

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

It was argued in chapter 1 that the theory for a comprehensive, practical and integrated management method did not exist in the South African mining industry and that existing planning theories, processes and structures in particular were totally inadequate to enable management to manage in a comprehensive, practical and integrated manner (refer section 1.5.1 and 1.5.2.3). In addition it was perceived that existing management theories could be inadequate to develop the desired management method, planning process and structure (refer section 1.5.2.2). It was also hypothesised that should existing management theories proved to be inadequate, some of it could be utilised together with newly developed theories in order to develop the complete theory for the desired comprehensive, practical and integrated management method, planning process and planning structure (refer section 1.5.2.6 and 1.5.2.7).

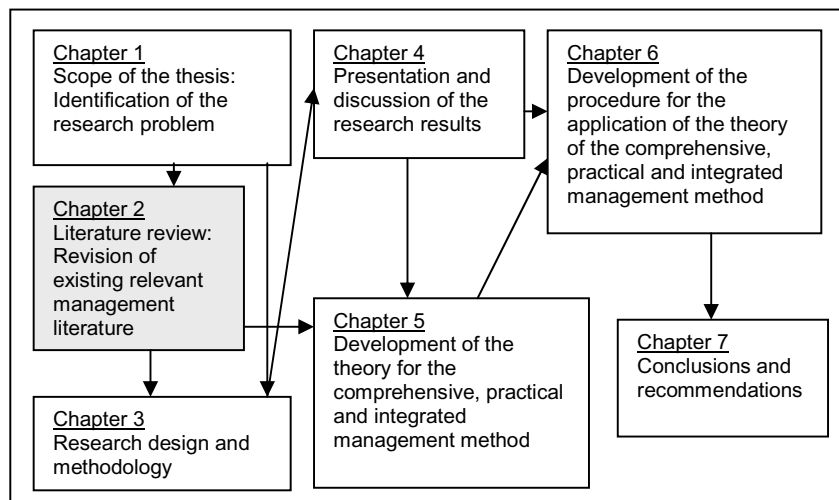


Figure 2.1: Chapter 2 in context to the overall thesis

In this chapter existing management theories and practices were scrutinised where feasible to ascertain whether a comprehensive, practical and integrated management theory and logical integrated management planning process and structure do exist. It was evaluated with a view to establish which of the theories and practices could be utilised in the development of a comprehensive, practical and integrated management method and integrated management planning process and structure. The objective was to determine to what extent existing theories and practices differ from or comply with the requirements for a comprehensive, practical and integrated management method (refer section 2.2.1).

In the event where theories or practices do not fully comply with the requirements for a comprehensive, practical and integrated management method and the development of a logical integrated management planning process and structure, those components that could be utilised for purposes of developing the new theory were identified and selected for further development where necessary. At the end the perceived theoretical deficiencies of existing literature were identified.

2.2 REVISION OF THE LITERATURE

The main emphasis of the revision was on the management processes and their applicability in the practical situation. It focused primarily on the area of management planning, more specifically the management planning processes and structures, as it is surmised that the planning function should form the basis for the development, utilisation, coordination and integration of the other management functions. Stoner (1982:129) argued that before managers can organise, lead and control they must first make the necessary plans to give direction to the organisation (refer section 2.6.2.1, 2.6.2.1 (a) and figure 2.21).

Most theorists supported the view that planning must first be performed and then the organisational structure could be developed, the people placed and influenced to realise the plans. Only then control could be exercised. This view indicated that the management work of planning not only forms part of management but that it is indispensable for efficient management.

The research was demarcated in order to focus on the specific literature in respect of the necessary elements of management. It therefore concentrated on the following management concepts:

- Management and leadership,
- The work managers and leaders have to perform,
- The management environment in which the organisation must realise its objectives,
- Management planning,
- Past and existing management practices, and
- The classification of the management functions and activities were concentrated on. The advantages and disadvantages of each were analysed and discussed.

In this chapter management functions and activities respectively have the following meanings:

- A management function refers to a main management task, consisting of related work aimed at the achievement of results directly contributing to the main results of the organisation.
- A management activity refers to a secondary related management task that has to be performed to contribute to the achievement of the results required by the specific management function (refer table 2.4, 2.5 and 2.6).

- A management element is a sub task of an activity. The total number of elements would eventually comprise a management activity and the total sum of the activities would comprise a management function.

2.2.1 Requirements for a comprehensive, practical and integrated management method

Most management authors, theorists and practitioners viewed the management work of a manager as a logical process consisting of the functions of planning, organising, leading and controlling. DuBrin (1994:26) supported this view by stating that every employee must plan and make decisions, organise, lead and control the resources they need to utilise for the achievement of the results expected of each of them.

It is the author's reasoned opinion that a suitable management method would enable every employee, from the chief executive to the operator, to manage comprehensively for the results required from him. Only then optimal results could be achieved. From the chief executive the results required would be that what the owners want. This process should be cascaded down to the lowest positions.

The degree or sophistication of management work would obviously differ from level to level and position to position but the basic management principles would be the same for every employee. In the case of the chief executive the management work of forecasting for example would be much more advanced than in the case of the operator – but each needs to perform this work however complicated or simple.

At this stage of the thesis it is perceived that an efficient comprehensive, practical and integrated management method should, where applicable, enable every employee in the organisation from the top down to the lowest level to perform the following tasks:

2.2.1.1 Plan for the results required from him – this would entail the following management tasks:

- a) identify opportunities and deviations from planned performance,
- b) determine and forecast the most probable results,
- c) state the most probable achievable results,
- d) formulate the objectives,
- e) develop alternative methods to realise the formulated objectives,
- f) develop the tasks required for each alternative method,
- g) develop performance standards that each task should comply with,
- h) analyse the tasks and establish the resources required for each task of every alternative method,
- i) assess all risks,
- j) schedule the work flow for each alternative method,
- k) budget for each alternative method,
- l) select the best method,
- m) develop the necessary policies and procedures,

- n) determine the job specifications or requirements,
- o) develop the necessary posts,
- p) develop the most functional organisational structure,
- q) delegate accountability to each post,
- r) determine the communication lines,
- s) determine the lines of authority,
- t) create the necessary relationships among posts and levels,
- u) determine supervisory accountabilities,
- v) affect proper coordination,
- w) optimise, computerise and compile the written plan,
- x) obtain the most competent people,
- y) develop realistic training and management development programs and schedules, and
- z) develop and maintain a logical and practically integrated planning structure.

2.2.1.2 Whenever necessary the employee should be able to:

- a) make sound decisions,
- b) communicate efficiently,
- c) motivate people,
- d) develop recruiting specifications,
- e) recruit people,
- f) appoint people,
- g) remunerate people,
- h) train and develop people,
- i) measure performance,
- j) evaluate performance, and
- k) correct deviations.

At this stage it is not possible to classify the above tasks under management functions. A method to logically and systematically develop and analyse management work needs therefore to be developed.

2.2.2 Methodology of revision

The theoretical revision comprised a literature study, as far as practically feasible, of all recent and relevant available national and international management theories, practices and research reports. Facilities such as libraries, journals and information locally, abroad and on the Internet were consulted. It was analysed and evaluated in terms of its compatibility with the perceived requirements of a comprehensive, practical and integrated management method (refer section 2.2.1). In the case where the existing theory was inadequate to develop the desired management method, the theory that could be utilised to assist in developing such a method was identified.

2.2.3 Demarcation of the literature

The boundaries of the research literature, as mentioned in section 2.2, were demarcated to:

- 2.2.3.1 the concept of management,
- 2.2.3.2 what managers have to do?
- 2.2.3.3 the concept of leadership,
- 2.2.3.4 what leaders have to do?
- 2.2.3.5 the environment in which management operates,
- 2.2.3.6 management practices,
- 2.2.3.7 the classification of the management work, and
- 2.2.3.8. management planning processes and structures.

2.2.4 Framework for revision

The existing literature was revised in terms of:

- 2.2.4.1 whether it did comply with the perceived requirements of a comprehensive, practical and integrated management method (refer section 2.2.1),
- 2.2.4.2 its adequacy to develop the necessary management theory for the development of the perceived comprehensive, practical and integrated management method,
- 2.2.4.3 whether any or part of any management theory or practice could be utilised or modified in order to develop a comprehensive, practical and integrated management method,
- 2.2.4.4 whether additional management theory needs to be developed in order to develop a comprehensive, practical and integrated management method, and
- 2.2.4.5 whether it supported the development of a logical integrated management planning process and structure.

2.3 MANAGEMENT

2.3.1 The concept of management

Many management authors interpreted the concept of management differently. Tsoukas (Ackroyd & Fleetwood, 2000:26) concluded that up to the present time it had not been easy to answer the question of what management is. Taylor generally regarded as the father of the scientific management approach, with his extensive shop floor experience had a different perception of management than the theorists who dealt exclusively with the upper echelons of management (refer section 2.5.1.1 (b)). When referring to the fair and humane treatment of employees and the legitimate expectations of the company, Taylor emphasised that the best type of management was the one where ordinary workmen gave their full initiative and effort and in return received a just reward from their employers (Taylor, 1917:34).

Fayol (1949:43-110), generally credited with the development of the administrative or process management approach, viewed management as a process. He classified management work initially into the five management functions of planning; organising, commanding, directing and controlling (refer section 2.5.1.1 (d)). Massie and Douglas (1977:31) defined management as the process by which a cooperative group directs actions of others toward the realisation of common objectives. Griffin (1987:8-9) defined management as the process of planning and decision-making, organising, leading and controlling an organisation's human, financial, physical and informational resources.

According to DuBrin (1994:5) management is the process of using organisational resources to realise organisational objectives. Bateman and Snell (2002:14) defined management as the process of working with people and resources in order to accomplish organisational goals.

Hellriegel et al (2005:7) argued that:

“Management refers to the tasks and activities involved in directing an organisation or one of its units: planning, organizing, leading, and controlling.”

According to McDaniel and Gitman (2008:210) management is the process of guiding the development, maintenance, and allocation of resources to realise the objectives of an organisation. In summary it appeared that most management theorists regarded management as a process (refer figure 2.2). It implied that management can be regarded as the process of planning, organising, leading and controlling an organisation's human, financial, physical and informational resources in order to realise predetermined organisational objectives in the most efficient manner.

Drucker (1999:39) emphasised that:

“Management must focus on the results and performance of the organisation. Indeed the first task of management is to define what results and performance are in a given organisation – and this, as anyone who has worked on it can testify, is in itself one of the most difficult, one of the most controversial, but also one of the most important tasks. It is therefore the specific function of management to organize the resources of the organisation for results outside the organisation.”

Further on in this thesis it was shown that management is not the preserve of managers and the man at the apex of the organisation alone. It forms part of every employee's work (refer section 2.2.1). De Villiers (1973:15) pointed out that the degree to which people manages, increases the higher up in the organisation the employee is employed (refer figure 2.3). Management also refers collectively to the managers of the firm, the individuals who carry out the process of management. Some theorists maintain that management consists of people, mainly at the top, generally being seen as responsible for realising the objectives of the organisation (Hellriegel et al, 2005:7).

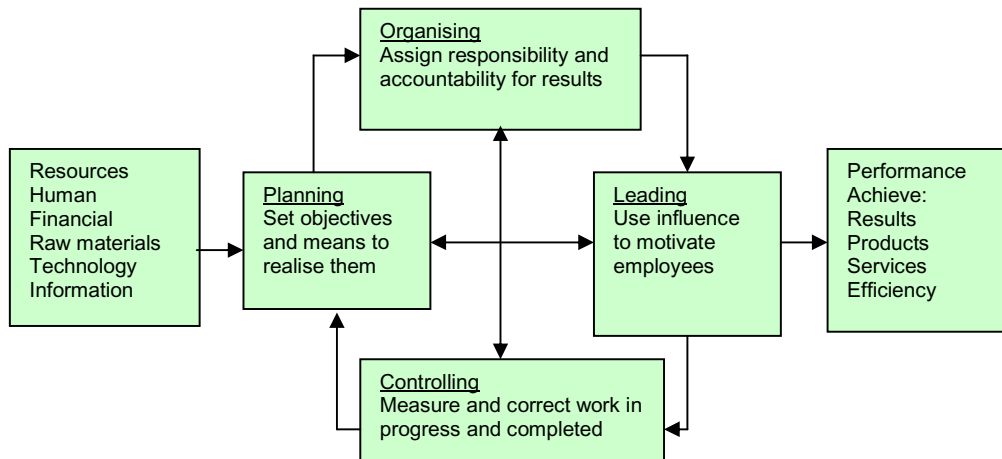


Figure 2.2: The management process

It is clear from these definitions that management can be regarded as the work any employee performs in the process of optimising the production resources; people, money, time and material in order to realise the objectives of an organisation most efficiently at all times. Successful management is regarded as the key to the success of an enterprise (Bedeian & Glueck, 1983:7).

2.3.2 What managers have to do?

Drucker (1968:13) stated that a manager is someone who plans and makes decisions, organises, leads and controls human, financial, physical and informational resources. Bedeian and Glueck (1983:5) pointed out that managers coordinate the human and physical resources required for maintaining the objectives and services of society. Managers represent a specific objective and in the long run the realisation of one of the objectives that would directly support the optimal realisation of one of the objectives which in itself constitutes one of the main components of the final or general objective of the manager and that of the organisation.

Adizes (1979:135) commented that:

“the role of a competent manager is to create an environment in which the most desirable things are most likely to happen.”

Callaway (1999:11 - 12) argued that managers are the organisers who, when given the objectives and direction, initiate and develop the plans and processes for every step of the way. He argued further that managers normally seem unable to set the direction or establish the strategy themselves in the first place.

Hellriegel et al (2005:7) maintained that:

“A **manager** is a person who plans, organises, leads, and controls the allocation of human, material, financial, and information resources in pursuit of the organisation’s goal.”

As the manager moves up the management hierarchy the essential management abilities or competencies required and work vary usually in scope and detail (refer figure 2.3). The more efficiently the manager performs his management work the more efficiently the results required would be achieved. To be able to perform optimally the manager must have the required intellectual skills, leadership qualities, competency and the necessary resources and organisational structures at his disposal. He needs to know, understand and be competent in the application of management work.

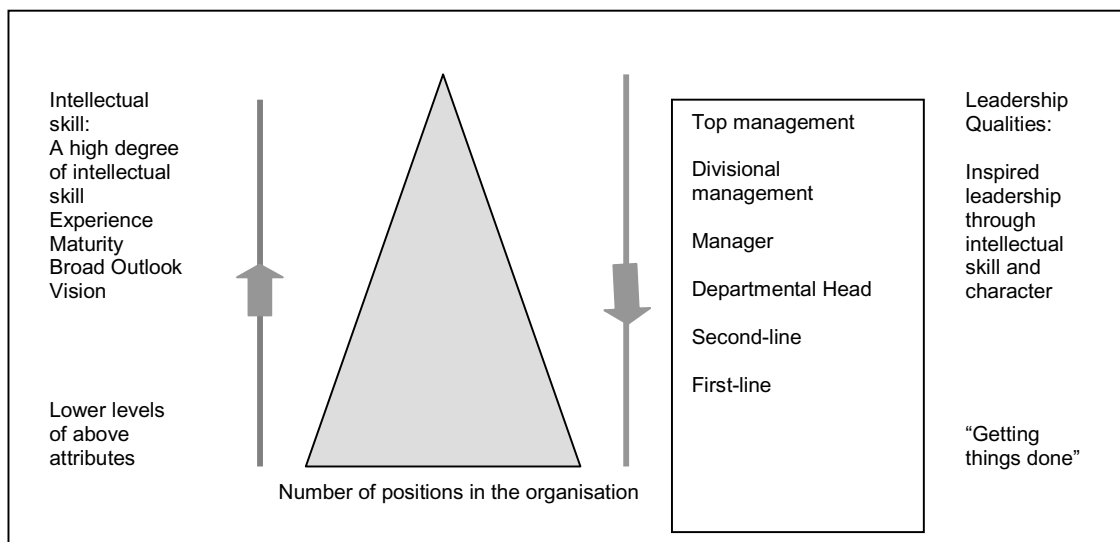


Figure 2.3: The changing nature of managerial ability

Source: De Villiers (1973:15)

Drucker (1968:20-26) and Donnelly et al (1998:19) reasoned that a manager’s first job is to manage a business, his second job is to manage managers and his third job is to manage the workers and the work. A manager is responsible for the work performance of other people. He must plan and make decisions, organise, lead and control human, financial, physical and informational resources and create an environment that would be conducive to optimal performance (Adizes, 1979:135).

From the previous views it appeared that the manager does not necessarily set the direction for the company or ‘lead’ the company. Somebody else or the leader sets the direction for the company (refer section 2.3.4). According to Daft (1995:14) the ultimate responsibility of managers is to achieve and maintain high performance standards. The manager is the person that pursues the predetermined direction by achieving the required results through people by performing the management work of planning, organising, leading and controlling. He must, when given the objectives and direction, initiate

and develop the plans and processes to realise these objectives. This reasoning implied that there is a definite difference between management and leadership. Further on it was shown that this 'difference' is not as clear-cut as some management authors would like it to be (refer section 2.3.5).

2.3.3 The concept of leadership

Leadership existed, since times immemorial, and would continue to exist as long as mankind itself exists. Today it is regarded by many management authors, theorists and practitioners as one of the most decisive managerial ingredients for any organisation to prosper and survive in the fierce competitive national and global environments. Leadership exists in all human activities such as politics, military operations and on the sport fields to mention only a few. It is multidimensional in skills and orientation and it should understand people, organisations, processes and structures (Gallos, 2007:3).

Rost (1993:105) viewed leadership as a noncoercive relationship based on influence. According to Chemers (1997:1) leadership appeared to be some kind of a process, act or influence that in some way gets people to do something by inspiring, organising, persuading or influencing them. Maddock and Fulton (1998:5), on the other hand, saw leadership as motivation and that the leader essentially is a motivator. According to Burns (1998:11) leadership is an influence relationship between leaders and followers who intend real changes that reflect their mutual purposes.

Fundamentally leadership is the work of influencing people to realise the 'ideals' of the leader (Burns, 1998:11) and (Manz & Sims 2001:39). According to Black and Porter (2000:401-402) leadership is undeniably a managerial process. Most experts on leaders and leadership development are of the opinion that one of the most important contributions of a leader is to help create a vision that brings with it commitment to organisational excellence and directs change efforts.

Bush (2003:53) argued that leadership is automatically ascribed to the person at the apex of the hierarchy, which implied that there can be only one leader in the organisation. Leadership is based to a large extent on the ability of persuasion. It is one of the oldest human abilities and if judiciously applied it can be a strong ingredient of efficient leadership (Knowles & Linn, 2004:117).

Yukl (2002:7) defined leadership as:

"the process of influencing others to understand and agree about what needs to be done and how it can be done efficiently, and the process of facilitating individual and collective efforts to accomplish the shared objectives."

Some authors questioned the exclusivity of leadership. Charlton (2000:63-64) was of the opinion that leadership can no longer be the preserve of the 'man' at the top and that there is now a real need for leadership to filter down to the different layers of the organisation as a whole.

Leadership can occur anywhere in the organisation, and is not a set of behaviours limited to or reserved for the chief executive officer or top management alone. It could be seen as an interpersonal process involving attempts to influence other people in realising desired objectives. The sooner this fact is accepted the sooner leadership can be comprehensively extended down to the lowest levels in organisations where the majority of activities occur. The operator would sometimes have to take the initiative where conditions require an immediate action such as in emergency situations. In many cases in the past it happened that operators took the lead. Normally an underground section would have an official leader, the team leader and an unofficial leader, one of the team members.

Drucker (1992:121) stated that:

"The foundation of effective leadership is thinking through the organisation's mission, defining it and establishing it, clearly and visibly. The leader sets the goals, sets the priorities, and sets and maintains the standards."

From the above views it could be concluded that the leader sets the direction of an organisation. Leadership in general is a process that entails either one or a combination of 'influencing, motivating, inspiring, organising, impressing, persuading or encouraging' people to act in a desired way. In the exceptional situation it would appear that impelling and 'making happen' or coercion could also be acceptable.

In summary it can be concluded that leadership entails the initiation of new directions for an organisation in order to optimise performance and to exploit new, probably more profitable, opportunities. It is the influencing of the stakeholders, subordinates, peers and where necessary the supervisor and upper management to voluntarily follow the leader's initiative. Leadership would always be an indispensable ingredient of any organisation's management if it were to survive in the increasing national and global competitive environments. It formed and would form the main management component in growth, new ventures, mergers and takeovers simply because leaders by nature are more inclined to 'see' opportunities when most managers do not.

2.3.4 What leaders have to do?

According to Charlton (1992:25) leaders think in terms of the future, foster change, and rely on people and do the right things right. Oden (1997:27) felt that, in the traditional companies of the past, leaders

exercised mainly command authority and that managers were technical experts who defined the jobs of their employees.

A leader, in the work situation, is automatically in a position of authority. To work under authority is a form of obedience to superior, group and social behaviour, norms, authority and in the present day to instructions. It existed since the advent of the human race (Homans, 1965:417). The leader has command authority, which implies that subordinates, without proper justification, may not simply ignore or disobey legitimate commands, suggestions or instructions – or introduce new ideas on their own.

In essence the leader is a person who, because of his unique abilities and position would be inclined to initiatively and intuitively 'take people' along in realising his predetermined 'dreams'. The adage that leaders are 'people who do the right things right' is questionable. The history of organisations and institutions, since times immemorial, is littered with glaring examples to the contrary. Many serious mistakes, some with catastrophic consequences to organisations and people, were also the result of impulsive or possibly incompetent leadership.

Leadership can not be the preserve of the man at the top only because all employees need to exercise leadership in varying proportions. In practice one would find leadership on all the levels in the organisation and society depending on personalities and situations. Leaders need not to be told to lead, they would take the lead intuitively and most of the time would not even realise that they had done so. A leader is someone who sets the direction, creates alignment and maintains commitment in groups of people who share common work.

2.3.5 The difference between managers and leaders

Most theorists and practitioners of the management discipline endeavour to draw a clear distinction between leaders and managers. Some still view managers and leaders as synonymous. Schuitema (1998:121) stated that the difference is that managers are primarily held accountable for results. Bjerke (1999:57) argued that the main difference is that a leader is an individual within an organisation with a natural ability to influence the attitudes and opinions of others whereas a manager is normally instructed by the owners of the organisation or the executive management to influence the actions and decisions of subordinates in order to deliver the planned results. Callaway (1999:13-18) reasoned that leaders have a natural orientation, a far-reaching objective, a vision coupled with a strong determination to achieve an objective and the ability to inspire others to act. Management is about coping with change and leadership (Gallos, 2007:6). Organisational change can push people out of their comfort zones that challenge their vested interests. This could cause them to sometimes react negatively to the best interests of the company (Buchanan & Badham, 2008:6).

For success, there must be a balance between the discipline associated with management and the inspiration brought by the leader and an overlapping phase from leaders to managers. Williams (2000:694) stated that leadership and management are required in varying proportions on all the levels of the organisation depending on the specific situation and managerial position. The general difference between a manager and a leader could be summarised as that the manager mostly concentrates on meeting the expectations of others and deals mainly with organisational complexity while the leader deals with change and as such they are complementary (Stankard, 2002:123).

2.4 THE EVOLUTION OF MANAGEMENT

The practice of management is as old as mankind itself. Archaeological evidence proved that the use of organisations could be traced back to the times when man started to live, probably out of necessity, in organised groups. Many groups of early human civilisations succumbed to famine, diseases or enemies but some of those that were more organised and produced and stored surplus food managed to survive in the long run (Homans, 1965:454). One of the earliest references to organised management is found in the Bible in the book of Exodus where Jehthro, the father-in-law of Moses advised him to stop being a one-man manager. The five thousand year-old written inventory control accounts of the Sumerians are the oldest management literature discovered to date (Fulmer, 1983:6). The construction of the pyramids, can be traced back approximately to 3 000 years B.C (Daft, 2000:45). There were relatively large successful nations such as the Macedonians under Alexander the Great, the Persians and later the Romans, long before the birth of Christ, all of which required the extensive application of management principles (Mescon et al, 1988:39).

