Why Study Engineering Management?

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The better you can work with people, the more successful you will be in both your personal and your professional lives.

- Employers want to hire employees who can participate in managing the firm.
- Even non-managers (Individual Contributors) are being trained to perform management functions.

The study of management builds the skills needed in today's workplace to succeed in:

- Becoming a partner in managing your organization through participative management
- Working in a team and sharing in decision making and other management tasks.

The study of management also applies directly to your personal life in helping you to:

- Communicate with and interact with people every day.
- Make personal plans and decisions, set goals, prioritize what you will do, and get others to do things for you.

Society Needs Leaders and Team Players

- Be Successful in our Community, Religious, Social, Professional, Recreational and Other Organizations.
- Become Leaders for a "Just and Humane World"

Who is a Manager?

- The individual responsible for achieving organizational objectives through efficient and effective utilization of resources.

The Manager's Resources

- Human, financial, physical, informational and knowledge

Performance

- Means of evaluating how effectively and efficiently managers use resources to achieve objectives.
- Today often means "How" as well as "What"

Management Qualities

- Integrity, industriousness, and the ability to get along with people

Management Skills

- Technical
- Human and communication (Teaming)
- Conceptual and decision-making skills
  - "Systems Thinking" & "Critical Thinking"

Management and Organizations

1.0   Management and Organizations

In today's tough and uncertain economy, a company needs strong managers to lead its staff toward accomplishing business goals. But managers are more than just leaders — they're problem solvers, cheerleaders, and planners as well. And managers don't come in one-size-fits-all shapes or forms. Managers fulfill many roles and have many different responsibilities at each level of management within an organization.

So, what is Management?

We typically think of managers as bosses – as people who supervise others by the use of force or because of organizational structure, rules, or procedure. But our perspective now is on what managers *should* be, which in the right situations make them also leaders. Henry Mintzberg explains on what management *should* be about:

  "Management is not about controlling people but about facilitating human collaboration."

Kotter says management too often is about coping with complexity:

- Focuses on details, order and consistency.
- Focuses on short-term results.
- Focuses on eliminating risks.
- Focuses on efficiency and bottom-line values.
- Focuses on things and stuff, not people.

While Peter Drucker outlines that Management is,

  "The skill of getting results with the cooperation of other people."

Organizations abound in today's society. Groups of individuals constantly join forces to accomplish common goals. Sometimes the goals of these organizations are for profit, such as franchise restaurant chains or clothing retailers. Other times, the goals are more altruistic, such as nonprofit churches or public schools. But no matter what their aims, all these organizations share two things in common: They're made up of people, and certain individuals are in charge of these people.

Managers appear in every organization — at least in organizations that want to succeed. These individuals have the sometimes-unenviable task of making decisions, solving difficult problems, setting goals, planning strategies, and rallying individuals. And those are just a few of their responsibilities! To be exact, managers administer and coordinate resources effectively and efficiently to achieve the goals of an organization. In essence, managers get the job done through other people.

The Intricacies of Management

No matter what type of organization they work in, managers are generally responsible for a group of individuals' performance. As leaders, managers must encourage this group to reach common business goals, such as bringing a new product to market in a timely fashion. To accomplish these goals, managers not only use their human resources, but they also take advantage of various material resources as well, such as technology. Think of a team, for example. A manager may be in charge of a certain department whose task it is to develop a new product. The manager needs to coordinate the efforts of his department's team members, as well as give them the material tools they need to accomplish the job well. If the team fails, ultimately it is the manager who shoulders the responsibility.

Levels of Management

Two leaders may serve as managers within the same company but have very different titles and purposes. Large organizations, in particular, may break down management into different levels because so many more people need to be managed. Typical management levels fall into the following categories:
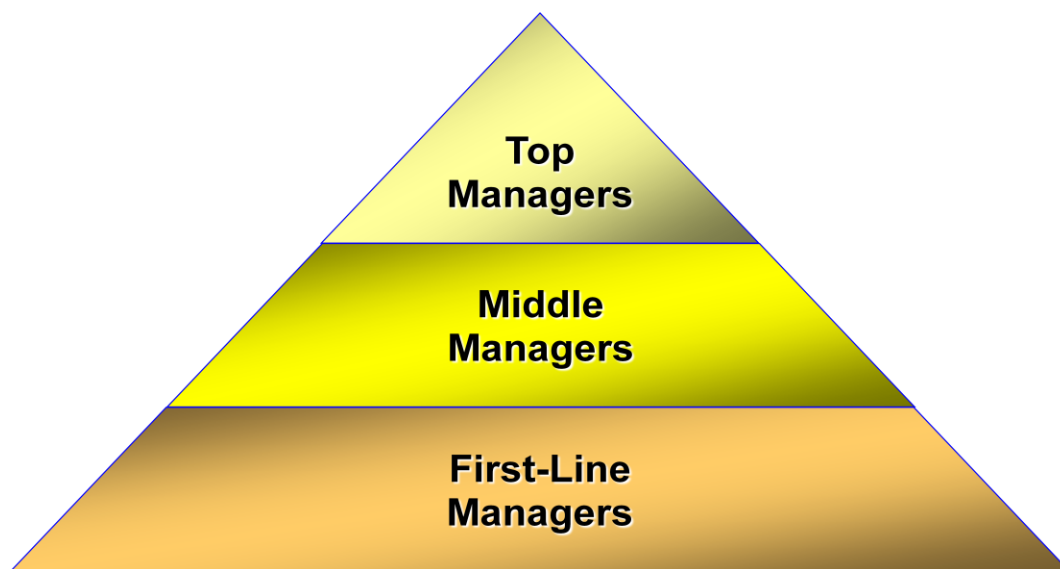
- **Top level:** Managers at this level ensure that major performance objectives are established and accomplished. Common job titles for top managers include chief executive officer (CEO), chief operating officer (COO), president, and vice president. These senior managers are considered executives, responsible for the performance of an organization as a whole or for one of its significant parts. When you think of a top-level manager, think of someone like Dave Thomas of the fast-food franchise Wendy's. Although John T. Schuessler was elected CEO in 2000, Dave Thomas was the founder

