activities.

5. State financial corporation's (SFCs)

- A Special law known as **state Financial Corporation Act 1951** was passed by Parliament to enable all the states except Jammu and Kashmir to set up their own state financial corporations.
- So far **18 SFCs are operating in different states** and union territories.
- The main objective of SFCs is to **finance and promote small and medium enterprises** in projects costing up to Rs. 5 crores for achieving balanced regional **socio-economic growth and generating employment opportunities.**
- SFCs operates number of schemes of **refinance and equity.**

Functions of state financial corporations:

a) They provide term loan for **acquiring land building plant** and **machinery** other miscellaneous fixed assets etc.

b) They established **polytechnics or training institutes** for imparting training to technically qualified persons.

c) They take up the development of **lesser developed parts** of the state and **engage in infrastructure development** like electricity, road, water etc.

d) They promote **self-employment**.

e) They provide finance for expansion, modernization and upgradation of Technology in the existing units.

f) They identify and **examine local problems**.

g) They provide **seed capital assistance** under the scheme of IDBI.

h) They provide deferred payment guarantee for **purchasing plant and machinery.**

i) They provide foreign exchange loans to industrial units under World Bank schemes.

6. State industrial development corporations (SIDCs)

- SIDCs were set up in 1960s and 1970s. These were established as wholly owned undertakings of the state governments under the Companies Act, 1956 autonomous Corporation under specific state Acts.
- Different states have set up the **state industrial Development corporations** with a view to improving the **growth of industry** in their states.
- These corporations operate as per the guidelines issued by State Governments.
- There are **28 SIDCs operating** in our country.
- They provide assistance to small and medium units and projects costing up. **to Rs.10 crores**

Functions of SIDCs

a) They promote and develop Industries by activities like **project identification**, **preparation of project report, selection and training of entrepreneurs.**

b) They provide **term loans** to industries.

c) They grant **initiatives and subsidies** on behalf of the central and state Governments.

d) They act as an **agent of IDBI, SIDBI** and thereby provide the benefit of seed capital scheme.

e) They provide **risk capital to entrepreneurs** by way of equity participation.

f) They develop industrial area by providing **infrastructural facilities**.

7. State small industries development corporations (SSIDCs)

SSIDCs are state Government undertakings responsible for catering to the needs of the **small and cottage industries** in the state/ union territories.

They undertake a variety of activities for development of the small sector. At present there are **18 SSIDCs** in operation.

Objectives of SIDC

The main objectives of SIDC are as follows:

a) SIDC aims to promote micro, small and medium enterprises.

b) It aids in the establishment of entrepreneurship and skill development.

c) It helps in facilitating industrial infrastructure development.

d) It aims in providing publicity and marketing support to industries.

Functions of SSIDCs

a) They extend seed capital assistance on behalf of the state government.

b) They produce and distribute scarce raw material.

c) The provide machinery on hire-purchase basis.

d) They provide assistance for marketing of the product of small-scale units.

e) They provide managerial assistance to production units.

8. District industries centers (DICs)

- DICs have been established in every district.
- The objective of establishing such centres is to develop small and medium industries.
- They collect information about the availability of **raw material and make arrangements for machinery and equipment, marketing research, credit facilities** etc. for the development of small units in the district.
- They identify the potential borrowers with a small sector and sponsor their loan applications to the banks operating in the district.
- Under the Prime Minister's Rozgar Yojana scheme (PMRY), DICs are assigned the task of identification of beneficiaries and implementation of the scheme in the district.

Objectives of district industries centers (DICS)

The following are the main objectives of DICs:

a) To identify the new entrepreneurs and providing assistance to them regarding their own startup's.

b) To provide financial and other facilities to smaller blocks.

c) To rise the complete efforts for industrialization at district level.

d) To enhance the rural industrialization and also the development of handicrafts.

e) To reach economic equality in multiple areas of the district.

f) To allow various government schemes to the new entrepreneurs.

g) To desire the regional imbalance of development.

h) To make all the necessary facilities to come under one roof.

Functions of district industries centres (DICS):

1) **To spot the entrepreneurs:** DICs conducting various motivational programmes so that they can find new entrepreneurs throughout the districts. It is done particularly under some schemes and with the association of SIS's and TCO's for conducting Entrepreneurial programmes.

2) Purchase of fixed assets: To purchase fixed assets, the DICs suggest loan applications of the prospective entrepreneur to some of the concerned financial and development institutions like NSIC, SISI etc., DCIs also recommend commercial banks so that to meet the working capital requirement of SSI to run operations daily.

3) Offers subsidies and other incentives: DCIs help the rural people to subsidies offered by the government on various schemes. It leads to the betterment in boosting financial capacity of the units and may undergo for further development activities.

4) Guidance of import and export: Government provides various types of incentives for import and export on particular goods and services. The license to the importer and exporter is issued on the basis of recommendation of DIC.

5) Entrepreneurial training programmes: DCIs allow a lot of training programmes for the rural entrepreneurs who are new to the business world and also recommend other institutions to take part in such training programs. These are intended to give better assistance to the new entrepreneurs.

6) Provides employment for unemployed educated ones: The DICs have introduced a scheme to guide the unemployed educated youth by providing them facilities for self-employment. The age limits between 18 to 35 years with minimum qualification of metric or technical trade. The notable thing here is that the technocrats and women are given importance

9.Small Industries Service Institutes (SISIs):

- The Small Industries Services Institutes (SISIs) are set up **to provide consultancy and training to small entrepreneurs**-both existing and prospective.
- The activities of SISIs are coordinated by the **Industrial Management Training division of the DCSSI's office**.
- There are 28 SISIs and 30 branches SISIs set up in the State capital and other places all over the country.

The main functions of SISIs include:

- To serve as an interface between Central and State Governments.
- To render technical support services.
- To conduct Entrepreneurship Development Programmers.
- To initiate promotional programs.

The SISIs also render assistance in the following areas:

(1) Economic Consultancy/Information/EDP Consultancy.

(2) Trade and market information.

(3) District industrial potential surveys.

(4) Modernization and implant studies.

(5) Workshop facilities.

(6) Training in various trade/activities.

(7) Project profiles.

(8) State industrial potential survey.

MARKET SURVEY & OPPORTUNITY IDENTIFICATION: -

Any unit in which the total investment on the **m/c's, plants and equipment does not exceed Rs. One crore** whether held on ownership Basis or by higher purchase basis will be qualified for the small-scale industrial unit.

Characteristics of small-scale industries: -

1. Highly personalized character: -

- In SSI the owner himself is generally the manager, therefore these industries are generally managed in personalized manner.
- The owner has first-hand knowledge of whatever is going on the business. the activity participates in all the aspect of Business decisions making

2. Labour intensive: -

- SSI are generally labour intensive where the group of people are involved to fulfil a particular task

3. Local resources: -

- SSI Uses a local resource and have a simple organization

Steps for standing SSI: -

1.Selection of products: -

- Selection of product is the most important decision before setting SSI.
- This decision must be then after taking into a **count personal choice of entrepreneur, financial resources, managerial skills, technical feasibility market demand** for this product must be analysed before taking the final decision.

Guidance or a support in this regard May be sought or find from the different authorities like SISI of a NSIC etc the following steps are helpful in the product identification

i) Conduct Market survey and study the product in regard of their demand in the Market.

ii) Study the similar product in the market that can be probable competitor, analyse them in respect of their cost, quality and utility.

iii) Find whether the product can be exported.

iv) Experience in the line should be considered.

v) Possibility of demand increase in future also be considered.

2.Preparation of project report: -

In this report entrepreneur has to give the details about the product, plant and machinery, loss of production, sale, profits and the economic feasibility of the product.

3.Location of the industry: -

One can purchase land or through the state industry development Co-operation who construct development industrial plots for the SSI.

An entrepreneur should consider these factors before choosing the location of his enterprise

a) Nearness to the source of raw material.

b) Nearness to the Market.

c) Availability of land at cheap rates.

d) Availability of skilled labour.

e) Lost of labour in the Asia.

f) Availability of transport and communication facilities.

g) Availability of power, water waste disposal and other essential service climate and environmental factor.

4.Registration of industry with the suitable authorities: -

Registration of SSI is done in two stages –

1. Provisional

2. Permanent

A Provisional registration is done before the unit is setup and the permanent registration is issued when the unit goes into production.

5.Arranging Finance: -

After the selection of industry, product and project.

The next step for entrepreneur is to decide amount of investment required in the project it depends upon nature of technology and the size of project.

6.Obtaining power and water collection: -

An entrepreneur has to arrange these before setting a small-scale unit these are available on the priority basis to the small entrepreneur one has to contact electricity board or municipal co-operation or a local body for this purpose

7.Arranging machinery and equipment: -NSIC and the other state small industry Co-operation helps In enquiring the machinery and equipment on the higher purchase basis

8.Arranging the raw material: -Without Raw material no production can begin SSIR sometimes based on local available raw material and local skills. There are some import policies with supply the raw material to the small-scale unit in a short time.

9.Recruitment of staff: -Recruitment and training of skilled and unskilled worker where ever necessary should be considered.

10.Starting the production: - A schedule of production should be drawn according to demand and order or product in hand

11.Quality control and testing: - Point should be considered because the success of failure of the product depends its quality. Therefore, material should be produced according to the specification and standard of national laboratories and testing centre.

12.Marketing the product: -Marketing is the activity to providing the link between customer and labour these activities involve flow of information for customer to producer so this relationship entirely depends upon accuracy and marketing

13.Export of promotion opportunity: - To expand the business outside the geographical boundaries. It is better to explore and export promotion opportunity of the market.

 # Procedure For Registration for SSI :-

Registration OF SSI is **optional and not compulsory** however the registration with DIC helps in getting the assistance from the govt.

To the registration of small-scale unit is done in 2 Stage

1. Provisional registration

2. Permanent

Both provisional and permanent are got done by applying on application form of SSI available with DIC.

1.Provisional Registration:

- ✓ The provisional registration is temporary type of registration Given initially the period of 2 year and can be renewed Maximum twice for the next each year
- ✓ One can apply for provisional Registration even when he is planning to setup the unit.

- ✓ The application for the extension should be made with in time otherwise registration will be cancelled.

The application for the registration of small-scale unit should be submitted to the general manager of DIC allowing with following document :-

i) Application in the prescribed form fully filled and signed by owner or the partners

ii) The passport size of photograph of the owner or the partners

iii) ID proof of owner or the partner

iv) Photocopy of partnership deal is required if the industry is partnership based

This registration helps the entrepreneur in following ways :-

- An entrepreneur can apply **for financial assistance in SFC**, from the commercial bank

- Apply for industrial plot in the industrial area masked by district authorities

- Apply of power and water connection

- Apply of sale tax number

- To apply to NSIC for purchasing the m/c and equipment

- Apply to municipal co-operation and the outer local authorities for permission to construct the Shell to establish a unit.