About five centuries B.C the Chinese extensively practiced the management functions of what is today known as planning and directing. Sun Tzu, the famous Chinese military leader, wrote approximately 500 B.C about his views on principles of leadership ideas, of which many are still regarded as valid today (Black & Porter, 2000:33). Around 400 B.C Socrates discussed management practices and concepts. According, to Ivancevich et al (1997:32) the Greeks were aware that maximum work output could be achieved easier by using uniform methods at a set work pace. The Roman Empire dominated the world for approximately 550 years. The Roman Catholic Church, 42 A.D. to present, is probably the oldest and the most successful organisation in the history of Western civilisation (Hodgetts, 1981:6).

Machiavelli, born about 500 years ago in Florence, Italy, made a systematic analysis of the work of a leader and from it derived practical principles that are still valid and useful today. During the fifteenth and sixteenth centuries city-states in Europe, such as Venice and Florence were managing certain activities with procedures that one would consider today as 'modern' (Black & Porter, 2000:34). Every early successful organisation that rose to prominence and power, albeit on the short or long-term, applied management principles in some or other form (Hodgetts & Kuratko, 1988:28-30).

2.4.1 The development of the management discipline

For centuries business management was not considered a serious field of study (Griffin, 1987:38). The topic of how to manage an organisation only began to receive serious thought towards the beginning of the 20th century (Black & Porter, 2000:32). The development of the management discipline had not been one series of steps. It developed rather in relation to the needs of specific civilisations and countries. Much of what people knew about managing organisations was derived from personal experience.

Mescon et al (1988:41) said that the development of the management profession could mainly be attributed to mankind's interest and burning desire in finding the most efficient way of accomplishing a job. Initially organisations were relatively small and production of commodities was mainly centred in individuals and small family units (Hodgetts, 1981:6). Torrington et al (1989:12) claimed that as a result of the Industrial Revolution (1760-1830), commencing in England, technological innovation resulted in that production of goods changed rapidly and completely. The management discipline, as a result, had to develop accordingly in order to accommodate these new challenges.

The Revolution changed the field of management permanently and initially caused a lot of hardship by the very nature of the results of modernisation but it eventually resulted in greater prosperity and much better living conditions for the peoples of the civilised countries (Ashton, 1997:129). With it inevitably came technological advances related to mechanised power, which was the main impetus of the fundamental changes that took place in human work performance in the latter half of the 1700s. Up to that time, work was performed mainly through human or animal effort, sometimes aided by wind or waterpower. Because of the 'domestic system' it was difficult to perform more complex work, produce products that were more complex and to turn out goods in high volumes. The Industrial Revolution eventually affected management practices throughout the entire world.

Arnold Toynbee, the great historian, credited the rise of industrialisation mainly to James Watt for inventing the steam-driven engine and Adam Smith, generally regarded by many management thinkers as the first economist, for laying the foundation for the modern economy (Smith, 1893:3). Watt invented the steam engine in 1781 with rotary as opposed to vertical movement making machines more adaptable for application in factories (Wren, 1979:45).

The factory system made it possible to dramatically increase production volumes with all labour located within the confines of a single venue. This development not only made production of large volumes of more complex commodities possible but also enhanced more effective control and training. Management, for the first time, had to deal with increased numbers of people and the associated human relations challenges. They did not really have adequate experience to manage large groups of people (Hodgetts & Kuratko, 1988:31).

According to Fulmer (1983:14) Smith developed the basis for the modern economic approach and:

- laid the foundation for the free enterprise system as it is known today,
- developed the principal framework for transforming capital and labour into goods and services,
- popularised standardisation with his concept of *division of labour*,
- made a difference between the concepts of creating wealth and making money (Nersesian, 2000:20), and
- published, in 1776, his classic manifest for the capitalistic order, titled 'An Inquiry into Nature and Causes of the Wealth of Nations' or 'The Wealth of Nations' as it is popularly known today.

The concept of capitalism, as a creator of wealth, is going from strength to strength since its inception whilst the concept of Marxism, developed many years later, regarded by many economists as the opposite pole of capitalism, had so far only caused bankruptcy, anarchy and misery to the masses. Leszek Kolakowski in 'Main Currents of Marxism' stated that it could be said with little fear of contradiction that Marxism would eventually prove to be the least attractive form of intellectual life (Johnson, 1983:728).

With the advent of the Industrial Revolution the invention and development of patents and techniques more than doubled from 379 patents for the 1700 – 1760 period to 976 for the 1760 - 1790 period (Cronje et al, 1987:19). The necessity for improved methods of management became more crucial for the continued growth and survival of organisations.

Some of the major developments of the Industrial Revolution were: economic growth, reduced dependence on agriculture, a rising per capita income, a high degree of specialisation of labour, a widespread integration of markets and in general increased prosperity to peoples and countries (Deane, 1965:5-19). Overall the industrial revolution was certainly one of, if not, the most important developments in the progress of the human race.

New machinery was invented and commissioned and the scientific application of job specialization in the workplace was introduced. Endeavours were made to develop more efficient production methods. The textile and other industries became more mechanised with the increase of technical inventions forcing many small entrepreneurs gradually out of business. When it became apparent that it was more efficient to place all the machines in one locale and hire a workforce to come to the site to work, the factory system was established (Hodgetts and Kuratko, 1988:30).

As organisations became larger and more powerful, the management discipline became more complex and sophisticated. Technological innovations increased, governments became more involved with organisations and new management approaches were accordingly developed (Mescon et al, 1988:39).

Inadequate communication and transport initially delayed the development and spreading of new management principles and techniques. The growth of some of the earlier businesses was in many cases significantly retarded as a result. The economies of scale motivated managers to strive for further growth.

Meredith and Mantel, (2000:6) commented that the process of managing organisations had been impacted by three revolutionary changes since the 1980s that involve the:

- increase in replacement of traditional, hierarchical management by consensual management,
- establishing of projects to accomplish specific strategic changes, and
- increase in the application of the systems approach.

Systematic thought about management problems and issues, specifically efficiency, production processes and cost savings were stimulated by the opportunities created by mass production created by the Industrial Revolution (Bateman & Snell, 1996:32). Mass production in immensely larger quantities had become the norm since and a means of increasing the competitive edge of companies. The increased competition resulted in the acceleration of mechanisation in order for manufacturers to deliver at the lowest possible economical level.

2.4.2 The study of management

Prior to the Industrial Revolution, there were very few, if any, trained managers or supervisors, since this task had never existed before. In Britain, at that time, there were no professional managers, common body of knowledge about how to manage, codes of management behaviour or a universal set of expectations about how a manager should act. The need to address the process that would come to be known as 'management' became more imperative as Britain and the United States of America entered the nineteenth century and the Industrial Revolution became more widely spread (Black & Porter, 2000:36). Industrial development required higher production volumes in order to decrease and contain unit cost of goods as a result of the increased competition.

For several centuries management was not considered as a serious field of study. The formal study of management in terms of time is relatively recent (Daft, 2000:45). Griffin (1987:38-39) stated that from a scientific perspective point of view, it did not really begin to develop until the nineteenth century. Before the advent of the twentieth century, most people were more interested in utilising organisations to acquire wealth or political power or both. Very few thought on a systematic basis how to manage organisations. Peterson (1993:1-2) was of the opinion that, although academicians and practitioners had been writing on the subject of management at least since the late nineteenth century, the study of management and managerial behaviour was largely a post-World War II phenomenon.

Researchers and practitioners in the management theory became more knowledgeable about the factors influencing organisational performance with the advancement of supporting disciplines such as mathematics, engineering, psychology and anthropology or the study of humankind in all its aspects. This enabled them to perceive why certain earlier theories sometimes did not hold up and to develop new approaches to management (Mescon et al, 1988:41). In Britain it was then already realised that the engineering curricula should include management teaching if engineers are to become part of the management pool (Howells, 2005:219). The overwhelming number of management scholars at the time was full-time academics instead of management practitioners or consultants.

Black and Porter (2000:61) stated that:

“the history of management thought up to the end of the nineteenth century could be compared to a flowing river. In the centuries before the 1900s, there was a relatively tiny stream of ideas about how to manage organisations of any size and complexity. Like small brooks forming the source of a river, the ideas of ancient writers made their individual contributions to the development of management thought, but it was not until other events occurred, in this case the Industrial Revolution, that a major river was formed. The needs of expanding industrial societies provided the setting and impetus for concentrated attention on the subject of management. It took the exceptional efforts and dedication of a relatively small number of people to increase the flow of ideas.”

The obvious possible advantages of effective management initially raised very little interest. The first genuine interest in management occurred in 1911 with the publishing of Taylor's book '*Principles of Scientific Management*' (refer section 2.5.1.1 (b)). This event is traditionally considered as the beginning of management as a recognized field of scholarly inquiry.

The realisation that the systematic management of organisations could enable management to more efficiently realise its objectives developed from the mid-nineteenth century to the 1920s and first arose in America (Mescon et al, 1988:40). From thereon it gradually spread over the entire globe until all the major civilised countries in the Western world became part of it. The effects on the human race were difficult if not impossible to calculate.

Management did not become a recognised discipline until the early twentieth century. Some universities and colleges began to introduce and teach management topics relevant to the requirements of businesses at the time, Almost simultaneously most engineering schools started to introduce classes in specific selected management topics (Rue & Byars, 1989:42). Since 1950, the management discipline was recognised as an indispensable university subject (Cummings, 2002:12).

2.4.3 The management discipline

From the foregoing it could be expected that management as a discipline would, as in the past, always be a major contributor to the future survival, development and prosperity of mankind. It is becoming more and more indispensable for success in the fierce competitive national and global environments. Organisational performance and success depend now more than ever before largely on the competency of management together with that of all the employees as a team in the organisation (Hodgetts & Kuratko, 1988:3). Without competent and energetic managerial leadership, production resources would largely remain production resources. With respect to the importance of the management discipline Drucker (1968:13) commented that:

“the emergence of management as an essential, a distinct and a leading institution is a pivotal event in social history. Rarely, if ever, has a new basic institution, a new leading group, emerged as fast as has management since the turn of this century. Rarely in human history has a new institution proven indispensable so quickly: and even less often has a new institution arrived with so little opposition, so little disturbance, so little controversy.”

Hodgetts and Kuratko (1988:4) advised that organisations must continuously strive to increase the managerial competencies of the work force. Management knowledge and competency increased tremendously over the last century and can be regarded as the single most critical factor for future economic progress. It can be said, with little ground for contradiction that due to the ever-increasing competition the entire free world has an immense stake in the competence of management (Farmer & Richman, 1965:1).

In this regard Drucker (2001:3) commented that:

“In less than 150 years, management has transformed the social and the economic fabric of the world’s developed countries. It has created a global economy and set new rules for countries that would participate in that economy as equals. And it has itself been transformed.”

Bateman and Snell (2002:32) implied that management, for thousands of years, experienced to some extent problems and issues of the same relative magnitude and complexity as those confronting the management of today. The magnitude and complexity of managerial problems will in fact increase exponentially with the increase in competition. The challenges to management will not disappear.

2.4.4 Management work

Allen (1973:47-53) classified human work into management and technical work where he regarded technical work as the direct application of physical and mental effort to resources in order to secure

results by the person doing the work. Management work he defined as the application of mental and physical effort by a person in a leadership position to secure results through other people.

According to Allen a manager needs to always plan, organise, lead and control management and technical work. Hellriegel et al (2005:8) emphasised that all managers must capably perform the four basic management functions of planning, organising, leading and controlling on all the levels of an organisation. By this statement the authors admitted that all employees on all the levels of the organisation should in varying degrees perform these four managerial functions. Basically the essence of management work is that not only the managers but also all employees from the top man at the apex of the organisation down to the operators must perform management work in order to efficiently manage the achievement of the results required from each one of them and the organisation as a whole (refer sections 2.3.1 and 2.3.2). Logically then the ideal management method should accommodate this requirement.

2.4.5 Management levels

As the organisations grew larger and competition increased mainly in England and the United States of America the number of supervisors and managers and levels had to increase. Also as the volumes of production increased greater supervision was required. The organisational levels of management depend on many aspects such as the type of industry, size of the organisation, geographical location and the competency and general management philosophy.

Donnelly et al (1987:23-26) related the strategic level to top management, the managerial level to middle management, the operations level to the first-line management, and the worker level representing all the so-called workers or operating employees (refer figure 2.4). These levels are to some extent general and could in the practical situation vary from organisation to organisation.

Top Management	Strategic level
Middle Management	Managerial level
First-level Management	Operational level
Operating employees	Worker level

Figure 2.4: Managers and the levels of management

Source: Donnelly et al (1987:23-26)

Generally the following three most common management levels are identified:

- Top management; consisting of the managing director or chief executive officer and several executive managers, who as a team, make up the management committee,
- Middle management; consisting of the managers responsible for the tactical management of the

organisation's departments, and

- First-line management; consisting of the managers responsible for the operational management of the sections of the organisation.

Management authors and practitioners proposed different sets of management level categories for different types of organisations. The main decisive criteria for the determination of the management levels of an organisation are the type of business, geographic location, size and organisational structural design. There is no general classification of the management levels in the literature. Some theorists claimed that the sophistication and improvement in managerial efficiency would increase with the improvement in technology. Kramer and Messick (2005:118) stated that twenty years from now a typical large business would have less than half the number of levels of management and less than one third of the number of managers than a similar organisation of today. Drucker (1968:36), on the other hand, argued that new technology would greatly extend the management area and as a result demand more managers.

2.4.6 Managerial skills

According to Griffin (1987:21-25) and Massie and Douglas (1977:40-41) managers need specific skills in order to perform their work efficiently. Griffin (1987:24) identified and defined five skills applicable to management.

Conceptual skills	Conceptual skills	Conceptual skills
Interpersonal skills	Interpersonal skills	
Diagnostic skills	Diagnostic skills	Interpersonal skills
Analytic skills	Analytic skills	Diagnostic skills
	Technical skills	Analytic skills
	Technical skills	Technical skills
First-line management	Middle management	Top management

Figure 2.5: Managerial skills at different organisational levels

Source: Figure 1.5, Griffin (1987:24)

The skills as depicted in figure 2.5 are:

- technical skills for understanding and acquiring the necessary competency to accomplish specialised activities,
- interpersonal skills to efficiently interact with people from both inside and outside the organisation,
- conceptual skills to see the enterprise as a whole and to think in the abstract,
- diagnostic skills to analyse situations to determine the best course of action, and
- analytic skills in order to identify the key variables in a specific situation.

Merrill and Reid (1981:66) stated that analytical employees are inclined to make decisions on facts. In practice managers can not acquire everything of all these skills but should at least have an acceptable working knowledge of each and above all the competency to apply it efficiently at all times on all the levels of an organisation. Since managers are primarily responsible to deliver the results required from them through other employees they have to be competent in the work of managing. McDaniel and Gitman (2008:226) identified technical skills, human relation skills and conceptual skills.

The degree to which employees perform management work would vary from level to level but would increase as the employee progresses up the organisational hierarchy. It means that each manager and employee must be appropriately competent in the management work of planning, organising, leading and controlling at each specific level.

2.4.7 Management roles

Managers often fail to achieve the results required from them through others because they pre-occupy themselves with work that others should actually be doing for them. A manager must fully understand his role and position in the organisation with respect to the results required from him and delegated accountabilities. In practice people are mostly told what results are required from them – they are not necessarily involved in the planning of the results required from them (refer section 4.4.3). No literature could be found indicating how managers should logically determine their own work content or their ‘so-called’ core businesses as it is popularly referred to in practice. Job descriptions were very much products of personal efforts.

Allen (1973:44-45) was of the opinion that a manager has to content with four organisational interfaces (refer figure 2.6). These interfaces placed the manager in the unique position where only he had the objectivity, perspective and balance to satisfy the sometimes varying and conflicting needs of subordinates, peers and supervisors. The operator had to content with only three organisational interfaces. This concept is true for all employees from the highest to the lowest levels of the organisation and is essential for effective, comprehensive and integrated management for the organisation as a complete system.

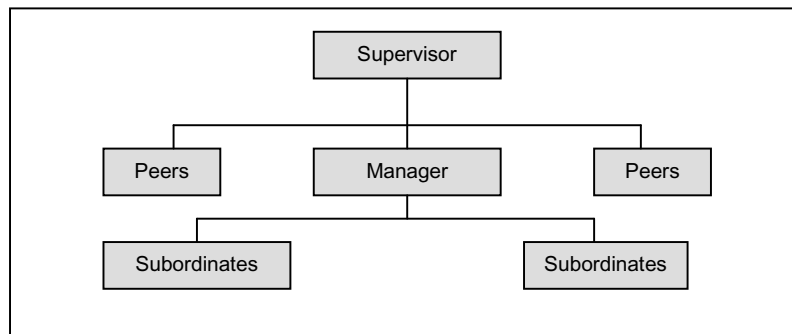


Figure 2.6: Multiple interfaces of a manager

Source: Allen (1973:45)

The manager must realise that the results required by his supervisor are the sum total of the results that he will obtain from his subordinates and the contribution and participation and support from his peers, stakeholders and supervisor respectively. The results of the subordinates, peers, stakeholders and supervisor are directly and indirectly influenced by the manager's contribution. The results of each employee in the organisation must ultimately efficiently support the end result of the organisation.

2.4.8 The environment in which management operates

Businesses do not operate in a vacuum but in an environment that is dynamic and which has a direct influence on its performance (McDaniel and Gitman, 2008:34). One of the many phenomena that managers have to execute efficiently is change, either as a result of changed internal requirements or as a result of external circumstances. According to London (1988:15) change is a given fact in today's business organisations and the effects of it need to be taken fully into consideration when and where necessary. Organisations should anticipate and detect changes that could influence the operation of it or that may have any influence on it and the employees. Managers need to affect changes wherever and whenever it becomes necessary to the best interest for the company's continued optimal performance. Not all managers, however, have the skills to implement change and transform entrenched patterns of behaviour in an organisation (Backman & Butler, 2003:159).

Some innovative proposals, alterations or changes may be resisted merely because they may be perceived to require subordination of the organisation or the employees to the will of outsiders (Austin, 2002:424). The implementation of changes needs to be meticulously planned for with the total involvement of all the employees where applicable (Williams & Parr, 2004:65). According to Wegener et al (Knowles & Linn, 2004:13) the manager must communicate and coordinate the activities of the entire organisation and departments efficiently in order that it could successfully accommodate and adapt to all the influences of the internal and external environments. The responsibility of sound public and employee relations is imperative for the efficient operation of organisations and is the duty of management and of all stakeholders (Lamb & McKee, 2005:7).

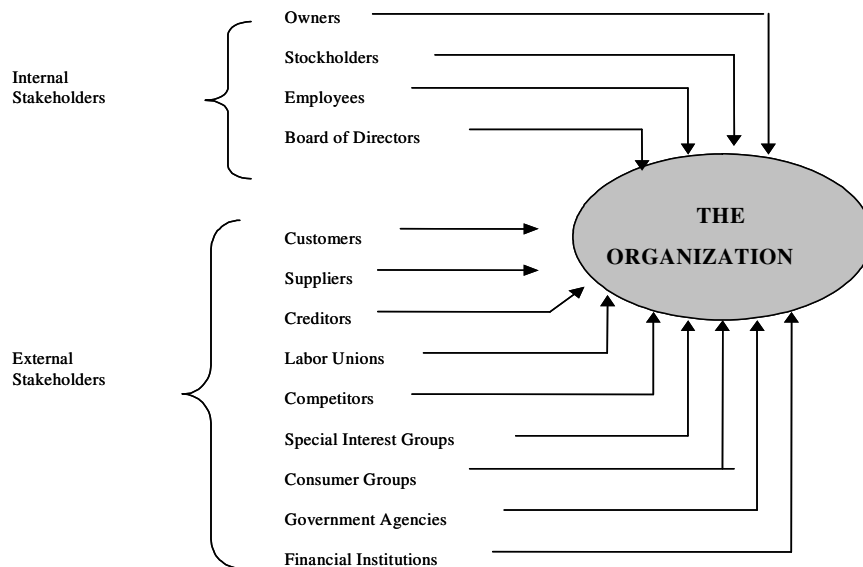


Figure 2.7: Environment influencing business

Source: Hellriegel et al (2001:100)

Organisations operate within the boundaries of internal and external environments as illustrated in figure 2.7. According to Donnelly et al (1998:31) the internal environment includes the day-to-day forces within the organisation in which managers perform their functions, the external environment and all the forces acting on the organisation from the outside. Each of these environments has profound influences on the performance, results and survival of the organisation.

What is not reflected in figure 2.7 is that in the practical situation the organisation and all its subsystems are also interacting dependently on and with each other. An organisation also has an internal environment, which includes the elements within the organisation's environment, consisting of the current employees, management, stakeholders and especially the corporate culture. A change in any one of the subsystems or components may have an influence on the organisation and its components as a whole. If for example, in a continuous miner operation, a change in the type of the cutting picks or cutting cycle is introduced, it may well have an influence on the productivity, production and engineering cost elements of that section and could eventually impact on the total cost and productivity of the colliery as a whole. It would therefore be a decision affecting more than one employee, section or department on the mine. Also not indicated in figure 2.7 is that any system is closed, with inputs, outputs to the greater system and, very importantly, reporting systems from the output to the input in order to report and correct unfavourable deviations. Most, if not all, organisations operate in environments, which are defined by the most general elements in the internal and external environments and which are in continuous interaction and change (Bateman & Snell, 2002:47-57) and (Hussey, 1999:2-4).

According to Kottler (Howells, 2005:40) it has become more and more imperative for organisations to thoroughly investigate the external and internal environments that have or could influence it and its employees, suppliers, competitors, customers and potential markets. Environmental factors should be categorised, mainly in uncontrollable, semi-controllable and totally controllable factors. It is necessary in order that management can decide how it should manage the identified factors in order to optimise the viability of the business.

Management must create the means to timeously detect any changes and environmental factors that would or may have an influence on it or on a part of it. It needs to keep its fingers on the 'pulse' of the organisation at all times. The available literature and management practices did not mention or discussed the internal 'environments' which do exist within each employee's working boundary, section, department and the impacts of these environments horizontally and vertically in the organisation. The interaction is vital for sound delegation, communication, integration, coordination, control and optimisation.

2.4.9 Management and stakeholders

Some controversy exists as far as the concepts of share- and stakeholders are concerned. A shareholder can be defined as a person or entity either outside or in some cases inside the company with a financial interest, usually in the form of shares, in the company. Hussey (1999:32) and (Gaines-Ross, 2008:6) viewed stakeholders, as the shareholders of the organisation and not necessarily all are involved in and with the company. Stakeholders have the important responsibilities to link or contribute in the linking of the activities necessary to develop and realise the planned objectives of the organisation. All employees are stakeholders of the organisation because they each have an interest in the achievement of the results.

Carroll and Buchholz (2000:65) argued that:

“a stake is an interest in an undertaking. The idea of a stake, therefore, can range from simply an interest in an undertaking at one extreme to a legal claim of ownership on the other extreme.”

Hellriegel et al (2005:165) defined stakeholders, as:

“Individuals or groups that have interests, rights, or ownership in an organisation and its activities are known as stakeholders.”

Campbell and Craig (2005:35) maintained that:

“A stakeholder can be defined as ‘any person or party that has an interest in, or is affected by, the activities of an organisation, however, strong or weak that interest may be. The interests of stakeholders may or may not be primarily financial in nature.’”

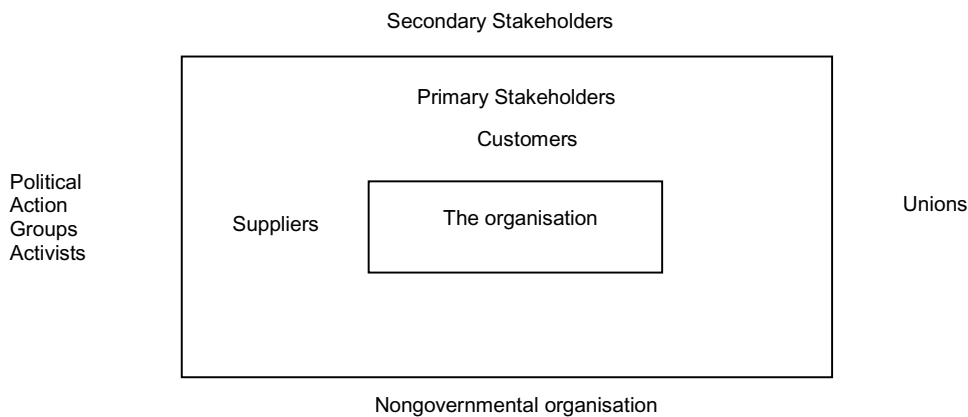


Figure 2.8: Common stakeholders of organisations

Source: Hellriegel et al (2005:166)

The controversy over stake and shareholders should not be seen as a serious problem. Each organisation should decide for itself how this issue should be dealt with within the organisation. The important fact is that due cognisance of the legitimate interests of stakeholders should be taken. They in effect have to interact and coordinate and integrate their activities with their stakeholders in order to optimise the performance of their sections or departments and that of the organisation as a whole.

