Planning:

Planning is a primary and an important function of modern management. The basic functions of management are commonly identified as *planning, organizing, staffing, leading (directing, guiding, and motivating), and controlling.* Of these, planning is said to have primacy – to come first. Organizing, staffing, leading and controlling have little purpose unless they are focused on achieving desired objectives.

Definitions:

Planning being a central function of management refers t o the determination of a course of action to achieve a desired result. Planning concentrates in advance – what to do, how to do it, when to do it and who is to do it. It bridges the gap between – 'from where we are to where we want to go' and planning is actually the foundation of management. Planning is very much essential because an organization has to cope with the problems like scarce resources and uncertain environments with a fierce competition for these resources.

Peter Drucker has defined planning as "a continuous process of making present entrepreneur decisions systematically and with best possible knowledge of their futurity, organizing systematically the efforts needed to carry-out these decisions and measuring the results of these decisions against the expectations through organized and systematic feedback".

Koontz and **O'Donnel** defined planning as "an intellectual process, the conscious determination of courses of action, based on decisions on purposes, acts and considered estimates".
An effective planning programme incorporates the effects of both external as well as internal factors.

Importance:

While planning does not guarantee success in organizational objectives; there is evidence that companies engaged in formal planning, constantly performed better than those with none or limited formal planning; and improved their own performance over a period of time. It is very rare for an organization to succeed solely by luck or circumstances. Some of the reasons as to why planning is considered a vital managerial function are given below:

1. **Planning as a Goal Oriented process** – planning is very closely associated with the goals or objectives of the organization. The goals may be expressed or implied and well defined goals lead to efficiency in planning.
2. **Planning as a tool of Forecasting** – planning mainly concerned with looking ahead and reduces the elements of risks and uncertainties; since accurate forecast of the future is an integral part of effective planning.
3. **Planning as a Governing factor of survival, growth and prosperity** - the growing complexity of the modern business with rapid technological changes, dynamic changes in consumer preference and growing tough-competition necessitates orderly operation; not only in the current environment but also in the future environment. Planning offsets future uncertainty and changes. **Planning is essential in modern business.**
4. **Planning as a tool of making choice** – 'choosing is the root of planning' i.e., planning involves picking-out with care and caution, the best from a number of alternative given. Without planning, a business would be a rolling stone; and it cannot have much chance of succeeding in any field.
5. **Planning affects performance** – it is evident that the organizations with formal planning consistently performed better than those with no formal planning.
6. **Planning anticipates problems and uncertainties of future** – a significant aspect of any formal planning process is collection of relevant information for the purpose of forecasting the future as accurately as possible. This would minimize the chances of haphazard decisions. Since, the future needs of the organization are anticipated in advanced, the proper acquisition and allocation of resources can be planned; thus minimizing wastage and ensuring optimal use of these scare resources.
7. **Planning offers effective coordination** – planning helps the management in the coordination process also. As **Koontz** and **O'Donnel** say, "plans are selected courses along which the

management desires to coordinate group actions". It avoids duplication of work and inter-department conflicts also.

8. **Planning leads to economy of operation –** i.e., the benefits of large scale production such as market economy, labour economy, technical economy, etc. Planning is the only way to realize the business objectives at cheapest and the best. It provides for the proper utilization of company resources.
9. **Planning encourages innovation and creativity** – planning is basically the deciding function of management; it promotes innovative and creative thinking among the managers, because many new ideas come to the minds of a manager when he/she is planning.
10. **Planning helps in the process of decision making** – since planning specifies the actions and steps to be taken in order to accomplish organizational objectives, it serves as the basis for the decision making about future activities. It also helps the managers to make routine decision about current activities as the objectives, plan, policies, schedules, etc., are clearly laid down.
11. **Planning facilitates and provides itself as an effective tool of controlling** – it is always pre-requisite for controlling. No control can be exercised without planning. Planning, is forward looking and control as a backward looking. Well developed plans can aid the process of control by way:
    - **a)** Establishing a system of advance warning of possible deviations from the expected performances and the deviation may come to light during periodic investigations; and hence immediate action can be taken before any harm is done.
    - **b)** As a contribution to controlling process planning provides quantitative data which would make it easier to compare the actual performance in quantitative terms.

Planning Premises:

An essential for effective planning is establishment of the premises, or assumptions, on which planning is to be based. **Weihrich** and **Koontz** define planning premises as "the anticipated environment in which plans are expected to operate. They include assumptions or forecasts of the future and known conditions that will affect the operation of plans". Examples of planning premises include assumptions about future economic conditions, government decisions (regulation, tax law, and trade policy, etc.), the nature of competition, and future markets.

In managing technology it is essential to establish planning premises about the future of technology and competition. Where there are uncertainties about critical premises, prudent managers develop ***contingency plans*** that can be implemented if indicators show a change in the environmental conditions from those on which mainstream planning is based. Modest changes in current plans may be needed to add flexibility so that a switch to a contingency plan can be made quickly if needed.

Planning Horizon:

The **planning horizon** asks – how far into the future one should plan. This varies greatly, depending on the nature of the business and the plan. The planning period needed to look far enough ahead to encompass a return on company's long-term investment. Koontz and Weihrich summarize the 'Commitment Principle' – i.e., logical planning encompasses a future period of time necessary to fulfill, through a series of actions, the commitments involved in decisions made today. The high technology products may have short effective lives, and, therefore, a short planning horizon.

Objectives:

Objectives feature in all branches of management and are one of the most basic and fundamentally important tools of management and they are constantly in use with in organizations. Objectives are defined as, "*the important ends toward which organizational and individual activities are directed*". In the words of Koontz and O'Donnel, "*objective is a term commonly used to indicate the end-point of a management programme*". Objectives decide where we want to go, what we want to achieve, and what is our destination, etc. An organization cannot take intelligent planning without clear objectives.

The Need for Objectives:

There are two powerful influences that cause the need for objectives in engineering management.

a) The practical limits in communication; which results in misunderstanding in delegation of tasks and authority in management hierarchy. The organizations need objectives (which are clear and precise) to eliminate misunderstanding from the delegation process.

b) Objectives are also a desirable way to be managed from a personal point of view since they allow room or scope to do things (work) the way people want. People are not forced into methods that they do not necessarily approve of and they have the opportunity to bring their own ideas to manage the problem at work.

Thus, the need for an objective is to be an unambiguous answer to the question – what exactly the management expects from the subordinates at work or employees? And, another reason to have objectives is to fulfill a deeply rooted part of employees' motivational psychology. Thus, the two basic reasons (needs) for having objectives in an organization are as above:

- To provide unambiguous delegation of work and authority; and
- To serve a fundamental drive of humans – i.e., the need to achieve or accomplish.

By working towards objectives as end-results, these two things are also simultaneously realized by the people at work.

Attributes/Features/Characteristics of Good Objectives:

Objectives are clear and unambiguous statements of desired outcomes or end-results. Objectives are used by people who delegate or by individuals who are managing their time. They may be corporate objectives applying to many people or they may be departmental objectives, applying to only a few. Whichever the form of objectives, in all cases, there are various important characteristics of a well-specified objective that prevent ambiguity and foster accurate interpretation. There are many popular tests of attributes or characteristics that well-written objectives should exhibit. The major features or attributes of sound objectives are shown as below:

a) Quantifiable: Objectives must be quantified, numerically, if possible. If a given objective cannot be quantified then one can never know whether it will be achieved or not. However, the quantification must also be appropriate.

b) Achievable (Attainable): An objective must be achievable, because it aimed at two things:

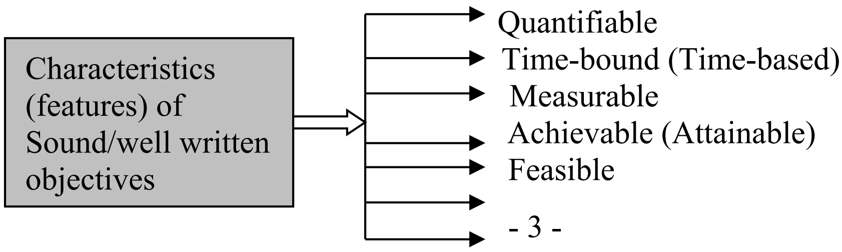
- It is motivating to the employees, if the given an objective is exciting and although tough, still achievable.
- Achievable objectives make planning possible; and thereby optimize the use of resources and predict overall lead times. If any of the benefits of planning are to be realized, there must be a known likelihood that each of the tasks will be achieved.

c) Compatible: This attribute is related to feasibility, but is distinct from it. Compatibility relates to a collection of objectives and describes the need for them to fit together as a whole. Therefore, objective-setting always starts with one, central, goal that is supported by others that follow from it. Such a progressive sub-division ensures that conflicting objectives do not occur.

d) Time-bound (Time-based): An objective which is not having any time-limit to accomplish or achieve it has no use what so ever. Every result that is desired has some appropriate deadline (time-limit) to accomplish or achieve. Open-ended objectives result in wastage of resources; and if there is no particular time by which an objective is achieved; then it never be achieved so easily.

e) Measurable: This is related to the attribute – being quantified. However, for an objective measurable, people have to have access to an appropriate measuring system. If people cannot measure the changes they are making, they cannot know if they are having the desired effect.