- Any other export or Import license for the goods and raw material

2) Permanent registration:-

- ✓ When the entrepreneur has taken all the step to establish the unit that is factory building is ready, power connection is obtained and the licenses from municipal co-operation is obtain one can apply for permanent registration

Application for the permanent registration along with following document must be submitted to the general manager of DIC

1. Rent receipt or NOC from landlord or the photocopy of house tax service in name of small scale unit

2. Documentary proof of power installation or the proof of power bill

3. Photocopy of Business issued by municipal co-operation

4. Documentary proof of plant and machinery are in working condition

5. If few copies of purchase and sale bill

6. Photocopy of purchase of raw material

7. Photocopy of partnership deal

8. Photocopy of approved scheme and the project scheme

Condition of Registration: -

- Unit remains closed continuously for more than one year

- Unit has mis utilized the raw material allocated to it

- The unit fails or avoids to give the full and true information acquired by registering authority from time to time

 # List of items reserved for exclusive manufacture in SSI:-

* man-made fibres

* Chemical

* Die stuff

* Electrical

* Thermoplastic product

* Leather and products

* Paper product

* Rubber products

* Wood products

* Organic chemical and products

sales forecasting:

Entrepreneur is required to know the demand of product likely to be manufactured.

He must know the estimate of sale of the industry in the future all the manufacturing unit are based on sales forecast.

The forecast helps the management in determining as to how much will be the turn over, how much to manufacture and what shall be the requirement of men, m/c and at equipment

 # Importance of accessment of demand and supply: -

- It helps to determine production volume considering availability of facilities like equipment, capital, man power

- it helps in taking decisions about plant expansion and changes in the production schedule

- It facilitates in deciding the extend of advertising

- sale forecast helps in preparing production and purchasing schedule.

 # Factor for sales forecasting :-

a. Competition:-To process demand is the main factor to know about the existing and new competitor. Quality of their products and sales of their products

b. Changes of technology: - With the advancement of technology new products are coming in market the liking of customers are changing with advancement of technology so this factor must be considered

c. Govt. Policy: - Depending upon govt. Policies and rules the sale is product affected demand of product also depends upon the factor whether the govt. Is buyer of that production

d. Factor related to concern itself: - These factors are related to change In price due to change in expenditure methods used for forecasting the demand

#Method used for forecasting the demand:-

1.Customers views:-

This is the most direct method for making for casting for short time in which customers are asked but they are thinking to buy a product in future.

In this method everything depends upon customers view

2.Sales man opinion: -The forecasting depends on sales man estimation for their respective area.

As the salesman are closest to customers. They can estimate more properly about the customer reaction about the product and their future requirement

3.Projection in post :-

In this method some Data are collected from past and on the basis of this data sales of future prediction

 # Concentration in product selection :-

* Product is such that for which there is already more demand then the existing supply in the Market

* The product is such that which can succesfully complete with existing similar product in the Market due

to it's improve design

* Product should satisfy a presently unserved need.

Following factor must be considered in product selection

- Present Market :- The size of presently available market is a main factor In the product selection estimates of the number of customers and their expected capacity to consume gives the sales estimates of the product

- Cost :- Cost of production and distribution must permit and acceptable profit when the product is priced competitively

- Risk:- The possible risks are the technological risk, competition, market stability, quality and reliability risks toward the product the risks should be analysed

- **Availability of main production factor:-** Production factors such as raw material, water, fuel should be examine to ensure there solubility

 # Data collecting for setting a SSI :-

During the starting stage of the project planning a new enterpreneur needs a lot of information on the various aspects of a proposed projects

The data to be collected for setting a new business activity May be classified into following ways :-

i) Raw material data :-

- Name of the major suppliers of the raw material

- Material to be imported

- Prices and availability of raw material

- Is there any alternative raw material which can be used

ii) Machinery and equipment data :-

- who are the manufactures or supplies of the machinery needed for project

- what are the specification in different branch of machineries available in the market

- Wheather the spare parts of machinery are easily available

- What is the normal maintaince and repair cost

- Wheather special type of transport and handling will be required

iii) Market data :-

collect the Data from the existing manufactures or the competitor of the proposed products regards the following aspects

a) range of data

b) Prices of the product

c) their plan for expension

*** Collect the following data from the suppliers from the proposed product**

a) Existing suppliers of the proposed product

b) their terms of Business and comession

c) Are they dealing in the other product also

d) Market area and the annual turn over of the suppliers

iii) Collect the following data regarding the consumer :-

a) what are the present sources of supply

b) Weather the customer is satisfied with the present product

c) What are the preference of customers in case of your product.

iv) Financial data :-

a) approximate financial requirements of the proposed unit

b) Effective or current rate of interest on the loan and and the capital offered by the different financial institutions

v) Personal data :-

a) Total man power needed for proposed unit

b) Category wise requirements of the man power and their qualifications and skills required

c) What are the current wages and salary rate

Vi) General data :-

a) Is there a possibility of getting a shed all rent in the industrial rate. What are the current rates in industrial rates

b) Possibility of getting an industrial plot in the area identified for the project and the cost of same

c) Electric power supply position in the area identified for the proposed project

WHAT IS DATA COLLECTION?

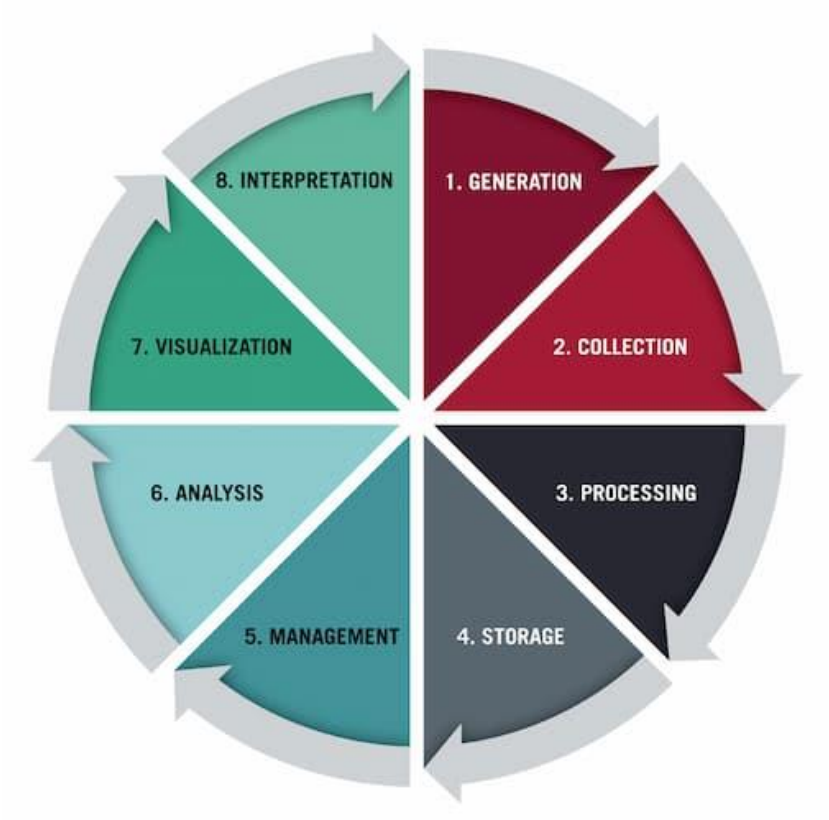
Data collection is the methodological process of gathering information about a specific subject.

In general, there are three types of consumer data:

a. First-party data, which is collected **directly from users** by your organization.

b. Second-party data, which is **data shared by another organization** about its customers (or its first-party data).

c. Third-party data, which is data that's **been aggregated and rented or sold by organizations** that don't have a connection to your company or users.



7 DATA COLLECTION METHODS USED IN BUSINESS ANALYTICS

1. Surveys:

Surveys are physical or digital questionnaires that gather both qualitative and quantitative data from subjects.

Ex: One situation in which you might conduct a survey is gathering attendee feedback after an event.

2. Transactional Tracking:

→ Each time your customers make a purchase, tracking that data can allow you to make decisions about targeted marketing efforts and understand your customer base better.

→ Often, e-commerce and point-of-sale platforms allow you to store data as soon as it's generated, making this seamless data collection method that can pay off in the form of customer insights.

3. Interviews and Focus Groups:

→ Interviews and focus groups consist of talking to subjects face-to-face about a specific topic or issue.

→ Interviews tend to be one-on-one, and focus groups are typically made up of several people. You can use both to gather qualitative and quantitative data.

→ Through interviews and focus groups, you can gather feedback from people in your target audience about new product features.

→ Seeing them interact with your product in real-time and recording their reactions and responses to questions can provide valuable data about which product features to pursue.

4. Observation

→ Observing people interacting with your website or product can be useful for data collection because of the candor it offers. If your user experience is confusing or difficult, you can witness it in real-time.

→ Yet, setting up observation sessions can be difficult. You can use a third-party tool to record users' journeys through your site or observe a user's interaction with a beta version of your site or product.

5. Online Tracking

→ To gather behavioural data, you can implement **pixels and cookies**. These are both tools that track users' online behaviour across websites and provide insight into what content they're interested in and typically engage with.

6. Forms

→ Online forms are beneficial for gathering qualitative data about users, specifically demographic data or contact information. They're relatively inexpensive and simple to set up, and you can use them to gate content or registrations, such as webinars and email newsletters.

7. Social Media Monitoring

→ Monitoring your company's social media channels for follower engagement is an accessible way to track data about your audience's interests and motivations.

→ Many social media platforms have analytics built in, but there are also third-party social platforms that give more detailed, organized insights pulled from multiple channels.

UNIT 3:

Management and Planning:

→ Management is the act of getting people together to **accomplish desired goals and objectives** using available resources efficiently and effectively.

→ Management comprises **planning, organizing, staffing, leading or directing, and controlling** an organization or effort for the purpose of accomplishing a goal.

→ Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources and natural resources.

Basic roles

 Interpersonal: roles that involve coordination and interaction with employees, networking.

 Informational: roles that involve handling, sharing, and analysing information.

 Decisional: roles that require decision-making.

Management skills

 Political: used to build a power base and establish connections.

 Conceptual: used to analyse complex situations.

 Interpersonal: used to communicate, motivate, mentor and delegate.

 Diagnostic: the ability to visualize most appropriate response to a situation.