Sound interaction and cooperation with stakeholders could be regarded as a sure recipe for continued success of the organisation. This fact is more often than not overlooked by many organisations. In fact it is sometimes regarded as doing stakeholders a special favour to involve them but in reality it is imperative to adequately involve every person that should make a contribution.

2.4.10 Management as a profession

From the literature it appeared that the majority of management thinkers lately began to recognise and accept that management is a full-fledged profession. According to Altman and Hodgetts (Mali, 1981:46) the management practice is both a science and an art. Establishing concepts and principles in practice reflects the science, and on the other hand the application of these concepts and principles in practice reflect the art.

From the views of Daft (2000:45) an occupation would qualify as a profession, if it:

- accumulates knowledge,
- requires competent application of the knowledge,
- accepts social responsibility,
- exercises self-control, and
- receives community sanction.

The management profession complies fully with all these requirements. Cronje et al (1987:21) concluded that management is a relatively young applied science that is concerned with the ways the enterprise could optimise its profit. It was and still is the only means of optimising company resources, increasing productivity and directing the company closer towards its goal (Goldratt, 1986:32).

When dealing with material matters, managers approached management as a science. At the lower levels of an organisation, managers, most of the time, applied scientific techniques. On the upper levels managers mostly applied judgment, thought and intuition. Successful managers on all the levels of the organisation need to employ both the art and science of management (Hodgetts & Kuratko, 1988:5).

Each practice has its own theory and therefore the management practice has its own theory. As an art, management requires the use of behavioural and judgmental skills that can not always be quantified or categorised in the same way that scientific information could be (Czarniawska, 1999:1). Management needs to acquire the art to 'read' each employee, simply because people are complex and different for a whole variety of legitimate reasons. Management is an art as well as a science because it requires the use of logic and analysis and it is a profession because it meets with the requirements of a profession.

Since management is the work that all employees have to do in order to obtain the most acceptable results all employees should acquire this proficiency. This would require that the theory should be logical, easy to comprehend and practical to apply. It would appear that existing management theories were not derived from a specific logic that would enable the organisation to manage comprehensively and practically from the top down to the bottom on all the levels of the organisation. In this thesis it had been hypothesised that such a management theory does not exist at present (refer section 1.5.1).

2.5 MANAGEMENT PRACTICES

In this section a few of the most noted and practiced management approaches, techniques and programs, collectively referred to as management practices, were discussed and analysed. The objective was to determine whether they comply with the requirements of the comprehensive, practical and integrated management method and to what extent they could be utilised in the development of the theory for such a method (refer section 2.2.1).

2.5.1 Management approaches

In this thesis a management approach was defined as a general overall method of management, which aims to enable all employees to manage comprehensively. Management approaches were developed over time and are relatively recent. From the literature it is evident that the development was as a result of a combination of trial and error, individual initiatives and organisational pressures and needs. The historical approaches were divided into the classical and contemporary approaches (Black & Porter, 2000:29-62). Bateman and Snell (2002:33-39) and Hellriegel et al (2005:36-62) gave a logical and understandable classification of the development of management approaches over the past 140 years that were briefly discussed in this section (refer figure 2.9).

Out of the great variety of ideas of how to improve management, parts of each approach survived and had been incorporated into modern perspectives on management. The emergence of the concept of economies of scale and the opportunities for mass production was initially created by the Industrial Revolution (1760-1830). This event came rather as a 'shock' to the management theorists and business organisations of that time. They were not ready for it and it resulted in intense and systematic thought about management problems and issues, particularly efficiency, production processes and cost savings.

Many of these approaches developed simultaneously, and often overlapped chronologically with the resulting impact on one another (refer figure 2.9). They were a direct reaction to the perceived deficiencies of previous approaches, needs and issues confronting management. All the approaches attempted to address the real issues facing the managers at the time and attempted to provide them with tools or some means to solve prevailing and future problems.

Although there existed a great number of classifications proposed by various management theorists this classification as proposed by these three theorists was accepted by the author of this thesis as the most logical and acceptable example for analytical reasons and further discussion. It reflects the most understandable, logical and progressive description of the development of management thought from the 1880s to the late 1900s.

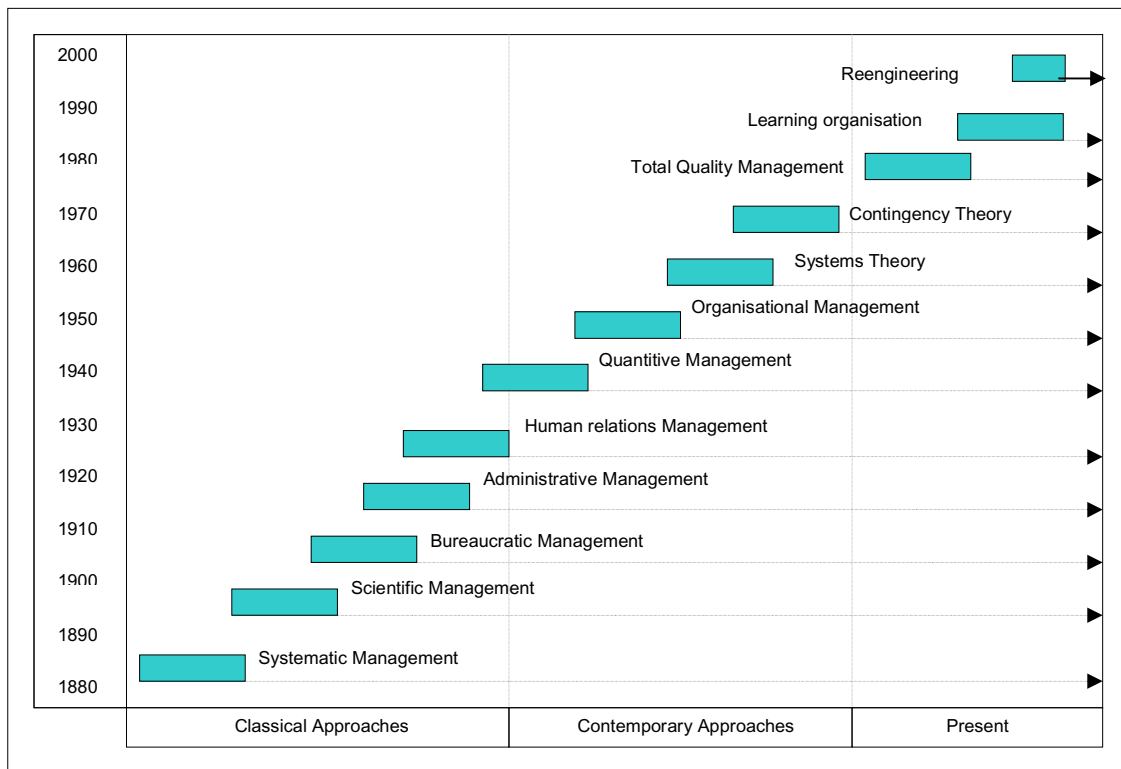


Figure 2.9: The evolution of management thought

2.5.1.1 The classical management approaches

The classical management approaches developed toward the end of the nineteenth and beginning of the twentieth centuries. It emphasised a rational, scientific approach to the study of management and intended to convert organisations into efficient operating entities. The factory system that began to appear in the 1800s posed management challenges that caught earlier organisations totally by surprise which they could not have imagined previously in their wildest dreams (Daft, 2000:45). In short the businesses of the time were totally unprepared for the demands that faced them.

There were other management thinkers who were also thinking about how to manage organisations. According to Black and Porter (2000:43) the most notable among them were the Frenchman, Henri Fayol, Max Weber and the two Americans, D. Mooney and A. C. Reiley. Their ideas have come to be labelled as the ‘classical management theory’.

The classical management theory focused on the study of the principles and functions of management, the authority structures of organisations, management of the total organisation and on ways and means to make organisations more efficient (Griffin, 1987:44-46). The systematic management, scientific management, bureaucratic management, administrative management and human relations management approaches were classified under this category. These approaches attempted to provide management with the necessary ‘tools’ to solve the problems at hand.

a) The systematic management approach

The systematic management approach was developed during the mid-19th century. The objectives with this approach were to build specific procedures and processes into operations in order to ensure the coordination of effort. It emphasised economical operations, maintenance of inventories to meet consumer demand, organisational control and adequate staffing. At the time managers were mainly concerned with meeting the explosive growth in demand brought about by the Industrial Revolution, which required the optimisation of internal operations (Bateman & Snell, 2002:33).

i) The systematic management approach's main contributions were that it:

- initiated formal management in the United States of America, and
- promoted efficient, uninterrupted production.

ii) According to Bateman and Snell (1996:33) its main limitations were the ignoring of:

- differences in the views of managers and workers, and
- the relationship between the organisation and the environment.

As an approach it was a major improvement mainly directed at the optimisation of internal operations. It could be regarded as the first step taken into the still unexplored wilderness of the all-inclusive management ideal. It is in effect not a comprehensive management method.

b) The scientific management approach

The growth in the number and sizes of factories, following the end of the American Civil War in 1865, caused increased attention to the issue of improving industrial efficiency (Black & Porter, 2000:37). A mechanical engineer, Frederick Winslow Taylor (1856-1915), generally regarded as the father of scientific management, developed the concept of a scientific approach to management in order to improve production processes (Hodgetts, 1981:8). It minimises wastage and inefficiencies at the operative level and maximises output with minimum effort (Rue & Byars, 1989:37).

Scientific management utilised scientific methods in studying and analysing individual tasks and establishing optimal working methods and the associated performance standards to maximise efficiency (Holt, 1993:38) and (Ivancevich et al. 1997:36). According to Black and Porter (2000:38) Taylor's scientific management approach focused on a few key principles (refer figure 2.10). It is a sub-field of the classical management approach.

Basset (1993:6) summarised scientific management as a viable and relevant approach that:

- sets high specific performance standards, and
- selects the most suitable workers, and trains and pays these workers according to output.

Scientific management emphasised scientifically determined changes in management practices as the solution to improving labour productivity (Daft, 2000:46). It focussed on individuals and their machines or tools (Hellriegel et al. (2001:54). Taylor stated in his testimony in 1912 before the Special House Committee investigating the Taylor and other systems of shop management under the authority of the 'House Resolution 90' that scientific management was merely the equivalent of a labour saving device (Taylor, 1947, Testimony:15-16). It was a means of making men more efficient than they were at the present and that it was in accordance with Smith's philosophy that the division of labour had the potential to tremendously increase the productivity of labour (refer section 2.4.1). He claimed that the greatest permanent prosperity for the worker and the owner could be achieved when the work is performed with the least human and resources cost (1917:11).

To implement this approach, Taylor developed and used time and motion studies to determine the most efficient way to complete specific tasks and argued that management itself should change and the manner of change could only be determined by scientific studies. Peterson (1993:1) argued that although the scientific management approach was mainly applied on the shop floor there was no reason why it could not equally have been applied on all managerial levels to create the most efficient methods in planning.

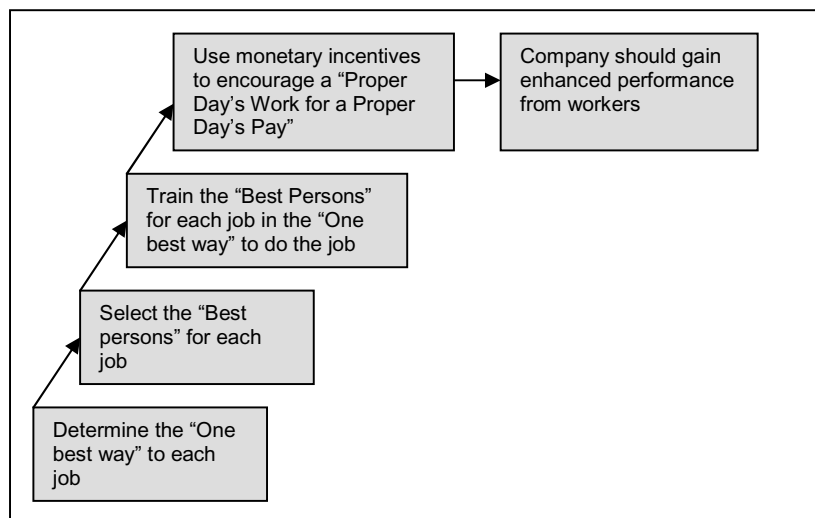


Figure 2.10: Basic elements of scientific management

Source: Black and Porter (2000:39)

i) According to Mescon et al (1988:49) and Daft (2000:47) the main contributions of the scientific management approach were the:

- improved factory productivity and efficiency by gathering factual data concerning tasks and the introduction of scientific analysis into the work place,
- piece rate system equating worker rewards and performance,

- abandonment of haphazard approaches to planning and organising of work and the stressing of management's role in organising work, training workers and instituting incentives,
- instilled cooperation between management and the workers,
- demonstration of the importance of personnel selection and training,
- supporting of workers by planning their work and eliminating interruptions,
- provision of workers with the resources required to perform their tasks efficiently, and
- separation of planning and thinking from the actual work.

Taylor's discovery that work could be managed was a radical turning point in the thinking on the optimal utilisation of resources at the time. Although he never formulated his views into a theory the truth that productivity is the result of the application of the human knowledge to the work was never denied (Drucker, 1980:15).

ii) According to Bateman & Snell (2002:33-35) the main limitations of the scientific management approach at the time were that it:

- was too an authoritarian approach and places too much pressure on workers to perform,
- caused unfair division of rewards between management and labour demands and excessive specialisation of jobs and tasks,
- represented an oversimplified approach to worker motivation,
- paid insufficient attention to social factors in the workplace,
- affected worker behaviour,
- did not appreciate the social context of work and the higher needs of workers,
- did not acknowledge the variances among individuals,
- ignored the ideas and suggestions of the workers,
- made workers often felt exploited,
- ignored many job-related social and psychological factors by emphasising money as incentive,
- reduced production tasks to a set of routine procedures that led to boredom, apathy and quality control problems,
- was strongly opposed by the unions because they feared that management might abuse their power to set the performance standards and the piece-rates, and
- did not help managers to deal with broader external issues.

The scientific management approach made a tremendous impact and contribution to the productivity and profitability of organisations. It introduced the management functions of planning and controlling, the activities of cooperation, selection and training of personnel, coordination, and motivation at the worker level. It is still being applied today, mainly at the shop floor level. The main shortcoming was that it was not a total comprehensive management approach. It is perceived that it could to some extent be utilised in the development of the theory for a comprehensive, practical and integrated management method.

c) The bureaucratic management approach

During the late 1800s, many European companies were managed on a 'personal' family-like basis. Employees were loyal to a single individual rather than to the organisation or its mission with the result that those resources were utilised to realise individual desires rather than to serve the customers (Daft, 2000:47).

Max Weber (1864-1920), a German theorist, envisioned organisations that would be managed on an impersonal, rational basis. It should rely on rules, a set hierarchy, a clear division of labour, and detailed procedures. The bureaucratic organisation emphasised management on an impersonal, rational basis through such elements as clearly defined authority and responsibility, formal record keeping and separation of management and ownership.

Bureaucratic structures can eliminate the variability resulting when managers in the same organisation have different skills, experiences and goals. Jobs are standardised to eliminate disruptions during personnel changes. One of the main benefits of this approach was that it enhanced the development of training schedules for the relevant employees.

i) The main contributions of this approach at the time were that it:

- promoted efficient performance of routine organisational activities,
- eliminated subjective judgment by employees and management,
- emphasised position rather than the person,
- provided a standard way of dealing with employees,
- facilitated developing of training manuals,
- enhance training of employees to act uniformly, and
- lead to improved company performance.

ii) According to Hellriegel et al (2005:43) the main limitations of the bureaucratic management approach at the time were that it:

- limited flexibility in organisational functioning,
- ignored the importance of interpersonal relationships and people,
- could sometimes lead to slow decision making,
- could become inappropriate with improvement in technology, and
- was difficult to dismantle once established.

This approach introduced discipline and order with specific procedures, policies and rules. It was used in this regard as part of the comprehensive, practical and integrated management method with the development of the most optimal tasks for each alternative method and the development of the supporting plans during the development and evaluation of the work tasks.

d) The administrative management approach

The systematic, scientific and bureaucratic management approaches mainly dealt with improving efficiency and productivity, specific job analysis, rules and procedures and stringent control on the lower levels of the organisation. They resulted in large increases in efficiency at the lower levels of the hierarchy. In order to take full advantage of these approaches organisations had to plan in more detail and involve all employees. According to Hodgetts (1981:10) managers realised that they knew very little about how to affect greater efficiency at the management levels.

The French mining engineer, Henri Fayol (1842-1925) is generally credited with as being the first scholar to present explicitly a functional analysis of the management process (Hodgetts, 1981:11), (Rue & Byars, 1989:48) and (Black & Porter 2000:44). He worked his way up to become managing director in 1888 of Comambault, the largest mining and metallurgical group in central France (Fayol, 1949:vi). He was the first to systemise the practice of management to provide guidance and direction to other managers. In his book '*General and Industrial Management*', published in 1949 by Pitman, he listed the five management functions of planning, organising, commanding, coordination and controlling (Fayol, 1949:43-107). His approach was known as the administrative or process management approach, which would appear to be the most widely applied management approach today (refer figure 2.11).

Fayol defined the five management functions as follows:

- Planning is examining the future and drawing up a plan to achieve organisational objectives.
- Organising is the building up of a structure to mobilise the materials and human resources to put the plans into action.
- Commanding is the giving of directions to employees to get them to perform the needed tasks.
- Coordinating is the unifying of the activities of employees toward realising organisational objectives.
- Controlling is ensuring that the objectives are realised according to the plans.

In addition, Fayol postulated the following fourteen principles or guidelines for efficient management (Fayol, 1949:19-42):

- "Division of work – divide work into specialised tasks and assign responsibilities to specific Individuals.
- Authority – delegate authority along with responsibility.
- Discipline – make expectations clear and punish violations.
- Unity of command – each employee should report to one supervisor only.
- Unity of direction – employees' efforts should be focused on achieving organisational objectives.
- Subordinating of industrial interests to the general interest – the general interest must predominate.
- Remuneration – systematically reward efforts that support the organisation's direction.

- Centralisation – determines the relative importance of supervisor and subordinate roles.
- Scalar chain – keep communication within the chain of command.
- Order – order jobs and material so they support the organisation’s direction.
- Equity – fair discipline order enhances employee commitment.
- Stability and tenure of personnel – promote employee loyalty and longevity.
- Initiative – employees to act on their own in support of the organisation’s direction.
- Esprit de corps – promote a unity of interests between employees and the customer.”

i) The main contributions of the administrative management approach were that it:

- viewed management as a profession,
- presented management as a process,
- maintained that management could be applied on all the levels of the organisation,
- believed that workers could be trained in the principles of management, and
- believed that managers could be trained in management theory.

ii) According to Bateman & Snell (2002:36) the main limitation was that universal prescriptions for environmental, technological and personnel factors needed qualification.

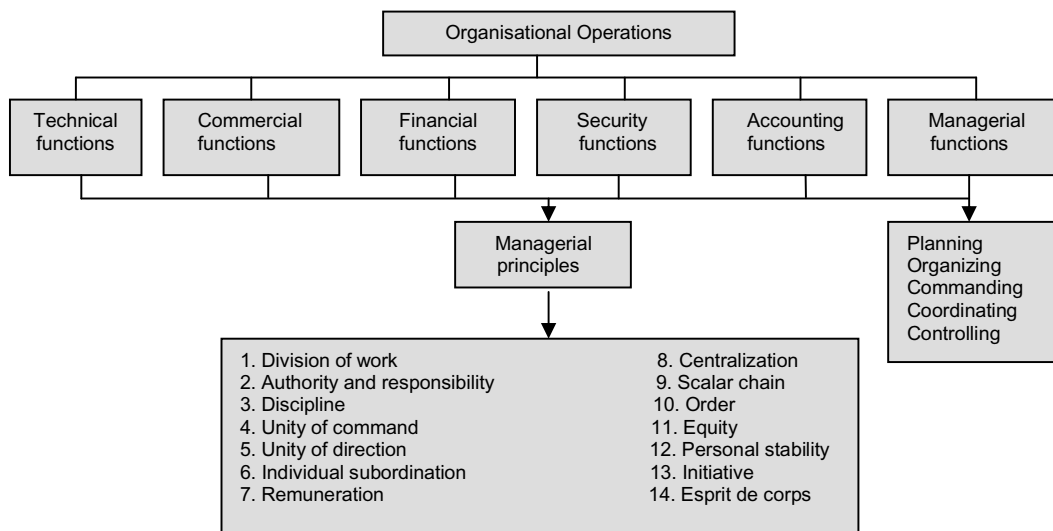


Figure 2.11: Fayol’s managerial functions and principles

During the late 1940s management thought in the English-speaking world began to move toward the idea of a process approach to management. It was only after Constance Storrs translated Fayol’s book in 1949 into English that the administrative management approach became known and available to the English-speaking countries of that time (Rue and Byars, 1989:48).

Lyndall Urwick was familiar with management theory literature on both sides of the Atlantic. In his book titled 'The Elements of Administration', he integrated the theories of Taylor, Fayol, Mooney, and other early management writers. He discovered many agreements between these early theorists. Because of his writings, it became evident by the early 1940s that the administrative theory was far more scientific, better researched, and more clearly understood than had previously been believed.

The application of his management approach as from 1888 enabled Fayol to turn the Comambault Mines and Steel Mills completely around from a serious loss situation into an extremely successful and profitable operation (refer figure 2.12). The administrative management approach focused on the total organisation. It was accepted by many organisations because of its functionality and applicability in general management applications. It is a process of management and explains managers' responsibilities and activities according to the managerial functions of planning, organising, leading and controlling (Holt, 1993:41).

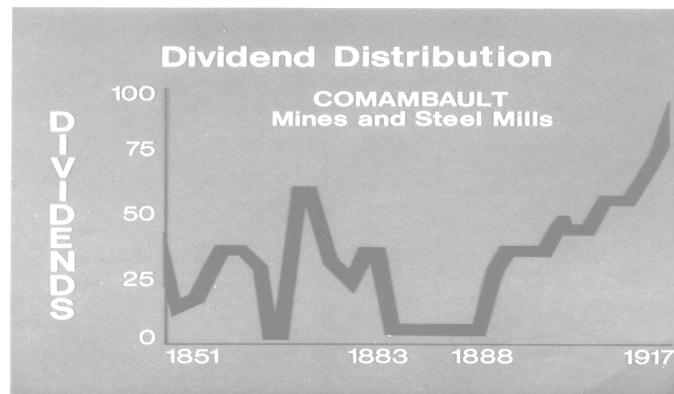


Figure 2.12: Dividend Distribution – Comambault Mines and Steel Mills

Source: Leaders Guide, How to manage: The Process Approach and Henri Fayol, (1982)

It could be speculated that had Taylor and Fayol, as compatriots, met in real life a comprehensive, practical and integrated management method could have been developed more than one hundred years ago. The administrative management approach advocated that management is a process and in this respect it was utilised in the development of the theory of the comprehensive, practical and integrated management method. Crainer (1995:85) argued that:

“The Frenchman Henri Fayol continues to be an under-estimated figure in the fledgling years of management theorizing. While the American Frederick Taylor gained attention (and later notoriety) for his ‘scientific management’, Fayol’s work is generally forgotten. Yet, Fayol pursued a much broader path than Taylor and his codification of what he thought management involved remains valuable.”

e) The human relations and resources management approach

The humanistic perspective emerged around the nineteenth century. It was divided into the sub fields of: the human relations movement, human resources perspective and the behavioural sciences approach. The human relations movement emphasised satisfaction of the basic needs of employees as the key to increased worker productivity. It is based on the assumption that workers mainly respond to social needs and to a lesser extent to monetary needs (Black & Porter, 2000:53).

The human resources approach suggested that tasks should be designed to meet higher level needs by allowing workers to use their full potential. Two of the best-known contributors to the human resources perspective were Abraham Maslow and Douglas McGregor.