and served as the chairman of the board. He was the well-known spokesperson for the chain, until his death in 2002.

- **Middle level:** Middle managers report to top managers and are in charge of relatively large departments or divisions consisting of several smaller units. Examples of middle managers include clinic directors in hospitals; deans in universities; and division managers, plant managers, and branch sales managers in businesses. Middle managers develop and implement action plans consistent with company objectives, such as increasing market presence.

- **Low level:** The initial management job that most people attain is typically a **first-line management** position, such as a team leader or supervisor — a person in charge of smaller work units composed of hands-on workers. Job titles for these first-line managers vary greatly, but include such designations as department head, group leader, and unit leader. First-line managers ensure that their work teams or units meet performance objectives, such as producing a set number of items at a given quality, that are consistent with the plans of middle and top management.

Functions of Managers

2.0   Functions of Managers

Managers just don't go out and haphazardly perform their responsibilities. Good managers discover how to master five basic functions: planning, organizing, staffing, leading, and controlling.

- **Planning:** This step involves mapping out exactly how to achieve a particular goal. Say, for example, that the organization's goal is to improve company sales. The manager first needs to decide which steps are necessary to accomplish that goal. These steps may include increasing advertising, inventory, and sales staff. These necessary steps are developed into a plan. When the plan is in place, the manager can follow it to accomplish the goal of improving company sales.
- **Organizing:** After a plan is in place, a manager needs to organize her team and materials according to her plan. Assigning work and granting authority are two important elements of organizing.
- **Staffing:** After a manager discerns his area's needs, he may decide to beef up his staffing by recruiting, selecting, training, and developing employees. A manager in a large organization often works with the company's human resources department to accomplish this goal.
- **Leading:** A manager needs to do more than just plan, organize, and staff her team to achieve a goal. She must also lead. Leading involves motivating, communicating, guiding, and encouraging. It requires the manager to coach, assist, and problem solve with employees.
- **Controlling:** After the other elements are in place, a manager's job is not finished. He needs to continuously check results against goals and take any corrective actions necessary to make sure that his area's plans remain on track.

All managers at all levels of every organization perform these functions, but the amount of time a manager spends on each one depends on both the level of management and the specific organization.

Roles Performed by Managers

A manager wears many hats. Not only is a manager, a team leader, but he or she is also a planner, organizer, cheerleader, coach, problem solver, and decision maker — all rolled into one. And these are just a few of a manager's roles. In addition, managers' schedules are usually jam-packed. Whether they're busy with employee meetings, unexpected problems, or strategy sessions, managers often find little spare time on their calendars. (And that doesn't even include responding to e-mail!)

In his classic book, *The Nature of Managerial Work,* Henry Mintzberg describes a set of ten roles that a manager fills. These roles fall into three categories:

- **Interpersonal:** This role involves human interaction.
- **Informational:** This role involves the sharing and analyzing of information.
- **Decisional:** This role involves decision making.

Table below contains a more in-depth look at each category of roles that help managers carry out all five functions described in the preceding "Functions of Managers" section.