Levels of management

Most organizations have three management levels:

1.Low-level,

2.Middle-level,

3.Top-level managers

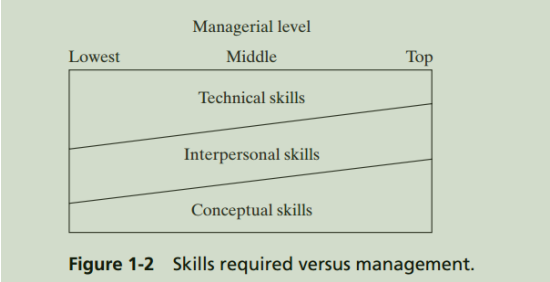


Figure 1-2 Skills required versus management.

1.Top-level managers:

- Consists of board of directors, president, vice-president, CEOs, etc.
- They are responsible for controlling and overseeing the entire organization.
- They develop goals, strategic plans, company policies, and make decisions on the direction of the business.
- In addition, top-level managers play a significant role in the mobilization of outside resources and are accountable to the shareholders and general public.

The role of the top management can be summarized as follows -

a. Top management lays down the objectives and broad policies of the enterprise.

b. It issues necessary instructions for preparation of department budgets, procedures, schedules etc

c. It prepares strategic plans & policies for the enterprise.

d. It appoints the executive for middle level i.e. departmental managers.

e. It controls & coordinates the activities of all the departments.

f. It is also responsible for maintaining a contact with the outside world.

g. It provides guidance and direction.

h. The top management is also responsible towards the shareholders for the performance of the enterprise.

2.Middle-level managers

- Consist of general managers, branch managers and department managers.
- They are accountable to the top management for their department's function. They devote more time to organizational and directional functions.
- Their roles can be emphasized as executing organizational plans in conformance with the company's policies and the objectives of the top management, they define and discuss information and policies from top

management to lower management, and most importantly they inspire and provide guidance to lower-level managers towards better performance.

Some of their functions are as follows:

a. They execute the plans of the organization in accordance with the policies and directives of the top management.

b. They make plans for the sub-units of the organization.

c. They participate in employment & training of lower-level management.

d. They interpret and explain policies from top level management to lower level.

e. They are responsible for coordinating the activities within the division or department.

f. It also sends important reports and other important data to top level management.

g. They evaluate performance of junior managers.

h. They are also responsible for inspiring lower-level managers towards better performance.

3.low-level managers

- Consist of supervisors, section leads, foremen, etc. They focus on controlling and directing.
- They usually have the responsibility of assigning employees tasks, guiding and supervising employees on day-to-day activities, ensuring quality and quantity production, making recommendations, suggestions, and channelling employee problems, etc.

First-level managers are role models for employees that provide:

 Basic supervision.

 Motivation.

 Career planning.

 Performance feedback.

 Supervising the staffs.

Modern Management approaches:

A worker does not work for money only. Non-financial rewards such as affection and respect for co-workers are also important factors.

The emphasis was on employee-cantered, democratic and participative style of supervisory leadership as this is more effective than task cantered leadership.

1. Behavioural Approach:

An approach that recognizes the practical and situational constraints on human rationality for making decisions.

Behavioural scientists attach great importance to participative and group decision making.

Two major theorists, Abraham Maslow and Douglas Mcgregor, came forward with ideas that managers found helpful.

Abraham Maslow: He developed the theory of motivation that was based on three assumptions.

First, human beings have needs that are never completely satisfied.

Second, human action is aimed at fulfilling the needs that are satisfied at a given point in time.

Third, needs fit into a hierarchy, ranging from basic and lower-level needs at the bottom to higher level needs at the top.

Douglas McGregor: He developed a concept of Theory X versus Theory Y dealing with possible assumptions that managers make about workers.

Theory X managers tend to assume that workers are lazy, need to be coerced, have little ambition and are focused mainly on security needs.

Theory Y managers assume that workers do not inherently dislike work, are capable of self-control, have capacity to be creative and innovative and generally have higher level needs.

This approach helped managers develop a broader perspective on the nature of workers and new alternatives for interacting with them.

2. Quantitative Approach:

An approach that focuses on the use of quantitative tools for managerial decision making.

The quantitative management viewpoint focuses on the use of mathematics, statistics and information aids to supports managerial decision making and organizational effectiveness.

Three main branches have evolved: **operations research, operations management and management information systems.**

Operations Research: Operations Research is an approach aimed at increasing decision effectiveness through the use of sophisticated mathematical models and possibilities as they can accomplish extensive calculation. Some operations research tools are linear programming, querying, waiting line, routing and distribution models.

Operations management: Operation management is a field that is responsible for managing the production and delivery function of an organization's products and services.

Operations management is generally applied to manufacturing industries and uses tools such as inventory analysis, statistical quality control, networking etc.

Management Information System: Management Information System refers to the designing and implementing computer based information systems for use by the management.

Such systems turn raw data into information that is required and useful to various levels of management.

Contingency Approach: A view point which believes that appropriate managerial action depends on the peculiar nature of every situation.

This approach is a viewpoint which argues that there is no best way to handle problems. Managerial action depends on the particular situation. Hence, rather than seeking universal principles that apply to every situation, this theory attempts to identify contingency principles that prescribe actions to take depending on the situation.

Systems Approach to management:

Systems theory is an approach based on the notion that organizations can be visualized as systems.

A system is a set of interrelated parts that operate as a whole in pursuit of common goals.

Every system has four major components:

1. Inputs are the various resources required to produce goods and services.

2. Transformation processes are the organization managerial and technological abilities that are applied to convert inputs into outputs.

3. Outputs are the products, services and other outcomes produced by the organization.

4. Feedback is information about results and organizational status relative to the environment.

Resources:

(1) Human

(2) Materials

(3) Equipment

(4) Financial

(5) Informational

Managerial and Technological Abilities:

(1) Planning

(2) Organizing

(3) Leading

(4) Controlling

(5) Technology

Outcomes:

(1) product and services

(2) Profits and losses

(3) Employee growth and satisfaction.

What is Scientific Management Theory?

Scientific management theory is a method of improving efficiency in the workforce. As its name implies, this management theory uses scientific methods to assess work processes.

The scientific method consists of three steps:

1.observation: observing the effects of a treatment.

2.experimentation: experimenting with a different treatment

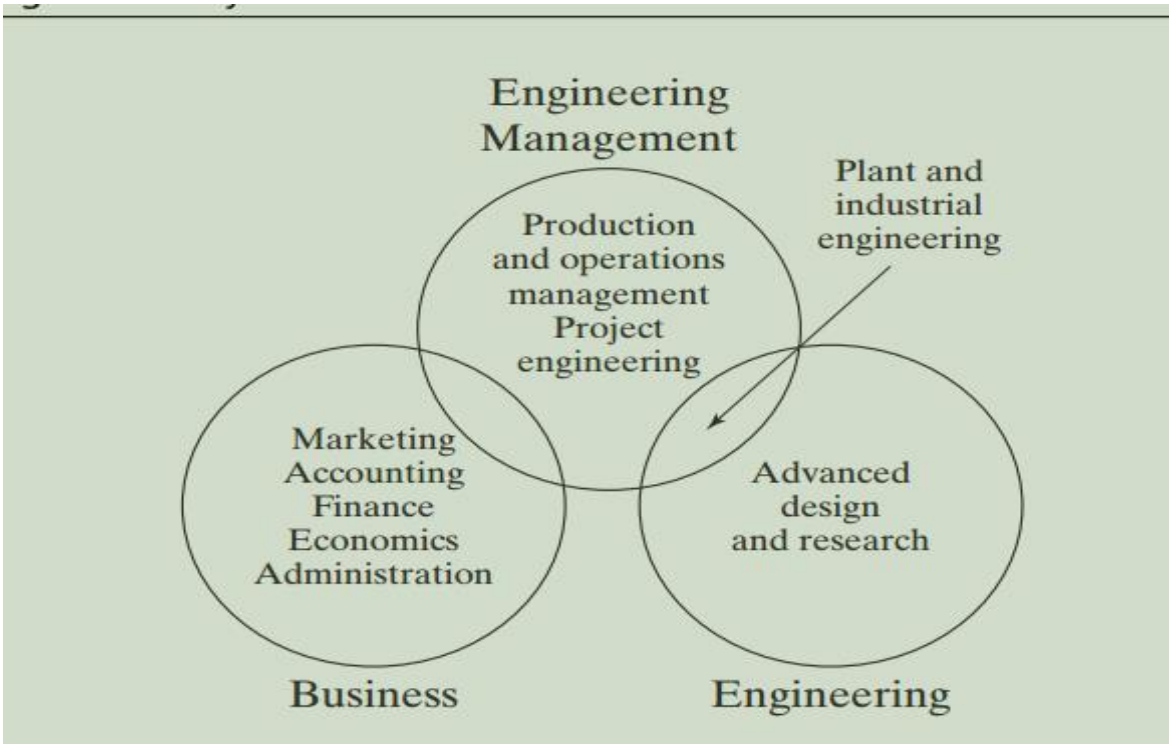
3.analysis: analysing the results

Similarly, managers use scientific management theory to observe their workplaces, test different methods of completing tasks, and analyse the effect of the changes.

When properly implemented, scientific management theory improves productivity.

It is an evidence-based method that prioritizes efficiency and reliability.

Engineering Management:



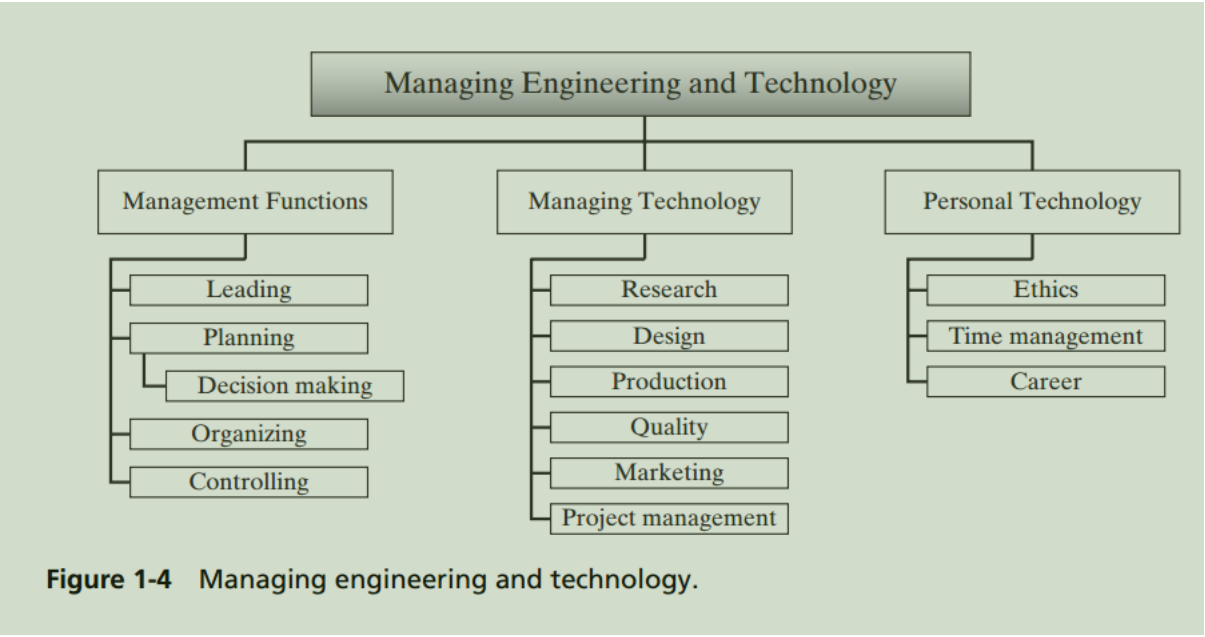


Figure 1-4 Managing engineering and technology.