The behavioural sciences approach applied social science in an organisational context, drawing from economics, psychology, sociology and other disciplines. It emerged around the 1930s and endeavoured to understand how psychological and social processes interact with the work situation and influence performance. It stated that the key to increased worker productivity lies in the satisfaction of the basic needs of employees (Holt, 1993:43). It was the first approach, which emphasised the necessity of workers' satisfaction and higher performance in the operational situation through the implementation of informal work relationships (Ivancevich et al, 1997:39).

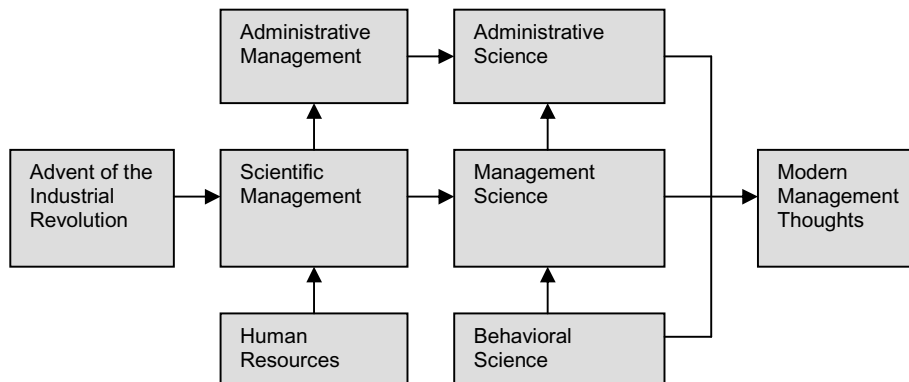


Figure 2.13: The Emergence of modern management thought

i) The main contributions of this approach were:

- that the reality of a hierarchy of needs was accepted, and
- management's acceptance that psychological and social processes influence performance.

ii) The main limitations were that:

- the simplistic belief that happy workers are always more productive is not always valid, and
- it was difficult to develop lower level employees to understand these concepts.

The scientific, administrative and human relations management approaches form the main pillars of the development of modern management and eventually resulted in what is today called modern management thoughts (refer figure 2.13). Although modern management thoughts, as we know it, are still not comprehensive, it formed a very important basis for the development of the comprehensive, practical and integrated management method. The systematic, scientific, bureaucratic and administrative management approaches were where applicable utilised in the development of the theory of the comprehensive, practical and integrated management method. The human relations and resources management approach would be used in the operation of the organisation once the comprehensive, practical and integrated management method had been implemented.

2.5.1.2 The contemporary management approaches

The shortcoming with the classical management approaches was that even if used jointly they still had serious limitations. Industrial leaders required an approach or combination of approaches that would be comprehensive, practical and applicable on all levels. This need was, to some extent, addressed after World War 11 since military planners, when applying mathematical techniques out of necessity to defence and logistical situations, developed many new techniques. Business leaders felt that these techniques could be equally applicable in many situations in business areas. According to Bateman & Snell (2002:37) it represented the corner stones of modern management thought, attempted to overcome the limitations of the classical approaches and proposed relevant ideas for modern management.

The constituents of the contemporary management approaches were the quantitative management approach, organisational behavioural approach, systems theory, and the contingency management approach. Of these approaches mainly the systems approach was used in the development of the theory for the comprehensive, practical and integrated management method.

a) The quantitative management approach

This management science perspective is the application of mathematics, statistics and other quantitative techniques to solve managerial problems. It assists management in making decisions by developing formal mathematical models of problems (Holt, 1993:53). Techniques such as, management information systems, operations research, queueing theory and operations management were developed under this perspective (Daft, 2000:53-55). During World War 11, military planners began to apply mathematical techniques to defence and logistical situations. After the war, large organisations assembled expert teams to modify and apply these techniques in industrial situations (Bateman & Snell, 2002:37).

According, to Rue & Byars (1989:49) the 1950s saw a new era in the study of management. Production management and industrial engineering scholars began testing mathematical and modelling approaches

to quantify management problems and to arrive at more logical decisions. As a result, mathematical and decision theory schools of thought were developed for the study of certain management situations. The mathematical school viewed management as a system of mathematical relationships.

This era was followed by a period of attempting to integrate and rationalise the different theories and practices. The systems approach was one of the main and most meaningful management approaches that developed during this period.

The contingency approach was developed during the 1970s. Technological advances, especially, the rapid development in computer and programming technology facilitated and advanced the development of specific quantitative methods. These methods included techniques such as statistical decision theory, linear programming, queueing theory, simulation, forecasting, inventory modelling, network modelling and break-even analysis to name but some of many. The application of these techniques in the business sector is virtually unlimited.

i) The main contributions of this approach were that it:

- facilitated the development of specific mathematical methods to managerial problem solving,
- enhanced the development of sophisticated quantitative techniques to assist in decision making, and
- had been extremely useful in planning, controlling processes and assisting management in selecting the best alternative amongst a set of alternatives.

ii) The main limitations of this approach were that:

- it is not suited for non-routine or unpredictable management decisions,
- models tend to neglect non quantifiable factors, and
- managers, not trained in these techniques, may not trust or understand the outcomes of it.

The quantitative management approach could mainly be applied to quantifiable situations. It greatly simplified complex quantitative situations and hence enhanced improved decision-making. It would, be used in the optimisation of the various alternatives in the comprehensive management method.

b) The organisational behaviour and human behavioural management approach

According to the organisational behaviour approach, human behaviour was much more complex than the theorists realised up to that time. Slowly it dawned upon them that organisational success was based on more than the satisfaction of social or economic needs (Bateman & Snell, 2002:38). Performance and satisfaction could be increased when employees are adequately trained and allowed to optimally utilise their talents and capabilities (Black & Porter, 2000:54). Organisational behaviour attempted to deal with the human aspects of organisations. It studied and identified the management activities which

would improve the effectiveness of employees through an understanding of the nature of individual, group and organisational processes (Hellriegel et al, 2001:59). It became one of the most important ingredients of efficient modern management.

i) In summary, the main contributions of this approach were:

- enriched jobs by increasing performance and autonomy,
- individual challenges, initiative and increased participation,
- the recognition of the importance of developing human resources,
- the provision of important insights into motivation, group dynamics and other interpersonal processes in the organisation, and
- that it challenged the view that employees were merely 'tools' instead of valuable resources.

ii) The main limitations of this approach were that:

- it ignored situational factors such as the environment and the organisation's technology,
- prediction of behaviour is not an exact science because of the complexity of individual behaviour,
- many managers were reluctant to apply some of the behavioural concepts, and
- not every practising manager properly communicated all the contemporary research findings.

The organisational behaviour and human behavioural management approach was limited to organisational and human behaviour. It could not be used in the development of the theory of the comprehensive, practical and integrated management method.

c) The systems theory

Management scholars, in the 1950s, attempted to analyse and understand the organisation as a whole and the different parts out of which it consists. It was found that the organisation, in reality, consists of many different dependent and interdependent systems and was a system in itself (refer figure 2.14).

According to Homans (1965:313) the employee in the group is firstly operating as an individual and secondly as part of the group. In this respect he is analogous to a cell in the human body. A closed system is completely self-supporting. An open system on the other hand does interact with its environment from which it obtains essential inputs for efficient functioning.

Senge et al (2001:90) viewed a system as a whole made up of a series of parts, which interact with each other. He defined a system as:

“a perceived whole whose elements ‘hang together’ because they continually affect each other over time and operate toward a common purpose.”

Most systems can be subdivided into sub-systems such as the production and marketing sub-systems. Further in this thesis it was proved that each of these sub-systems can further be subdivided into the most elementary systems and elements where an element is the smallest component of a system.

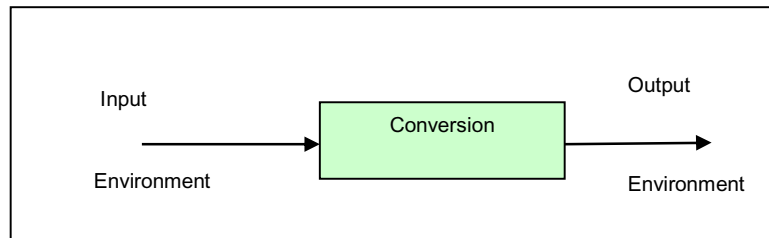


Figure 2.14: Basic model of an open system

The system's approach consists in recognising that if managers wish to understand the behaviour of anything that possesses the properties of a system, not only the part-part and part-whole relationships, but also the system's relationship to one or more larger systems should be studied (Amey, 1986:4-7). The General Systems Theory (GST) largely used in biology ('living systems') and engineering ('mechanical systems'), was developed early in the 1920s. This logic was also utilised in management.

Systems were generally defined as consisting of inputs into a process in order to produce outputs within the confines of a specific environment along with a feedback loop to measure and correct performance (Haines, 1999:19). According to Ziegenfuss (2002:11) management theorists began to realise that an organisation could also be seen as an open, sociotechnical system composed of a number of subsystems. It was only as recent as the 1960s that this approach was introduced to organisations (Black & Porter, 2000:57).

A process optimises results by converting inputs through a specific process into outputs Chase et al (2001:92). An organisation, its departments, sections and related processes are all systems that act interdependently and form part of the integrated whole. The organisation is a system in itself and if one part is changed, it can affect the rest of the organisation (Meredith & Mantel, 2000:6).

i) The main contributions of the systems theory were that:

- it views an organisation as a manageable system,
- management must interact with the environment to gather inputs and return the outputs,
- organisations contain a series of systems and subsystems which interacts,
- it recognises the importance of the internal organisation specific relationships, and
- it recognises the importance of the organisation's relationship with the external environment.

ii) The main limitations of the systems theory are that:

- it does not provide specific guidance on the functions and duties of managers, and
- not all employees understand and apply it.

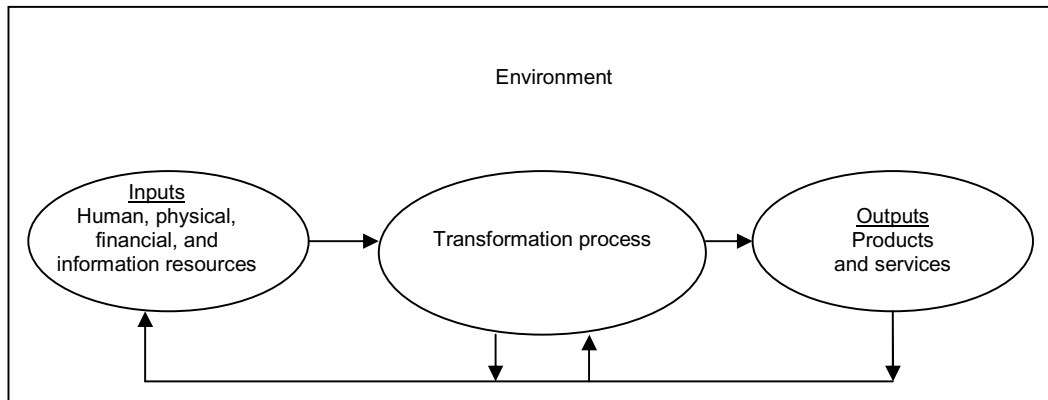


Figure 2.15: Basic systems view of an organisation

Source: Hellriegel et al (2005:52)

The systems approach recognised the reality that organisations are made up of different interdependent subsystems such as departments, sections and operators and that each subsystem again is made up of smaller systems. It was used in this respect in the development of the theory of the comprehensive, practical and integrated management method.

d) The contingency theory

Management practices should be consistent with the requirements of the external environment, technology and the capabilities of the people involved in the organisation. Bateman & Snell (2002:39) stated that a variety of factors, both internal and external to the firm, might affect the organisation's performance. Therefore, there is still no best way to manage. Contingencies include circumstances in the organisation's external environment, the internal strengths and weaknesses of the organisation, the values, skills and attitudes of managers and workers in the organisation and the types of tasks, resources and technologies the organisation utilises. The manager should keep these contingencies in mind at all times.

i) The main contributions of this approach were that it:

- identified major contingencies, and
- argued against the generalisation of management principles.

ii) The main limitations were that:

- not all important contingencies can always be identified, and
- not all employees understood it and the theory may not be applicable to all managerial issues.

The contingency approach served the purpose of identifying major contingencies affecting the operation of the organisation. It, however, had a limited application potential and can not identify all contingencies. It was not used in the development of the comprehensive, practical and integrated management theory.

2.5.1.3 Evaluation of the management approaches

Initially there were no uniform organised methods of managing. Every business owner managed according to his best ability. It is likely that many owners and managers had their own preferential management styles, carry-overs from the past from generation to generation, and others were just not interested to learn from others, the not invented here (NIH) syndrome. It was possible that a great variety of inefficient management methods were the order of the day.

The systematic and bureaucratic management approaches served mainly to bring order, direction and control to basically haphazardly managed organisations. Scientific management concentrated on increasing productivity, especially on the shop floor. The administrative management approach led management to become primarily concerned with identifying and refining the functions or components of the management process and was concerned with the functions of management. According to Hodgetts (1981:18-20) the scientific managers, administrative managers and the behaviourists all contributed important ideas to modern management. The scientific managers arrived on the scene around the 1880s, the administrative managers came along around the 1920s and the behaviourists began to emerge during the 1930s. The thinking of each contributed to the understanding and application of management to the extent that present management practices could be seen as a combination of all the management approaches.

The classical and contemporary management approaches made a major contribution in the designing, developing and applying of new management techniques. It provided valuable and indispensable management techniques and practices to management to improve productivity, human and social relations and the identification of contingencies. The classical and contemporary management approaches' major deficiency, however, was that they still failed to provide specific guidance on the comprehensive application of a comprehensive, practical and integrated management method that could be applied efficiently by all employees on all the levels of all organisations.

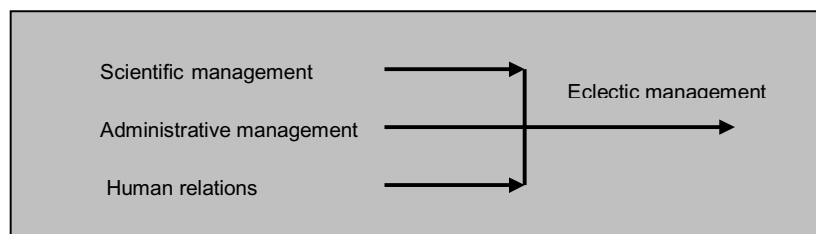


Figure 2.16: Development of management approaches

The thinking of each contributed to the understanding and application of management in so far as that present management practices could be seen as a combination of all the management approaches. This led to a management method called eclectic management, which meant that the management of the time used a combination of the best of what was available and let the rest go (refer figure 2.16).

a) Classical approaches

i) The main contributions of the classical approaches were that they:

- promoted efficient, uninterrupted production and improved factory productivity and efficiency with the introduction of scientific analysis into the work place,
- stressed the role of management in organising work, selecting, training workers and instituting incentives,
- stressed the importance of the administrative management approach, and
- eliminated subjective judgment and promoted efficient performance.

ii) The main limitations were that:

- they were more appropriate for stable and simple organisations than for today's dynamic and complex organisations,
- they did not provide for comprehensive and integrated management,
- they often prescribed universal procedures that are not really appropriate in some settings,
- they did not provide specific guidance on the functions and duties of managers, and
- many managers still view employees as tools rather than valuable resources.

b) Contemporary approaches

i) The main contributions were that they:

- facilitated the development of specific mathematical and quantitative methods and techniques to managerial problem solving and decision-making,
- recognised the importance of developing human resources,
- furthered the belief that employees are valuable assets,
- recognised the importance of the systems concept,
- recognised the organisation's relationship with the external environment, and
- identified major contingencies.

iii) The main limitations were that:

- models neglected nonquantifiable factors,
- some approaches ignored situational factors such as the environment and the organisation's technology,

- they did not provide specific guidance on the functions and duties of managers,
- they did not provide for comprehensive and integrated management,
- in some situations they were difficult if not impossible to implement,
- they can not guarantee that all important contingencies could be identified, and
- the theory may not be applicable to all managerial issues.

The classical and contemporary management approaches provided valuable and indispensable management techniques and practices to management to improve productivity, human and social relations and the identification of contingencies and problem solving. Their major shortcoming was that they did not provide specific guidance on the functions and duties of managers and specific guidance on the application of a comprehensive, practical and integrated management method.

2.5.2 Management techniques

In this thesis a management technique is defined as a deliberate effort or input of relative short duration, a program introduced with the aim to either introduce, update or improve specific management decisions or performances such as safety, cost, human relations, zero based budgeting or activity based management to name but a few. Many management techniques emerged over the decades; all because of the need to supply much needed management input in order to supplement the still incomplete management practices. Many management techniques disappeared since and new ones appeared and many more would continue to appear in the future. A few were discussed here in order to reflect the general nature of these techniques and their applicability for developing the theory of the comprehensive, practical and integrated management method.

2.5.2.1 Total quality management

The total quality management (TQM) concept was based on the work of W. Edwards Deming (Statt, 1999:138). TQM is a process and a set of techniques whose total application results in customer satisfaction (Delener, 1999:151). It focused on customer satisfaction through managing the total organisation to deliver the required quality of products and services to the customers.

Chase et al (2001:260) argued that the entire organisation must excel on all dimensions of products and services that are important to the customer. Quality was regarded as a critical aspect of the management function and can not entirely be left to operators (Madu, 1993:3-5). The four significant elements of TQM are:

- the focus of customers,
- the involvement of all employees,
- benchmarking, and
- continuous improvement.

According to Feigenbaum (Christopher & Thor, 1993:2-1.3 – 2-1.10) TQM requires top management's commitment and includes the total quality of products as well as the total commitment of all the business management processes. Quality management must be seen as a customer-driven approach to quality. The enterprise must continuously improve the quality of services.

2.5.2.2 The learning organisation

According to Hodgson (Crainer, 1995:691-700) the learning organisation was a popular management technique. It was extensively used by many organisations.

Hellriegel et al (2005:343) argued that:

“A learning organisation has both the drive and the capabilities to modify or transform it and improve its performance continuously.”

a) Characteristics

The learning organisation is characterised by:

- i) a visionary leadership,
- ii) a team-based structure and a participative strategy,
- iii) a strong adaptive culture,
- iv) a high degree of participation and morale,
- v) employees that are fully empowered,
- vi) employees feeling that they are making valuable contributions,
- vii) the organisation realising that it has more and more a wealth of experience and skills,
- viii) mutual respect and people treating each other as coequals, and
- ix) people venturing freely to experiment, take risks and openly discuss the results. No one is penalised for making a mistake (Senge et al, 2001:51).

b) Systems thinking

Senge (1990:5) argued that the learning organisation is distinguished from the traditional organisations by its emphasis on mastery of certain basic principles. It actually utilises systems thinking in developing the learning organisation.

Systems thinking could not work successfully without:

- i) building a shared vision which fosters a joint long-term commitment,
- ii) mental models which focuses on the openness required to solve deficiencies in the present ways of seeing the world, and

iii) team learning which develops the skills of groups to identify the reasons of what lies behind individual employees' perspectives.

2.5.2.3 Work breakdown structures

The technique of Work Breakdown Structures (WBS) was normally used in developing a framework to organise the work, establish effective means for communication, costing, and control purposes for projects (Haugan, 2002:1-6). It is a quick technique but it is in no way a comprehensive method. It does not follow a definite logic.

a) Development of the WBS

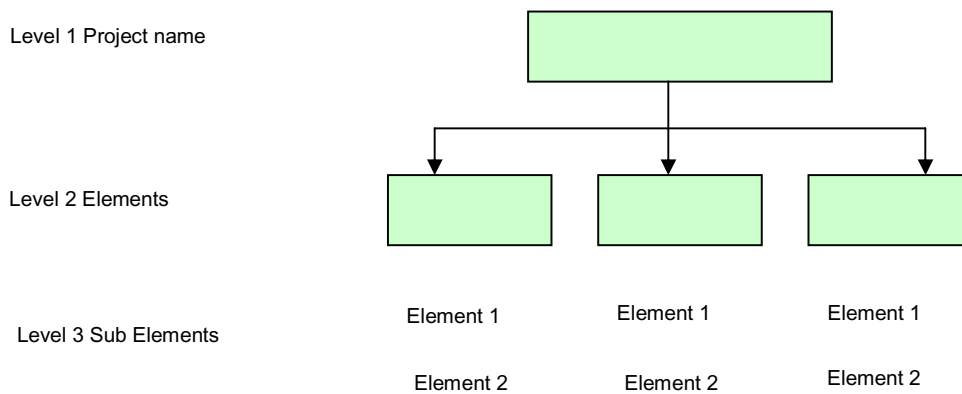


Figure 2.17: Example of a work breakdown structure (WBS)

In the development of the WBS the following steps were used:

- i) specify the project objectives with specific focus on the products, services or results to be provided,
- ii) identify the products, services or result deliverables or end items to be provided to the customer,
- iii) identify other work areas in the project to make sure that all the work is covered,
- iv) identify areas that represent intermediate outputs, or complement the deliverables, and
- v) subdivide each area into successive steps and logical subcategories until the complexity and money value of the elements become manageable units for planning and control purposes.

b) Content of the WBS

The content of the WBS will vary from project to project depending on the:

- i) size and complexity of the project,
- ii) structure of the organisations involved,
- iii) phase of the project,

- iv) project manager's judgment of work allocation to subcontractors, and
- v) degree of uncertainty and risk involved.

Once the WBS for a project was established, it has to be maintained. It has to be updated to reflect any changes in the project. The WBS was considered as a tremendous communication tool to present the project's scope in an understandable format. At the end of the planning phase, the plans and schedules were frozen or 'baselined' and became the basis for executing the work of the project. At the same time, the WBS became one of the key mechanisms for change management.

Proposed work not in the WBS needed to be added to the project and to the WBS through formal change control processes. For any change in the required results or influences of factors outside the organisation the existing WBS model needed to be adjusted or revised.

The WBS was not developed from a specific management logic but was rather based on a set of rules. It can not in any way be regarded as a comprehensive, practical and integrated management method. All employees on all the levels can not apply it uniformly in all organisations. The development of it would be very much dependent on the practical experience, competency and commitment of the specific employee.

2.5.2.4 Activity-based management (ABM)

Activity-based management is the implementation of activity-based costing by the management of an organisation. It is a set of analytical tools or method that assists management to make a wide range of decisions in maximising value from operations (Statt, 1999:3). This technique concentrated on the cost aspects only and unfortunately does appeal very strongly to executives with the overriding desire to reduce costs and maximise profits at all cost over the short term. The inherent danger with this technique was that it was not developed from a logical step-by-step work flow development point of view. It was not necessarily a pure objective focused technique. It can, therefore, do more harm than good. It concentrated mainly on the cost aspects of activities or work steps and ignored the validity of these activities in terms of the pursuit of a predetermined objective. It would appear that the activities analysed were normally not derived from a step by step development of work required to realise a legitimate objective but just analysed existing unscientifically determined activities.

The practice of concentrating primarily on the cost aspects only may result in:

- a) the danger of just only keeping on financially controlling an ineffective system, which could over the long-term nullify all existing advantages without management really appreciating it,
- b) that 'career-chasers' may use it to further their own interests,
- c) the danger of neglecting necessary work over the long term,
- d) the possibility that many tasks could have been omitted from the work method in the first place,

- e) the possibility that the working method is not necessarily, from a management point of view, the best and scientifically designed method, and
- f) that adjustments may be cumbersome and as such sometimes neglected.