These major characteristics of a sound objective may be presented in the form of a chart as below:



Reliable and Compatible
Simple and Flexible

In addition, the sound (well-written) objectives must also fulfill the following attributes:

- The objectives must be pre-determined and clearly defined.
- The objectives must be reduced (stated) in Black and White, i.e., they must be clearly written.
- The objectives must be realistic and attainable.
- The objectives must have social-sanction (approval by the society or general acceptability).
- All objectives must be interconnected and mutually supportive; so as to avoid conflict of objectives.
- The objectives must be arranged in a hierarchy i.e., overall (organizational), major, divisional, departmental, individual, etc.
- The objectives must also be flexible to changes, and replaceable with new ones; etc.

To make it more specific a sound objective must be SMART - Simple, Measurable, Attainable, Realistic, Time-bounded – in every respect.

Forecasting:

Henri Fayol identified the first management function as ***prevoyance***, a French word meaning to "foresee" and "prepare for" action. An essential preliminary to effective planning is therefore ***foreseeing*** or ***forecasting*** what the future will be like. The engineer manager must be concerned with both future market and future technology, and must, therefore, understand both sales and technological forecasting.

The most important premise or assumption in planning and decision making is the level of future sales (or, for nonprofit activities, of future operations). Almost everything for which we plan is based on this assumption:

- the production level (which determines how many people we must hire and train or, if production declined, lay off),
- the need for new facilities and equipment,
- the size of the sales force and advertising budget; and
- new funding for purchases and for investment in inventory and accounts receivable.

The following are the common ways or methods of Forecasting and are classified into two broad categories:

1. Qualitative Methods; and
2. Quantitative Methods.

1. Qualitative Methods:

The qualitative methods of sales forecasting of a firm generally involve the following methods:

a) **Jury of Executive Opinion:** This is the simplest method, in that the executives of the organization (typically, the vice presidents or managers of the various divisions) each provide an estimate (educated guess) of future volume, and the president provides a considered average of these estimates. This method is inexpensive and quick and may be entirely acceptable if the future conforms to the assumptions the executives have used in estimating.

b) **Sales Force Composite:** In this commonly used method, members of the sales force estimate sales in their own territory. Regional sales managers adjust these estimates for their opinion of the optimism or pessimism of individual salespeople, and the general sales manager "massages" the figures to account for new products or factors of which individual salesmen are unaware. Since the field sales force is closest to the customer, this method has much to recommend it. However, if there is any suggestion that the estimate a salesperson provides will next appear as a minimum goal they must achieve, the sales force may find it in their own best interest to "play games" with the figures.

c) **Users' Expectation:** When a company sells most of its product to a few customers, the simplest method is to ask the customers to project their needs for the future period. The customers depend for their own success on reliable sources of supply, and so communication is in the best interest of both parties. This might be done by market testing or market surveys. For consumers goods, though, not only is such information expensive to obtain, but customers often do not know what they will purchase in the future.

2. Quantitative Methods:

Some of the quantitative methods of sales forecasting are:

a) **Simple Moving Average:** Where the values of a parameter show no clear trend with time, a forecast $\mathbf{F_{n+1}}$ for the next period can be taken as the simple average of some number '**n**' of the most recent actual values $\mathbf{A_t}$. Then;

$$\mathbf{F_{n+1}} = \frac{1}{n}\sum_{t=1}^{n} A_t$$

b) **Weighted Moving Average:** The Simple Moving Average method has the disadvantage the an earlier value (the value in past to that what is given in the list for estimation) has no influence at all, but a value '**n**' years in the past (the value of extreme past as given in the list for estimation) is weighted as heavily as the most recent value (recent past as given in the list for estimation). We can improve on the simple average model by assigning a set of weights '$\mathbf{w_t}$' that total unity (1.0) to the previous values. Then:

$$\mathbf{F_{n+1}} = \sum_{t=1}^{n} w_t A_t \quad Where \sum_{t=1}^{n} w_t = 1.0$$

c) **Exponential Smoothing:** The Weighted Moving Average techniques have the disadvantage that one must record and remember '**n**' previous values and '**n**' weights for each parameter being forecast, which can be burdensome if '**n**' is large. The simple exponential smoothing method continuously reduces the weight of a value as it becomes older, yet minimizes the data that must be retained in memory. In this technique the forecast value for the next time period $\mathbf{F_{n+1}}$ is taken as the sum of:

i. The forecasted value $\mathbf{F_n}$ for the current period, plus
ii. Some fraction $\boldsymbol{\alpha}$ of the difference between that actual ($\mathbf{A_n}$) and forecasted ($\mathbf{F_n}$) values for the current period:

$$\mathbf{F_{n+1}} = F_n + \alpha\left(A_n - F_n\right)$$
$$= \alpha A_n + (1 - \alpha)F_n$$

In this equation the weight put on past values continues to decrease but never becomes zero.

d) **Regression Models:** Regression models are a major class of ***explanatory forecasting models,*** which attempt to develop logical relationships that not only provide useful forecasts, but also identify the causes and factors leading to the forecast value. Regression models assume that ***a linear relationship*** exists between a variable designated the ***dependent (unknown) variable*** and one or more other ***independent (known) variables***.

i. Simple Regression Model: The simple regression model assumes that the independent variable (y) depends on a single dependent variable (x), i.e., y = a + bx

ii. Multiple Regression: In multiple regression, the dependent variable (y) is assumed to be a function of more than one independent variable (x_j), such as: $y = c_o + c_t x_j + \frac{c_2}{x_2} + c_3 x^2{}_3 + \ldots\ldots\ldots\ldots\ldots$ The dependent variable can be assumed to be proportional directly or inversely proportional to a power or a root, or proportional in some other way to the independent variables, as is suggested in the equation above. Past values of dependent and independent variables are then used in ***regression analysis*** to reduce the independent variables to the most important ones and to find the values for the constants $\mathbf{c_i}$ that give the best fit. For example, a manufacturer of replacement automobile tires might find that the demand for tires varied with the cost of gasoline, the current unemployment rate, sales of automobiles two years before, and the weight of the automobiles.

Break Even Analysis and Break Even Chart

Since the profit earning is one of the most important objective of any company, profit cannot be left to chance or luck. A proper planning and control of profits is, therefore, of an utmost importance to the strategic business unit. Break Even Analysis is one of the techniques available in profit planning and estimation.

Break Even Analysis reveals the relationship between the volume and cost of production on the one hand, and the revenue and profits obtained from the sales on the other. It captures the relation of fixed costs, variable costs, the value of output, sales mix, prices, etc., to the profitability of the company.

Break Even Analysis divides cost into their fixed cost and variable cost (components) to estimate the production levels needed for profitable operation. **Fixed cost** are those assumed to be independent of production level, at least in the range of production volume of interest. They include lease payments, insurance costs, executive salaries, plant heating and lighting, and the like. **Variable Costs** are those assumed to vary directly with the levels of production, such as direct labour, direct materials, and power for production equipment. Some **semi-variable** costs may be divisible into fixed and variable components, i.e., selling costs, may consist of both salary (fixed) and commissions (variable)

Break Even Point:

"The Break Even Point (BEP) is that point of activity (sales volume) where total revenues and total expenses are equal. It is the point of zero profit" (as stated by Horngren).

