6.4.1 ESSENTIALS OF ENTERPRISE MANAGEMENT FOR ENGINEERS

The overall job of an enterprise manager is to create within the enterprise an environment which may facilitate the accomplishment of the enterprise's objective. In doing this, he will, essentially, be affected by the internal and external environment in which the enterprise operates. In the light of this understanding, management activities essentially include the process of policy formulation, the preparation of regular comprehensive plans for the enterprise as a whole and for each part, the recruitment and motivation of suitable staff, the development of an organizational structure to implement the plans and the continuous coordination and control of performance.

In order to avoid confusion as we advance in this chapter, it will be ideal to make a distinction between the usages of word "management" and "administration".

Management is concern with policy formulation, developing regular operational plans within the policy of the organization, and the taking of corrective action in the light of feedback mechanism created by the management.

On the other hand administration is concerned with the implementation of the policy, the measurement of actual performance and reporting thereon to interested parties, especially top management members.

In this chapter, we are concerned primarily with the functions of management in an enterprise. This will be followed by administrative function and other related topics such as basic principle of job description, work measurement, pay systems and information in data processing systems. As a take-off we shall discuss the principles of management and propounded by Henry Fayol. This will be followed by the functions of management.

6.4.2 Principle of management

Henry Fayol has drawn up fourteen principles which is adhered to should make for a forward-looking enterprise. It must be said from the onset that these principle are more relevant in an organized enterprise than in one –man business enterprise. The principles of management propounded by Henry Fayol are as follows:

1. Division of work
2. Authority
3. Discipline
4. Unity of command
5. Unity of direction
6. Subordination of individual interest to the general interest
7. Remuneration
8. Centralization
9. The scalar chain
10. Order
11. Equality
12. Stability of tenure of personnel

13. Initiative
14. Espirit de crops

Some of the above principals are given further consideration as follows:

(1) Division of work in enterprises implies existence of specializations which have the capacities of increasing the enterprises performance and consequent increase in output and earning s. Division of work permit reduction in the number of objects upon which attention and effort are directed at the higher levels in an organization. This principle appears to be the best means of making use of individuals and groups of people in an enterprise.

(2) Authority and responsibility: Authority is the right you give orders and the power to exalt obedience from subordinates. It must however be realized that authority is conferred on a Manager as a result of the responsibility placed on him. In this regard, authority must be commensurate to ones responsibility within an organization. The best safeguard against the abuse of authority is personal integrity and particularly high moral character of an enterprise manager.

(3) Discipline is in essence, obedience and an outward mark of respect observed in accordance with expressed and implied standing agreements between an enterprise and its employees. Discipline therefore makes it mandatory for manager at all levels, just as much as employee, to respect the agreements and thus achieve the necessary organizational discipline. The best means of establishing and maintaining good discipline are: good superiors at all levels; agreements are as faired, Clear as possible and sanctions and/or penalties are judiciously applied.

(4) Remuneration of personnel: This relates to the price of services rendered by employees. It should be fair and far as possible, afford satisfaction to both employee and the enterprise. According to this principle, the rate of remuneration should depend firstly on circumstances independent of the employee’s worth and the employers will. To a large extent in developed economies and to a lesser extent in developing economies, these external circumstances are: cost of living, shortage or otherwise of labour, general business conditions and the economies, these external circumstances are: cost of living, shortage or otherwise of labour, general business conditions and the economic position of the firm. After these external factors come the consideration of value of the employee and the method of payment in the enterprise.

(5) Order: This principal implies materials and social order. With respect to material order all enterprise materials should be in their proper place while social order implies that there must be an appointed place each employee. The employee must be suitable for the place and the place for the employee. For the materials and social order to exit simultaneously there must be good organizational communication, selection of appropriate personnel and proper utilization of enterprise’s resources.

6.4.3 Functions of management

The most useful method of classifying managerial functions is to group them around the following activities of management as provided by Henry Fayol in his book "General and industrial management" the functions are planning, organizing, commanding, coordinating and controlling.

(i) Planning: A plan is predetermined course of action. A manager's predetermined course of action may include issues like product design, research and development, production, marketing and sales. A good business plan should originate with the identification of an opportunity in the economic environment.