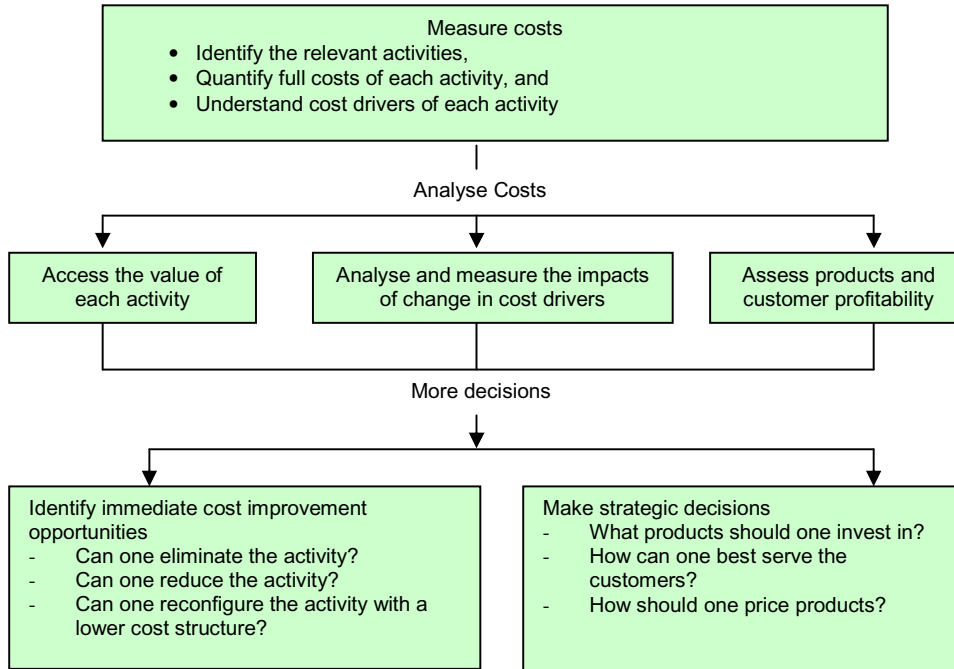


Figure 2.18: Example of activity-based management

2.5.2.5 Evaluation of the management techniques

The management techniques, similar to the management programs, dealt each mainly with one or a few management activities or aspects only. They were by no means comprehensive but were intended to serve a specific purpose. Most, if not all, organisations use some or combinations of these approaches, programs and techniques. The real shortcoming was that, whether in a combination or not it still did not constitute a comprehensive, practical and integrated management method. They were popular as quick fixes by many managers who easily fell for the bestseller advertising campaigns. These techniques were without exception single topic attempts to address prevailing management issues. They were not products of comprehensive research. They seldom lasted for extended periods. Above all they were not comprehensive from a management point of view.

2.5.3 Management programs

A management program is a management practice, which is directed at the introduction or improvement of a specific management function or skill such as communication skills, negotiation skills, motivation skills or other. A great number of short single-topic-focused management programs were developed

over the past 60 years, specifically to serve identified needs at the time and to overcome the deficiencies of existing management approaches.

Mali (1981:28-46) described a number of, what he termed, practice management strategies defined as preferred ways of managing. Practitioners developed these by way of selecting and synthesising what they felt they needed from knowledge, technologies, attitudes, doctrines, theories, methods and existing proven practices. These preferred ways of managing were developed over time to supplement the existing incomplete management practices.

Ten out of many of these programs were briefly described to illustrate the point that each of them was developed to serve the need of a single or a small number of management deficiencies only. They were developed as specific needs arose and served the management discipline at the time. Many of these had since become obsolete and disappeared from practical use. They were by no means the solution to a comprehensive, practical and integrated management method.

2.5.3.1 Managing by objectives (MBO)

Managing by objectives emphasises the importance of setting objectives for and by each individual member of a section, department or an organisation as a whole (Statt, 1999:99). The purpose is to set and pursue realistic attainable objectives.

Austin (2000:12) defined management by objectives as:

“an effects-oriented process for developing what is essentially campaign ‘recipes’.”

It is a practical way to ensure the planning for results by all members of management and to establish controls in an environment of individual freedom. When all management levels participate in establishing the strategy, a system emerges in which key individuals move in a given coordinated direction.

Objectives tend to be improvements that supervisors and managers want to initiate in their areas of responsibility and accountability. Peters & Waterman (1982:13) commented that their research proved that the excellent companies were, above all, brilliant on the basics; tools did not substitute for thinking, intellect did not overpower wisdom and analysis did not impede action.

Hellriegel et al (2005:389) defined management by objectives as:

“a participative goal-setting technique used in many U. S. organisations.”

a) The benefits of MBO are that it can result in:

- i) large-scale achievement of results in the organisation or part of it within a specific time limit,
- ii) the institution of coordination and control in the specific department or section in an organisation,
- iii) clarity of the performance-contribution-reward process, and
- iv) increased motivation to complete commitments with an existing style.

b) The disadvantages of MBO are that:

- i) unforeseen circumstances can disrupt the pursuit of objectives, for the duration of the application of it, and
- ii) it closes the door on any new opportunities or resources.

This program formed and still forms a valuable part of productivity improvement campaigns of many organisations, especially, in the western world. It is not a comprehensive management method. It concentrates, as the name implies, on a concerted drive on objective setting in a section or department and the realisation of these objectives.

2.5.3.2 Managing by exception (MBE)

Managing by exception is a control strategy that enables managers to concentrate on problems and opportunities that need their direct attention and avoid dealing with those that could be handled by subordinates. Managers set up reporting systems that would signal when their attention and involvement are needed. The reporting systems indicate no action when subordinates are completing expectations according to standards or plans.

Many activities are reduced to measurable standard practices, so that the manager could mainly handle genuine emergencies. Statt (1999:98) defined management by exception as managerial control that requires subordinates to inform supervisors only when something happens which is sufficiently exceptional to require their personal attention. Managers should not just add on their responsibilities but should only perform tasks that contribute to the achievement of their delegated results.

a) The benefits of MBE are that it:

- i) allows the manager to manage from a distance and releases more personal time for him,
- ii) introduces the management activities of delegating, controlling and setting of performance standards,
- iii) focuses on the use of standards in judging performance and people,
- iv) reduces significant fluctuations in work situations which strengthens predictability of results,
- v) makes fuller use of competent and highly paid workers, and
- vii) provides a channel to screen the daily flow of information requiring a manager's attention.

b) The disadvantages of MBE are that:

- i) it requires a comprehensive observation and reporting system,
- ii) it can give a false sense of security when no variances are reported, and
- iii) it requires special skills to set and write measurable standards.,

This management program has the benefit that it forces the management to set performance standards, delegate to subordinates and act when a deviation requiring attention is reported. It also emphasises the need for an efficient reporting system and immediate correction. It is, however, concentrating mainly only on the three management control activities of setting performance standards, delegating and reporting by exception.

MBE does not commence from an objective directed analysis based on a logical management logic. The control standards therefore are not necessarily legitimate in a specific instance and the perceived corrective action may not result in optimal performance. This principle could therefore only be applied in situations where the work and performance standards are correctly developed.

2.5.3.3 Managing by decision models (MBDM)

Managing by decision models is a quantitative strategy testing variables by comparing alternatives. It facilitates decision-making by constructing or simulating situations in such a way that the variables could be tested as to their effects when changes are made. These simulated or represented situations are termed models.

A model can be manipulated or analysed more easily at relatively lower costs than the real situation, which permits the manager to carry on with experiments. The models are manipulated so that conditions are maximised or minimised. They could consist of many types of models such as physical, analogue, probability-verbal, schematic and mathematical models.

The specific model selected must best serve the specific management aspect or problem.

a) The benefits of decision modelling are that it:

- i) explores maximum and minimum limits with respect to costs, time and technical performance without changing the real situation,
- ii) determines the effectiveness of various methods through a test or dry run in the model,
- iii) provides rational ways to deal with uncertainty, risks and prediction of outcomes, and
- iv) assists to define major and minor problems in complex situations and a way to test the outcome of a decision through simulation and manipulation before implementation.

b) The limitations in model use are that:

- i) many variables of a real situation are nonquantifiable in cause-effect relationships,

- ii) the model tends to be an oversimplification, and
- iii) the cost of developing and validating the model could be high could be sometimes excessive..

This management program endeavours to improve performance results by concentrating on simplifying and improving decision-making. It introduced the utilisation of models in order to evaluate alternative methods. This aspect was used in the development of the theory of the comprehensive, practical and integrated management method.

2.5.3.4 Managing by styles (MBS)

Managing by styles is a strategy of selecting a leadership role that would best influence the people within a certain situation. The role is a collection of perceptions, orientations, concerns and attitudes that would 'best fit' the needs and relationships of the members of the group and their responsibilities for completing work. Because situations and groups differ, many styles are possible. The effectiveness of some styles resulted in them being used more than others.

a) The benefits of managing by styles are that it:

- i) provides the required leadership to make a group operational in a given situation,
- ii) enables the building of teamwork among people who have never been part of a team,
- iii) enables subordinates to behave in a desired manner, and
- iv) provides a means to enhance some form of flexible management.

b) The problems with managing by styles are that:

- i) difficulty may be experienced to change an originally effective style when the situation changes,
- ii) all persons are not susceptible to changed styles,
- iii) it may be difficult and time consuming to change to the appropriate style, and
- iv) it is play-acting on a one-stand basis in its lowest form.

Managing by styles provided a simple but effective way of changing existing styles or introducing new effective styles. It was however concentrating only on human behaviour, one of many aspects of the management discipline and was not utilised in developing the comprehensive management theory.

2.5.3.5 Managing by competitive edge (MBCE)

Competition in the market place is well appreciated and understood by organisations that are motivating customers to buy their products. Managing by competitive edge concentrates on the rules of competition among departments, groups and individuals. It is a silent form of competition. Those who practice in it know that the potential advantage or edge an individual, group, division or organisation can obtain over colleagues and coequals can be a powerful means for advancement, growth and rewards. MBCE begins

with a careful assessment of the performance of rivals, behaviour and contributions of colleagues, partners and organisational counterparts. The practitioner proceeds to determine the level, type and amount of performance needed to operate with an edge over his rivals.

a) The benefits of MBCE are that:

- i) visibility of performance is obtained by practitioners within the organisation, and
- ii) ambitious practitioners bent on rapid advancement can utilise this program.

b) The disadvantages of MBCE are that:

- i) it could disrupt vitally needed cooperation in projects or coordinated undertakings, and
- ii) it tends to favour aggressive personality types.

This program served to enhance excellence in the organisation. Like the previous programs it was only concentrating on one of the many aspects of management. It was not utilised in the development of the comprehensive, practical and integrated management theory.

2.5.3.6 Managing by coaching and development (MBCD)

Managing by coaching and development is a strategy with the aim to develop the knowledge and skills of the employees. It is a very important constituent of sound management and should as a rule be part of the normal operation of any organisation. Subordinates can acquire valuable knowledge from experienced supervisors with this program. Tasks, work assignments or projects are selected in order of increasing difficulty and then delegated to the employee. The systematic improvement in knowledge, skills and attitudes required is then attained through concerted teaching and coaching.

a) The benefits of MBCD are that it:

- i) enhances achievement of higher level performance in developing potential and talent,
- ii) ensures that knowledge and skills that satisfy individual needs remain up to date, and
- iii) increases motivation through the increased developmental attention.

b) The disadvantages of MBCD are that:

- i) personality traits may seriously hamper coaching and training,
- ii) it could damage morale,
- iii) it could cause dissatisfaction due to over training, and
- iv) coaching and development can often be difficult if not impossible.

The managing by coaching and development program is an excellent program to improve performance, provide managerial succession and to develop individual talent, knowledge, skills and motivation. For this reason it would form part of the comprehensive integrated management method.

2.5.3.7 Managing by information systems (MBIS)

Managing by information systems ensures that information centres are developed for deliberating, generating, distributing, storing and returning information needed across disciplines, functions and departments. It ensures that information needed by decision-makers is timeously available.

a) The benefits of MBIS are that it:

- i) establishes the information interrelations that exist among departments,
- ii) gives a better prediction of the effect of an action or change on everyone, and
- iii) enhances sound decision making.

b) The disadvantages of MBIS are that:

- i) designing a complete information system is a complicated and expensive task,
- ii) a time lag exists between data generation and end-use information,
- iii) information centres do not coincide very often with departmental centres, and
- iv) skills and technical know-how for the design and development of MBIS are not found frequently in organisations.

This program provided effective communication. It would prove to be automatically an outcome of the development of the comprehensive, practical and integrated management method.

2.5.3.8 Managing by matrices (MBM)

Managing by matrices was a useful practice in a wide variety of management approaches in obtaining results. This approach establishes relationships in tabular form so that analysis and decision-making is simplified.

a) The benefits of MBM were that it:

- i) clarified many cause-effect relationships operating in complex processes,
- ii) allowed exploration of the minimum and maximum limits by manipulation of quantitative relationships,
- iii) enabled these quantitative relationships to be identified for study and analysis, and
- iv) helped management visualise extensive components involved in a situational problem.

b) The disadvantages of MBM were that:

- i) it was an oversimplification to consider relations one-over-one,
- ii) not all relationships were quantifiable,
- iii) not every employee would understand and utilise this program,
- iii) solutions were at best approximations, and
- iv) if more than two variables were involved, assumptions of two-dimensional analysis fall apart.

Again as in the previous programs discussed this one was also only providing in one of many management aspects. It was not utilised in the development of the theory for a comprehensive, practical and integrated management method.

2.5.3.9 Managing by work simplification (MBWS)

Managing by work simplification was a process of study and analysis to discover simpler and more effective methods of accomplishing work. The study usually resulted in changed methods of work for the purpose of lowering costs, improving productivity or bettering the quality of output. It leads to the achievement of higher productivity levels.

a) The benefits of MBWS are that it:

- i) leads to direct labour and material savings,
- ii) improves morale motivation,
- iii) simplifies work processes, and
- iv) justifies issuance of new policies in the work situation.

b) The disadvantages of MBWS are that:

- i) job classifications and pay scales make it difficult to use it in union-connected organisations,
- ii) it creates defensiveness on the part of superiors whose work situations were to be studied,
- iii) it requires a great deal of paper work for analysis and plans for implementation, and
- iv) it lacks motivational inspiration.

This program can be related to the scientific management approach. If applied in this context it may result in considerable savings and motivation but is in no way a comprehensive method.

2.5.3.10 Managing by organisational development (MBOD)

Managing by organisational development was a formal practice for designing and implementing plans to assist the members of an organisation to interact more efficiently in their pursuit of objectives. This practice required one or more change agents whose job it was to assist the organisation in creating conditions for change.

a) The advantages of MBOD are that it:

- i) is aimed at the development of the organisation as a whole,
- ii) recognises that the most important changes could be made with people in groups,
- iii) creates much needed openness in cooperation,
- iv) develops collaboration and trust, and
- v) clarifies verbal and nonverbal types of communications.

b) The main disadvantages of MBOD are that:

- i) habits of people can make change difficult,
- ii) implementation is expensive,
- iii) implementation often requires help from outside,
- iv) many interventions are still unproven and experimental, and
- v) supervisors need special training.

This program, in itself, can only serve a specific purpose. It was not utilised in the development of the theory of the comprehensive, practical and integrated management method. It would come out as part of the development of the theory.

2.5.3.11 Evaluation of the management programs

In summary the programs served one or at the most three management aspects each, and even when combined, constituted in no way a comprehensive, practical and integrated management method. Furthermore they should be used with the utmost care and strict control as some of them, if not judiciously used, could be counter-productive to the morale and performance of the organisation.

2.5.4 Ubuntu; an African management philosophy

Ubuntu, a much acclaimed African philosophy and lifestyle, is regarded by many leading black people in Africa as a management method or approach which is more and more seen by them as a means of solving mankind's existing problems. Many black people are convinced that it would be the best substitute for the modern capitalistic driven western management approaches.

In real life one does not see the manifestation of this philosophy. It is difficult if not impossible to detect any compliance with the core values of the Ubuntu philosophy (refer table 2.1). Some black people strongly advocate the institution of this philosophy. These suggestions are regarded as unjustified and if it should replace existing proven management methods it could only lead to complete chaos in the modern business world (refer section 2.5.4.3).

2.5.4.1 Meaning of Ubuntu

Ubuntu in the English language means 'humanness' (Broodryk, 2002:14). The late South African black conscious leader, Steve Biko for example rejected certain western values and traditions of the power-based western society. He maintained that the western society is concerned with improving its technological knowledge while neglecting its spiritual values.

According to Broodryk (2002:7) Ubuntu was defined as:

“a comprehensive ancient African world view based on the values of intense humanness, caring, sharing, respect, compassion and associated values, ensuring a happy and qualitative human community life in a spirit of family.”

2.5.4.2 Value base of Ubuntu

The Xhosa proverb “Ubuntu ungamuntu ngabanye abantu” (people are people through other people) most probably best reflects the claimed spirit of Ubuntu (Broodryk, 2002:13). The Ubuntu philosophy is to make the world a better and happier place for mankind, a world of less greed, crime, stress and strife and more happiness and compassion. Ubuntu is based on certain basic values.

Core values	Associated values:
Humanness	Warmth, tolerance, understanding, peace, humanity.
Caring	Empathy, sympathy, helpfulness, charitable, friendliness.
Sharing	Giving (unconditionally), redistribution, open handedness
Respect	Commitment, dignity, obedience, order, normative.
Compassion	Love, cohesion, informality, forgiving, spontaneity.

Table 2.1: Basic values of Ubuntu

According to Broodryk (2002:18-19) values are the means which one uses to manage one’s personal life and protects that of the community. Table 2.1 identifies the core and associated values of Ubuntu respectively.

2.5.4.3 Evaluation of Ubuntu

In evaluating Ubuntu as a management method to manage a modern society, it appears that:

- a) it is by no means a comprehensive, practical and integrated management method,
- b) it is not based on a logic but on a spiritual philosophy,
- c) the fact that it is a carry-over by word of mouth from generation to generation since times immemorial harbours the danger of line loss. The true meaning of this philosophy could have seriously been distorted through the generations,
- d) it can never be successfully applied in the complex competitive global environment of today. It can not even remotely be considered as a substitute for existing management approaches or be used as an exclusive system to manage an organisation let alone the world. Recently Adams (Rapport, 26 November 2006, By:3) concluded that this philosophy must be regarded as the greatest obstacle to black self-advancement,

- e) the cultural differences in the world limit its application and it can at best be seen as a tiny aspect of the much broader and complex management concept,
- f) the philosophy of Ubuntu has definite values and lessons, which in effect already form a very small part of the broad world-wide management approaches, and
- g) it is difficult if not impossible, to accept that the philosophy of Ubuntu could be proposed as the sole means of ensuring a happy, prosperous and peaceful world society or as a substitute for proven management approaches.

There are many more programs or management innovations. They all have developed with the objective of serving or solving a few management aspects only. Over the past 40 years numerous management fashions and fads have appeared. Critics argued that managers are quick to adopt quick fixes and that new techniques may not represent permanent solutions. Others feel that managers adopt new techniques because they are working toward continuous improvement of the results of their organisations in a highly competitive and uncertain world.

2.5.5 Summary of the management practices

The advantages of the management approaches, techniques and programs discussed so far are summarised in table 2.2 for easier comparison and evaluation.

MANAGEMENT PRACTICES	MAIN FEATURES
MANAGEMENT APPROACHES	
Classical management approaches	
Systematic management approach	<ul style="list-style-type: none"> - Build specific procedures and processes into operations to ensure the coordination of effort - Emphasises economical operations - Maintain inventories to meet consumer demand - Maintain control of the organisation and staffing
Scientific management approach	<ul style="list-style-type: none"> - Utilises scientific methods in studying and analysing individual tasks - Establishes optimal working methods - Establishes performance standards to maximize efficiency - Focuses on a few key principles - Combines key principles in order to improve performance - Selects the most suitable workers - Trains selected workers - Pays workers according to output
Administrative management approach	<ul style="list-style-type: none"> - Presents a functional analysis of the management process - Systemises the practice of management - Provides guidance and direction to managers - Defines management into the functions of



	planning, organising, leading and controlling
Contemporary management approaches	
Quantitative management approach	- Applies mathematics, statistics and other quantitative techniques to solve managerial problems
Organisational behaviour and human behavioural management approach	- Deals with the human aspects of organisations - Studies and identifies the management activities which, will improve the effectiveness of employees through an understanding of the nature of individual, group and organisational processes
Systems theory	- Analyses the organisation as a whole and the different parts of which it consists
Contingency theory	- Analyses circumstances in the organisation's external environment - Analyses the internal strengths and weaknesses of the organisation - Analyses the values, skills and attitudes of managers and workers in the organisation - Analyses the type of tasks, resources and technologies the organisation uses
TYPE	FEATURES
MANAGEMENT TECHNIQUES	
Total quality management	- Focuses on customer satisfaction through managing the total organisation to deliver the required quality of products and services to the customers
The learning organisation	- The organisation culture encourages individual learning as well as collective learning about the organisation itself
Work breakdown structures	- Develops a framework to organise the work, establishes effective means for communication and cost control projects
Activity-based management	- Implements activity-based costing by management of an organisation. It is a method used by management to cost its activities
MANAGEMENT PROGRAMS	
Managing by objectives (MBO)	- Sets objectives for and by each individual member of a section department or an organisation as a whole
Managing by exception (MBE)	- Managers set up a reporting system that will signal when their attention and involvement are required
Managing by decision models (MBDM)	- Test variables by comparing alternatives
Managing by styles (MBS)	- Select a leadership role that will best influence the people within a certain situation
Managing by competitive edge (MBCE)	- Concentrates on the rules of competition among departments, groups and individuals
Managing by coaching and development (MBCD)	- Selects tasks, work assignments or projects in order of increasing difficulty and challenges - Attains systematic improvement in knowledge, skills and attitudes through concerted teaching and coaching
Managing by information system (MBIS)	- Develops information centres for deliberating, generating, distributing, storing and returning information needed across

	<p>disciplines, functions and departments</p> <ul style="list-style-type: none"> - Ensures that information is available at the right time and in the right form
Managing by work simplification (MBWS)	<ul style="list-style-type: none"> - Studies and analyses to discover simpler and more effective methods of accomplishing work - Develops changed methods of work for purposes of lowering costs, improving productivity or bettering the quality of output
Managing by organisational development (MBOD)	<ul style="list-style-type: none"> - Designs and implements plans to assist the members of an organisation to interact more effectively in their pursuit of objectives - Requires one or more change agents whose job it is to assist the organisation in creating conditions for change
Ubuntu: An African Philosophy	<ul style="list-style-type: none"> - Uses certain basic values to management of community life

Table 2.2: Management practices

These management practices made and are still making significant contributions in improving the management knowledge, skills and proficiency of managers and enabled mankind to move forward. Most of them cover only a part of the management discipline. None could be regarded as a complete comprehensive, practical and integrated management method. Mainly the scientific, administrative and systems management approaches were utilised in the development of the comprehensive, practical and integrated management method. During the process of developing the theory for the comprehensive, practical and integrated management method the author indicated where some of these practices featured or were utilised.

2.6 DISCUSSION OF THE MANAGEMENT DISCIPLINE

In this section some of the most recent, available and relevant descriptions of the management discipline were discussed. At the end the deficiencies, where applicable, they were briefly summarised and utilised to compare with the theoretical and practical deficiencies identified in chapters 2 and 4 in order to develop the guidelines for developing the theory for the ideal comprehensive, practical and integrated management method in chapter 5.

2.6.1 The overall view of the management discipline

Fayol (1949:43-107) was the first to propose a statement on the theory of general management, initially stating that management must be seen as a process consisting of the five managerial functions of planning, organising, commanding, coordinating and controlling (refer section 2.5.1.1 d). Rue and Byars (1989:12-13) classified the practice of management into the five functions of planning, organising, staffing, leading and controlling (refer figure 2.19). According to Allen (1973:49-50) the functions of commanding and coordinating was lately substituted by the single function of leading by the majority of management theorists and practitioners

According to Allen (1973:49):

“Other investigators and writers agree substantially on the planning, organizing, and controlling functions, as defined, which follows from the basic work of Henri Fayol. There is most disagreement on the nature of the leading function. The usual approach has been to identify two or more ‘people’ categories, such as ‘staffing’ and ‘directing’, or to overlap the category with the planning, organizing, or controlling functions. First developed in 1959, the leading function, as defined, seems to be as acceptable a ‘people’ category as any. The important conclusion, in this case, is not the semantic label, but rather the work to be done and the objectives to be achieved.”

Some management theorists argued that the many management concepts available in the management fraternity caused confusion. They suggested that a uniform management framework or approach was necessary. The framework of planning, organising, leading, and controlling seems to be the most popular way of structuring managerial knowledge. Management textbooks based on this framework are extensively used around the world.

Today the vast majority of management thinkers, supports the administrative management approach and accept the classification of management work into the four functions of planning, organising, leading and controlling Drucker (1968:1-450), Allen (1973:49-53), Bedeian and Glueck (1983:174), (Griffin, 1987:10-13), Smit and Cronje (1992:5), DuBrin (1994:71), Donnelly et al (1998:138-240), Williams (2000:7), Bateman & Snell (2002:14-16), Hellriegel et al (2005:9-10) and McDaniel & Gitman, (2008:1-620) to mention only a few. Most authors, in many respects, seemingly arbitrarily further subdivided the management functions into management activities, rules, steps or processes.