The relationship between the fixed costs, variable cost and total cost and also total cost with the total revenue (income) determining the Break Even Point may be represented in the chart below. The break even chart represents that at the point of BEP the Total Revenue is equal to the Total Cost (TR=TC). The volume of output and sales below the BEP results in loss; and the volume of output and sales above the BEP results in profit as a difference between the Total Revenue and Total Cost (i.e., the Profit = Total Revenue – Total Cost).

Break Even Chart helps the management of the strategic business unit in visualizing the profit or loss implication at different levels of sales. *It shows the extent of profit or loss to the firm at different levels of the activity or sales volume.* A break even chart may, therefore, be defined as 'an analysis in graphic form of the relationship of production and sales to profit'.

Assumptions of Break Even Analysis:

The break even analysis is based on a set of assumptions, some of which are quite restrictive. The assumptions underlying the analysis are:

a) it assumes that costs can be classified into fixed and variable costs, thus ignoring semi-variable costs,

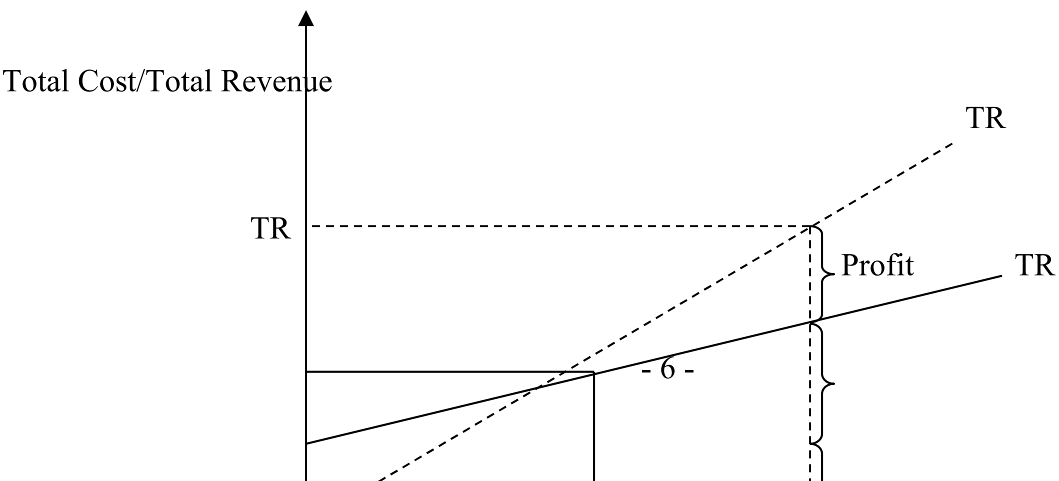
b) sale price (Selling Price) of the product is assumed constant, thus giving linearity property to total revenue (TR),

c) it assumes constant rate of increase in variable cost, thereby imparting linearity to total cost (TC),

d) the technology and labour efficiency assumed constant,

e) changes in input prices are also ruled out,

f) it also assumes that the product and sales are synchronized, in the sense that there is no addition or subtraction from inventory.



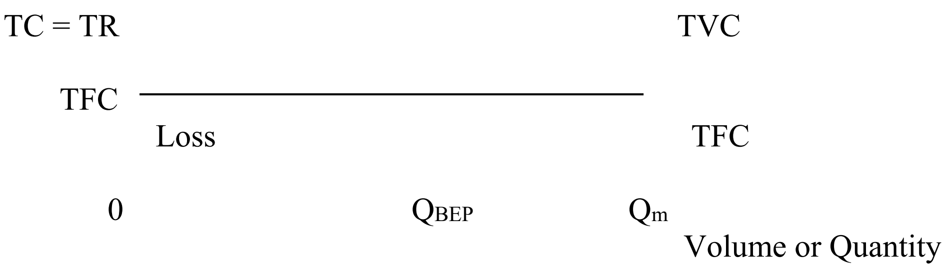


Figure: Break-Even-Chart

At BEP (i.e., at Q_{BEP}) the Total Revenue is equal to Total Cost, earning neither profit nor loss. Any quantity or volume above BEP (Q_m) will result in earning profit as a difference between the Total Revenue and Total Cost (i.e., TR>TC) and any volume of output below BEP will result in loss (i.e., TR<TC). The Break-Even-Chart will also help in estimating and depicting the change that may result in Fixed Cost, Variable Cost and also Selling Price on the Break Even Point and profit making ability of the firm.

The general equation to calculate the Break Even Point is derived by using the definition of the break even point

$$TR = TC$$

Substituting we get,

$$SP \times Q_{BEP} = TFC + Q_{BEP}(AVC)$$

$$Q_{BEP}(SP - AVC) = TFC$$

Therefore, the break-even point quantity is

$$BEP = \frac{TFC}{SP - VC}$$

Where; SP – VC is also called as contribution margin.

And; for the total values: $$BEP = \frac{TFC}{1 - \frac{TVC}{Total\ Sales}}$$

<u>Uses of the Break Even Analysis</u>:

The major advantages of using the break even analysis in managerial decision making can be the following:

a) it helps in determining the optimum level of output, below which it would not be profitable for a firm to produce,
b) it helps in determining the target capacity for a firm to get the benefit of minimum unit cost of production,
c) it help the strategic business unit to determine minimum cost for a given level of output,
d) it helps the firm in deciding which products to be produced and which to be bought by the firm, i.e., to decide either to make or to buy the components,
e) plant expansion or contraction decisions are often based on the break even analysis of the perceived situation,
f) impact of changes in prices and costs on profits of the firm can also be analyzed with the help of break even technique,
g) to take decision on either to add or drop an item into or of the product mix (product line),
h) it evaluates percentage financial yield from a project, and thereby helps in the choice between various alternative projects,

i) to decide the selling price which would prove most profitable for the firm,
j) to decide the level of production and sales wherefrom the firm can start the payment of dividend to its shareholders, etc.

Limitations:
The preceding discussion on assumptions gives a fair idea of the limitations of the break even analysis. The break even analysis fails in evaluate the implications of

- the changes input prices, wages , material costs, etc., over time,
- the result of the application of the break even analysis may appear unrealistic as it don't consider the changes in the product prices,
- it is static in nature as it assume a constant relationship between the cost, revenue and volume of the output,
- it fails to consider the relative implications of the frequent changes in the composition of demand and product mix,
- it fails to consider the implications of the technological changes, and managerial effectiveness on profit of the firm,
- it ignores the selling cost and only concentrates on the production cost, and so on.

Organizing:
The nature of organizing includes the following aspects in our discussion:

Organizing - Definition:
Weihrich and **Koontz** belied that people "will work together most effectively if they know the parts they are to play in any team operation and how their roles relate to one another………Designing and maintaining these systems of roles is basically the managerial function of organizing".

For an *Organizational Role* to exist and be meaningful to people, it must incorporate:

a) Verifiable objectives, which ….are a major part of planning;
b) A clear idea of the major duties or activities involved; and
c) An understood area of discretion or authority, so that the person filling the role knows what he or she can do to accomplish goals.

In addition, to make role work out effectively, provision should be made for supplying needed information and other tools necessary for performance in that role.

In this sense, the **Process of Organizing** (Steps in Organizing Process) involves:

1. the identification and classification of required activities,
2. the grouping of activities necessary to attain objectives,
3. the assignment of each grouping to a manager with the authority (delegation) necessary to supervise it; and
4. the provision for coordination horizontally (on the same or similar organizational level) and vertically (for example, corporate headquarters, division, and department) in the organization structure.

Legal Forms of Organisation:
As background to the study of organization, let us first compare the legal forms in which a business firm can be organized and their salient features. The major forms generally considered are:

1. The Sole Proprietorship or Sole Tradership,
2. The Partnership,
3. The Corporations (The Joint – Stock Companies or Companies); and
4. The Cooperatives.

1. The Sole Proprietorship (Sole Tradership):

This form of business is known by other names such as – '*individual proprietorship*', '*sole-ownership*' and 'individual *enterprise*'. It is owned and controlled by a single individual. The proprietor or the sole trader invests his own capital, skill and intelligence and he receives all the profits and assumes all the risks of ownership. When the activities of the industry increase, he can take the assistance of employees or his own family members.