Historical Development of Engineering Management:

1.Ancient Civilizations:

Many ancient civilizations left behind great stone structures that leave us wondering how they could have been created with the few tools then available.

Ex.:

1. The great pyramid of Cheops, built about 4500 years ago, covers 13 acres(hectar) and contains 2300.000 stone blocks weighing an average of 5000 pounds.

2. High priest was responsible for ceremonial and religious activities, while administrative high priest coordinated the secular activities of the organization.

Records were kept on clay tablets (kil plaka), plans made, labor divided and work supervised by a hierarchy of officials.

3.Problems of controlling military operations and dispersed empires have made necessary the development of new management methods since ancient times. Alexander the Great is generally credited with the first documented use of staff system.

Alexander the Great – staffing system

He developed an informal council whose members were each entrusted with a specific function;

Supply, (malumat)

Provost marshall,

Engineer

2.The Industrial Revolution

Before the late eighteenth century farm families would spin cotton, wool to yarn or on a spinning wheel, wet the goods with mild alkali and spread them on the ground for months to beach in the sun before selling at a local fairs for whatever price they could get.

End of Cottage Industry

1.The spinning jenny

Invented by James Hargreaves (1764),

Could spin 8 threads of yarn(iplik) at once

2. The water frame

Patented by Samuel Crompton (1779),

Spinning machine driven by water power

3.The mule (cark)

Invented by Samuel Crompton (1779),

A combination of the spinning jenny and water frame.

4.Chlorine bleach (beyazlatici)

Discovered by French chemist Claude Louis Berthollet (1785),

Provided quick bleaching without the need for large open areas or constant sunlight.

6. The steam engine

Patented by James Watt (1769),

Used in place of water power in factories.

3.Scientific Management

Charles Babbage (1792 – 1871) Patron saint of operations research and management science.

Inventor of

difference engine, financial support from the state

analytical engine, no financial support

➔ Memory
➔ arithmetical unit
➔ punch card input system
➔ conditional transfer (if statement)

Babbage's inventions never became a commercial reality, largely because of the difficulty of producing parts to the necessary precisionand reliability and he then had to visit many factories.

His experiences were published in On the Economy of Machinery and Manufactures, 1832.

1.Frederick Winslow Taylor (1856 – 1915)

→ Efficient Expert in US Steel Company

→ Inverted New tool designs and handling methods

→ Called "father of scientific management",

→ Presented his work at Midvale Steel Company to ASME his famous papers;

"A Piece Rate System" (1895)

break a job into elementary motions

discard unnecessary motions

find an efficient method to connect the remaining elementary motions

train the workers for the new method

"Shop Management" (1903)

2.The Gilbreths

→ Frank Bunker Gilbreth (1868 – 1924)

→ Analyzed each job to eliminate unnecesary motions,

→ Devised a system of classifying hand motions into 17 basic divisions (therbligs);

Search, select, transport loaded, position, hold, etc…

3.**Lillian Moller Gilbreth (1878 – 1972)**

→ Worked on understanding the human factor in industry, got Ph.D. in Psychology.

→ Continued on her own, advancing the concept of work simplification especially for the physically handicapped.

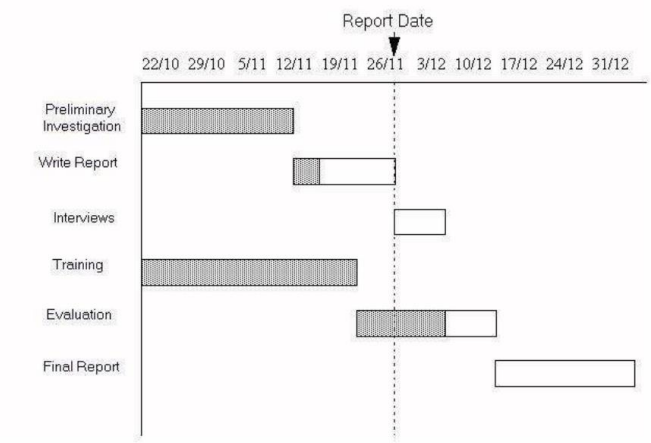
→ provide the Foundation for

Job simplification, meaningful work, incentive wages, effective training, improve work Environment.

4.Henry Laurence Gantt (1861 – 1919)

- Developed simple graphs that would measure performance while visually showing projected schedules.
- Invented a Wage Payment system that rewarded workers for above-standard performance, eliminated any penalty for failure, and offered the boss a bonus for every worker who performed above standard.
- Emphasized Human Relations and promoted Scientific Management as more than an in human 'Speed up' of labour.

GANTT CHART



4.Administrative Management

→ 1.Henri Fayol (1841 – 1925)

He believed that the activities of industrial undertakings could be divided into six groups:

Technical (production),

Commercial (marketing),

Financial,

Security,

Accounting, and

Administrative activities

- Planning / Forecasting,
- Organization ,
- Command,
- Coordination, and
- Control

2.Max Weber (1864-1920) and Bureaucracy

→ Weber developed a model for rational and efficient large organization, which he termed as "bureaucracy".

→ He described any kind of bureaucracy incl. that of industrial organizations:

basic organizational unit is the office/position,

loyalty to the office not to individuals,

candidates must be appointed, and not elected,

clearly defined hierarchy of offices,

officials are subject systematic discipline and control, subordinates may appeal,

every act must be documented in written form,

incumbent has fixed salary, office is the primary occupation,

promotion depends on superiors,

officials are not the owners of the organization.

What Is Business Opportunity:

A business opportunity is the chance to take advantage of an occurrence in the market for business gain. It involves some kind of favourable condition which exists in the market.

Example:

A good example of a business opportunity in the market today is **e-books**. Amazon was one of the first companies in the online bookselling business who initiated an e-book reader that made it possible to read books by means of a digital device that looks more or less like a tablet pc.

Importance Of A Business Opportunity:

- In business, an **opportunity** is a key to success. Without it, a business cannot begin, expand, or succeed.
- The main purpose of an opportunity is to serve as the basis for any action that results **in profit** and **business growth**.
- Opportunities allow businesses to **create** and **implement ideas** and innovations and improve their **performance**.
- Only those who spot opportunities early can take the best advantage of them and capitalise on them.

why a business opportunity is important

1.The chance to build a business: A business opportunity can be an **existing unsolved problem** in the market or a **new problem arising** from current trends, which is the chance to build a business.

2.The chance to avoid failure: A business is likely to fail without opportunities. This is because they are essential for implementing ideas and innovations that can make a business successful. They allow businesses to take the **right decision** at the right time.

3.The chance to grow: Opportunities allow businesses to create and implement ideas and innovations. It is also a chance to improve performance by **solving existing problems better**, providing a more refined **value proposition** to the target market, and building a more efficient **business model**.

4.The chance to maximise profits: A business opportunity involves favourable conditions that can be used to **increase profits.** These conditions include but are not limited to the availability of resources, the existence of market demand, and the presence of favourable competition. The goal is to find solutions that can potentially **maximise profits** while **solving problems**.

Characteristics Of A Good Business Opportunity

Business opportunities are the core of every successful business. They help in identifying problems and in creating solutions that can potentially help businesses grow.

Some characteristics of a good opportunity:

1.Clarity: Good opportunities are **clear, well defined, and straightforward**. They allow businesses to accurately and completely identify problems and create solutions that can maximise their potential.

2.Relevance: Good opportunities are relevant to **the scenario in which they exist**. They provide added value to **customers, markets, and industries**. This means they do not only represent potential but also relevance for solving existing problems or creating added value for others.

3.Feasibility: Good opportunities are **realistic and feasible**. They help businesses achieve their goals while making them **more efficient, productive, and profitable**.

4.Profitable: A good opportunity is capable of providing returns on investment. It is able to achieve its objectives while capitalising on the available resources, strategies, and assets more efficiently.

5.Scalable: A good opportunity is **scalable**. This means it can be expanded to a big or a wide scale. It can extend to various markets and industries while maximising the results of investments in terms of **time, human resources, and money**.

How To Identify A Business Opportunity?

Opportunity identification is an important part of business development and growth. It allows companies to make the right decisions that will help them achieve their goals.

1.The Customer Research Stage

→ The first step is to research customers and their problems by asking questions related to the customer's needs, goals, and expectations.

→ This involves collecting, organising, and analysing information about customers' behaviour as well as their needs.

→ The past and present trends of the target market must also be identified to help businesses better understand customer preferences.

→ The objective is to identify potential business opportunities that can help the business create value for its customers.

2. Problem Hypothesis Stage:

→ In this stage, businesses **search for problems** by identifying issues and concerns from customer feedback and other sources of market research. The first step is to define the problem.

→ Once that has been done, businesses need to search for the **root cause of the problem** and **explore possible solutions**. The goal is to formulate a well-focused hypothesis that can be tested with market research.

3. Product Hypothesis Stage:

→ Businesses should determine what kind of product or service will solve customers' problems or address their needs. The product or service should target specific customers based on the information gathered during the customer research stage.

4. Market Hypothesis Stage

→ The market hypothesis stage involves testing certain key assumptions about the business opportunity with customers to determine the demand for a particular product or service in the real world, and how it solves problems in the specified market.

→ It also involves doing in-depth research to identify existing players in the targeted market, and determining customer expectations for the product or service.

5. Product Development Stage

→Once a business opportunity is confirmed, the next step is to develop a product or service that will solve the problem.

→ The product or service should be designed and tested using various methods to ensure its viability and effectiveness.

→ Businesses need to consider their target market, competitive threats, and business models as they develop the product or service.