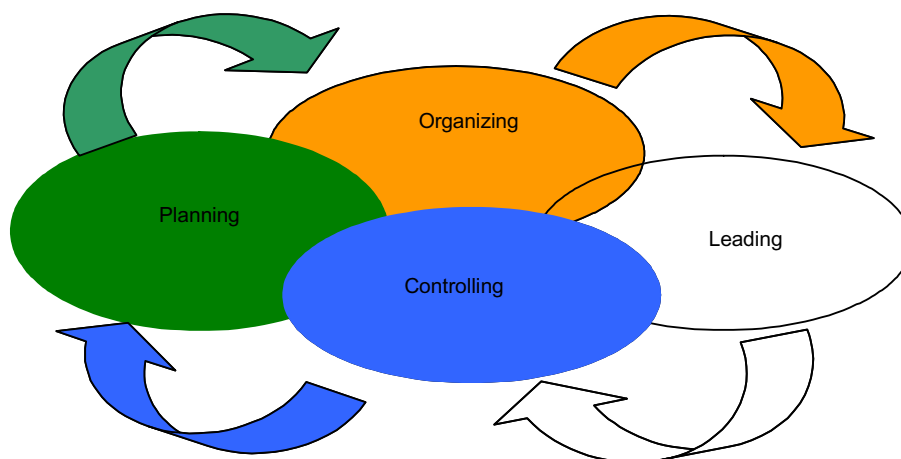


Figure 2.19: The management functions

2.6.2 The management functions

The successful manager must perform the four basic managerial functions of planning, organising, leading and controlling. The percentage time that a manager spends on each of these functions depends on the type of work, particular level of the position and the strategy of the organisation. Regardless of the managerial level each manager has to perform all of these functions more or less simultaneously rather than in a preset order or sequence. The best way in which to obtain an average picture on the time generally spend on these functions can be approximated by planned investigations.

Not anyone of the four managerial functions can be prioritised ahead of one another. Normally it just seems the right thing to do to start off in any discussion of the managerial functions with the planning function. Many management theorists and practitioners agree with this statement. It is not possible to present the management process diagrammatically.

It would be more correct to view the management process as consisting of many systems where all the management actions are being performed within each system, however small, by each employee. Many management authors prefer to present management as a transformation process (refer figure 2.20). The interrelationships between these functions, although real and most relevant, will for the sake of clarity be dealt with separately during the discussion of the various views of the management discipline.

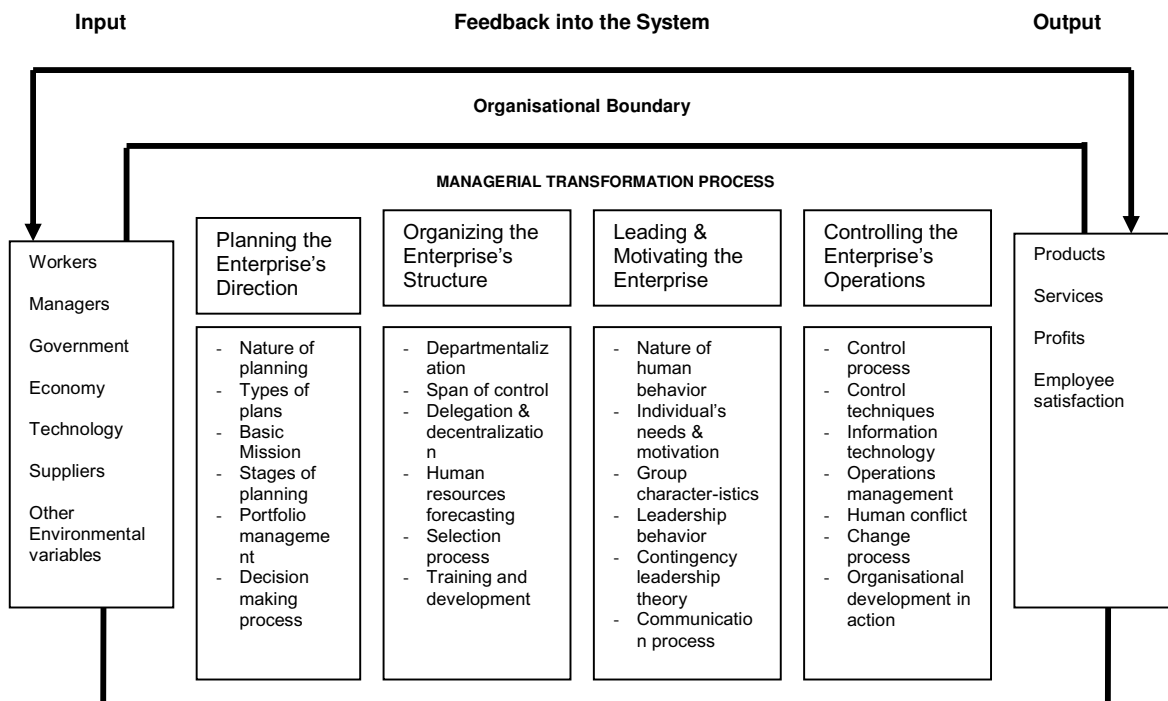


Figure 2.20: Management as a transformation process

Source: Hodgetts & Kuratko (1988:21)

2.6.2.1 The planning function

After the end of World War 11 managers start to utilise ex-army officers to apply the concept of long range planning to the work of top managers in business organisations. It was only then that formal planning processes were developed and became widely used in the industries (Drejer, 2002:2). Historically, planning was very much an autocratic top down process. In the new era it is much more a participative process where more employees are to some extent involved and endeavour to contribute maximum value to the results of the company (Bateman & Snell, 2002:14).

McDaniel and Gitman (2008:211) stated that planning:

“is the process of deciding what needs to be done to achieve organizational objectives; identifying when and how it will be done; and determining by whom it should be done.”

Planning is deciding in advance what is to be done. It is a projected course of action. Planning therefore involves the conscious creation of a desired future state and the statement of an effective method or means to achieve just that.

Ackhoff (1970:23) said that:

“planning is predicted on the belief that the future can be improved by active intervention now.”

Rue and Byars (1989:168) defined planning as:

“the process of deciding what objectives to pursue during a future time period and what to do to achieve those objectives.”

Daft (2000:8) commented that planning is the:

- defining of objectives for future organisational performance, and
- deciding on the tasks and the utilisation of resources required to realise these objectives.

Planning in the new era was described as delivering strategic value and was viewed by most of the management theorists as the work managers perform to predetermine a future course of action. As a decision-making process, it focuses on the future of the organisation and how it would get where it wants to go, at what cost and over what period of time. It would involve more than one person most of the time operating cooperatively (Branch, 1999:143).

A plan can only be executed successfully when the proper control measures are developed, instituted and maintained. Hellriegel et al (2005:9) viewed planning as the determination of the objectives for the

organisation and how the organisation should achieve it. From a system's perspective every organisation would prefer to be in a 'preferred' state which represents the situation where it is achieving its defined objectives.

McDaniel and Gitman (2008:186) defined a business plan as:

“A formal written statement that describes in detail the idea of a new business and how it will be carried out; includes a general description of the company, the qualifications of the owner(s), a description of the product or service, an analysis of the market and a financial plan.”

From the above it is clear that any organisation wishing to be in a 'preferred state' should, by means of efficient planning, determine what this 'preferred state' should be. Significant deviations should be evaluated and corrected as soon as feasible. Donnelly et al (1995:156) said that planning should occur at all the levels of the organisation. Of the four management functions of planning, organising, leading and controlling, planning is the most fundamental. Everything else stems from planning.

a) Importance of planning

Donnelly et al (1998:139) maintained that many managers regard planning as the primary management function and the other functions as secondary (refer figure 2.21). According to Allen (1973:54-56) management work would always be utilised to plan, organise, lead and control management and technical work. The elements of both are so intertwined that without a proper logic it would be impossible to understand and apply the whole of management.

On the importance of planning Steiner (1969:732) quoted the description of planning by the Spanish Jesuit, Balthazar Gracian more than four centuries ago as follows:

“Think in anticipation, today for tomorrow, and indeed for many days. The greatest providence is to have forethought for what comes. What is provided for does not happen by chance, nor is the man who is prepared ever beset by emergencies. One must not, therefore, postpone consideration till the need arises. Consideration should go beforehand. You can after careful reflection, act to prevent the most calamitous events. The pillow is a silent sibyl, for to sleep over questions before they reach a climax is far better than lying awake over them afterward. Some act and think later – and they think more of excuses than consequences. Others think neither before nor after. The whole of life should be spent thinking about how to find the right course of action to follow. Thought and forethought give counsel both on living and achieving success.”

Planning helps one to master the future and bridges the gap between the present situation and where one should be at a specific time in the future. It is the platform for stating the required results and to

define the necessary objectives for each employee in the organisation and the company as a whole. It is vital for teamwork because it is the best way of integrating the efforts of innovative, productive people and to encourage them to think through, before they take action, what they want to do and how they should do it. Donnelly et al (1998:142) stated that planning can occur at all levels in an organisation and that in some companies planning is being pushed down to the lower levels.

According to Bedeian and Glueck (1983:176) and Dessler (1982:35) the planning function is important because it:

- i) plays an indispensable role in the coordination of activities and in preparation for change,
- ii) still is the best way for organisations to determine the future course of action and to control work in progress,
- iii) helps organisations to succeed,
- iv) provides direction and purpose,
- v) helps to reveal future opportunities and threats and to cope with change,
- vii) contributes to the performance of the other management functions,
- viii) prevents piece-meal decisions,
- ix) keeps the employees focused and assists in developing managers,
- x) assists to discover new opportunities,
- xi) anticipates and minimises future problems,
- xii) develops effective courses of action,
- xiii) keeps the employees interested and enthusiastic by assisting them to see how their work contributes towards the overall effort,
- xiv) assists management to make the most effective and economical use of resources,
- xv) is the best vehicle for determining performance standards and establishing of control,
- xvi) is a prerequisite for control, and
- xvii) ensures coordination throughout the entire organisation.

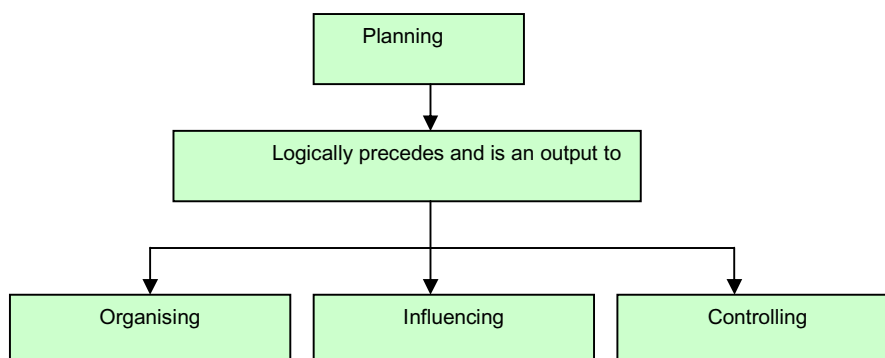


Figure 2.21: The primacy of planning

b) Hierarchy of plans

The normal planning structure of organisations consists of various term plans. Black and Porter (2000:174- 176) proposed the hierarchy of plans as depicted below:

i) Strategic plans

The purpose with strategic planning is to arrive at the decisions necessary for the long-term successful operation of the organisation. Strategy is the intelligent deployment of limited resources. It is imperative to determine the objectives and the appropriate strategies required. Once the strategy is established, the structure of the organisation sets the framework for the other organisational design decisions (Galbraith, 1995:19).

McDaniel and Gitman (2008:213) described strategic planning as:

“The process of creating long-range (one to five years), broad goals for the organization and determining what resources will be needed to accomplish those goals.”

The corporate strategy can be described as the sense of purpose of an organisation, which guides it to realise its objective (Lowson, 2002:40). The formation of a winning strategy requires that a series of difficult choices must be made (Pietersen, 2002:43).

Strategic plans commence when management considers and evaluates their current position with respect to their mission, goals, and strategies. The organisation’s internal and external environments are investigated and strategic factors that may require change are identified. Internal or external events may require that the mission or goals must be redefined and a new strategy formulated at either the corporate, business, or functional level.

A company’s business must be defined by what objectives it wishes to realise, its customers it wants to serve, the technologies it would use and the functions it would have to perform (Thompson & Strickland, 1999:20). Strategic plans focus on the future of the organisation and must incorporate the external environmental demands and internal resources into the actions managers need to take (Black & Porter, 2000:174).

Strategic planning normally covers the future three to five year period and focuses on the entire organisation and would include the human resources, technology, products, services and finances. For success every strategic plan must ensure that adequate reciprocity between the strategic and the operational activities is established (Cook, 2000:12).

ii) Tactical plans

Black and Porter (2000:175) stated that the purpose of tactical plans is to translate strategic plans into specific goals for specific parts of the organisation. Consequently, it has a one to two year time frame, is narrower in scope and is seldom broader than a strategic business unit. Tactical plans are somewhat complex but more specific because of the limited domain of application. It can affect specific businesses but generally not the survivability of the entire organisation. It must take the resources and capabilities of several units within a business into account. According to Hellriegel et al (2005:183) tactical planning is about making concrete decisions who should do what, how and when within a time span of one year. The concept of tactical plans is generally not used in the South African mining industry and would therefore not be further investigated in this thesis.

iii) Operational plans

Operational plans in turn translate tactical plans into specific goals and actions for small units of the organisation and are normally compiled for a period of twelve months or less. It focuses on departments or smaller units of the organisation. It has a low interdependence since it is linked to higher-level tactical and strategic plans but is less interdependent with them and it uses analytical thinking to deal with real-world problems (Chase et al, 2001:6). The functional levels mainly compile operational plans. The interaction between the different types of plans and the organisational levels is depicted in figure 2.22 (Black & Porter, 2000:179).

Care should be taken to ensure that the most appropriate plans for each employee, section, department and the organisation are instituted. It is imperative that the employees performing the physical tasks have detailed plans.

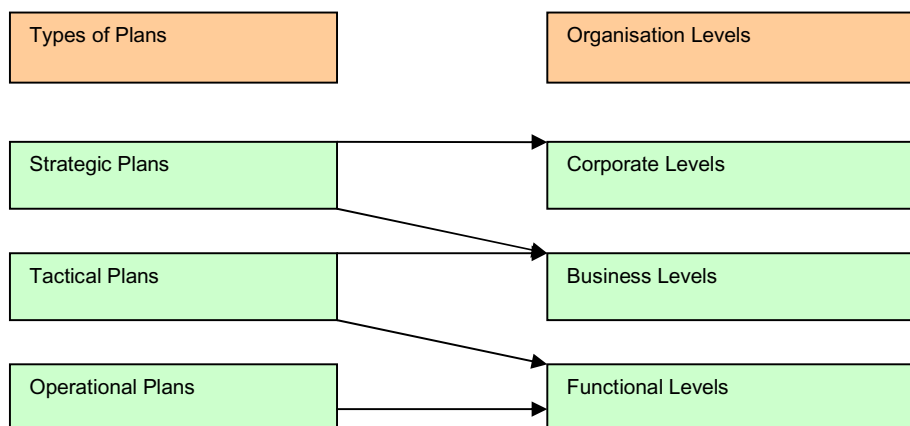


Figure 2.22: Interaction between levels and plans

Source: Black & Porter (2000:179)

iv) Action Plans

Black and Porter (2000:184-186) stated that action plans are essentially the marching orders, which every one uses to accomplish the formulated objectives. For the successful execution of action plans it is important that management should always compile it with a view to support the strategic plan. It is compiled in as much detail as practically feasible under the specific circumstances. The concept of action plans is not generally used in the South African mining industry. It generally utilises the concept of project plans which is discussed in the following section and in chapter 5.

v) Project planning

Project planning has to do with the planning of specific projects and is valid only for the duration of the planning and integration of the project into the normal operations. In the practical situation the interaction, coordination and integration of the different plans in the organisation are much more complicated (refer section.5.6.2.9). The interaction between the different levels and plans are important for adequate integration and coordination of the planning work.

vi) Standing plans

Standing plans are plans that are fixed until such time as it becomes necessary, for valid reasons, to adjust, replace or disband it. Each time when it becomes necessary to ensure that tasks should be performed in a specific manner a standing plan would be compiled.

1. Policies

Policies are mostly defined as standing plans that establish the boundaries within which specific types of decisions could be made. The degree of judgement would vary from level to level of the organisation. Policies could in some instances be broad and in some instances very narrow and limiting.

The importance of policies is that they:

- make decisionmaking easier and simpler with less time wasted,
- are established either by management, through appeals, as implications from decisions from executives or imposed from externally,
- provide permission to managers to delegate decisionmaking to subordinates,
- simplify decisionmaking, and
- assist to secure consistency and equity in decisionmaking.

2. Rules

Rules are made from time to time as the situation changes and warrant a change or total abolishment of a specific rule. It is extensively used in smaller units of organisations. All serve to assist in the achievement of the objectives of the organisation. They are specific statements of what must or must not be done in a given situation. It leaves no room for discretion. They may be viewed as the far end of a policy continuum showing degrees of discretion. Rules are normally instituted in order to ensure that all employees in a specific section or department comply with safety, production and specific standard instructions of that section or department. They are normally instituted by the supervisor of a section, department or technical experts and sanctioned by the head of the department.

3. Procedures

Procedures are guides to execution or action. They consist of detailed chronological sequences of steps performing or handling frequently occurring tasks or events. There are usually little room allowed for discretion. They pervade all levels of the organisation, cut across departmental lines and make routine certain types of recurring activities and allow activities to be delegated to the lowest organisational levels. They are extensively used in the training of technical personnel and operators.

4. Standards of performance

Hussey (1999:30) viewed standards of performance as a logical development from the concept of goals. The literature does not supply adequate detail on how to set performance standards, especially for the managerial levels. A standard of performance is normally seen as a numerical quantity that serves as a yardstick for measuring work in progress or completed. Confusion with respect to performance setting exists.

The setting of performance standards are irregular and are not determined consistently throughout the organisation on all the levels. The setting of performance standards would be dealt with in much more detail during the development of the theory of the comprehensive, practical and integrated management method in chapter 5.

vii) The planning time horizon

The planning time horizon differs from author to author and from organisation to organisation. It is dependant on many factors such as type of business, locality, competition, markets, products, culture and management preferences to name but a few. The long-term plan would be compiled for a much longer period than the operational plans. Many factors would determine the terms of plans.

Strategic planning	1-5 years +
Long-term planning	2 – 5 years
Intermediate-term planning	1 – 2 years
Short term planning	Today – 1 year

Table 2.3: Planning time horizon

In most companies the contractual periods require that long-term plans in terms of critical issues such as provision of resources, sustainable development, training and development of personnel, community involvement and environmental rehabilitation being compiled for the duration of the contractual period. In order to sharpen the focus, managers must compile various term plans as a basis for the efficient execution of the strategy and operations of the organisation (refer table 2.3). These plans must be updated whenever the situation requires it.

c) The planning process

The planning process, as one of the organisation's key management mechanisms, must be adapted to the specific situation in which it has to be applied – it must specify the future course of action and the resources required for that (Lock & Farrow, 1983:31). Despite wide differences some management theorists suggested that the planning process should follow the following logical steps.

- i) Establish objectives.
- ii) Identify available alternatives.
- iii) Evaluate alternatives.
- iv) Select the most appropriate alternatives.
- v) Formulate supporting plans.
- vi) Implement plans – organise,
 - influence, and
 - control.

None of the planning processes described in the available literature consisted of a complete logical sequence of steps that could be utilised as guidelines for the planning function in a comprehensive, practical and integrated management method. It would appear that a uniform logical integrated management planning process does not exist at present (refer section 1.5.2.3, 2.6.2.6 and table 2.4).

d) General hierarchy of objectives

A great variety of objectives had been and is still being suggested and proposed from time to time by authors on management literature. For the purpose of this thesis only definitions and descriptions of the most common known type of objectives would be discussed.

i) Vision

Hussey (1999:22) stated that a vision is top management's expression of what the organisation is striving to become and incorporates both the critical values of the firm and mission statements. An organisational vision is generally seen as a directive or something that should motivate employees toward a dedicated effort to realise the organisation's dream and provide clarity to those who follow it.

Vision statements must be stable enough to provide direction, however it must also evolve over time. Visions provide a stable and unifying target or image for organisational members, and they motivate organisational members to reach for a new order. A vision is semi-permanent, it is likely to outlast any strategic plan that may be prepared, but it would not last forever. Hellriegel et al (2005:181) stated that a vision expresses the fundamental aspirations and purposes of an organisation by appealing to the hearts and minds of its members. Campbell and Craig (2005:26) concluded that a vision could be interpreted as an inspirational view of the desired state of the organisation at a point in the future.

According to Lane et al (2006:180) a vision should be:

- understandable,
- accepted by the total local and global workforce,
- dealing with change, and
- giving a clear direction at all times.

The concept of a vision seemed to create a lot of confusion among organisations. Visions differ markedly from one company to another.

From a summary of various literature sources it was concluded that a vision could generally be viewed as an unusual discernment of foresight, something seen or an object of imagination. In short it could be seen as an objective to be realised and should be set in the same way as objectives. They would normally be vague statements of what the company wishes to achieve.

ii) Mission

The organisation's mission is a formal statement of the organisation's purpose, describes its basic philosophy and reason for its existence (McDaniel & Gitman, 2008:213). According to Austin and

Pinkleton (2000:16) a mission statement should identify the products the organisation intends to produce, the services it provides and the types of relationships it strives to cultivate. Hellriegel et al (2005:181) and Campbell and Craig (2005:26) stated that the mission of an organisation is the purpose for the existence of the organisation.

According to Campbell and Craig (2005:27) a mission has the following advantages:

- it clearly communicates the objectives and values of the organisation,
- it directs all employees to work in the same direction, and
- it influences the actions and attitudes of the employees in the organisation.

From a summary of various management literature sources it was concluded that a mission should generally be viewed as a specific task with which a person or a group is charged, a calling or vocation, a task assigned or performance of a service or carrying on of an activity by a body of persons. The mission is the strategy or method required to realise the vision or objective of the organisation.

The mission statement of the organisation should clearly spell out the business in which it operates and the method how it intends to achieve the stated results. It basically is the unqualified method that the organisation defined as initial directive to direct the planning process.

iii) Objectives

Objectives are defined as the end results that must be planned for. They define specific results to be achieved. Hussey (1999:24) defined an objective as specifically relating to the five-year plan and as the maximisation of profits. For the development of the theory for the comprehensive, practical and integrated management method in chapter 5 only the term objective would be used.

iv) Goals

Goals can only be set after the strategy had been developed. It is a very different type of objective from the vision and the profit objective and which is determined before the strategy is formulated.

Hussey (1999:28) defined goals as:

“quantified objectives that provide a unit of measurement.”

According to Hellriegel et al (2005:181) goals express the results that the organisation selected to achieve for its long-term survival. The term goal is very rarely used in the South African mining industry and would as a result for the purpose of developing this thesis be seen as synonymous to an objective and not further be investigated.

e) Assessment of risks

According to Shimell (2002:129) every job and task has an element of risk. Risks could be classified into macro, micro, environmental, social and ethical risks. Macro risks are external whilst micro risks are internal. In addition legislative and regulatory risks are also a reality that organisations should fully be aware of at all times (Shimell, 2002:151-153).

Risks relate to situations in which outcomes are uncertain or bear a definite measure of risk. Risk management is instituted because the management of it would enhance the realisation of objectives and reduce the probability of possible losses and catastrophes. Risk management is the single most important key to success. The changing nature of environmental standards and circumstances requires regular risk assessments (Smullen, 2000:8).

2.6.2.2 The organising function

According to McDaniel and Gitman (2008:215) organising is the process of coordinating and allocating a firm's resources in order to carry out its plans. Chandler (1969:19) stated that before the 1850s very few businesses in the United States of America required the services of a full-time administrator or a clearly defined administrative structure since enterprises were mostly one man concerns or very small.

The increase in the sizes of enterprises during the 1880s and 1890s, however, brought entirely new problems of industrial management and led to the building of the first sizable administrative structures in the American industry. The organisation of enterprises was the result of the expansion and development of new structures to optimise resources. It started when basic operations were assigned to different individuals. An organisation is also viewed as a subsystem of one or more larger systems.

The form that any particular organisation takes depends on the kinds of activities involved, and on the results planned. Normally the emerging organisation is a tailor-made instrument designed for a specific situation and purpose. As the organisation expands its operations the organisation would also change accordingly.