This form of organization is the oldest and most natural form of ownership. The industrialist carries out the functions of the industry exclusively by and for himself. The sole trader has unlimited freedom in selecting the type of industry depending upon his likes and dislikes. This form of organization is well suited in the circumstances like:

i. When the size of the industry is small,
ii. When the capital to be invested is small,
iii. When the business requires the personal attention of owner to his customers and employees,
iv. When the risk involved is less; and so on.

The sole trader, for example, may be in the form of small shops, newsagents, electrician, plumbers and small consultants and builders, etc.

Features (characteristics) of Sole trader (Proprietorship):

As far as sole trader or proprietorship is concerned, the business has no separate legal identity from the owner, which means that all debts, liabilities, and profits belong to the owner. Operating, as sole trader does not mean that the owner has to work on his own, he can even employ other people. Some of the major *features (characteristics)* of sole trader or proprietorship are:

a) ***Individual ownership***.
b) ***No separate entity of business***
c) ***Unlimited liability*** – i.e., in case the business incur loss and runs in debts, then the sole trader is liable to pay it not only from his company assets but also liable to his personal property to pay the debts to an unlimited levels. Thus, liability for debts is unlimited.
d) ***Centralized management and control*** – i.e., the owner (sole trader) makes all decisions, and therefore has the total control of the business. It provides for a *quick and prompt decisions* on issues related to the areas like credit policy, sales promotion, production programmes, inventory control and management, labour policy, etc. A sole trader being a supreme judge and master of his business makes prompt and quick decisions and thereby takes advantage of favourable situations.
e) ***Sole enjoyer of profit*** – i.e., since the sole trader invests his capital (either personal or borrowed at personal liability), skills and intelligence and being the whole and sole owner of the business, the sole trader is the sole enjoyer of the business profit also.
f) ***Free from too much government regulations*** – i.e., as a sole trader he is in an eminent position to keep the business affairs to himself and also to maintain the utmost secrets of the business. The sole trader need not bound to furnish particulars of the business or to publish it for others. The accounts do not have to be disclosed publicly, and are therefore not available to the competitors. This enables the sole trader to maintain utmost secrecy in al matters relating to his business and sustain the competitive strength.
g) A sole trader can ***offer a personal service***, which may be valued more highly by some customers.
h) It can be ***a high cost enterprise*** because the sole trader rarely benefits from economies of scale.

2. The Partnership:

Partnerships exist when there are a number of people involved who are part owners of the business. This form of organization eliminates some of the disadvantages of the sole trader form of business, such as limited capital, absence of specialization, and limited managerial ability, etc.

Section of 4 of the Indian Partnership Act 1932 defines a partnership as, "the relation between persons who have agreed to share the profits of a business carried on by all or any of them acting for all".
According to *Henry* a partnership is, "the relation between persons competent to make contracts, who agree to carry on a lawful business in common with a view to private gain".

As defined by *Uniform Partnership Act*, the partnership is an "association of two or more partners to carry on as co-owners of a business for profit".
The persons who enter into partnership are voluntarily known as partners and collectively as a firm. The name under which the partnership business is carried on is known as the firm name.

Features (characteristics) of Partnerships:
The major features of a business operating as a partnership form of organization are:

a) ***Plurality of persons*** – i.e., the minimum number of persons to partnership business is TWO. The maximum is restricted to TEN in the case of partnership organization carrying on banking business and TWENTY in the case of a trading and manufacturing business. But in certain professional partnership where companies are not allowed to be formed by law, such as solicitors and accountants, there may be more than twenty partners.
b) ***Mutual agreement*** – where a partnership form of business is established by a contractual agreement entered into by all the partners. Therefore, any person who cannot qualify to enter into a contract cannot join a partnership organization. A partnership business can be set up without any formality but it is usually advisable to draw up a deed of partnership, which covers things such as the way in which the profit will be split between the partners.
c) ***Lawful business*** – i.e., the contractual business entered into by the partners must be for a lawful business. In other words, the business generally accepted by the society and law as especially viable one.
d) ***Sharing of profits*** – It is immaterial whether a partner takes an active part in the business or not; but sharing of profit must be the criterion to call a person as partner.
e) ***Collective management*** – Unlike proprietorship or sole trader form of business, the partnership form of business is managed collectively by most of the partners if not by all of them. The liability and decision-making are shared. This can be the advantage when the skills and experience of the partners complement each other and the management of the business is carried out effectively.
f) ***Non-transferability of interest (ownership rights)*** – A partner in a partnership business cannot transfer his interest or ownership rights to anyone (either to any of his family members or to a third party) unless the other partners give consent to it. However, if a partner does not like to continue with the partnership organization, he can retire or withdraw on his own and thus get back his capital share from the firm.
g) ***Unlimited liability*** – The liability of the partners (except the minor partners and secret/hiding out partners) of the business organization is unlimited as in the case of sole trader (proprietorship) form of business; where the partners to the business are expected to go for forced disposal of their personal property and the possessions to pay the debts over and above the organization's assets in case the debt burden is so heavy to pay-off from the organization's assets. Thus, the partners are liable to debts to an unlimited level.
h) ***Durability of role*** – The partner in a partnership form of organization plays two roles as – '*principal*' (one of the owners) as regards to the outsiders and assume the role of an '*agent*' as between the partners themselves.
i) ***Utmost goal faith*** – The partnership if formed on the basis of faith and trust, which each partner reposes in others.
j) ***Easy to form*** – There is less formality and expense than is involved in forming a company form of business. It does not involve any legal formalities to be fulfilled. Registration of the firm or organization is also not compulsory and even if desired it is very simple.

k) ***Maintenance of business secrets*** – Since the accounts of the business in a partnership form of organization need not be publicly disclosed for the reference of the public and to the competitors, it is easy to maintain utmost business secrecy and sustain the competitive strength.

Types of Partnership:
The major types of partnerships are classified and identified on basis of:

- Liability - as general partnership [which involves the classifications like general, sleeping (dormant or silent), active, special or nominal, and secret or hiding-out partners] and limited partnership.
- Age of the partners – as major and minor partners.
- Duration of the firm – partnership at will (where business is carried out on an indefinite period) and particular partnership (where partnership is formed for a definite period and purpose only).

The general partners are liable to an unlimited level to the debts of the organization. The sleeping partners take no active participation in business but entitled to share of profit. Special or nominal and secret partners are insignificant part of partners and have no direct involvement in managing of business. Limited partnership is a registered form of partnership and is to be registered under law. In the case of minor partner the liability is limited. The partnership at will carried on for an indefinite period, where as the particular partnership only for a specific purpose and particular period.

3. The Corporations:

Company form of organization was evolved with a view to overcome some of the disadvantages and handicaps of the partnership business such as lack of continuity, unlimited liability, etc., and to meet the requirements of the modern business such as large capitals, professional managers carrying on business on a large scale and the like.

According to Indian Company Act, 1913 a joint-stock company is "*an artificial person created by law having a separate entity, with a perpetual succession and a common seal*".
Chief Justice Marshall of USA has defined a corporation (company) as "*a person artificial, invisible, intangible and existing only in the eyes of law*".

A company may be defined as an artificial person recognized by law with a distinct name, common seal, and a common capital comprising of transferable shares of fixed value carrying limited liability and having a perpetual succession.