TABLE 1 Mintzberg's Set of Ten Roles

Category	Role	Activity
Informational	Monitor	Seek and receive information; scan periodicals and reports; maintain personal contact with stakeholders.
	Disseminator	Forward information to organization members via memos, reports, and phone calls.
	Spokesperson	Transmit information to outsiders via reports, memos, and speeches.
Interpersonal	Figurehead	Perform ceremonial and symbolic duties, such as greeting visitors and signing legal documents.
	Leader	Direct and motivate subordinates; counsel and communicate with subordinates.
	Liaison	Maintain information links both inside and outside organization via mail, phone calls, and meetings.
Decisional	Entrepreneur	Initiate improvement projects; identify new ideas and delegate idea responsibility to others.
	Disturbance handler	Take corrective action during disputes or crises; resolve conflicts among subordinates; adapt to environments.
	Resource allocator	Decide who gets resources; prepare budgets; set schedules and determine priorities.
	Negotiator	Represent department during negotiations of union contracts, sales, purchases, and budgets.
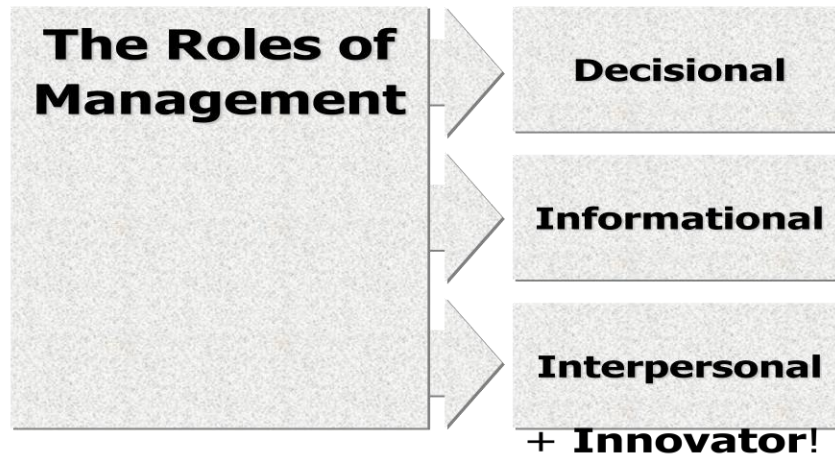
Skills Needed by Managers

Not everyone can be a manager. Certain **skills,** or abilities to translate knowledge into action that results in desired performance, are required to help other employees become more productive. These skills fall under the following categories:

- **Technical Skills:** This skill requires the ability to use a special proficiency or expertise to perform particular tasks. Accountants, engineers, market researchers, and computer scientists, as examples, possess technical skills. Managers acquire these skills initially through formal education and then further develop them through training and job experience. Technical skills are most important at lower levels of management.
- **Human Skills:** This skill demonstrates the ability to work well in cooperation with others. Human skills emerge in the workplace as a spirit of trust, enthusiasm, and genuine involvement in interpersonal relationships. A manager with good human skills has a high degree of self-awareness and a capacity to understand or empathize with the feelings of others. Some managers are naturally born with great human skills, while others improve their skills through classes or experience. No matter how human skills are acquired, they're critical for all managers because of the highly interpersonal nature of managerial work.
- **Conceptual Skills:** This skill calls for the ability to think analytically. Analytical skills enable managers to break down problems into smaller parts, to see the relations among the parts, and to recognize the implications of any one problem for others. As managers assume ever-higher responsibilities in organizations, they must deal with more ambiguous problems that have long-term consequences. Again, managers may acquire these skills initially through formal education and then further develop them by training and job experience. The higher the management level, the more important conceptual skills become.
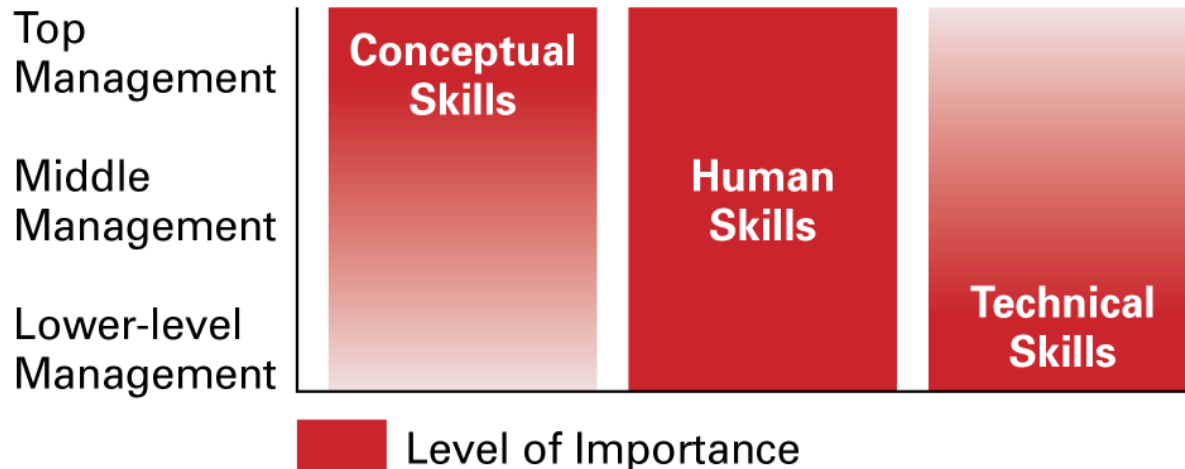
American Assembly of Collegiate Schools of Business View

Although all three categories contain skills essential for managers, their relative importance tends to vary by level of managerial responsibility. Business and management educators are increasingly interested in helping people acquire technical, human, and conceptual skills, and develop specific competencies, or specialized skills, which contribute to high performance in a management job. Following are some of the skills and personal characteristics that the American Assembly of Collegiate Schools of Business (AACSB) is urging business schools to help their students develop.