Donnelly et al (1998:188) stated that:

“The organizing function involves breaking down the overall task into individual jobs with specific duties and assigning authority to carry out those duties and aggregating the individual jobs into departments of specific bases and sizes. Thus we can describe the organizing function in terms of dividing tasks into jobs, delegating authority, determining the appropriate bases for departments, and deciding the appropriate size of each department.”

Black and Porter (2000:265-278) defined the organisational structure as the division of the organisation’s labour into specific units and the coordination of these units. Changes in the strategy would influence the structure. As organisations change their strategies their structures would adapt accordingly (Hodgetts & Kuratko, 1988:158). According to Daft (2000:8) organising is concerned with assigning tasks, grouping tasks into departments and allocating resources to departments. Bateman and Snell (2002:14) defined organising as the assembling and coordinating of human, financial, physical, and informational and other resources needed to realise objectives.

Hellriegel et al (2005:9) stated that organising:

“is the process of deciding where decisions will be made, who will perform what jobs and tasks, and who will report to whom in the company.”

Today mainly three basic types of organisational structures are recognised but in practice a whole variety could be found. The three most common types of organisational structures are the functional organisational structure (refer figure 2.23), the geographical divisional structure (refer figure 2.24) and the product divisional structure (refer figure 2.25).

In the functional structure, the activities of a specific function are grouped together from the top to the bottom of the organisation. For example all engineers are grouped together in the engineering department, all the production people in the production department and all the financial people in the financial department.

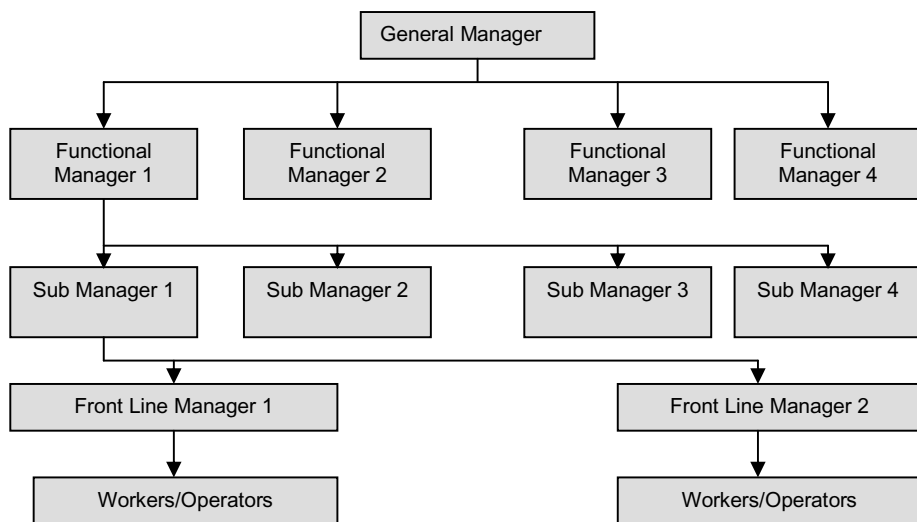


Figure 2.23: Example of a functional organisational structure

The advantages of the functional structure design are that it:

- facilitates rapid change in unstable environments,
- involves effective coordination across functions,
- is best in organisations with several products,
- leads to client satisfaction,
- decentralises decision making,
- consolidates all human knowledge and skills with respect to specific activities, and
- allows functional economy of scale.

The disadvantages of the functional structure design are that it:

- has a slow response time to changes in the environment,
- has inadequate coordination between departments,
- eliminates economies of scale in functional departments,
- leads to poor coordination across product lines,
- eliminates in-depth competence and technical specialisation, and
- makes integration and standardisation across product lines difficult.

When an organisation needs to expand and move some of its business into other areas and countries it would normally apply the geographic market segmentation principle (Rao, 2001:63). A geographical type of structure would then better suit such an arrangement.

Where the organisation produces different products in different areas, the products divisional type of structure would be more efficient. This type of structure has the following advantages and disadvantages.

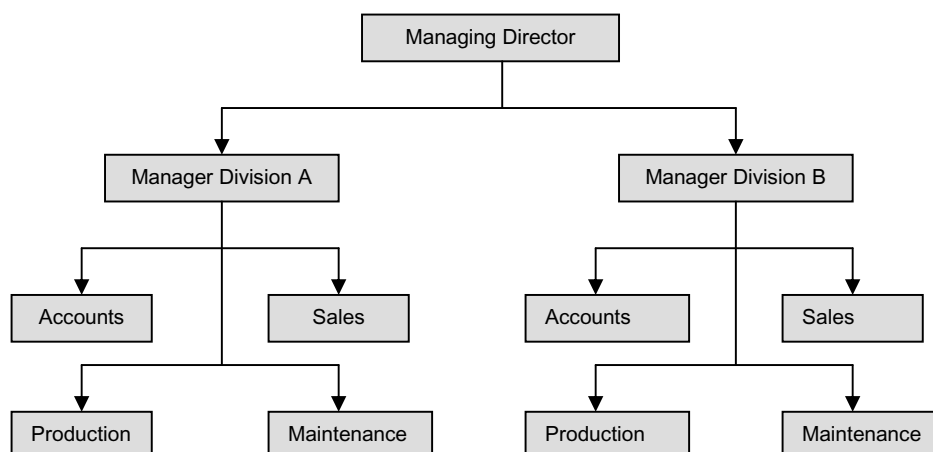


Figure 2.24: Example of a geographical divisional structure

The advantages are that:

- it provides high visibility of products,
- it is suited to fast change in an unstable environment,
- products could easily be adapted to the requirements of individual customers,
- coordination across functions is excellent, and
- it works best in organisations that supply multiple products or services.

The disadvantages are that:

- the organisation loses economy of scale,
- physical facilities have to be duplicated,
- some lines become separated from each other, and
- coordination across lines becomes difficult.

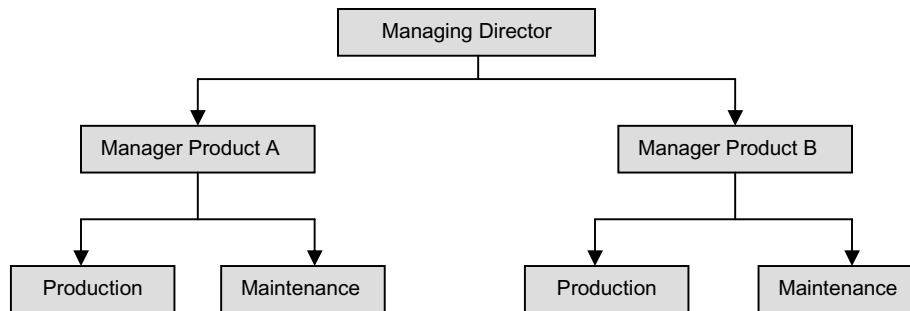


Figure 2.25: Example of a products divisional structure

Where the product and geography are emphasised at the same time the matrix organisation can be used. It works best when both technical expertise and product innovation and change are important for meeting organisational objectives. The matrix organisation is often the answer when organisations find that neither the functional, divisional, nor the geographical structures, combined with horizontal linkage mechanisms, would work. It is a strong form for horizontal linkage. The unique characteristic of the matrix is that both the product division and functional structures are implemented simultaneously.

The matrix organisational structure is deemed the best structure when:

- pressure exists to share scarce resources across product lines,
- environmental pressure exists for two or more critical outputs, and
- the environmental domain of the organisation is both complex and uncertain.

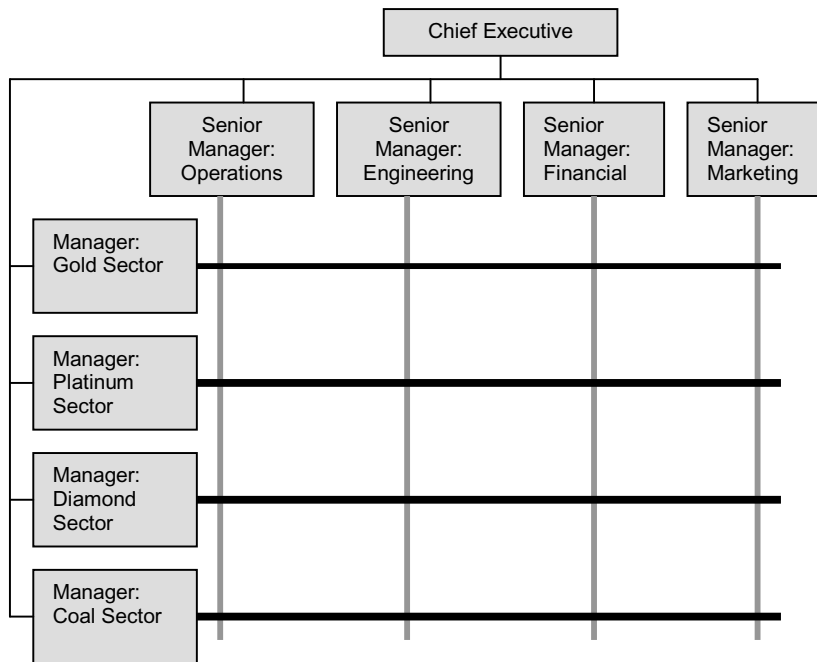


Figure 2.26: Example of a typical matrix organisational structure

This structure must be judiciously applied. It was developed for organisations where the functional, product divisional or functional geographical structures were not suitable.

The main characteristics of this type of structure are that:

- it facilitates discussion and adaptation to unexpected problems,
- it works best in organisations of moderate size with a few product lines, and
- too many product lines make it difficult to coordinate both directions at once.

The matrix is best suited when environmental change is high and when goals reflect a dual requirement, such as for both product and functional goals. The dual-authority structure facilitates coordination and communication, rapid environmental changes and facilitates an equal balance between product and functional supervisors. This organisation has specific strengths and weaknesses.

The main strengths are that it:

- achieves the coordination necessary to meet dual demands,
- is flexible in sharing human resources across products,
- is best suited to complex decisions and frequent changes in unstable environments,
- provides opportunity for both functional and product skills development, and
- functions best in medium-sized organisations with multiple products.

The main weaknesses are that it:

- causes participants to experience dual authority,
- requires that participants have good interpersonal skills,
- is time-consuming because it involves frequent meetings, and
- requires collegial rather than vertical-type relationships.

The behavioural management perspective forces managers of work groups to make their own decisions, which are conveyed upwards and downwards in the organisation. These managers serve a linking-pin role. This type of organisational structure is called the linking-pin structure (refer figure 2.27).

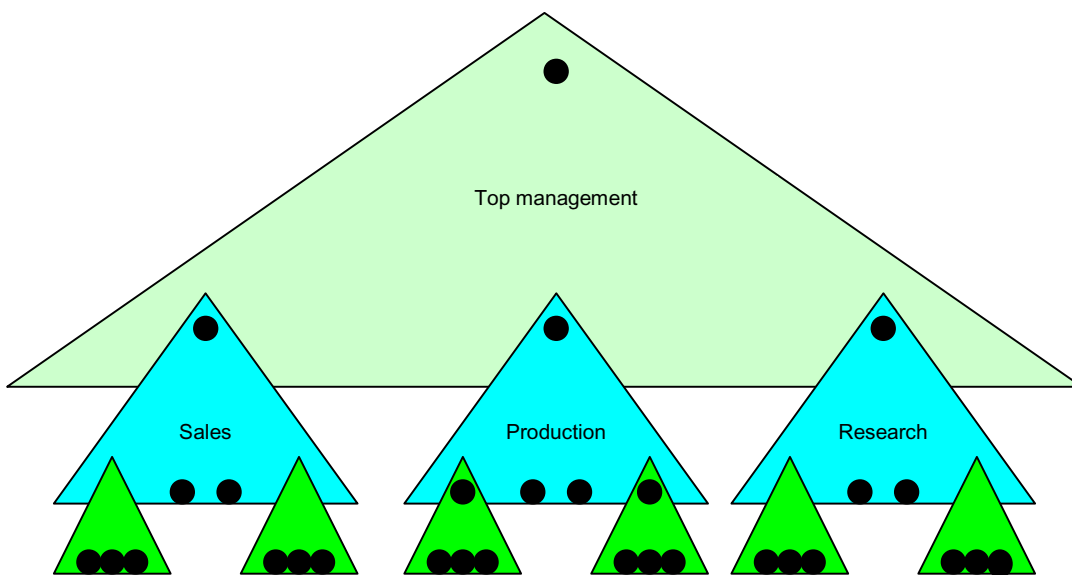


Figure 2.27: Example of a linking-pin organisation structure

The linking pin organisational structure is particularly functional with the participative management style and encourages group problem solving and cooperation among groups and individuals. The overlapping group structure enhances employee participation among functional groups and between hierarchical levels.

As the organisation increases in operations its control needs would as a result increase. The size of the organisation may have to increase or at least change. The span of control is also used as one of the criteria to design an organisational structure.

There are many proposals for organisational design. A company's organisational structure is dependant on the unique characteristics of its external environment, technology, and strategy. When looking at organisational design it is good to remember that in real life organisations consist of open and closed systems.

An open system must interact with the environment to survive; it both consumes resources and exports resources to the environment. It can not seal itself off. A closed system would not depend on its environment; it would be autonomous, enclosed, and sealed off from the outside world.

The literature did not anywhere indicate how an organisational structure could scientifically, systematically and logically be designed and developed (Davis & Weckler, 1996:19). Drucker (1968:352) argued that management as yet do not know how to organise human work. Robey (1991:44) argued that the environment, technology and the size of the organisation affect the design of an organisation. Pettigrew et al (2003:331-351) discussed various new forms of organisational design but did not propose a logical method to design and develop an organisational structure which would meet with the requirements of a comprehensive, practical and integrated management method.

Factors such as the type of product, area, and type of business, markets and localities would impact on the eventual structure. The three internal variables that have the greatest impact on the structures of organisations are the size of the organisation, the diversity of its operations and the characteristics of the personnel.

2.6.2.3 The leading function

Fayol (1949:97-104) regarded commanding and coordination as the two components of leading with commanding as the one that sets the organisation in motion and coordination the one that harmonises all the activities of the business. Other management theorists used staffing and directing as synonymous to taking people action. According to Allen (1973:50) this confusion had been solved in 1959 by the introduction and acceptance by the majority of management theorists and practitioners of the single term of leading (refer section 2.6.1). According to Daft (2000:9) leading is the influencing of employees to realise the objectives of the organisation. Bateman and Snell (2002:15) argued that leading involves the manager's efforts to stimulate high performance by employees.

Hellriegel et al (2005:10) argued that leading:

“involves getting others to perform the necessary tasks by motivating them to achieve the organisation's goals.”

According to McDaniel and Gitman (2008:217) leading is the process of guiding and motivating others toward the achievement of organizational goals. Some authors break management functions into activities. These activities, to a large extent, are subjected to time and cultural influences and technological developments.

The development of the electronic science for example has changed the mode and speed of communication unrecognisably. Means to handle communication and reporting requirements had increased tremendously and would have to adapt to changing management requirements and newly developed equipment. Management should always be aware of this phenomenon and be prepared to adapt timeously (Daft, 2001:14).

The leading function as a whole was and always would be affected by the development of mankind and would affect the modes of application of the different activities of it. A hundred years ago a manager would not have dreamed of asking or motivating a subordinate to perform a task, he simply would have instructed him to perform the task. The leading function involves the influencing or the inspiring of the subordinates, peers or supervisors to perform the necessary management work by motivating them to realise their individual objectives as part of the unified effort to most efficiently realise the main objective of the organisation.

Communication for instance is particularly vulnerable to manipulation by both the sender and the receiver. According to Higgins (Thompson et al, 1999:33) the tailoring and tuning of communication to suit the receiver nowadays developed into a fine art. In people development the development of the potential of the individual employee has become the ideal in the Western culture (Yingling, 2004:327). The contribution of the employees in the organisation has become more important than ever before (Nel et al, 2004:47).

According to De Villiers (1973:13-14) the leadership qualities required at the lower levels are along more general lines as defined in the Manual of the Royal Canadian Air Force:

“Leadership depends on simple human qualities. Above all, a leader requires the confidence of his men and this is to be gained only by commanding their respect for his personal character and professional knowledge; his sense of justice and common-sense; his energy, keenness and forethought; his indifference to personal danger and readiness to share the men’s hardships; his cheerfulness in the face of difficulties; the clearness and simplicity of his orders and his firm insistence on their execution; the pride he takes in his command.”

2.6.2.4 The controlling function

Controlling consists in verifying whether all the work occurs in conformity with the plan adopted, the instructions issued and the principles established. An effective control system safeguards against surprises, capable of developing into catastrophes (Fayol, 1949:107-109). Massie and Douglas (1977:394) stated that planning must precede control. McDaniel and Gitman (2008:222) viewed controlling as the process of assessing the organisation’s progress toward accomplishing its goals.

Hellriegel et al (2005:10) stated that:

“The process by which a person, group, or organisation consciously monitors performance and takes corrective action is **controlling**.”

The main aim of controlling is to ensure that the results of operations conform as closely as possible to the stated required results. The secondary aim is to provide timely information that may prompt the revision of objectives. These aims are achieved by setting standards, comparing predicted and actual results against these standards, and taking corrective action. Donnelly et al (1998:241) expressed the view that controlling includes all the work the manager undertakes to ensure that actual results do meet with those planned for. Black and Porter (2000:475-478) stated that standards should be established for every employee at every level of the organisation and be as specific as possible.

Nowhere in the literature it could be established how could an organisation set performance standards for each task, and employee on each level of the organisation. From the literature consulted it would appear that performance standards are normally set for the lower levels mainly by special trained technical staff. Standards provide data that is necessary for making rational decisions (Buffa, 1965:331). The setting of performance standards is and could only be correctly performed during and with the planning process.

2.6.2.5 Coordination

Fayol (1949:103) defined coordination as the work to be performed in order to ensure that the tasks are logically performed by the people to whom it is delegated and that no duplications or omissions occur. Hodgetts and Kuratko (1988:188) described coordination as the synchronization of the efforts of individuals and groups for the purpose of attaining organisational efficiency. It is achieved by establishing a hierarchy of objectives, assigning the corresponding authority, delegating the necessary accountability and committees or project groups. In general most employees do not fully understand what coordination means. It is very difficult if not impossible to establish and to maintain with existing management practices since the theory for a comprehensive, practical and integrated management method does not exist at present. Coordination is perhaps the most misunderstood aspect of the management discipline. There is great ignorance with respect to the true meaning of coordination, which could largely be ascribed to the many management practices being employed in the business environment.

a) Effective coordination.

The characteristics of a properly coordinated organisation are that:

- i) all departments operate in harmony with each other and all objectives are formulated as directives to ensure the optimal achievement of the planned results of the organisation,

- ii) results from different levels and employees support the general objective of the organisation, and
- iii) all divisions are informed as to their contribution to the company's results.

b) Ineffective coordination

Signs of ineffective coordination are that:

- i) departments are ignorant of what each other is supposed to deliver, and
- ii) watertight compartments exist between the divisions of the different departments.

2.6.2.6 Summary of the activities of the management functions

The functions of management are largely accepted as planning, organising, leading and controlling. The most recent classification of management, management functions and management activities as proposed and discussed by 12 prominent management authors are summarised and depicted in table 2.4. There appears to be major differences between these authors. The author of this thesis is of the opinion that because of the lack of a universal management logic it is impossible to develop a comprehensive, practical and integrated approach to management.

Reference	FUNCTIONS			
	Planning	Organising	Leading	Controlling
Allen (1973:65) Allen (1973:50) Allen (1973:50) Allen (1973:50)	<ul style="list-style-type: none"> • Forecasting • Developing objectives • Programming • Scheduling • Budgeting • Developing procedures • Developing policies 	<ul style="list-style-type: none"> • Developing organisation structure • Delegating responsibility and authority • Creating accountability • Developing relationships 	<ul style="list-style-type: none"> • Decision making • Communication • Motivation • Selecting people, and • Developing people 	<ul style="list-style-type: none"> • Developing performance standards • Measuring performance • Evaluating performance • Correcting performance
Massie and Douglas (1977:294) Massie and Douglas (1977:134-136) Massie and Douglas (1977:55-368) Massie and Douglas (1977:394-396)	<ul style="list-style-type: none"> • Identify the goals • Search for opportunities • Translate opportunities into selected courses of action • Set specific targets • Continual review and revision 	<ul style="list-style-type: none"> • Developing the organisational structure • Delegating responsibility and authority • Creating accountability • Developing relationships 	<ul style="list-style-type: none"> • Motivation • Decision making • Staffing • Training • Counselling • Handling grievances • Communication 	<ul style="list-style-type: none"> • Setting a target • Measuring performance • Making comparisons • Taking corrective action
Thierauf, et al (1977:170-275) Thierauf, et al (1977:328) Thierauf, et al (1977:488-	<ul style="list-style-type: none"> • Set objectives • Collect and forecast information • Make assumptions • Determine and evaluate alternative plans • Select the plan and develop sub plans 	<ul style="list-style-type: none"> • Develop the organisational structure • Assign responsibility and authority • Create accountability 	<ul style="list-style-type: none"> • Leadership • Motivation • Communication, and • Participation 	<ul style="list-style-type: none"> • Establishment of performance standards, • Measure performance • Take corrective action



622) Thierauf, et al (1977:634)				
Hodgetts (1981:52) Hodgetts (1981:113) Hodgetts (1981:72-227) Hodgetts (1981:259)	<ul style="list-style-type: none"> Analyse the external environment Analyse the internal environment Determine competitive advantages Identify a target market Purchase and allocate resources necessary to implement the plan Control operations 	<ul style="list-style-type: none"> Job descriptions Departmentalisation or grouping employees into posts Span of control or the number of people reporting to one supervisor Authority/responsibility relationships, authority the right to command 	<ul style="list-style-type: none"> Decision making Recruiting Selection Training and development Communication Motivation 	<ul style="list-style-type: none"> Formulate the plan Establish standards Compare results against standards Correct deviations
Bedeian and Glueck (1983:175) Bedeian and Glueck (1983:300-452) Bedeian and Glueck (1983:134-576) Bedeian and Glueck (1983:629)	<p>Phase 1</p> <ul style="list-style-type: none"> Establish objectives <p>Phase 2</p> <ul style="list-style-type: none"> Establish premises Forecast changes <p>Phase 3</p> <ul style="list-style-type: none"> Identify alternative courses of action Evaluate alternative courses of action Select a course of action <p>Phase 4</p> <ul style="list-style-type: none"> Implement plans <p>Phase 5</p> <ul style="list-style-type: none"> Evaluate plans <p>Controlling</p>	<ul style="list-style-type: none"> Organising jobs Span of control Organising and coordinating work units Delegate authority and responsibility Organising the total enterprise Organisational structure, change and development 	<ul style="list-style-type: none"> Motivation Decision making Recruiting Selecting Performance appraisal Training and development Communication 	<ul style="list-style-type: none"> Establish objectives Identifying performance predictors Establishing performance standards Comparing and evaluating performance against established standards Acting to reinforce success and deficiencies
Hodgetts and Kuratko (1988:113-118) Hodgetts and Kuratko (1988:172-217) Hodgetts and Kuratko (1988:226-283) Hodgetts and Kuratko (1988:376)	<ul style="list-style-type: none"> Forecasting Establishment of objectives Determination and choice of alternative courses of action Formulation of derivative plans Budgeting the plan 	<ul style="list-style-type: none"> Job analysis Job description Span of control Delegation of authority and responsibility Coordination Development of the organisational structure 	<ul style="list-style-type: none"> Recruit personnel Select Training Management development Communication Motivation Decision making 	<ul style="list-style-type: none"> Establish performance standards Measure performance Evaluate performance Correct deviations from performance
DuBrin (1994:74) DuBrin (1994:166-224) DuBrin (1994:97-355) DuBrin (1994:368)	<ul style="list-style-type: none"> Define the present situation Establish goals and objectives Forecast aids and barriers to goals and objectives Develop action plans to reach goals and objectives Develop budgets Implement the plans, and Control the plans Evaluate the feed back 	<ul style="list-style-type: none"> Job design Job specialisation Organisational structure Delegation of authority and responsibility Span of control 	<ul style="list-style-type: none"> Decision making Motivating Communication Staffing Recruitment Selection and placement Training and development 	<ul style="list-style-type: none"> Performance standards are set Performance is measured Performance is compared to standards Corrective action is taken if needed