Business Opportunity Examples

Business opportunities are everywhere, and it is important for businesses to identify and tap into them. For example, Uber found a business opportunity in the unorganised transportation industry by introducing an on-demand cab system.

There are also many other examples of great business opportunities:

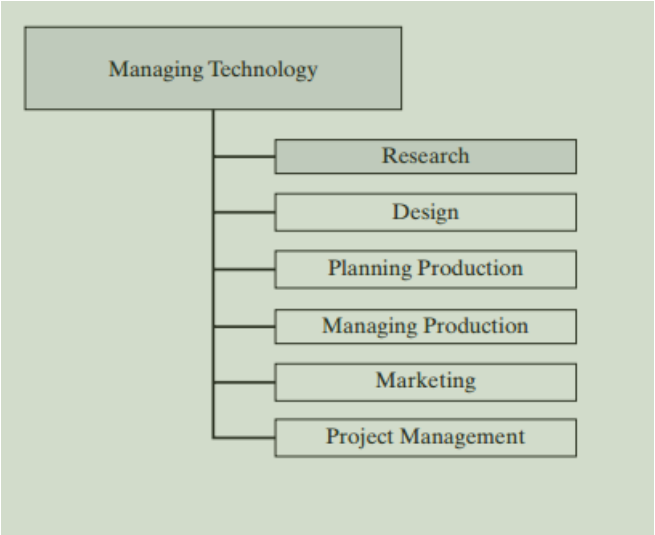
1. Airbnb: Airbnb introduced the concept of sharing economy by allowing people to **rent out their homes as an alternative to hotels or motels**. This is a perfect example of a new market opportunity because hotels were the only service providers for this kind of accommodation before Airbnb came along.

2. GoPro: GoPro is a **new camera brand** that saw an opportunity to introduce a unique product in the market where **smartphone cameras** and **existing digital cameras** were already popular. It catered to a repressed demand of capturing high-definition videos of sports activities, something traditional cameras were not capable of doing.

3. TikTok: TikTok saw an opportunity in the music and video streaming market by introducing a unique take that allows users to create 15-second videos set to music. It found a repressed demand of getting recognised and untapped technology of user-generated video content.

4. Crate and Barrel: Crate and Barrel saw an opportunity to introduce a unique concept in the furniture industry **by selling ready-to-assemble furniture**. This is different from other players in the market who only sold expensive, high-quality pieces of furniture.

UNIT 4: MANAGEMENT TECHNOLOGY:



Nature of Research and Development

Research: both basic and applied, is systematic, intensive study directed toward fuller scientific knowledge of the subject studied.

Basic research is...research devoted to achieving a fuller knowledge or understanding, rather than a practical application, of the subject under study.

Applied research is directed toward the practical application of knowledge, which for industry means the discovery of new scientific knowledge that has specific commercial objectives with respect to either products or processes

Development is the systematic use of scientific knowledge directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.

Research Strategy and Organization

New Product Strategies:

Within a specific industry, deciding the relative investment a company should make in R&D is a part of strategic planning and should be based on the organization's concept of its fundamental mission and objectives.

1.First-to-market. This...demands major expenditures for research before there is any guarantee of a successful product. It also demands heavy development expenditures and perhaps a large marketing effort to introduce an innovative product. The possibilities of reward from the R&D, however, are tremendous.

2.Follow-the-leader. This strategy does not require a massive research effort, but it demands strong development engineering. As soon as a competitor is found to have had research success that could lead to a product, the firm playing follow-the-leader joins the race and tries to introduce a product to market almost as soon as the innovator.

3.Me-too. A me-too strategy differs from follow-the-leader in that there is no research or development. In its purest form this strategy means copying designs from others, buying or leasing the necessary technology, and then concentrating on being the absolute minimum-cost producer. The firm following this strategy will try to maintain the lowest possible overhead expenses.

4. Application engineering. This role involves taking an established product and producing it in forms particularly well suited to customers' needs. It requires no research and little development, but a good deal of understanding of customers' needs and flexibility in production.

Selecting R&D Projects

Need for Selection:

→ Sixty ideas (from researchers, other employees, customers, and suppliers) need to be screened quickly down to

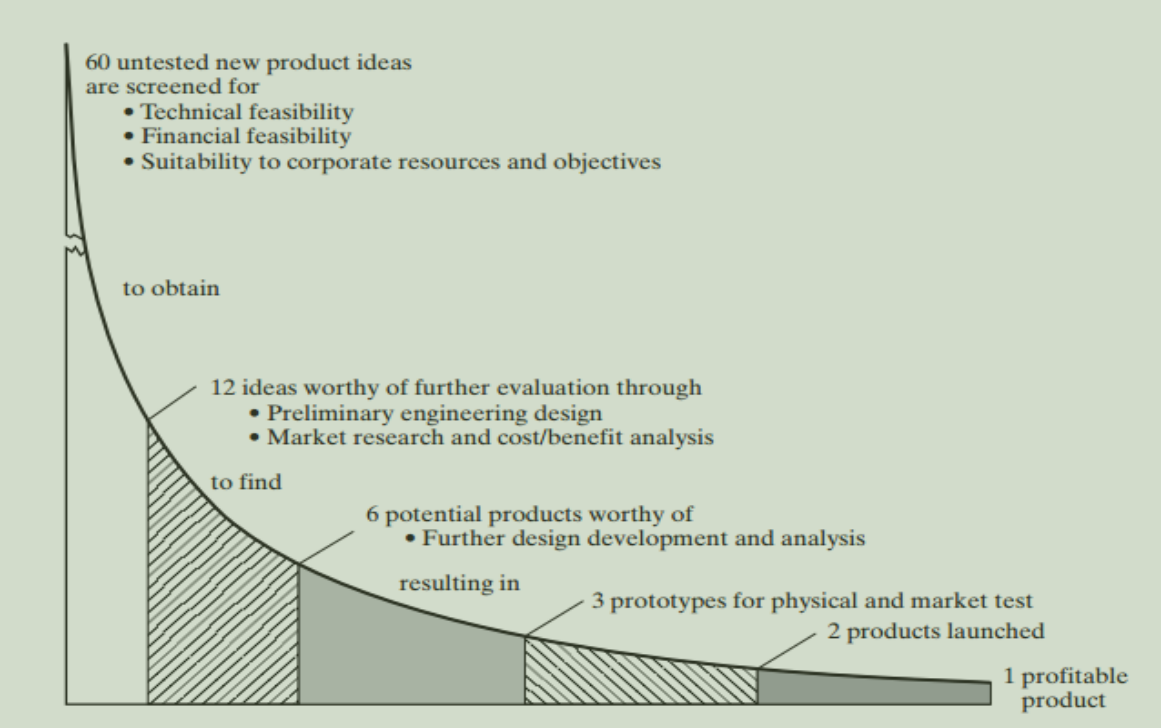
→ Twelve ideas worthy of preliminary technical evaluation and analysis of profitability, to produce

→ Six defined potential products worth further development, to obtain

→ Three prototypes for detailed physical and market testing, resulting in

→ Two products committed to full-scale production and marketing, of which

→ One product should be a real market success.



Initial Screening

To slash 60 crude ideas into 12 worthy of any significant evaluation requires a method that is quick

and inexpensive. A common method is use of a simple checklist, in which the proposed product is

given a simple judgmental rating (poor/fair/good/excellent or -2> -1> +1> +2, for example) for

each of a number of characteristics. Seiler suggests, for example, scoring 10 items:

1. **Technical factors** (availability of needed skills and facilities; probability of technical success)

2. **Research direction and balance** (compatibility with research goals and desired research

balance)

3. **Timing** (of R&D and market development relative to the competition)

4. **Stability** (of the potential market to economic changes and difficulty of substitution)

5. **Position factor** (relative to other product lines and raw materials)

6. **Market growth** factors for the product

7. **Marketability and compatibility** with current marketing goals, distribution methods, and

customer makeup

8. **Producibility** with current production facilities and manpower

9. **Financial factors** (expected investment need and rate of return from it)

10. **Patentability** and the need for continuing defensive research.

Nature of Creativity

Creativity is the ability to produce new and useful ideas through the combination of known principles and components in novel and nonobvious ways.

The Creative Process:

There are a number of models for problem solving. One method, often inefficient, is simple

trial and error. A second is the planning/decision-making process.

1. Preparation. Quite often the problem is solved at this stage as one submerges oneself in the problem while trying to

(a) structure the problem,

(b) collect all available information,

(c) understand relations and effects,

(d) solve subproblems, and

(e) explore all possible solutions and combinations that may lead to a satisfactory solution."

2. Frustration and incubation. Failure to solve the problem satisfactorily by the analytical process leads to frustration and the decision to set it aside and get on with something else. However, the problem, fortified with all the facts gathered about it, "stews" or incubates in the subconscious mind.

3. Inspiration or illumination. A possible solution to the problem may occur as a spontaneous insight, often when the conscious mind is at rest during relaxation or sleep. Many creative individuals are never without a notepad and pen on their person or bedside table, to write down these flashes of insight.

4. Verification. Intuition or insight is not always correct, and the solution revealed in a flash of insight must now be tested and evaluated to assure it is, indeed, a satisfactory solution to the problem.

Characteristics of Creative People

There have been many studies comparing more creative with less creative people. Characteristics of

creative people can be grouped into the following categories:

1.Self-confidence and independence. Creative people seem to be self-confident, self-sufficient, emotionally stable, and able to tolerate ambiguity. They are independent in thought and action and tend to reduce group pressures for conformity and rules and regulations that do not make sense.

2.Curiosity. They have a drive for knowledge about how or why things work, are good observers with good memories, and build a broad knowledge about a wide range of subjects.

3.Approach to problems. Creative people are open-minded and uncritical in the early stages of problem solving, generating many ideas. They enjoy abstract thinking and employ method, precision, and exactness in their work. They concentrate intensively on problems that interest them and resent interruptions to their concentration.

4.Some personal attributes. Creative people may be more comfortable with things than people, have fewer close friends, and are not joiners. They have broad intellectual interests: They enjoy intellectual games, practical jokes, creative writing, and are almost always attracted by complexity.

2.DESIGN:

Nature of Engineering Design

Essentially, design is the process of creating a model, usually described in terms of drawings and specifications, of a system that will meet an identified need of the customer.

Engineering design is a process of transforming information:

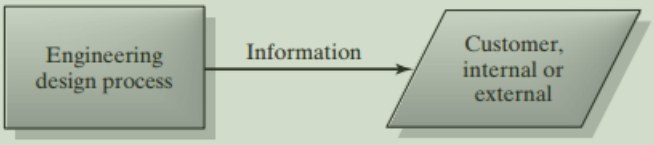


Figure 10-1 The engineering design process.