- **Leadership** — ability to influence others to perform tasks
- **Self-objectivity** — ability to evaluate yourself realistically
- **Analytic thinking** — ability to interpret and explain patterns in information
- **Behavioral flexibility** — ability to modify personal behavior to react objectively rather than subjectively to accomplish organizational goals
- **Oral communication** — ability to express ideas clearly in words
- **Written communication** — ability to express ideas clearly in writing
- **Personal impact** — ability to create a good impression and instill confidence
- **Resistance to stress** — ability to perform under stressful conditions
- **Tolerance for uncertainty** — ability to perform in ambiguous situations

Insights on Organization Leadership

3.0   Organization Leadership

Leading is establishing direction and **influencing others to follow** that direction. But this definition isn't as simple as it sounds because **leadership has many variations** and **different areas of emphasis**. Common to all definitions of leadership is the notion that *leaders are individuals who, by their actions, facilitate the movement of a group of people toward a common or shared goal*. This definition implies that leadership is an influence process. The distinction between leader and leadership is important, but potentially confusing. The **leader is an individual**; **leadership is the function or activity** this individual performs. The word leader is often used interchangeably with the word manager to describe those individuals in an organization who have positions of formal authority, regardless of how they actually act in those jobs. But just because a manager is supposed to be a formal leader in an organization doesn't mean that he or she exercises leadership. An issue often debated among business professionals is whether leadership is a different function and activity from management.

Harvard's University John Kotter says that management is about coping with complexity, and leadership, in contrast, is about coping with change. He also states that leadership is an important part of management, but only a part; management also requires planning, organizing, staffing, and controlling. **Management produces a degree of predictability and order**. **Leadership produces change**. Kotter believes that most organizations are under-led and over-managed. He sees both strong leadership and strong management as necessary for optimal organizational effectiveness.

Kotter on Leadership argues that leadership is about coping with change and should:
- Focuses on change and innovation.
- Focuses on the big picture.
- Focuses on strategies that take calculated risks.
- Focuses on people's values and dignity.

You can't manage people into battle; they need, deserve, and want to be led.

Leadership Traits

Theories abound to explain what makes an effective leader. The oldest theories attempt to identify the common traits or skills that make an effective leader. Contemporary theorists and theories concentrate on actions of leaders rather than characteristics. A number of traits that appear regularly in leaders include ambition, energy, the desire to lead, self-confidence, and intelligence. Although certain traits are helpful, these attributes provide no guarantes that a person possessing them is an effective leader. Underlying the trait approach is the assumption that some people are natural leaders and are endowed with certain traits not possessed by other individuals. This research compared successful and unsuccessful leaders to see how they differed in physical characteristics, personality, and ability.

A recent published analysis of leadership traits (S.A. Kirkpatrick and E.A. Locke, *"Leadership: Do Traits Really Matter?"* Academy of Management Executive 5 [1991]) identified six core characteristics that the majority of effective leaders possess:

- **Drive.** Leaders are ambitious and take initiative.

- **Motivation.** Leaders want to lead and are willing to take charge.

- **Honesty and integrity.** Leaders are truthful and do what they say they will do.

- **Self-confidence.** Leaders are assertive and decisive and enjoy taking risks. They admit mistakes and foster trust and commitment to a vision. Leaders are emotionally stable rather than recklessly adventurous.

- **Cognitive ability.** Leaders are intelligent, perceptive, and conceptually skilled, but are not necessarily geniuses. They show analytical ability, good judgment, and the capacity to think strategically.

- **Business knowledge.** Leaders tend to have technical expertise in their businesses.

Traits do a better job at predicting that a manger may be an effective leader rather than actually distinguishing between an effective or ineffective leader. Because workplace situations vary, leadership requirements vary. As a result, researchers began to examine what effective leaders do rather than what effective leaders are.

Leadership Skills

Whereas traits are the characteristics of leaders, skills are the knowledge and abilities, or *competencies,* of leaders. The competency a leader needs depends upon the situation. These competencies depend on a variety of factors:

- The number of people following the leader

- The extent of the leader's leadership skills

- The leader's basic nature and values

- The group or organization's background, such as whether it's for profit or not-for-profit, new or long established, large or small

- The particular culture (or values and associated behaviors) of whomever is being led

To help managers refine these skills, leadership-training programs typically propose guidelines for making decisions, solving problems, exercising power and influence, and building trust.

Peter Drucker, one of the best-known contemporary management theorists, offers a pragmatic approach to leadership in the workplace. He believes that **consistency is the key to good leadership**, and that successful leaders share the following three abilities which are based on what he refers to as *good old-fashioned hard work*:

- **To define and establish a sense of mission.** Good leaders set goals, priorities, and standards, making sure that these objectives not only are communicated but maintained.