<p>Kroon and Van Zyl (Kroon, 1995:138-140) De Bruyn (Kroon, 1995:234) Du Toit et al (Kroon, 1995:351-480) Crous (Kroon, 1995:485-488)</p>	<ul style="list-style-type: none"> Formulate the objectives Gather the information Evaluate the information Develop alternatives Develop the final plan Program, schedule activities and budget Execute and evaluate the plan 	<ul style="list-style-type: none"> Determine the objectives of the organisation Determine the most important organisational activities Divide and group the activities Design the organisational structure 	<ul style="list-style-type: none"> Motivation Leadership Communication Development, conflict and creativity Labour relations 	<ul style="list-style-type: none"> Develop standards Measure performance Evaluate performance Corrective action
<p>Donnelly et al (1998:141) Donnelly et al (1998:188) Donnelly et al (1998:372-416) Donnelly et al (1998:241)</p>	<ul style="list-style-type: none"> Forecasts Budgets Objectives Action Resources Implementation Performance outcomes 	<ul style="list-style-type: none"> Dividing tasks into jobs Delegating authority Determine the appropriate bases of departments Deciding the appropriate size of each department 	<ul style="list-style-type: none"> Communication Negotiation Decision making Staffing Motivation Recruitment Selection and placement Training and development 	<ul style="list-style-type: none"> Establishment of standards Measure performance against standards Taking corrective measures
<p>Black and Porter (2000:179) Black and Porter (2000:265) Black and Porter (2000:365-467) Black and Porter (2000:473)</p>	<ul style="list-style-type: none"> Analysis of the environment consisting of forecasts, benchmarks, contingencies, competitor analysis and scenarios Setting of objectives Determining of requirements Assessing of resources Developing action plans Implementing of plans Monitoring outcomes 	<ul style="list-style-type: none"> Organisational structure as the sum of ways an organisation divides its labour into distinct tasks and then coordinates them Organisational design is the process of assessing the organisation's strategic objectives and environmental demands Organisational charts illustrate relationships among units and lines of authority 	<ul style="list-style-type: none"> Decision making Motivation Communication Negotiation 	<ul style="list-style-type: none"> Establish standards Measure performance Compare performance against standards Evaluate results and take action
<p>Hellriegel et al (2005:193) Hellriegel et al (2005:298-303) Hellriegel et al (2005:206-382) Hellriegel et al (2005:10) Hellriegel et al (2005:193) Hellriegel et al (2005:298-303) Hellriegel et al (2005:206-382)</p>	<ul style="list-style-type: none"> Develop the vision, mission and goals Diagnose the opportunities and threats Diagnose the strengths and weaknesses Develop the most feasible strategies Prepare the necessary tactical plans Control and diagnose the results Continue with planning processes 	<ul style="list-style-type: none"> Designing of the organisational structure Delegation of the right and authority to make decisions in performing the assigned duties or responsibilities in order to accept the accountability for delivering the results required Development of relationships between the different units and departments which must be integrated and coordinated 	<ul style="list-style-type: none"> Communication Decision making Training and development Motivation 	<ul style="list-style-type: none"> Setting of performance standards Measuring of performance Correcting of significant deviations Adjusting of standards when necessary



Hellriegel et al (2005:10)				
McDaniel & Gitman (2008: 211)	<ul style="list-style-type: none"> • Set objectives and state mission • Examine alternatives • Determine needed resources • Create strategies to reach objectives 	<ul style="list-style-type: none"> • Design jobs and specify tasks • Create organizational structure • Staff positions • Coordinate work activities • Set policies and procedures • Allocate resources 	<ul style="list-style-type: none"> • Lead and motivate employees to accomplish organizational goals • Communicate with employees • Resolve conflicts • Manage change 	<ul style="list-style-type: none"> • Measure performance • Compare performance to standards • Take necessary action to improve performance

Table 2.4: Summary of the management functions and activities

2.6.2.7 The classification of management work.

It would appear from table 2.4 that the activities of the planning, organising and leading functions are illogical and vary to the extent that some of them are debatable. The summary of functions and activities of the existing management practices proved that most of the elements of management work were in some or other way mentioned but it was not in a logical sequence. Some elements were missing and there was no noticeable logic. In table 2.5 it is attempted to classify management from the different views summarised in table 2.4. It is felt that insufficient logic exists and that the classification would not assist employees in understanding and applying the management principles in the practical situation. At this stage it is still perceived that the four management functions could be used to develop the logic for a comprehensive, practical and integrated management theory.

FUNCTIONS	ACTIVITIES
Planning	<ul style="list-style-type: none"> - develop the vision, mission and goals - forecast - analyse the external and internal environment - diagnose the opportunities and threats - diagnose the strengths and weaknesses - search for opportunities - set and develop specific objectives - develop the most feasible strategies - prepare the strategic plan - prepare the necessary tactical plans - program activities - schedule activities - compile the budget - develop procedures and policies - monitor outcomes
Organising	<ul style="list-style-type: none"> - analyse the work - perform job description - organise jobs - determine the span of control - delegate authority and responsibility - create accountability - organise and coordinate work units - develop the organisational structure - coordinate the activities - develop relationships
Leading	<ul style="list-style-type: none"> - make decisions

	<ul style="list-style-type: none"> - motivate and communicate - recruit, select and place people - develop organisational behaviour - develop teamwork - staff, train and develop people - develop labour relations - appraise performance - counsel and handle conflict - participate - handle grievances - negotiate - manage change
Controlling	<ul style="list-style-type: none"> - establish performance standards - measure performance - evaluate performance - correct deviations

Table 2.5: Summary of the activities of management

The classification of management is important since it should form the basis for analysing management work. The analysis of the management work had been attempted several times in the past. All the efforts failed to produce a result that could be applied successfully. In chapter 5 the analysis of management work would be performed by the application of the newly developed comprehensive, practical and integrated management theory.

2.6.2.8 The Allen classification

One notable effort to transform management work into a practical workable management method was proposed by Allen. In the process of developing practical applicable management development programs he experienced enormous difficulties to transform management theory into practical workable programs. In 1973 he published his book 'Professional Management: New Concepts and Proven Practices'. In this book he proposed, what he termed, a logic theme or principles of reasoning for the classification of management work (Allen, 1973:47).

a) Basis of the theme.

The theme was based on the following four steps:

- i) determine the objective and the results to be realised through the work,
- ii) identify the largest categories of work that must be performed,
- iii) define each category in the clearest and simplest terms possible, and
- iv) select a suitable semantic label for each category.

b) Standards for developing the logic

To develop this logic, he used the following two standards:

- i) the work in each category must serve to realise a common objective, and
- ii) work assigned to a specific category must as far as is practically possible be related to the other kinds of work in that category.

c) Hierarchy for management work.

Allen (1973:47) developed a hierarchy for management work and proposed the following set of categories:

- i) Class,
- ii) Order,
- iii) Function,
- iv) Activity,
- v) Segment, and
- vi) Element.

He defined work as the application of energy to realise objectives. Work is the application of energy to change the nature or condition of work in order to realise the desired objectives.

d) The classification of management work.

According to Allen (1973:51-53) the four management functions of planning, organising, leading and controlling constitute the functions of management work where the:

- i) planning function is the predetermining of a course of action,
- ii) organising function is the arranging and relating of work,
- iii) leading function entails influencing people to act to accomplish objectives, and
- iv) controlling function is the assessing and regulating of results.

The classification of management work by Allen does not lend itself practically useful. It is difficult if not at all impossible to develop management work in the practical situation up to the smallest task using his logic. He endeavoured to subdivide the activities into segments. His logic, however, enabled him to establish only three segments for the developing objectives and two for the developing of organisational structure activities (refer table 2.6). Thereafter it would appear that he discontinued with any further attempts to complete the exercise for the rest of the management work, possibly because his logic could not match the requirements for comprehensive management.

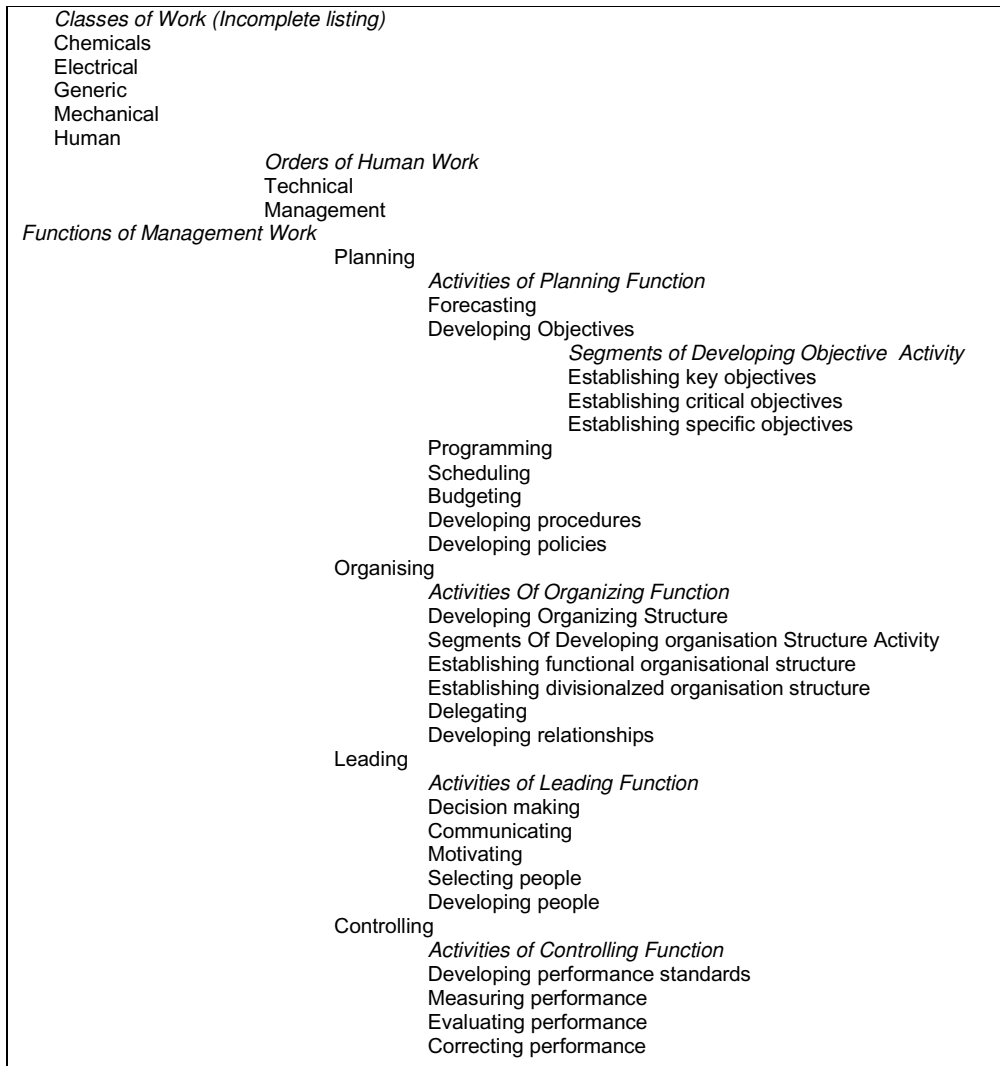


Table 2.6: Allen’s classification of management Allen, Fig 4.3, (1973:50)
A taxonomy of management work. This shows five of the categories for classifying management work: classes, orders, functions, activities, segments.

Allen (1973:48). differentiated between human and mechanical work and defined human work as the application of a person’s mental and physical effort in order to realise objectives with the view to achieve results directly through their own efforts and indirectly through the efforts of others through the application of mental and physical effort. He defined mechanical work, as the direct application of physical and mental effort to resources to secure results by the person doing the work.

e) Technical work

An example of Allen’s classification of technical work is depicted in figure 2.28 below. Since technical work does not follow his standardised format, he suggested a separate classification for each enterprise.

The classification of technical functions could vary within different organisations and departments and sections of the same organisation. The variation in technical work categories, as proposed by Allen, is haphazard and illogical.

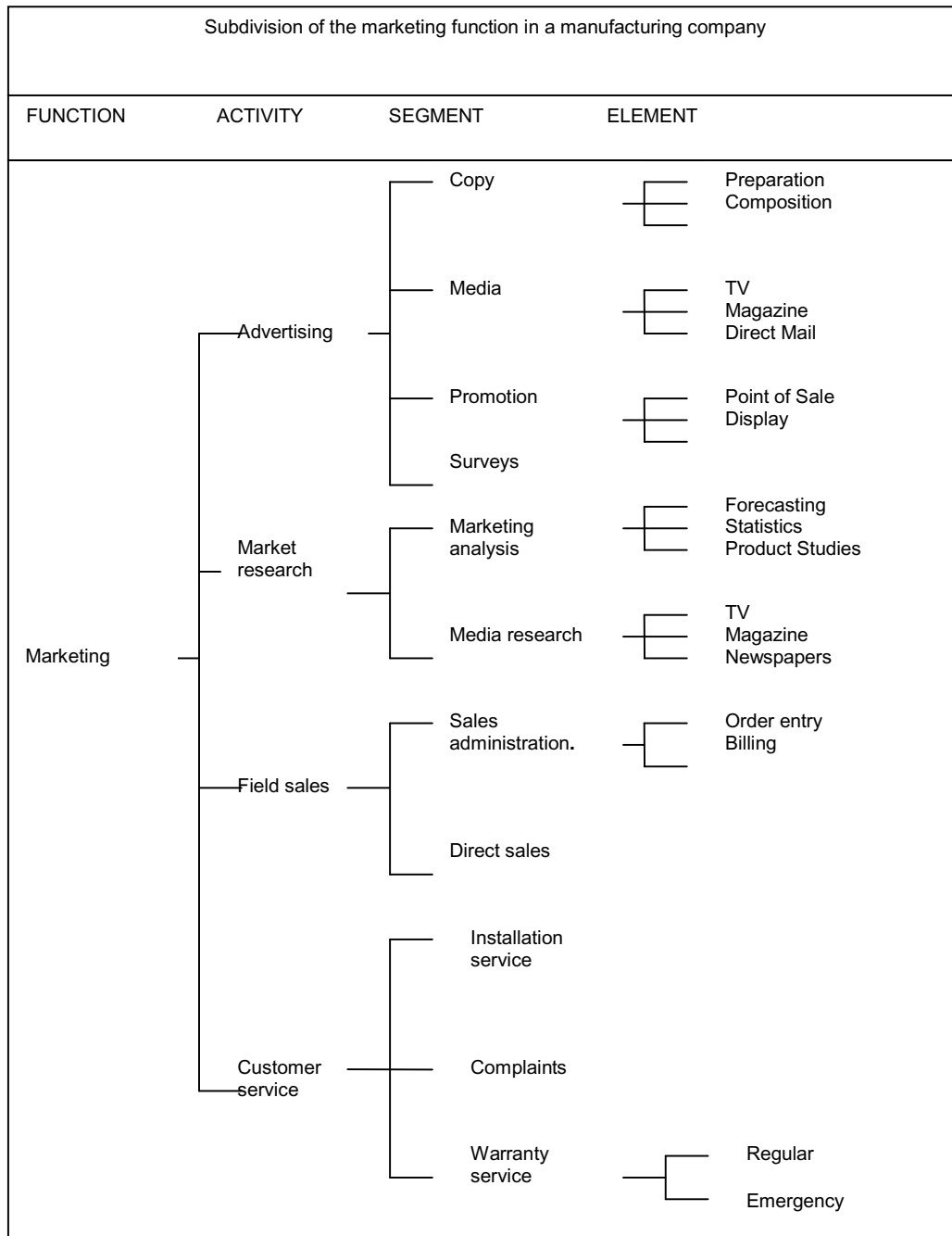


Figure 2.28: Classification of technical work

Source: Allen, 1973:56: Figure 4.4 Classification of technical work. This chart shows the subdivision of the marketing function in a manufacturing company (1973:560).

The development of the technical work by Allen is impractical since it:

- i) is not based on a specific logic,
- ii) is easy to make omissions during the development stage,
- iii) has no link or connection to the theoretical management work, and
- iv) would be extremely difficult for the employees to master and computerise.

It is obvious from figure 2.28 that his proposed classification of technical work is in no way practically applicable. It would not meet with the requirements of the comprehensive, practical and integrated management method. The main deficiency with Allen's management logic is that, as he said it should be objective orientated. It should serve to satisfy a main objective. The correct way would have been to commence with the results required because results required would create the needs or objectives and the objectives would dictate the work or best method required. The work would produce the results (refer figure 5.10).

2.7 OVERVIEW: PAST, PRESENT AND FUTURE PROSPECTS

Today the management of many organisations utilises combinations of a variety of management practices. Many of these play in varying degrees a role in present management practices and may assist to improve managerial efficiency in some respects (Griffin, 1987:64). According to Bateman and Snell (2002:32-39) a variety of perspectives had been developed in recent years, many of which had been based on rigorous researches and related analyses. Many thousands of books on the subject of management were published in the past; some claiming to have produced the ideal comprehensive management approach. Lock and Farrow (1983:10-13) argued that it is not possible to summarise the essentials of the various approaches and general body of management knowledge into a single representative set of principles. The available management approaches are incomplete and discuss basically single topics. The real thing, that the management of today needs and was waiting for so long, the grand all-inclusive management approach or method, has as yet not materialised.

There would, however, always be management authors who would come forward from time to time with so-called 'best sellers'. Covey (1989:53) for example identified seven habits for excellence, which according to him would solve the manager's problems. In 1994 he was still battling to prove this concept's functionality by claiming that the struggle to put first things first could be characterised between employees' commitments, appointments, schedules, goals, activities and management's vision, values, principles, mission, conscience and direction (Covey et al, 1994:19). Later he stated that employees should be taught to teach themselves which in actual fact is the well-known adage by Lao Tzu, "give a man a fish and you feed him for a day; teach him how to fish and you feed him for a lifetime" (Covey, 1999:208-209). More recently he came up with yet another effort, the 8th habit that stated that the employee should find his voice and inspire others to find theirs (Covey, 2004:270).

Peters and Waterman were two of the other management authors classified under the bestseller category with their book 'In Search of Excellence' (1982:13). Blanchard and Johnson (1983:1-62) 'simplified' the ideal management practice into the application of one-minute goals, one-minute praises and one-minute reprimands. More recently Templar (2005:3) stated in his book '*The Rules of Management: A definite code for managerial success*' in which he listed 100 rules for managerial success that:

"Of course we as managers, have to work with real flesh-and-blood people and we have to know what motivates them, how they think and feel, why they come to work, why they give of their best (or their worst), what they are afraid of, what they hope and dream for. We shall have to encourage them, coach them, give them the resources to do their job and manages themselves, oversee their processes and set their strategy for them. We will worry about them, look out for them, be on their side and support them. But we won't manage them. We will let them manage themselves and we shall concentrate on our real role as a manager."

Almost each and every management theorist, to date has in some respects a different perception of the management discipline and the implementation of it in the practical situation. Most still supports the process management approach. This approach, is, however, in no way a comprehensive management method (refer section 2.5.1.1 (d)). It does not provide a logical method to apply management in the practical situation.

All approaches are in some way contributing to the understanding, utilising and practising of management. They jointly made and are still making an indispensable contribution to the improvement of production efficiency, human relations and the general prosperity of mankind. Unfortunately even jointly they do not present the management fraternity of today with a comprehensive, practical and integrated management method applicable on all the levels of the organisation. Management as a subject still receives its fare share of attention. The process of management is still not fully understood and explained in the literature.

2.8 CONCLUSION

The existing relevant management literature suggests that some management theorists differed to some extent on the theory of management principles (refer section 2.6.1). The general consensus, however, was that the successful manager must perform the four management functions of planning, organising, leading and controlling of the process management approach (refer section 2.5.1.1 (d) and 2.6.2). Existing management practices should rather be seen as a result or mixture of many past management approaches (refer section 2.5.1, 2.5.2 and 2.5.3 and figure 2.11, 2.13, 2.14 and 2.16). Not one of them is based on a specific management logic. At this stage the perception is that a comprehensive, practical and integrated management method consisting of the appropriate theory and procedure does not exist.

It is perceived that the mining industry mainly utilises the administrative management approach supplemented by management programs that become available from time to time (refer section 4.2.2.1 (a) and 4.2.3.1). It is also continuously investigating new management practices and where applicable applies supplementary management theories from abroad and locally as presented by the literature, tertiary and other institutions. The existing practices by the mining industry to introduce from time to time new programs as they become available is causing a lot of confusion and resistance from the employees. In almost all cases the benefits of the introduced programs are not followed up and evaluated. The result is that great amounts of money are paid to institutions with little or no real advantages to the mining industry

Evaluated against the perceived requirements of a comprehensive, practical and integrated management method as set out in section 2.2.1 the deficiencies of the existing management literature and practices appeared to be that:

- 2.8.1 it is not possible to integrate and coordinate the four functions of the administrative management approach in practice by all employees on all the levels of the organisation with existing management practices,
- 2.8.2 a comprehensive, practical and integrated management method does not exist (refer section 1.5.1),
- 2.8.3 a comprehensive, practical and integrated management theory and procedure to implement it do not exist either (refer section 1.5.2.1),
- 2.8.4 existing management theories individually or combined appear to be inadequate to develop the theory for a comprehensive, practical and integrated management method (refer section 1.5.2.2),
- 2.8.5 existing planning processes are totally inadequate to enable management to plan comprehensively on an integrated basis on all the levels of the organisation (refer section 1.5.2.3),
- 2.8.6 it would appear that some components of the existing management theories and practices could totally or to some extent or in combinations be modified and utilised to develop the theory for a comprehensive, practical and integrated management method (refer section 1.5.2.6 and table 2.2),
- 2.8.7 the additional management theory required to develop a comprehensive, practical and integrated management method could be developed (refer section 1.5.2.7).
- 2.8.8 it would appear that existing practices are inadequate to enable managers and employees to comprehensively (refer section 2.2.1):
 - 2.8.8.1 identify deviations from planned performances,
 - 2.8.8.2 determine and forecast the most probable results,
 - 2.8.8.3 state the most probable achievable results,
 - 2.8.8.4 efficiently formulate the objectives,
 - 2.8.8.5 develop alternative methods to realise the formulated objectives,
 - 2.8.8.6 develop the tasks required for each alternative method,
 - 2.8.8.7 develop performance standards that each task should comply with,

- 2.8.8.8 analyze the tasks and establish the resources required for each task of every alternative method,
 - 2.8.8.9 determine and assess all risks,
 - 2.8.8.10 schedule the tasks and resources required for each alternative method,
 - 2.8.8.11 budget for each alternative method and select the best method,
 - 2.8.8.12 develop the necessary policies and procedures,
 - 2.8.8.13 determine the job specifications and the necessary posts,
 - 2.8.8.14 develop the organisational structure delegate accountability to each post,
 - 2.8.8.15 determine the communication lines and determine the lines of authority,
 - 2.8.8.16 create the necessary relationships among posts and levels,
 - 2.8.8.17 determine supervisory accountabilities,
 - 2.8.8.18 affect proper coordination,
 - 2.8.8.19 optimise, computerise and compile the written plan,
 - 2.8.8.20 obtain the most competent people,
 - 2.8.8.22 develop training and management development programs and schedules, and
 - 2.8.8.23 develop and maintain a logical and practical planning framework.
- 2.8.9 employees can not efficiently affect the required people actions, and
- 2.8.10 the introduction of a comprehensive, practical and integrated management method would enable all the managers and employees on all the levels of the organisation and under all circumstances to:
- 2.8.9.1 make more reasoned decisions,
 - 2.8.9.2 communicate and motivate people optimally,
 - 2.8.9.3 develop the most functional recruiting specifications,
 - 2.8.9.4 successfully recruit people with the best potential,
 - 2.8.9.5 appoint the most competent people,
 - 2.8.9.6 justly remunerate people,
 - 2.8.9.7 optimise the training and development of people,
 - 2.8.9.8 measure the actual planned performance,
 - 2.8.9.9 efficiently evaluate performance, and
 - 2.8.9.10 timeously correct deviations.

Existing management theories are inadequate to develop a comprehensive, practical and integrated management method that would enable all employees in the organisation to manage efficiently for the achievement of the results required from each of them. As a result the managerial competencies of management are unacceptably low.

The classification of the existing management theory is not based on a management logic that would allow the complete development of management work. The probability that the organising function, as it is known and applied today, should actually be one of the outcomes of the planning function is not

realised, understood and admitted. The leading and controlling functions are not really seen as time related functions or specific skill categories. In the next chapter an empirical research methodology would be designed in order to gather the necessary data for the assessment and evaluation of the management practices and managerial knowledge and competency of management in the South African mining industry.