This requires identification of a market need which the enterprise competent to satisfy. From here, the plan must fit in with the overall objectives of the enterprise -- that is to say its objective for being in existence. The steps involved in the strategic planning of a business include:

A. An analysis of the business environment which include economic , social, technological, legal and political factors;
B. The identification of the key characteristic of the industry of which the enterprise in question is a part;
C. The identification of future opportunities and risks;
D. An appraisal of the enterprise's own strengths and weaknesses in light of product/ service knowledge base, technological and function expertise. Other areas of keen appraisal should include capabilities of existing market, production, financial and other administrative personnel;
E. Consideration of the enterprise's capability to adapt to changes iin the market condition;
F. The formulation of regular detailed plans for the implementation of the policy;
G. Formulating implementation policy;
H. Design of feedback mechanism for determining actual performance;
I. Taking of corrective action when deemed necessary.

In the light of the foregoing, it will be apparent that planning forces enterprise manager to look ahead and formulate appropriate policy it reference to market needs and the enterprise's competence.

(ii) Organising: Organisation means the mobilization of the necessary enterprise resources to achieve the predetermined business plan. In addition, it is also concerned with developing an organisational structure that is suitable for the implementation of plan formulated by top management. The development of an enterprise structure involves an establishment of roles bt identifying while at the same time listing the activities required to achieve the purpose of an enterprise. Furthermore it include grouping of identified activities and the assignment of such groups of activities to a manager, along with delegated authority to carry them out. It also involves the provision of coordination of authority and informational relationship both horizontally and vertically within the organization

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From the foregoing, it will be apparent that organising involves delegation of duties at all levels. In this regard, in order to have organising success the manager must be someone "who sense enough to pick good people to do what he/she wants done, and enough self-restraint to keep from meddling with them while they do it".

(iii) Directing / commanding: The central focus of this function of management is on proper leadership, motivation and communication. This is because the management has the function of recruiting suitable staff for the positions created by the enterprise structure and motivating such staff appropriately. The key to motivation in this context, must be said to be at a point where the expectation of an employee coincides with the enterprise's expectation of him. However, the attainment of this point is by and large contingent upon the leadership styles of the management. In other words, the leadership styles of an enterprise's executives can influence the motivation of staff recruited into an enterprise.

The problem with this function is that if there should be a fault in commanding or directing the staff, it can completely nullify all the work and can consequently make the attainment of enterprise's objectives difficult. Due to the fact that management commanding functions is poor in developing economies, hence the government parastatals and other government agencies are short-performing.

(iv) Coordinating: Coordination is the continuous process of matching all the activities in an enterprise in the direction of planned enterprise goals. In this regard the enterprise manager should always ensure that activities in the production department are related to that in the sales and that of stocks to production and expenditure to financial resources.

Among the conditions of achieving coordination is the direct contact principles which state that that coordination may be achieved through inter-personal, vertical and horizontal relationships of people in an enterprise. The basis of this principle is that schedule officers in an enterprise exchange ideas, ideals prejudices and purposes through direct personal communication much more efficiently than by any other method. In this way people achieve both common and personal goals. This presupposes that such an interaction is not an informal type of communication that can destabilize the formal organizational goals.

Another principle stresses the importance of formulating coordination policy at the early stages of planning and policy making. This presupposes that all relevant departmental heads to be involved in the execution of the plan would internalize the formal enterprise goal which forms the basis of unifying and timing them.

Apart from the above principles, there are other methods of establishing coordination in a business enterprise. One of the basic ways of establishing such coordination is the drawing up of an organization chart the chart would outline the framework within which the enterprise will operate as well as illustrate the relationships and coordinating links within the organization. In addition to the formulation of organization chart, there should be terms of references for the various jobs within the organization.

Thirdly, budgetary control method can be employed. This will be discussed in detail in a separate chapter. For the meantime it will be noted that this method involves every aspect of the organization working towards the fulfillment of enterprise goal.

Fourthly, apart from providing an organizational framework within which coordination can be achieved the Chief Executive of an enterprise may employ meetings as a mechanism for ensuring coordination. This method presupposes that members sitting on the committee meetings are properly selected or elected and that the meetings are properly held, conducted and remain meaningful. For the purpose of coordination, the following committee meetings may be established finance committee, budget committee, joint consultation committee etc. etc.