- **To accept leadership as a responsibility rather than a rank.** Good leaders aren't afraid to surround themselves with talented, capable people; they do not blame others when things go wrong.

- **To earn and keep the trust of others.** Good leaders have personal integrity and inspire trust among their followers; their actions are consistent with what they say.

In Drucker's words, "Effective leadership is not based on being clever; it is based primarily on being consistent."

Very simply put, leading is establishing direction and influencing others to follow that direction. Keep in mind that no list of leadership traits and skills is definitive because no two successful leaders are alike. What is important is that leaders exhibit some positive characteristics that make them effective managers at any level in an organization.

Leadership Styles

No matter what their traits or skills, leaders carry out their roles in a wide variety of styles. Some leaders are autocratic. Others are democratic. Some are participatory, and others are hands off. Often, the leadership style depends on the situation, including where the organization is in its life cycle.

The following are common leadership styles:

- **Autocratic.** The manager makes all the decisions and dominates team members. This approach generally results in passive resistance from team members and requires continual pressure and direction from the leader in order to get things done. Generally, this approach is not a good way to get the best performance from a team. However, this style may be appropriate when urgent action is necessary or when subordinates actually prefer this style.

- **Participative or Democratic** The manager involves the subordinates in decision making by consulting team members (while still maintaining control), which encourages employee ownership for the decisions. A good participative leader encourages participation and delegates wisely, but never loses sight of the fact that he or she bears the crucial responsibility of leadership. The leader values group discussions and input from team members; he or she maximizes the members' strong points in order to obtain the best performance from the entire team. The participative leader motivates team members by empowering them to direct themselves; he or she guides them with a loose rein. The downside, however, is that a participative leader may be seen as unsure, and team members may feel that everything is a matter for group discussion and decision.

- **Laissez-faire** (also called free-rein or liberal). In this hands-off approach, the leader encourages team members to function independently and work out their problems by themselves, although he or she is available for advice and assistance. The leader usually has little control over team members, leaving them to sort out their roles and tackle their work assignments without personally participating in these processes. In general, this approach leaves the team floundering with little direction or motivation. Laissez-faire is usually only appropriate when the team is highly motivated and skilled, and has a history of producing excellent work.

- **Situational Approach or Contingency.** Contingency leadership recognizes that there is no one best way to manage. In the contingency perspective, leaders are faced with the task of determining which managerial approach is likely to be most effective in a given situation. For example, the approach used to manage a group of teenagers working in a fast-food restaurant would be very different from the approach used to manage a medical research team trying to find a cure for a disease. Contingency thinking avoids the classical "one best way" arguments and recognizes the need to understand situational differences and respond appropriately to them. The theme in early approaches to understanding leadership was the desire to identify traits or behaviors that effective leaders had in common. A common set of characteristics proved to be elusive, however. Researchers were continually frustrated by the lack of

consistent support for their findings and conclusions. As a result, research began to focus on what style of leadership was most effective in a particular situation.

- **Contingency** or **situational theories** examine the fit between the leader and the situation and provide guidelines for managers to achieve this effective fit. The theorists in this section believe that managers choose leadership styles based on leadership situations. Managers adjust their decision-making, orientation, and motivational approaches based upon a unique combination of factors in their situations: characteristics of employees, types of work, organizational structures, personal preferences, and upper-level management's influences.

Many experts believe that overall leadership style depends largely on a manager's beliefs, values, and assumptions. How managers approach the following three elements—motivation, decision making, and task orientation—affect their leadership styles:

- **Motivation.** Leaders influence others to reach goals through their approaches to motivation. They can use either positive or negative motivation. A positive style uses praise, recognition, and rewards, and increases employee security and responsibility. A negative style uses punishment, penalties, potential job loss, suspension, threats, and reprimands.

- **Decision making.** The second element of a manager's leadership style is the degree of decision authority the manager grants employees—ranging from no involvement to group decision making.

- **Task and employee orientation.** The final element of leadership style is the manager's perspective on the most effective way to get the work done. Managers who favor task orientation emphasize getting work done by using better methods or equipment, controlling the work environment, assigning and organizing work, and monitoring performance. Managers who favor employee orientation emphasize getting work done through meeting the human needs of subordinates. Teamwork, positive relationships, trust, and problem solving are the major focuses of the employee-oriented manager. Keep in mind that managers may exhibit both task and employee orientations to some degree.