Features (characteristics) of Company form of Organization:
The main features of a business organization operating as a company are:

a) ***Separate legal entity*** – A company has a separate legal entity from its owners and managers. It is considered to be quite distinct from its members, and in the eyes of law it is a separate entity with corporate status. Thus, it can sue others and be sued by others. It cannot be seen or touched but its existence can be felt. Therefore, it is an artificial person with a separate legal entity.
b) ***Voluntary association of person*** – A joint-stock company is a voluntary association of many persons, who contribute money (capital) to common stock and employ it for common purpose of producing goods and services on a large scale. They create it on their own and there is no kind of compulsion by the law of the government to from it.
c) ***Legal sanction*** – A joint-stock company has to incorporate with due process of law. In Indian Companies Act of 1956 lays down the procedure and basic conditions, which have to be fulfilled to start a company. Once all the conditions are satisfied the company must be registered under the act i.e., the Registrar of joink-stock companies does registration of the company. All large-scale enterprises of the country are coming under the Companies Act of 1956.

d) ***Perpetual succession (continued existence)*** – The perpetual succession and stable existence is one of the distinct features of the company form of organization. It means the life of the company is independent of the life of its shareholders (stock/stake holders). Being a legal person it will not die like a natural person with physical existence. It goes on forever until law winds it up. Shareholders may come and go, and may change hand any number of times but the company goes on forever. A company is brought into existence by law and its life can be put to an end only by law.

e) ***Profit motive*** - A company is established only on to carry out a business to earn profit.

f) ***Limited liability***-The liability of shareholders is limited to the extent of amount remaining unpaid on shares held by the shareholders. This means once the shareholders pay the whole amount on shares they cannot be asked to bring further amount from his private property to meet losses and to pay off debts; in other words, in a company form organization, the liability of owners (i.e., share/stake holders) limited to the amount of capital they invest in business individually.

g) ***Common seal –*** A company is as an artificial person, it cannot speak or sign documents on its own to facilitate entering contract with outsiders, the company's common seal is affixed on all documents and serve the purpose of evidence, two directors of company will sign such documents on behalf of the company. Moreover, the common seal of the company should be kept in a safe custody to avoid its possible access to others and misuse.

h) ***Management and control by elected representatives*** – A company being an artificial person cannot manage its business by itself. Therefore, a Board of Directors consisting a group of representatives of shareholders manage it. These members are known as the promoters of the company and such members in Board of Directors are generally the men of reputation in business and industrial circles. Though the shareholders are the owners of the company, they do not take direct part in the management of the company. Thus, the management and the ownership are separate from one another.

i) Transferability of shares – The shareholders of public limited company are free to transfer shares to any one who is willing to buy them. By this process, shareholders can get back the value of his share when he is in financial need. Extra capital can be raised in public companies by issuing more shares. Shares in public companies can be freely transferred without consulting other shareholders.

j) Number of members – The minimum number of members required to form a private limited company is TWO and SEVEN in a public limited company whereas the maximum number of members are fixed at FIFTY for a private limited company and there is no limit to the maximum number for public limited company.

k) ***Accounts and Audits*** – The accounts and audits are to be maintained compulsorily in all companies. The accounts re to be prepared according to the requirements of Companies Act and audited by an auditor of the company. The accounts have to be disclosed publicly, and therefore, it is possible to closely monitor what is happening in a competing company. The company's objectives are limited by the object clause. The company is more closely controlled and regulated by outsiders than in the case of sole traders and partnership form of business organizations.

l) ***Excessive Government control -*** The companies are subjected to excessive government control. They must also furnish various particulars and documents to the government and other government agencies from time to time.

4. The Cooperatives:

The *ILO (International Labour Organization)* defines a cooperative organization as, "an association of persons, usually of limited means, who have voluntarily joined together, to achieve a common economic end through the formation of a democratically controlled business organization, making equitable contributions to the capital required and accepting a fair share of risks and benefits of such undertaking".

The main objective of a cooperative organization is to promote 'self-help' and 'mutual-help' among men of moderate means and incomes having needs and interest in common.

Formation of Cooperatives (Cooperative Societies):

To setup a cooperative society, an application is to be submitted to the registrar of societies. It may be formed by a minimum of 10 members and should be registered with the registrar of cooperative societies. The officials of this department will attend the first general body meeting in which the bylaws are formed to govern the society and the directors are elected by the shareholders. If the officials are satisfied with the soundness, a license is issued by the registrar and cooperative society will be legally formed. The board of directors meets at least once in 3 months.

Features (Characteristics) of Cooperatives:

The main characteristics or features of cooperatives are:

a) ***It is a voluntary organization*** – There is open and voluntary membership for all who work in the organization. A member can continue his membership as long as he desire, and can withdraw his membership after giving a notice. No distinction is made between caste, creed, sex, and religion of the persons while admitting to the membership of the cooperative society.

b) ***No upper limit to membership*** – There must be minimum 10 members and maximum no limits to membership.

c) ***Lower face value of shares*** – The face value of the share is generally kept in between Rs. 25 and Rs. 100 to enable poor people also to become cooperative society's members.

d) The management is based on ***democratic line of equality*** – Every member can cast only one vote irrespective of the number of share he/she may hold.

e) ***Service motive*** - The main objective is to serve and not make profit; and also promoted the principal of self-help and mutual cooperation among the members of the community i.e., the idea of "each for all and all for each". Thus, service is the motto of the society.

f) ***Fulfillment of common interest*** – The cooperatives are aimed at the fulfillment of common interest such as economic activities like trade, commerce, finance, agriculture and related activities.

g) ***Mutual faith, cooperation and honest*** – as the guiding principle of the cooperatives in functioning. It gives a due emphasis on morality of business.

h) ***The provision of cash-sale*** – i.e., cash and carry system to avoid the risk of loss due to bad debt.

i) ***A separate legal status*** – Since a cooperative society has to be registered under the cooperative society act, gets a separate legal status.

j) ***Social responsibilities*** – The business must be socially aware and act responsibly towards other businesses, customers, suppliers and the local community; they are not necessarily profit-making.

k) ***Disposal of surplus*** – i.e., the surplus amount of revenue is not fully distributed as profit to the members of the society. It transfers 25% of its revenue to general reserve fund of the cooperative organization and 15% of the revenue for the general welfare of the locality where the cooperative society is functioning. The balance is distributed as profit to its members.

l) ***State control*** – i.e., a cooperative form of organization is governed by the cooperative societies act, 1912, and besides that is also governed by the cooperative societies act enacted from time to time for various state governments.

m) ***Tax exemption*** – The cooperatives are exempted from paying tax to the government so as to encourage the formation of the large number of societies.

n) ***Accounts and auditing*** – A cooperative form of organization has to compulsorily maintain its accounts and they are to be audited by the auditor of cooperative societies.

The cooperative form of the business organizations may be of various ***types*** such as:

- Cooperative credit societies,
- Producers (industrial) cooperatives,
- Consumers' cooperative societies (distributive cooperatives),
- Cooperative marketing societies,
- Housing cooperatives,

- Farming (agricultural) cooperatives, and so on.

While sole proprietorships are the most common form of business organization in sheer numbers, most large organizations are corporations.

Span of Control:

As soon as a new organisatin grows to a significant size, subordinate managers must appointed to help the top management. The question is not whether immediate managers are needed, but *how many*? It must be decided, in every organization, how many subordinates a superior can manage. The ***span of management and control*** is defined as "*the number of subordinates under a manager*" or "*the number of people reporting to a particular person or superior*". In other words, it refers to the numbers of positions that can be coordinated by a single executive.

Significance of Span of Control: The span of control may be ***'narrow'*** with a few individuals reporting to a superior or manager and may be '***wide***' with a large number of individuals are under the supervision of the same manager or superior. It is advisable to have no more than 4 or 6 subordinates working under one executive or superior. The narrow and wide span of control may be depicted in the form of chart as below:

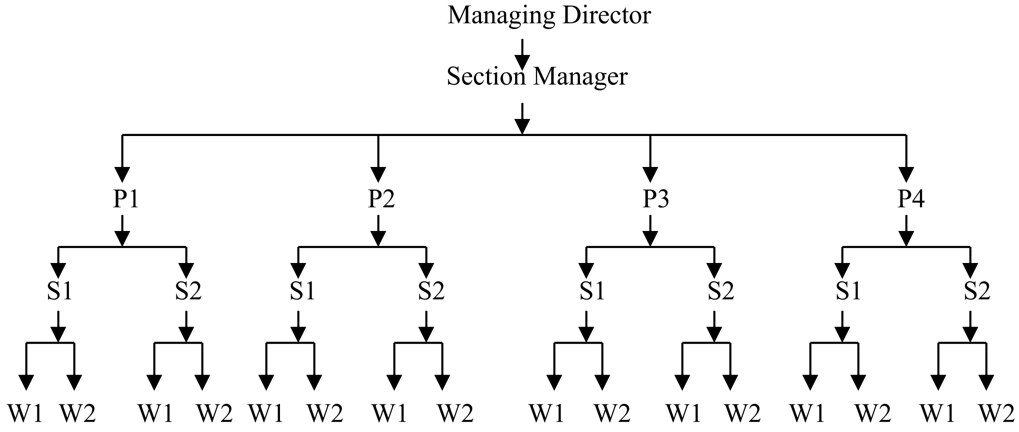


Figure: Organization with 'narrow span of control'