In addition, the following supplemental methods may be considered in the interest of achieving enterprise coordination. These are, the use of memoranda of instruction from the management, policy manuals, sales manuals and other sets of rules regarding other matters relevant to the success of an enterprise plan. It will seem apparent from the foregoing that the main focus of coordination is the need for continuous interchange of information among relevant organizational actors working towards the realization of enterprise planned goals.

(v) Controlling: Control is the continuous management process of measuring results of an enterprise in relation to the targets set for it as a whole. It is also a process of measuring the performance of each constituent part of the enterprise in the light of the overall enterprise goal. And when deviation occurs it is the duty of the management to take control action most advantageous to the enterprise.

The following are typical management control areas as identified by their individual techniques: budgetary control, production control, stock control, debtor control, internal audit, quality control, financial analysis and external audit report.

In the main, control is facilitated by setting and popularizing targets among the executor of the plan, measuring performance against targets, establishing appropriate feedback mac appropriate feedback mechanism for checking results, evaluation of result and managerial decision to check deviation.

(vi) Management Techniques: Techniques are essentially reliable ways of doing things or methods of accomplishing a given result. In all fields of practice, techniques are important. This is true in management too. Among the most notable management techniques are budgeting, network planning and control as in the critical path analysis, rat-of-return on investment control, managing by objectives and decision tree analysis. As ways of doing things, techniques normally reflect theory and provide a means of helping enterprise managers to undertake actively. Let us take a more detailed consideration of these techniques.

(vii) Budgetary control: Budgetary control is an important technique used by management for the purpose of controlling enterprise income and expenditure. Such control is achieved by preparing budgets relating to the various enterprise activities, comparing actual. Performance on monthly or bi-monthly basis with budgeted performance, thus progressively revealing budget variances and progressively taking corrective actions as appropriate. It must be noted that budgets are therefore quantitative measurements of the enterprise activities over a given time span, i.e. so much output in a week, so many units in a month, the number of goods to be bought e.t.c.

In essences the following managerial activities:

(a) The preparation of a forward plan for carrying out enterprise's objectives and the expression of such objectives in quantitative and monetary measurements.

(b) The allocation of responsibilities by means of fictional and departmental budgets for achieving enterprise objectives/plan.

(c) The formulation of quantifiable standard of performance for the enterprise functional departments, such as sales/marketing, production and stores.

(d) The creation of an information service which is capable of prompt and effective comparison between established management standard and performance of each departments and sub-departments of the enterprise.

(e) The establishments of a system of revising the plan when such revision is dictated by technological changes or the external changes necessitating amendments to corporate policy and objectives.

From the forgoing it can be deduced that budgetary control method can serve as strong motivational force at all levels of an enterprise for the fulfillment of it objectives.

6.4.4 Critical Path Analysis (CPA): Critical path Analysis is the assembly of techniques used for planning, progressing and controlling operations (of all kinds) which are made up of a number of separate and parallel activities. The techniques constituted in a critical path analysis (CPA) are programme/ project Evaluation are review technique (PERT), critical path method (CPM) and resources allocation and multi- project scheduling (RAMPS).

There are two main lines of approach to CPA. The first approach is he comprehensive approach which covers the use of three constitution techniques with respect to time, cost and resources allocation. This is often used in a relatively straightforward project.

The second is the individual approach in which the individual technique is employed to plan for more complex types of project. In context the PERT method is applied for the determination of the minimum project/programmes completion time; CPM is employed to determine the minimum project/programme costs and RAMPS for the most effective use of resources. It will be necessary to point out that these methods often overlap in application. Their common feature is that they all use the network diagram and critical path as their basic tool.

For maximum efficiency CPS as a management techniques is commended for the fact that it assists management to identify the minimum time of a project, cost of executing a project and I also assist the management in ensuring that the available enterprise resources – men, materials, machinery and money – are used in the most effective and economical way. Although these characteristic of the method does not always harmonies between time and cost, it nevertheless assist the management to evaluate all relevant factors thereby helping to make an optimum balance decision.

Typical of the operators which lend themselves to the CPA techniques are production processes, building and construction work, plant maintenance, research and development project, marking and publicity campaigns, installation of organisations and systems and similar multi- activity projects. Advantages of network plan in CPA include possibility of visualizing a complex project, determination of the critical path, possibility of studying the effect of changes are made possible, can be used to plan a project from start to finish, it can be repotted to resemble a Gantt chart with a time scale to ensure that the planned are met. Again it enhances control of slippage and delays and the effects of increasing resources can be objectively examined.