The managerial grid model, shown in Figure below and developed by Robert Blake and Jane Mouton, identifies five leadership styles with varying concerns for people and production:
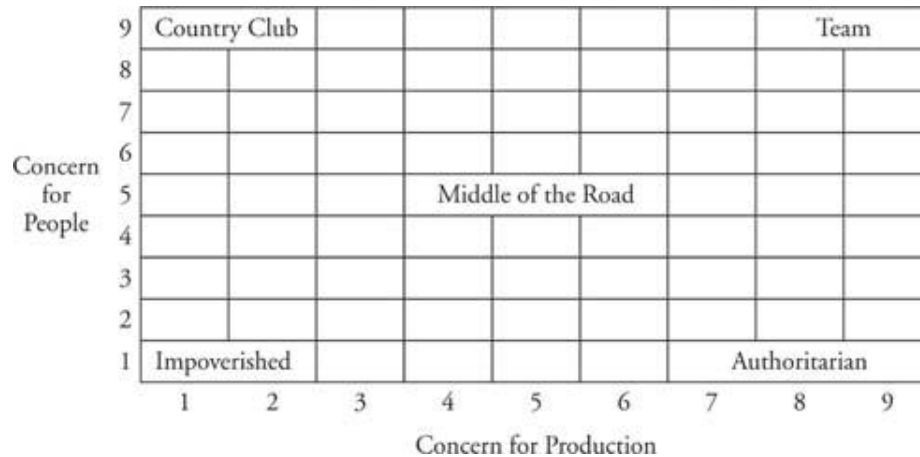

Figure 1 Blake-Mouton Managerial Grid.

- The **impoverished style,** located at the lower left-hand corner of the grid, point (1, 1), is characterized by low concern for both people and production; its primary objective is for managers to stay out of trouble.

- The **country club style,** located at the upper left-hand corner of the grid, point (1, 9), is distinguished by high concern for people and a low concern for production; its primary objective is to create a secure and comfortable atmosphere where managers trust that subordinates will respond positively.

- The **authoritarian style,** located at the lower right-hand corner of the grid, point (9,1), is identified by high concern for production and low concern for people; its primary objective is to achieve the organization's goals, and employee needs are not relevant in this process.

- The **middle-of-the-road style,** located at the middle of the grid, point (5, 5), maintains a balance between workers' needs and the organization's productivity goals; its primary objective is to maintain employee morale at a level sufficient to get the organization's work done.

- The **team style,** located at the upper right-hand of the grid, point (9, 9), is characterized by high concern for people and production; its primary objective is to establish cohesion and foster a feeling of commitment among workers.

The Managerial Grid model suggests that competent leaders should use a style that reflects the highest concern for both people and production—point (9, 9), team-oriented style.

3.1 Power versus Authority

Effective leaders develop and use power, or the ability to influence others. The traditional manager's power comes from his or her position within the organization. Legitimate, reward, and coercive are all forms of power used by managers to change employee behavior and are defined as follows:

- **Legitimate power** stems from a formal management position in an organization and the authority granted to it. Subordinates accept this as a legitimate source of power and comply with it.

- **Reward power** stems from the authority to reward others. Managers can give formal rewards, such as pay increases or promotions, and may also use praise, attention, and recognition to influence behavior.

- **Coercive power** is the opposite of reward power and stems from the authority to punish or to recommend punishment. Managers have coercive power when they have the right to fire or demote employees, criticize them, withhold pay increases, give reprimands, make negative entries in employee files, and so on.

Keep in mind that different types of position power receive different responses in followers. Legitimate power and reward power are most likely to generate compliance, where workers obey orders even though they may personally disagree with them. Coercive power most often generates resistance, which may lead workers to deliberately avoid carrying out instructions or to disobey orders. Unlike external sources of position power, personal power most often comes from internal sources, such as a person's special knowledge or personality characteristics. Personal power is the tool of a leader. Subordinates follow a leader because of respect, admiration, or caring they feel for this individual and his or her ideas. The following two types of personal power exist:

- **Expert power** results from a leader's special knowledge or skills regarding the tasks performed by followers. When a leader is a true expert, subordinates tend to go along quickly with his or her recommendations.

- **Referent power** results from leadership characteristics that command identification, respect, and admiration from subordinates who then desire to emulate the leader. When workers admire a supervisor because of the way he or she deals with them, the influence is based on referent power. Referent power depends on a leader's personal

characteristics rather than on his or her formal title or position, and is most visible in the area of charismatic leadership.

The most common follower response to expert power and referent power is commitment. Commitment means that workers share the leader's point of view and enthusiastically carry out instructions. Needless to say, commitment is preferred to compliance or resistance. Commitment helps followers overcome fear of change, and it is especially important in those instances. Keep in mind that the different types of power described in this section are interrelated. Most leaders use a combination of these types of power, depending on the leadership style used. Authoritarian leaders, for example, use a mixture of legitimate, coercive, and reward powers to dictate the policies, plans, and activities of a group. In comparison, a participative leader uses mainly referent power, involving all members of the group in the decision-making process.

3.2   Challenges Facing Leaders

Organizations today place multiple demands on leaders, requiring them to impart vision, initiate change, and make difficult decisions. To handle these demands, leaders must be flexible and adaptable.