System Engineering:

→ **State of the problem:** The problem statement starts with a description of the top-level functions that the system must perform: This might be in the form of a mission statement, a concept of operations.

→ **Investigate alternatives:** Alternative designs are created and are evaluated based on performance, schedule, cost and risk figures of merit. No design is likely to be best on all figures of merit, so multicriteria decision-aiding techniques should be used to reveal the preferred alternatives.

→ **Model the system:** Models will be developed for most alternative designs. The model for the preferred alternative will be expanded and used to help manage the system throughout its entire life cycle.

→ **Integrate:** Systems, businesses, and people must be integrated so that they interact with one another. Integration means bringing things together so they work as a whole. Interfaces between subsystems must be designed. Subsystems should be defined along natural boundaries. Subsystems should be defined to minimize the amount of information to be exchanged between the subsystems

→ **Launch the system:** Launching the system means running the system and producing outputs. In a manufacturing environment this might mean buying commercial off the shelf hardware or software, or it might mean actually making things. Launching the system means allowing the system do what it was

intended to do. This also includes the system engineering of deploying multisite, multicultural systems.

→ **Assess performance:** Figures of merit, technical performance measures, and metrics are all used to assess performance.

Figures of merit are used to quantify requirements in the trade off studies. They usually focus on

the product.

→ **Re-evaluate:**

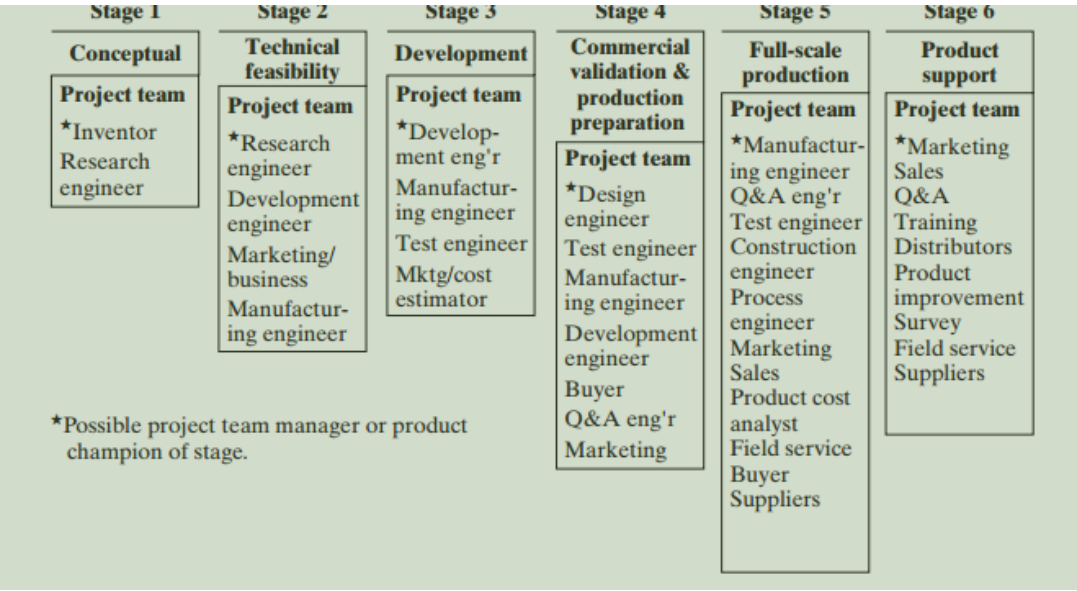
Re-evaluate is arguably the most important of these functions. For a century, engineers have

used feedback to help control systems and improve performance. It is one of the most fundamental engineering tools.

Re-evaluation should be a continual process with many parallel loops.

Re-evaluate means observing outputs and using this information to modify the system, the inputs,

the product or the process.



3.Planning

Planning Manufacturing Facilities

a. Plant Location:

1. Establish the need for a new plant.

2. Determine the best geographical area for the plant on the basis of the company's business needs.

3. Establish the requirements (e.g., product to be made, equipment and buildings needed, utilities and transportation necessary, number of employees, etc.).

4. Screen many communities within the general area decided upon.

5. Pinpoint a few communities for detailed studies.

6. Select the best location.

7. Build the plant.

Some of the factors affecting the choice of region, community, and site are as follows:

- Transportation (highway, rail, air, water)
- Labour (supply, skill level, local wage rates, union membership and attitudes)
- Geographical location (relative to raw materials, customers, or other company activities)
- Utilities (supply and cost of water, electric power, and fossil fuels)
- Business climate (taxes, pollution controls, community attitudes)
- Amenities (climate, educational facilities, nearby recreation)
- Plant sites (land availability and cost, zoning, space for expansion)

b. Plant Design

Once the site is selected, engineers must decide on the nature of the plant and its arrangement

on the site. Multistory plants conserve land area, permit use of gravity flow in moving product

along the production line, and are cheaper to heat. However, single-story construction is more

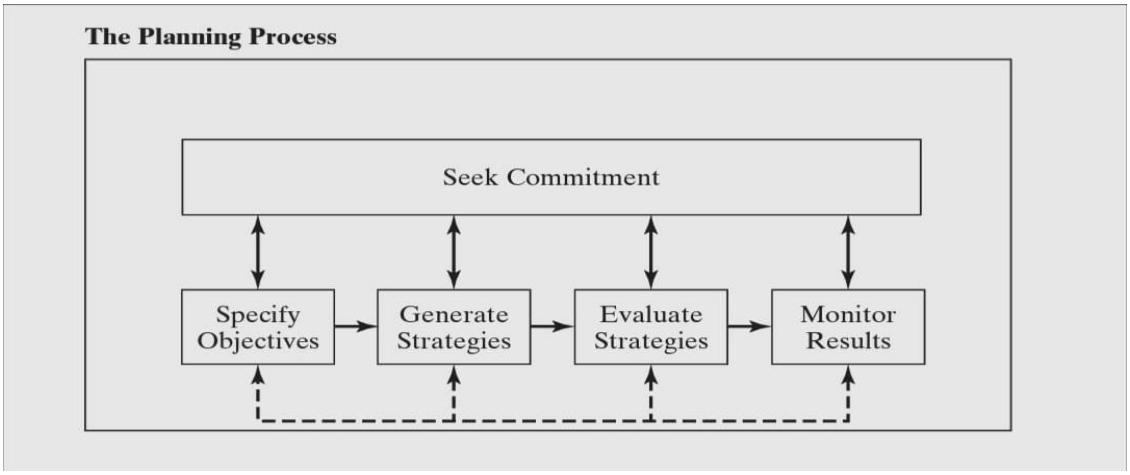
flexible, permits lighter foundations and columns, and allows higher floor loadings.

c. Plant Layout

Plant layout attempts to achieve the most effective arrangement of the physical facilities and

personnel for making a product. The three principal methods of moving the product through the

manufacturing steps are product layout, process layout, and group technology.



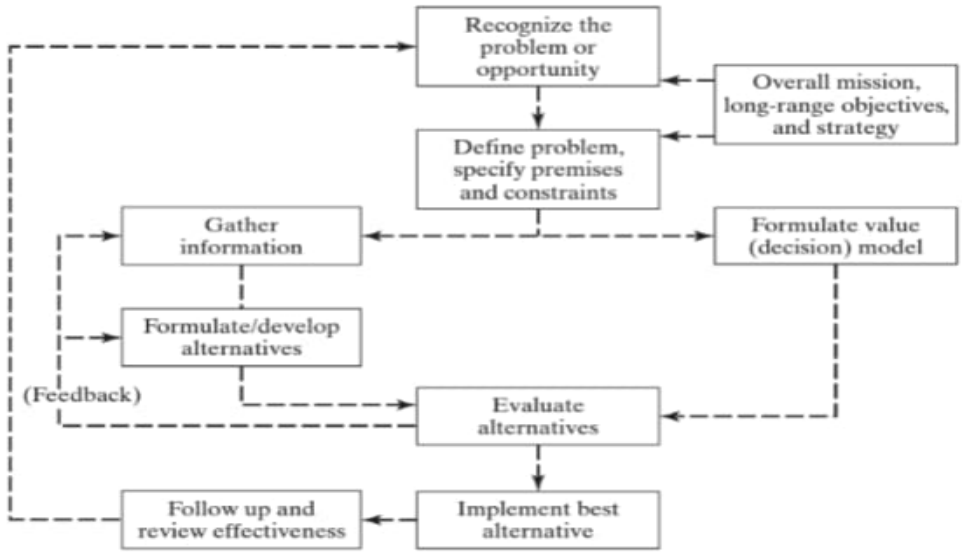


Figure 4-1 The planning/decision-making process.

4. Managing Production Operations

Quality has been described as fitness for use or customer satisfaction.

It may be divided into two categories.

Quality of design measures the extent to which customer satisfaction is incorporated into the product design through the specification of proper materials, tolerances, and other precautions. Quality of design will vary to some extent with the intended customer: One would not expect the same features in a stripped-down Ford Focus and a fully equipped Lincoln Navigator.

Quality of conformance (or quality of production) measures how well the quality specified in the design is realized in manufacture and delivered to the customer.

The customer may be an internal customer, as the next process on the production line, or an external customer.

One author adds a third aspect of quality, measuring how the product is applied or employed, and what that does to its properties.

Quality Costs

An important step in getting management support for improving quality is documenting the total cost of poor quality and of quality control efforts. The American Society for Quality (ASQ) has established four categories of costs to help in this analysis:

1. **Prevention costs** are those incurred in advance of manufacture to prevent failures, such as quality planning, training, data analysis and reporting, process control, and motivation programs.

2. **Appraisal costs** include the costs of inspection of incoming parts and materials (whether by your supplier or by you when you receive it), inspection and test of your product in process and as a finished product, and maintenance of test equipment.

3. **Internal failure costs** are those that would not appear if there were no defects in the product before shipment to the customer. They include scrap (labour and material spent on unrepairable items), rework (the cost of making defective items fit for use, including necessary retesting), downtime and yield losses caused by defects, and the cost of material review and disposition of defectives.

4.**External failure costs** are those caused by defects found after the customer receives the product. These include the costs of investigating and adjusting complaints, the costs of replacing defective product returned by the customer, price reductions ("allowances") offered to compensate for substandard products, and warranty charges. The total costs to your customer in downtime and other damages may be much higher, and these may drive your customer to seek a more trustworthy supplier.