6.4.5 Management by Objectives (MBO): Management by objectives as a management technique has been described as a practical and professional way of running a business in that it is a management technique which continuously seeks to fuse together the objective of an enterprise with that of its managers. The technique is based on the concepts that unless you identify where you are to go, you are unlikely to get there; and unless you know what you want to achieve you are unlikely to achieve them. In fact it is a very useful technique for achieving coordination in an enterprise. This is so in that MBO employee a process whereby the superior and subordinate managers jointly identify the organisation's common goals, define each individual's major areas of responsibility in terms of result expected, and use these measures of as guides for operating their unit and thereby facilitating assessment of the contribution of each of its members.

Typically, MBO starts at the top of an enterprise, where a sequence is established for setting and reviewing objectives. This sequence comprises a rudimentary calendar of events that take place cyclically in two years periods. At the top of an enterprise, a long terms plan and policies are established with reference to (a) where the enterprise wishes to go; (b) where it is now and (c) how it is going to get from where it is now to where it wants to get to.

How to set strategic objectives. The first step in goal setting is to determine the ordinary calendar of events which must followed in the enterprise. This entails consideration of some events that occur prior to the beginning of the target year and some events which will occur during the year in view.

The second step will be the establishment of strategic objectives with reference to the following enterprise's internal factors: strengths, weaknesses, problem, threats, risks and opportunities.

This could be followed by an establishment of strategic options/alternatives with relative consequences of each option/alternatives identified.

Having established alternative objectives, the enterprise may proceed to establish operational objectives. However, this should not be concluded until the management of the enterprises has been able to give satisfactory answer to the question: "are we doing the right thing?" This thinking session may have to be done by the board of directors' or the committee to the board.

The strategic goal of the enterprises should be expressed with clarity in order to define expected long-run goal. An example of a strategic goal statement might be ABC Nigeria Ltd. Will become the leading publishers of tertiary textbooks by the year 1992.

How set operational objectives. At the beginning of the operational year, each manger and subordinate manager conducts a formal dialogue on specific operational objectives for the coming year for the subordinate position. Before this discussion, however, each must have reviewed the present situation, the result of the previous year and some of the more likely requirements for change. The implication for the superior manager and subordinate manager is that they both have to be present at the meeting armed with relevant information. For example, the superior manager must come for the meeting armed with information about budget limitations and strategic goals which have been agreed upon either at the board level or at the management committee level, while the subordinate manager also comes with some expectations and knowledge of his or her own strengths, weakness and problems as well as threats, risks and opportunities in the environment for the enterprise.

After this session, the superior manager and the subordinate manager agree on short-term objectives after which they meet periodically, say every three months to review progress in setting the first short-term objectives the stages may be in this order.

a) The superior manager and his subordinate jointly analyse the subordinate's job with reference to areas of main responsibility, results to be achieved within the first three months plus means of measuring and monitoring the work progress.
b) The job holder and his senior manager then agree on short-term objectives.
c) Formulation of job improvement plan.
d) At regular intervals, the job holder and his superior should come together to review the job and to measure actual achievement against those set in the short-term objectives.
e) If achievement does not measure up to objectives, action will be identified for the future which will enable the job holder to achieve better results. After this another short-term objectives are set to achieve better results. .

The main implications of the MBO technique to the superior and the subordinate are commitment and responsibility. To the subordinate, the MBO will compel him to make some promises of responsibility to his superior whose opinion is important to his progress in the enterprise. For effectiveness, such commitment cannot be expected to be general but specific, explicit, measurable and worthwhile.

On the part of the superior manager the MBO technique will compel him to accept responsibility or accountability for the outcomes produced during the commitment period without reference to excuses. It therefore means that those objects agreed on between the two of them will become the basis for judging performance at the end of a given period. The commitment of the superior manager to his subordinate may include promise of salary adjustments, merit-pay recommendations, bonus awards, promotion and similar rewards for achievement.

On accepting agreed objectives at the beginning, the superior cannot later apply capricious judgments and the kind of responsibility which the job holder undertook to shoulder at the beginning should in turn expect the subordinate manger to put up adult behavior, professional effort and mature self-control in order to achieve the realistic of the realization of the agreed objectives.