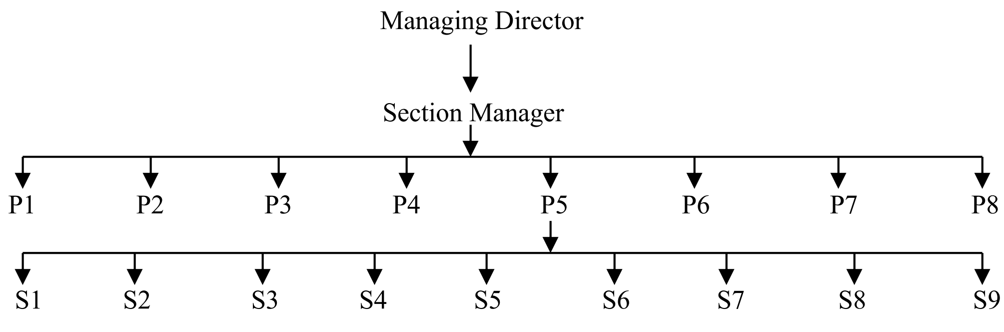


Figure: Organization structure with 'wide span of control'

Factors Determining Effective Spans: What, then, does determine a desirable span? **Graicunas**, a Lithuanian engineer and a Paris-based management consultant stated that this depended on the number of *relationships* that existed between managers and subordinated individually and in various combination, and among the subordinates themselves. He calculated the number of relationships for a manager with 'n' subordinates as

$$n\left[2^{(n-1)} + n - 1\right]$$

so that every subordinate added *more than doubled* the number of relationships the manager had to be concerned with and, **Graicunas** assumed, the difficulty of the job. However, effective span of control depends on many factors other than the simple number of subordinates and studies of effective spans have identified the following conditions or factors as affecting the number of people a manager can effectively supervise:

1. The level of *Training of the Subordinates* as per the job requirements.
2. The Nature of the Job supervises – whether simple or complex.
3. The Rate of Change of Activities and Personnel.
4. The Clarity of instruction and delegation of power and authority.
5. The Staff assistance required to a manager in discharging his responsibilities.
6. Similarity of function in which subordinates are involved.
7. Complexity of functions; making too many subordinates difficult to manage and supervise.
8. Geographical closeness of employees at work place.
9. Degree of direction and coordination required.
10. Capabilities of subordinates.
11. Use of objective standards.
12. Effective communication and meetings with subordinates and personal contact with subordinates.
13. Maturity level of the subordinates and their support to the manager or leader.
14. The philosophy of centralization and decentralization in decision-making;
15. Finally, the skill and experience of the manager does, of course, have an effect on the number of people that he or she can supervise.

Thus, the span of control has a crucial influence on a manager's effectiveness and also determines the level of coordination of resources for a proper utilization to accomplish organizational goal or task.

Current Trends in Spans:

The current trend in spans of control is definitely to increase the "spans of control", which ultimately decreases the number of organizational (hierarchical) levels within a given organization or company. This shift to large span of controls is due in part to the Information Revolution. With more automated systems, databases, and ever-increasing methods of communication, decisions can be made efficiently. Line workers and technicians no longer have a small role in a particular process but have the ability to manage, in large part, the particular process that they are partly responsible for with the latest in technology. These results in large spans generally are around 20 to 30 subordinates per span, and the organization should consist of no more than five organizational levels in hierarchy. The major key points (advantages or benefits or reasons) that will result in wider or large span of control are:

1. Significant reduction in administration costs.
2. More effective and efficient organization communication.
3. Faster decisions and closer interaction between organizational levels.
4. Requirement that all levels of personnel become better trained, informed and educated; and
5. Better leadership at all levels.

The progress in information technology and its application resulting in large span of control benefit the entire organization as a whole, requiring better educated, involved, and trained workers and forcing better leadership, decision making, and involvement from managers.

Impact of the Information Revolution:

Modern computer and telecommunication (Information Technology) technologies are rapidly changing the organizations in ways that we do not yet fully understand. **Lund** and **Hansen** believe that the time horizons between design and production are collapsing because the design data base, once created, is available for design analysis and evaluation, creating prototypes, control of ultimate production and even planning and control of quality inspection. It reduces the resources tied up in in-process and finished goods inventory. Product life cycles will be shortened in many industries. The successful firms will be those evidencing the flexibility, adaptability, and quick response that computer based technologies can provide.

Lund and **Hansen** also observed "a diminishing of the size and importance of centralized corporate headquarters" as operating decisions are pushed to lower levels (and even simpler once are automated).

As computer-based automation replaces conventional processes, it will sharply reduce the number of workers needed per unit of output. Factory workers will be *monitoring* the production process rather than forming part of it and they will need at least the following skills:

1. Visualization (ability to manipulate mental patterns)
2. Conceptual thinking (or abstract reasoning)
3. Understanding of process phenomena (machine fundamentals and machine/material interactions)
4. Statistical inference (appreciation of trends, limits, and the meaning of data)
5. Oral and visual communication
6. Attentiveness
7. Individual responsibility.

Peter Drucker observed four special problems for management as particularly critical in the new information-based organization:

1. Developing rewards, recognition, and career opportunities for specialists (since opportunities for promotion into the management hierarchy will drastically decrease).
2. Creating unified vision in an organization of specialist.
3. Devising the management structure for an organization of task forces.
4. Ensuring the supply, preparation, and testing of top management people (since the progression of middle management levels that provided this training in the past have diminished).

A special Business Week report on "Rethinking Work" discusses some of the salient aspects:

1. Virtual disappearance of job security, replaced by shared responsibility.
2. Increasing demand for well-paid professional and technical workers; decreasing demand for operators, labourers, craftsmen, clerical staff, and farm workers.
3. Reduced real wages and increasing the need for the two-income family.
4. Continuing "downsizing" of staff, with the surviving personnel working longer hours under higher stress.
5. Increases in part-time, contract, and self-employed workers who are paid only when needed without the fringe benefits that often add 40% to payroll cost.

Therefore, each individual must take personal responsibility for their own career, to assure they continue to acquire the new knowledge and skills they will need.

Human Aspects of Management - Man Power Planning:

The management function of staffing involves finding, attracting, and keeping personnel of the quality and quantity needed to meet the organization's goals. Staffing is included in some management textbooks as part of the organization function and in others as a separate function, but the same steps are required. Effective staffing requires first identifying the nature and number of people needed, planning how to get them, selecting the best applicants, orienting and training them, evaluating their performance, and providing adequate compensation.

Hiring a labourers when jobs are scarce may involve just a call to the nearest union hall, but hiring quantities of engineers and other professionals, whether new colleges graduates or experienced professionals with specific skills, requires planning ahead from six months to more than a year. Planning for the overall personnel (or human resource) needs of a large high-technology firm can therefore be quite complex. Following is the process used in hiring technical professionals:

1. Document the number of technical personnel of each classification presently on hand.
2. Estimate the number of professionals of each type needed in the near future (six months to a year) to meet firm contracts and likely potential business.

3. Estimate the expected attrition in the current staff including –
    a. resignations as a function of the national demand for scientists and engineers and the relationship between salary scale and the employees strength of competition.
    b. Transfers out to other divisions and promotion to higher positions; and
    c. Retirements, deaths, and leaves of absence.
4. Establish the need for increased personnel as
   Increase (4) = need (2) – personnel on hand (1) + attrition (3)
   Subdivide this increase (4) into (5) new college hires, (6) experienced professionals, (7) technical support, and (8) other sources.
5. Hiring from the colleges and technical institutes.
6. Develop a hiring plan to acquire experienced personnel using national and local hiring, employment agencies and "headhunters" career centres, and employees -referrals.
7. Develop a plan to acquire needed technicians and technologists from two and four – year technical institutes; B.A. and B.S. graduates in physics, and mathematics, discharged military technicians, advertisements, state and commercial employment services, and employee-referral.
8. Needs that cannot be bet by sours (5), (6), and (7), especially those of to short a duration to justify permanent hiring, can be met by scheduling overtime, hiring contract (temporary) engineers, borrowing engineers from other company divisions, and contracting work to other company divisions or to other companies.