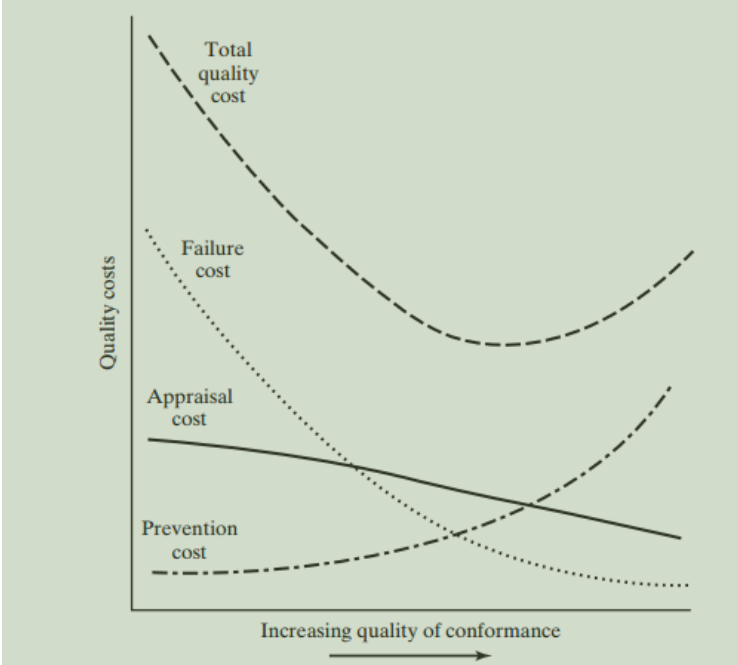


Figure 12-1 Effect of quality improvement on quality costs.

4.Project Planning and Acquisition:

A project represents a collection of tasks aimed toward a single set of objectives, culminating in a definable end point and having a finite life span and budget.

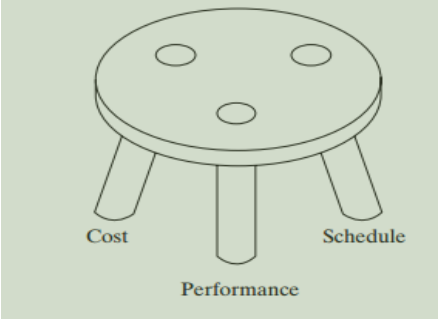
The three essential considerations in project management are

(1) time (project schedule),

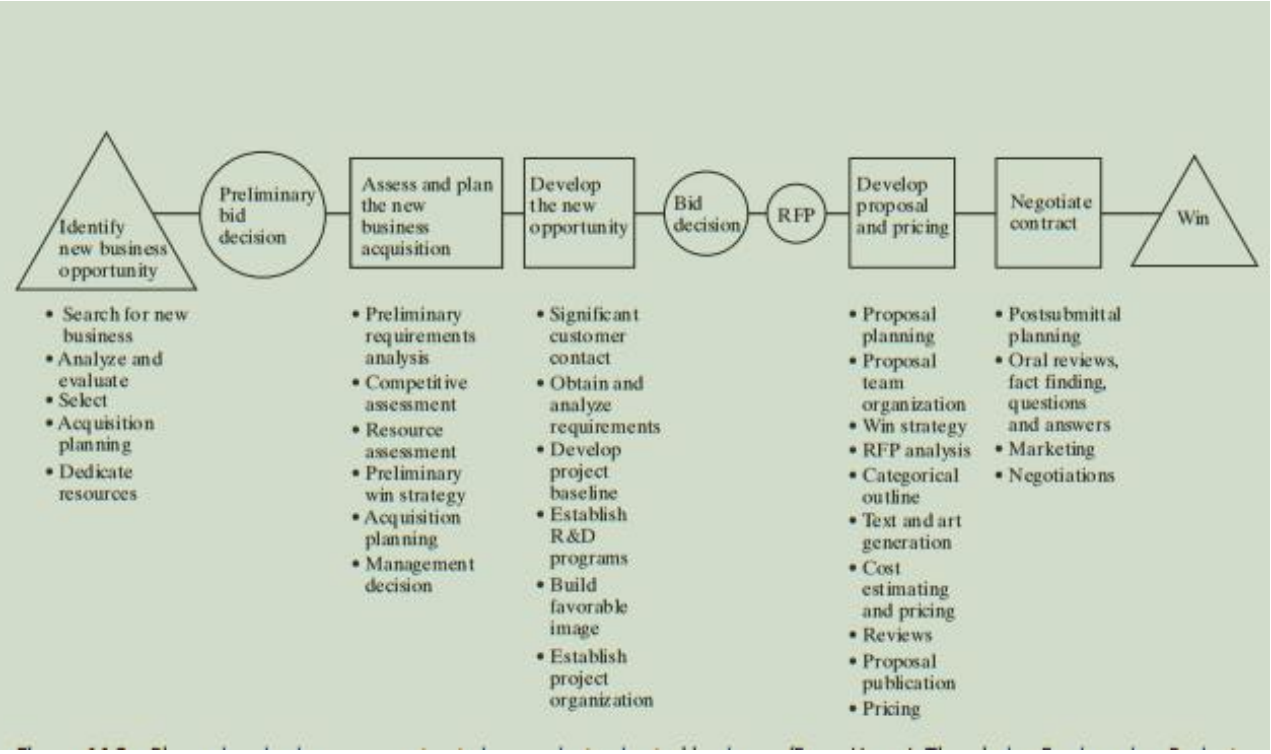
(2) cost (in dollars and other resources), and

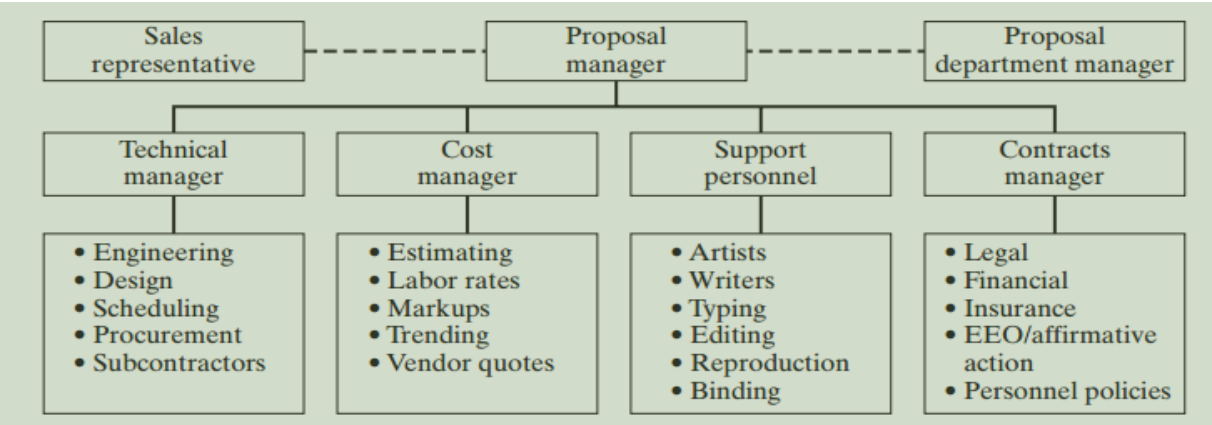
(3) performance or quality (the extent to which objectives are achieved).

The successful project manager will attempt to keep these three in balance



The Project Proposal Process:





Proposal Contents

The RFP will often specify separate management, technical, and cost proposals and their expected

contents:

1.The management proposal typically discusses the company, its organization, its relevant

experience, and its management methods and control systems, and describes the personnel

proposed to lead the project.

2.The technical proposal outlines the design concept proposed to meet the client's needs, with

special emphasis on the approach planned to resolve the most difficult technical challenges

posed by the project.

3.The cost proposal not only includes a detailed price breakdown, but often also discusses

aspects of inflation, contingencies, and contract change procedures.

The proposal package is critically reviewed by company senior management not involved in

he creation of the proposal, then revised, printed, and delivered to the customer.

Project Planning Tools

The Project Management Institute (PMI) identifies five phases in project management:

1.Initiating the project includes the steps previously described and the preliminary scope.

2. Planning includes refining the scope and scheduling, which are described in the next section.

3. Executing has the project manager as the leader of the project team, as described in Chapter 15.

4. Monitoring and controlling the progress is done on a continuous process with a reporting

process and a change process.

5. Closing the project includes obtaining the customer acceptance, final documentation, and a

final report.

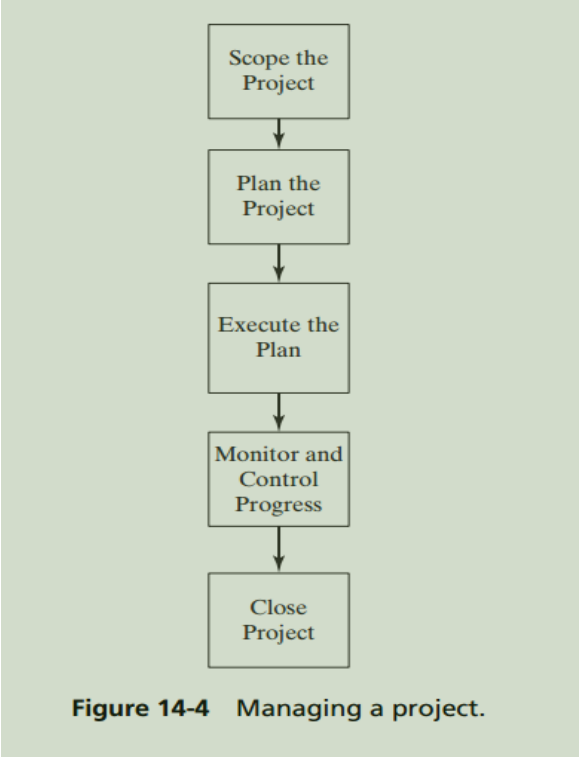


Figure 14-4 Managing a project.

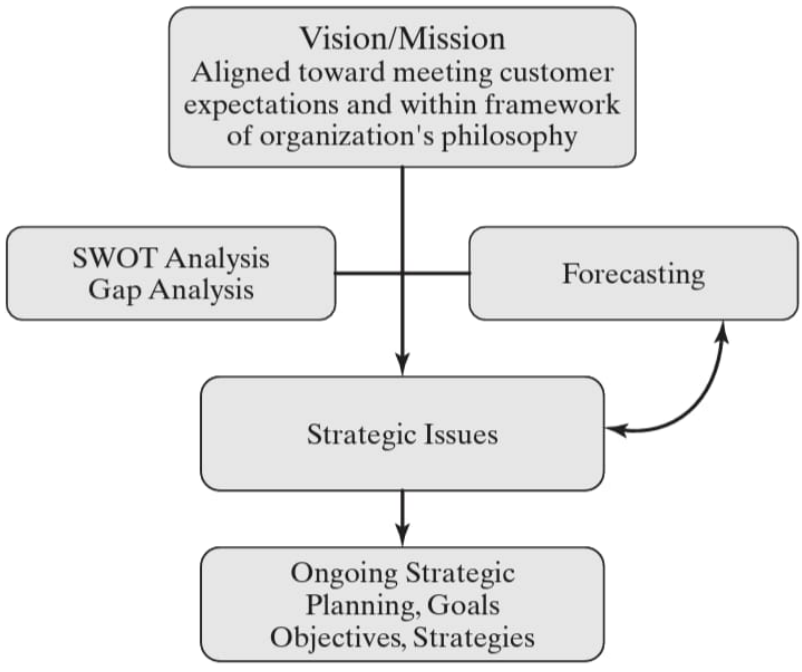


Figure 4-2 Strategic planning.