Types of Leaders

Transactional	Transformational
Meeting Established Goals	Inspiring Employees
Clarifying Organizational Roles	Finding Creative Solutions
Securing Correct Resources	Promoting Success

Transformational Leadership

Transformational leadership blends the behavioral theories with a little dab of trait theories. Transactional leaders, such as those identified in contingency theories, guide followers in the direction of established goals by clarifying role and task requirements. However, transformational leaders, who are charismatic and visionary, can inspire followers to transcend their own self-interest for the good of their organizations. Transformational leaders appeal to followers' ideals and moral values and inspire them to think about problems in new or different ways. These leaders influence followers through vision, framing, and impression management. Vision is the ability of the leader to bind people together with an idea. Framing is the process whereby leaders define the purpose of their movements in highly meaningful terms. Impression management is an attempt to control the impressions that others form of a leader by practicing behaviors that make him or her more attractive and appealing to others.

A transformational leader instills feelings of confidence, admiration, and commitment in his or her followers. This type of leader is charismatic, creating a special bond with followers and articulating a vision with which his or her followers identify and for which these followers are willing to work. Each follower is coached, advised, and delegated some authority. The transformational leader stimulates followers intellectually, arousing them to develop new ways to think about problems. This leader uses contingent rewards to positively reinforce performances that are consistent with his or her wishes. Management is by exception.

Transformational leaders take initiative only when problems occur and are not actively involved when things are going well. He or she commits people to actions and converts followers into leaders. Research indicates that transformational, as compared to transactional, leadership is more strongly correlated with lower turnover rates, higher productivity, and higher employee satisfaction. Transformational leaders are relevant to today's workplace because they are flexible and innovative. Although it is important to have leaders with the appropriate orientation defining tasks and managing interrelationships, it is even more important to have leaders who can bring organizations into futures they have not yet imagined. Transformational leadership is the essence of creating and sustaining competitive advantage.

Change Leadership

Today's business world is highly competitive. The way for an organization to survive is by reshaping to meet the needs of a rapidly changing world. Resistance to change is a dead-end street for employees and for the organization. Leaders need to emphasize action to make the change as quickly and smoothly as possible. Organizations go through a four-stage life cycle. For some organizations, the four periods of growth come and go very rapidly; for others, that process may take decades. Failure to follow through with the needed changes in any of the four growth periods could mean the end for an organization. Throughout these periods of change, which is just about all the time for a good organization, leaders must concentrate on having their people go from change avoidance to change acceptance. The five steps that accompany change—for individuals facing life-altering circumstances and for organizations facing fundamental shifts—are denial, anger, bargaining, depression, and finally, acceptance. Often a worker's first reaction to change is to resist it.

An employee becomes comfortable performing tasks and processes a certain way. These comfort levels provide employees with the security of knowing that they are the masters of their work environment. Employees fear that change could disrupt their lives by making their jobs harder or causing them to lose their sense of control.
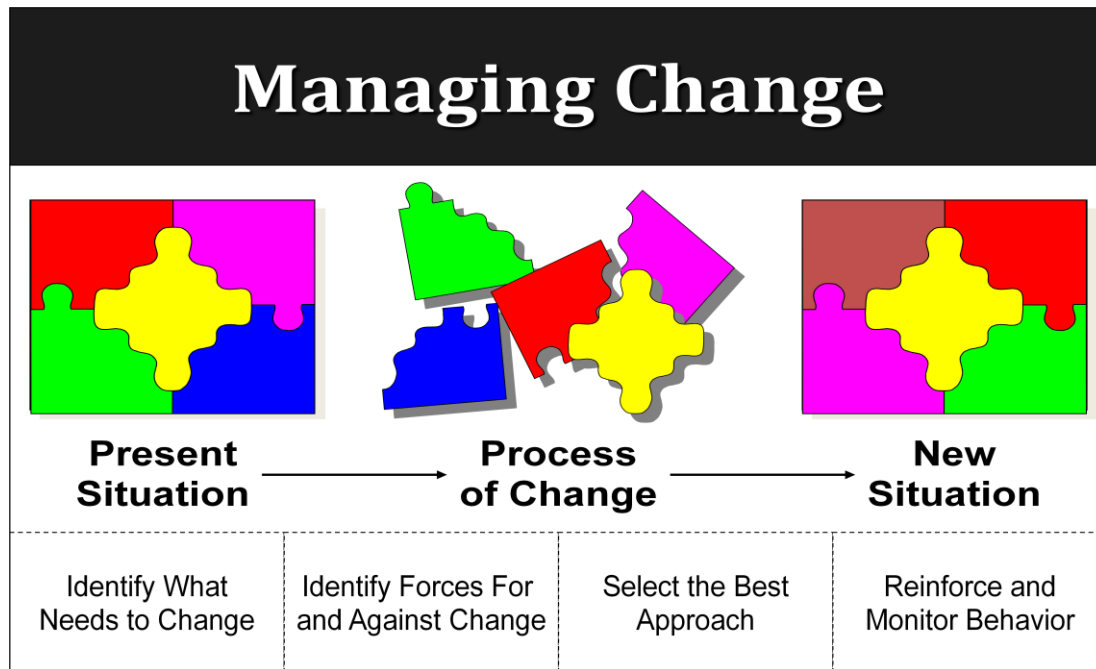
Leaders can help the change process by changing their employees' attitudes from avoidance into acceptance. This change is accomplished by managers as strong leaders transforming their employees' avoidance questions and statements into acceptance questions:

- **From "Why?" to "What new opportunities will this change provide?"** When employees ask "why," a manager should focus on the benefits that the change will provide employees and the organization.