Job requisition/description: A manager wishing to fill a professional position normally must fill out a form known variously as a job description or job requisition, which then is approved by higher management and given to the personnel department as guidance in their search for candidates that might be considered for the position. A typical job-requisition consists of:
1. Title of the position and grade
2. Educational requirements
3. Experience
4. Personal specifications – physical and psychological
5. Description of the duties – to whom to report, authority of the employee, responsibilities and tasks involved in the job, types of machinery and materials to be handled, working conditions, etc., and
6. Emoluments and pay packages – salary range, etc.

The job-description contents that clearly communicates to the workers as to what they are required to do and this reduces confusion and misunderstanding. A clause my also be incorporated which provides the employer with a degree of flexibility when asking the job holder to carry-out specific tasks.

Selection:

Selecting those applicants who will be offered jobs from among the many contracted in the search described in human resource planning is essentially a filtering process. Resumes and applications are reviewed, potential candidates are screened in campus or telephonic interviews, references are checked, and applicants who pass through these screens are invited to the company for interviews (and sometimes testing) before job offers are made. The selection process includes:
- Resume and cover letter
- Employment application
- Campus interview
- Reference checks
- Site (plant) visit
- Starting salary; and
- Job offer.

Resume and Cover Letter: For the most engineering professionals the first impression is normally made by the resume, which is submitted with a cover letter in response to an advertisement or as an initial inquiry. The cover letter should be addressed to the appropriate individual by name. Normally the cover letter begins by identifying the position or type of work you are applying for and if appropriate, where you heard of the opening. The second paragraph can state why that company and position interest you, and describe *concisely* (a sentence or two) the education, experience, and other abilities that have prepared you for the position you seek. A closing paragraph can be referred to the attached resume, thank the recipient for his/her time to inquire about a possible interview. The cover letter must be impeccable in appearance, grammar, and spelling. A quality cover letter should encourage the recipient to give your resume fair consideration; with a poor one, your resume may not be read.

The resume generally includes all or most of the following details:

1. Name, address, and telephone number(s).
2. Current job position and/or status (such as 'graduating senior')
3. Current and longer term employment objectives.
4. Summary of education (formal degrees and continuing education)
5. Employment experience, with the most recent employment firs, emphasizing accomplishment (the longer you are out of college, the more likely this is to precede education in a resume).
6. Publications, significant presentations, and patents.
7. Professional affiliations.
8. Significant honours and awards.
9. References available on request (not a requirement on the initial resume).

Writing an effective resume is an important skill that many engineers do not master easily. An effective resume normally should not exceed two pages (except for academic positions, since publications and presentations are listed there in detail). The resume should be well organized concise, faultless in grammar and spelling, and attractively printed on quality paper.

Employment Application: If the resume leads to further interest from a potential employer, the applicant will normally have to fill out (neatly, of course) much of the same information on an employment application, arranged in a standard form familiar to interviewers from that organization.

Campus Interview: The newly graduating engineer typically makes the first contact with the potential employers in the campus interview. Interview outcomes are a complex dynamic of the attributes of the applicant, of the interviewer, and of the situation. Engineers need to learn to conduct interviews as well, since they may find themselves interviewing candidates at their plant or back on campus after a few years experience.

Reference Checks: Before inviting an applicant for a site visit, a prospective employer commonly checks the references given in an application or requests them if they have not already been provided. References for new graduate include professors and supervisors from part-time jobs; for the experienced engineers they will be primarily the past and current supervisors and co-workers. An increasing problem with references is the fear of liability if a bad reference is given.

Site (plant) visit: When a company has a strong interest in an engineer or other professional, he or she will normally be invited for a visit to a chosen company location at company expense.

At the end of an interview and plant visit it is perfectly proper for the applicant to inquire – "when to you expect to make a hiring decision" or "If I haven't heard from you by (date), may I call you?" A prompt letter thanking the interviewer for courtesies extended and expressing continuing interest in the company is generally appropriate.

Starting Salary: If an employer is interested in an applicant, sooner or later he or she will ask – "What salary do you expect?" Often this will occur toward the end of a site visit, and the applicant should be prepared. Remember, everything is not set in stone. A candidate who replies "whatever is your going rate", will probably be offered the bottom of the range. Since future salary adjustments in most companies are typically small percentage adjustments to current salary, inequities in starting salary can be adjusted only slowly. **Kennedy** suggests:

The answer should be "*I understand that market in this area for entry-level (your specialty) engineering jobs is X to Y dollars. I'm told I should expect to be paid at market rate*". This is both accurate and polite. The irony of the whole salary negotiation game is that if you hold out for market, the company thinks you are better and brighter then someone who actually hand them a bargain.

Experienced engineers will measure their expectations based on the years since their bachelor's degree, graduate degrees if any, the quality of their experience, local cost of living, and other factors.

Job Offer: The employment offer is a standard format letter offering a specific position and identifying salary, reporting date, position and title, the person to whom the candidate will report to, and often provisions for moving expenses. A candidate should acknowledge the offer immediately. However, the candidate with other interesting offers in hand may ask for a reasonable delay and if rejecting the offer should also reply about the rejection of the offer in a polite way. Striking a balance between demanding too much and selling oneself too cheaply requires the candidate to have a clear understanding of his or her true worth in the current job market.

Orientation and Training:

When a new employee reports to work, the employing organization needs to help the newcomer become part of the organization by introducing him or her to the policies and values of the organizations as a whole and specific requirements of the person's new department and job. The personnel department generally deals with these responsibilities in modern organizations. Orientation also involves the process of inculcating the values of the organization, such as attitudes toward quality, safety, and customers, etc. The management also needs to arrange for the appropriate training sources and methods to impart the skills and expertise required to work on specific areas in organizational activities. In a more comprehensive sense, orientation and training can be considered to include the total socialization of the new employee to the environment and culture of his or her new organization.

Training and Development is the process of developing knowledge, skills, and behaviour in people that will enable them to perform better their current and future jobs, and to discharge the responsibility effectively. It is, however, important to distinguish between Training and Development before we procede with further discussions on the topic. Training presuposes that the desire skill is already with in the capacity of the individual and that they only need to be shown how to apply the skills and knowledge to perform the job. Development, however, involves preparation for tasks or behaviours that currently beyond the individual's range of responses.

There are two prerequisites for successful training:

- Intellectual capability; and
- The desire to learn.

It should be realised that there are limits to how much a person may change as a resuld of training. Training cannot affect the basic psychological attributes.

However, there are several factors have contributed to the increased adoption of 'training and development' schemes in modern organisations, such as:

1. need for skilled labourers,
2. growth and development of new technologies, and techniques of operation,
3. persistent obsolescence of manpower,
4. the policy of the government relating to employing of socially and economically backward classes; and
5. realisaion on the part of employees the need of training to improve the productive efficiency, etc.

Conducting (organisation of) Training Programme:

The following ***phases*** to be considered while conducting ororganising a training programme:

1. Identify the Needs**:** It is the process of assessing the training needs in the orgaisation; using organisation's objectives and a summery of the given individual's abilities as starting points, generate a list of training needs for each individual in the form of objectives.

2. Select and apply the appropriate and best method of training**:** There are many techniques with which people may be trained and each method and type of training is suited to particular circumstances and types of training are generally include:
   - individual instructions,
   - group instructions,
   - lecture method,
   - demonstrational method,
   - written instructions method,
   - written instructions method,
   - conferences (may even include video and audio conferences,etc. also); and
   - meetings, etc.

[various methods of training are discussed in preceding paragraphs with title – methods of training]

Therefore, most appropriate technique should be selected and applied.

3. Monitoring the Effectiveness**:** It involves the process of examining the trainees' job, to correct mistakes and deviations, if any; till he gets competence. Therefore, the following steps should be given due consieration, such as:
   - Preparation of training programme – this step is crucial, since the organisation has to arrange all training materials, etc., to take-up training programme.
   - Conducting training – it involves the steps like:
     - Fixation of time-table of training,
     - All levels of job should be taken into account for training; and
     - Training stipend is to be paid to the trainee workers, etc.