Characteristics of Effective Project Managers

Project managers need enthusiasm, stamina, and an appetite for hard work to withstand the special pressures of project management. Where possible, project managers should have seniority and position in the organization commensurate with that of the functional managers with whom they must negotiate. Whether they are project coordinators within a functional structure or project managers in a matrix structure, they will often find their formal authority incomplete, and they need a blend of technical, administrative, and interpersonal skills to provide effective leadership.

1.Technical Skills. Many projects depend for their success on effective application of certain key technologies. The effective manager of such projects must understand the essentials of those technologies enough to evaluate whether the work done is of sufficient quality, even if he or she is not as expert as the specialists actually doing the work. Further, when an unfamiliar technology is involved in a problem on the project, the program manager must quickly be able to master the essential technology bearing on the problem from briefings by specialists, so that he or she can articulate the problem to the client or general management and make effective decisions regarding resolution.

2.Administrative Skills. Project managers must be experienced in planning, leading, organizing,

staffing, and control techniques as they apply to projects. In particular, they should understand the

project planning techniques—such as the work breakdown structure, network systems, and others.

3.Interpersonal Skills. Except in fully projectized organizations, project managers depend heavily on the work of others not under their line control. The ability to inspire, cajole, negotiate, and persuade others therefore becomes very important, and project managers need a good understanding of conflict resolution methods.

Characteristics that strongly affect perceived failure of projects were found to include the following:

- Inadequate project manager skills, influence, and authority
- Poor coordination and rapport with the client
- Poor coordination and rapport with the parent organization

- Lack of project team participation and team spirit.
- Poor project control: inability to freeze design or close out the project, unrealistic schedules, inadequate change procedures, and/or inadequate status/progress reports.
- Project of different type or more complex than handled previously and/or initially underfunded.
- Poor relations with public officials or unfavourable public opinion.

Customer Communications:

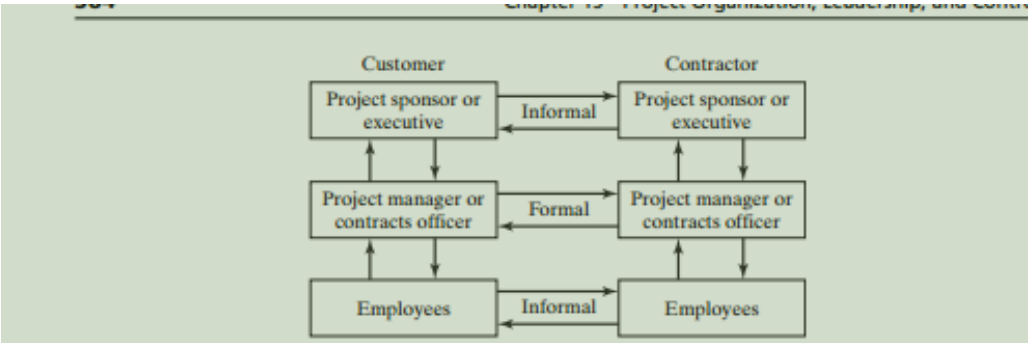


Figure 15-6 Customer (client) communications. (From David I. Cleland and Harold Kerzner,

UNIT- 5

Preparation for project

1.Project management

Project management is the discipline of planning, organizing, securing, managing, leading, and controlling resources to achieve specific goals.

A project is a temporary endeavour with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverables), undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value.

The traditional approach:

A traditional phased approach identifies a sequence of steps to be completed. In the "traditional approach", five developmental components of a project can be distinguished (four stages plus control):

Typical development phases of an engineering project

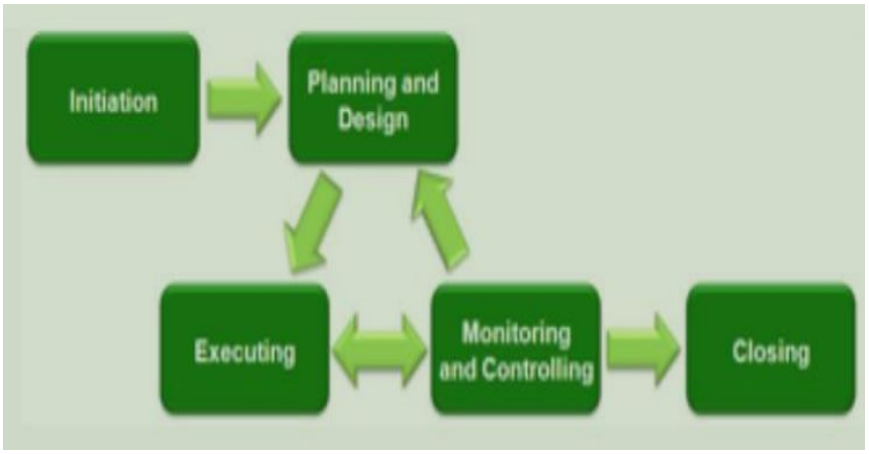
1. initiation

2. planning and design

3. execution and construction

4. monitoring and controlling systems

5. completion



2.Project appraisal

Project appraisal is a generic term that refers to the process of assessing, in a structured way, the case for proceeding with a project or proposal. In short, project appraisal is the effort of calculating a project's viability.

It often involves comparing various options, using economic appraisal or some other decision analysis technique.

Process

- Initial Assessment
- Define problem and long-list
- Consult and short-list
- Develop options
- Compare and select

Project Types of appraisals

a. Financial

- Cost-benefit analysis

b. Economic appraisal

- Cost-effectiveness analysis
- Scoring and weighting

3.Technical Feasibility

The technical aspects for the development of the proposed project are well within the project team's capabilities to produce such a product.

The project team has experience in all aspects of the technology to be used;

the World Wide Web (web) and a database program, Microsoft Access.

The scope of this project encompasses both web and database development. The web development involves producing and marketing a web page that conforms to Emerald Webs Request for Proposal. The project team has developed web pages for the purpose of marketing real estate, both for commercial and private residential properties.

4.Feasibility study:

Feasibility studies aim to objectively and rationally uncover the strengths and weaknesses of the existing business or proposed venture, opportunities and threats as presented by the environment, the resources required to carry through, and ultimately the prospects for success.

In its simplest terms, the two criteria to judge feasibility are **cost required and value** to be attained.

As such, a well-designed feasibility study should provide a historical background of the business or project, description of the product or service, accounting statements, details of the operations and management, marketing research and policies, financial data, legal requirements and tax obligations.

Generally, feasibility studies precede technical development and project implementation.

5.Technology and system feasibility

→ The assessment is based on an outline design of system requirements in terms of Input, Processes, Output, Fields, Programs, and Procedures.

→ This can be quantified in terms of volumes of data, trends, frequency of updating, etc. in order to estimate whether the new system will perform adequately or not.

→ Technological feasibility is carried out to determine whether the company has the capability, in terms of software, hardware, personnel and expertise, to handle the completion of the project.

→ When writing a feasibility report the following should be taken to consideration:

- A brief description of the business to assess more possible factor/s which could affect the study
- The part of the business being examined
- The human and economic factor
- The possible solutions to the problems

At this level, the concern is whether the proposal is both technically and legally feasible (assuming moderate cost).

6.Social feasibility

This involves questions such as how much time is available to build the new system, when it can be built, whether it interferes with normal business operations, type and number of resources required, dependencies,

7.Cultural feasibility

In this stage, the project's alternatives are evaluated for their impact on the local and general culture. For example, environmental factors need to be considered and these factors are to be well known.

Further an enterprise's own culture can clash with the results of the project.

SWOT ANALYSIS:

"SWOT" represent following four factors;

- ➔ S stands for what things are **Satisfactory** for organization at present.
- ➔ W means what are **weakness** in the organization that can become source of hindrance in the performance of organization.
- ➔ O denotes what **Opportunities** can be explored in the future,
- ➔ T means **Threats** that could surface in the future

→ Finally, SWOT analysis is a method by which the organization's management do analysis about strengths, weaknesses, opportunities and threats that can affect performance of organization.

→ Each organization wants to improve its performance and increase revenue.

→ It is a challenge for organization. They use different methods like analysis, examinations and evaluation methods etc. to do this.

→ "SWOT" Model is a source to fulfill challenge.

→ Developed by "Albert Humphrey" at the Stanford University

→ Albert S. Humphrey was an American business and management consultant who specialized in organizational management and cultural change.

→ SWOT became a analytical tool to find right strategy for successful development of organization.

Purpose of SWOT Analysis

➤ **Analyze Internal Factors:** Strengths or weakness and their impact on company's objectives.

➤ **Analyze External Factors:** The external environment consists of a variety of factors outside your company doors that you typically don't have much control over.

1.Oppurtunities

2.Threads

➤ Make improvements in product/service by viewing macroeconomic matters, technological change, and socio-cultural changes, as well as changes in the marketplace or competitive position.

Examples of Strengthens:

•Excellent sales staff with strong knowledge of existing products

•Good relationship with customers

•Good internal communications

•High traffic location

•Successful marketing strategies •Reputation for innovation.

Examples of weaknesses:

•Currently struggling to meet deadlines - too much work?

•High rental costs

•Market research data may be out of date

•Cash flow problems

•Holding too much stock

•Poor record keeping

Advantages

a.SWOT Analysis

> SWOT analysis can be applied to an organization, organizational unit, individual or team.

b.Universal Application

> Same analysis is used to support strategic planning, opportunity analysis, competitive analysis, business development or product development processes.

c.Simplicity

>SWOT analysis requires neither technical skills nor training**.**

Limitations of Model

> SWOT model can generate too many ideas but cannot help you choose which one is best

> SWOT model can produce a lot of information, but not all of it is useful.

Utility of SWOT:

- Set objectives: what are intentions of organizations?
- Environmental Analysis: Assessment of performance of employee.
- Product evaluation: Assessment of product.
- Competitor evaluation
- Preparation: Implementation of new strategies.
- Monitoring results, mapping against plans and taking corrective actions.