At this stage of 'monitoring the effectiveness', the manager assesses the response of the group to the training. This could be measured both by how the employees are performing and by discussing it with the trainers. The manager will wish to know whether any further training is required, whether the individuals are now able to produce the required skills, and whether value for money has been realised. The appraisal forms an excellent means to the manager to examine the success of training; as it has generally been identified the training for improvement in the agenda of the performance appraisal.

Methods of Training and Developing Personnel:

Training and developing being one of the methods or ways to enhance the employees performance followed in organisations. There are various 'methods' of training selected on the basis of its suitability in organisations; and the major methods of training and development of personnel are classified into two broad catergories as sources of training:

1. Internal Training Methods; and
2. External Training Methods.

1. Internal Training Methods:

In this method, the training is imparted with in the organisation and it includes the following important methods of training:

a) Induction and Orientation Training : This type of training is imparted or offered to the newly appointed employees inorder o familiarise with all departments and nature of jobs to be carried-out by them, so as to make work without assistance and with confidence.

b) On-the-Job Experience : This is the simple, extremely relevant, cheapest and widely used method of training. This type of trining takes-place all through the working day. In this type the worker is trained on the job under the close supervision of a trainer or trained instructor; who is anyone else involved in the daily running of the department and is usually more senior and experienced. Sometimes, on-the-job training is very structured. This training continues till the supervisor or the trainer is satisfied that the employee can adequately perform the job without supervision. In this type, inorder to train the employees in variety of jobs, the employees are moved to variety of jobs by the trainer at different levels of management; where the employee get trained in variety of skills. This is called – "job-rotation" and it will helps the organisation to have a pool of multi-job trained workers to work in the situations like absenses, vacations, or resignations of some workers at different levels.

c) Coaching : It is generally used to instil particular skills, often of physical nature. It involves a coach who will take the students through the learning process so as to acquire the desired skills. Coaching is very effective at instilling skills and is of particular relevance when personal safety or credibility are threatened.

d) Role-play : In role-play the trainees use their ability to see things from another's point of view and learn from the experience of playing another person's role.

e) Apprentice training : This method is offered to learners who cannot be trained effectively through 'on-the-job' training programmes, because of the extended period of time required to learn the job. The Apprentice Training lasts for various periods from 2 years to 7 years and during th;is period the trainees are paid a fixed amount – 'stipend' as remuneration. Usually, an agreement in writing; where in the employee guarantees to work for a certain period after acquiring apprentice training for the company. In India, the Indian Apprentice Act was enacted and amended in 1977, and under this act 1,31,127 apprentices were provided training as on june 1985.

f) Off-the-Job (Vestibule) training : This is one in which a class-room is setup with a regular production area as an attempt to stimulate an actual production situation. This method of training is adopted when a large number of workers are to be trained in similar skills, uniformly and quickly. However, these types of training programmes are costly as it requires special arrangements and highly paid instructors.

g) Refresher training : It is the method of training to refresh the workers in methods which might have been forgotten in passage of time; and to train on the new techniques in the place of out-dated techniques. It is an opportunity to the employees to improve their knowledge.

h) Promotional training : The training under this method is imparted on to the workers who moves into higher positions on promotion and who needs to handle greater responsibilities.

i) Training by Skilled, Experienced and Senior Workers : In this method a new employee is attached to an old (senior and experienced) employee; where the new employee watchthe processes of doing work by the experienced worker and do the same type of work by himself. This form of training is common in small business enterprises.

j) Training by Helper System : This is also known as 'understuduy system' of training. This method pressumes that a worker will learn by helping another worker to do his/her job. The 'understudy' or the 'trainee' is taught by the employer actually working on the job, to whom the trainee is understudy or helper.

k) Study : It is especially appropriate to the personal acquisition of factual knowledge. It is not, however, efficient for the acquisition of practical skills. The formal study, if it is with in the structured syllabus only and the study is only aimed at getting formal qualifications.

l) Retraining : It is mostly imparted to the existing employees for the following reasons:

- to keep the all-round skills of employees as a reserve in case of need,
- when retrenched or dismissed workers are called by after lay-off period owing to several reasons,
- when new technology demands new methods of promotion,
- when a worker is not in a position to his normal alloted work due to illness, accidents, or incapacity due to age, but who can take-up jobs which are within such employee's reach.

2. External Training Methods:

External training methods as a source of training resorted to in such circumstances where facility of internal sources of training are not available. Special training institutes have come into existence, which are either owned privately or by the public and governement. The employees are deputed in such institutions for a specific duration and made to learn the required skills and abilities. For example, the institutions like – National Productivity Council (NPC), Small Scale Service Institutes, the Industrial Training Institutes, Small-scale Industries Associations, the Government Tool Room and Training Centres, etc.

However, the selection of a training method, depends on the factors like:

- nature of the problem,
- trainee's level in management hierarchy,
- interest of the trainees,
- availability of trainers, finance, time and other resources available with the company, and so on.

Thus, 'Training and Development of Personnel' plays very improtant role in staffing function of management (organisation), so as to enable the workers to gain the necessary skills to achieve professional efficiency or proficiency in their job.

Appraising Performance:

There are several reasons for requiring formal appraisal of an employee's performance. It needs to decide upon the compensation package (pay and bonus and other benefits), to decide upon the training and development needs of the employees, need for counseling, need for promotions, and also need for staff planning and also to make retention/discharge decisions.

University of Missouri system developed a method of rating the employees in five steps from "outstanding" to "inadequate" in each of:

a) Knowledge of the work,
b) Quality of the work,
c) Quantity of the work,
d) Attendance and punctuality (timeliness),
e) Initiative behaviour of the employee,
f) Communication skills,
g) Carrying out instructions, and
h) Overall appraisal.

There are various methods of performance appraisal as given and explained by the specialists; however, most forms used for the appraisal of professionals in large organizations involve combinations of methods. Generally, the performance appraisal methods may include:

- Appraisal forms,
- Appraisal interviews,
- Ranking or forced distribution methods, and so on.

The primary emphasis in appraisal today, therefore, is on the contribution made toward achieving organizational objectives, which is the reason that personnel are employed to begin with. And with the increased emphasis on teamwork, there is greater emphasis on rewarding team members for team (or even total organization) performance rather than just individual performance.

<u>The Implication of an Appraisal System</u>:

The implementatation of an appraisal scheme needs financial as well as personnel planning. It also nvolve time and cost. However, the benefits of performance appraisal are largely intangible and it is difficult to produce a numerical cost justification.

The advantages of appraisal for employees are:

- it allows an objective assessment of an individual's performance to be made,
- it provides a database of information concerning the personned, their skills, and abilities, on which the company can draw. From this, it can lead to better and more effective use of staff by means of transfer, training and planned projects,
- it can identify difficulties and potential problems so that they can be dealt with before they become major problems,
- it can improve the performance of personnel through the use of objective setting and increased motivation, and
- It is an ideal too for use with in a management system that relies on objective-setting to control and motivate the work-force.

However, the appraisal schemes also suffer from certain limitations and disadvantages for which they creiticised.

<u>Linking Appraisal to Pay-review</u>:

Many organisations link the appraisal interviews to pay-review. It provide a fair base on which to divide the salary budget by awarding merit points for performance and giving salary increments on the basis of points achieved. Hence, who contribute (perform) better get the best reward. Moreover, it helps in increasing employer motivation to reach company objectives. However, there are disadvantages to linking appraisal and pay-review, and these are oftendeemed to outweigh the advantages; such as:

- It will increase the amount of defensive behaviour and reluctance to admit faults on the part of the appraisee,
- It can cause people to use the appraisal as an opportunity to justify why their salary should increase; and
- It can lead to conflict between the appraiser and appraisee, damaging the personal relationship and understanding the purpose of the appraisal.

UNIT III

Motivation – Meaning, Theories of motivation (the Carrot and the Stick, Maslow's Need Hierarchy theory, Herzberg's Motivation-Hygiene theory, McClelland's Trio of Needs, Theory - X and Theory – Y, Self-Motivation, General Motivational Techniques),.

Leadership – Meaning, Ingredients/Traits of leadership, styles of leadership – Blake and Mouton's Managerial Grid