- **From "How will this affect me?" to "What problems will this solve?"** Managers should let employees know what the problem is and how they will be part of the solution.

- **From "We do not do it this way" to "What will be the result if we do it this new way?"** One of the first reactions is that a process never has been done this way. Managers should provide explanations and empathy.

- **From "When will this be over so that we can get back to work?" to "What can I do to help?"** Managers should get employees involved in implementing the change.

Managers need to keep in mind that feelings are contagious. By positively promoting a change, a leader makes others want to be part of it. Managers should also give employees the necessary authority and control to help bring the change about. So that employees do not feel powerless, managers should share their responsibilities. A manager should want his or her team members to feel useful and enthusiastic. Employees should be made to feel as though the change could not have happened without them.

3.3   Leading in the Learning Organization

An organization that encourages learning among its people is referred to as a **learning organization.** In a learning organization, employees are engaged in identifying and solving problems, enabling the organization to continuously experiment, change, and improve. Thus, the organization can increase its capacity to grow, learn, and achieve its purpose.

In the learning organization, all employees look for problems, such as understanding special customer needs. Employees also solve problems, which mean putting things together in unique ways to meet customer needs. A learning organization promotes exchanges of information among employees, which creates a more knowledgeable workforce. Learning organizations exhibit flexibility because employees accept and adapt to new ideas and changes through a shared vision.

Today's increased pace of change is one reason the learning organization is popular. The corporation that is able to quickly shape and motivate their workers is better able to transform its work practices to keep pace with the constantly changing environment. Leadership in learning organizations requires something more than the traditional approach of setting goals, making decisions, and directing the troops. In learning organizations, managers learn to think in terms of "control with" rather than "control over" employees. They "control with" employees by building relationships based on shared visions and shaping the cultures of their organizations so that all can help achieve the same visions. A leader in this learning environment can help facilitate teamwork, initiate change, and expand

the capacity of employees to shape their organization's future. Leaders who understand how the learning organization operates can help other leaders adapt to this organizational style.

Visionary leadership, a team-based structure, participative strategy, a strong, adaptive internal culture, empowered employees, and open information characterize the learning organization. Consultant Peter Senge, author of the popular book, *The Fifth Discipline,* identifies the following ingredients of learning organizations:

- **Mental models**—setting aside of old ways of thinking
- **Personal mastery**—self-awareness and ability to remain open to others
- **Systems thinking**—understanding of the plan of action
- **Shared vision**—mutual agreement to the plan of action
- **Team learning**—working together to accomplish the plan of action

Senge's concept of the learning organization places high value on developing the ability to learn and then make that learning continuously available to all organizational members.

Management Philosophies and Motivation

Management Philosophies and Motivation

Management philosophy can set the foundation for a positive work climate and influence a manager's approach to motivation. The way a manager views employees and communicates with employees affects their behavior.

4.0   Motivation Theories: Individual Needs

Motivation is a complex phenomenon. Several theories attempt to explain how motivation works. In management circles, probably the most popular explanations of motivation are based on the needs of the individual. The basic needs model, referred to as **content theory** of motivation, highlights the specific factors that motivate an individual. Although these factors are found within an individual, things outside the individual can affect him or her as well. In short, all people have needs that they want satisfied. Some are *primary needs,* such as those for food, sleep, and water—needs that deal with the physical aspects of behavior and are considered unlearned. These needs are biological in nature and relatively stable. Their influences on behavior are usually obvious and hence easy to identify. *Secondary needs,* on the other hand, are psychological, which means that they are learned primarily through experience. These needs vary significantly by culture and by individual. Secondary needs consist of internal states, such as the desire for power, achievement, and love. Identifying and interpreting these needs is more difficult because they are demonstrated in a variety of ways. Secondary needs are responsible for most of the behavior that a supervisor is concerned with and for the rewards a person seeks in an organization. Several theorists, including Abraham Maslow, Frederick Herzberg, David McClelland, and Clayton Alderfer, have provided theories to help explain needs as a source of motivation.

Abraham Maslow's Hierarchy of Needs Theory

Abraham Maslow defined **need** as a physiological or psychological deficiency that a person feels the compulsion to satisfy. This need can create tensions that can influence a person's work attitudes and behaviors. Maslow formed a theory based on his definition of need that proposes that humans are motivated by multiple needs and that these needs exist in a hierarchical order. His premise is that only an unsatisfied need can influence behavior; a satisfied need is not a motivator.

Maslow's theory is based on the following two principles:

- **Deficit principle:** A satisfied need no longer motivates behavior because people act to satisfy deprived needs.

- **Progression principle:** The five needs he identified exist in a hierarchy, which means that a need at any level only comes into play after a lower-level need has been satisfied.

In his theory, Maslow identified five levels of human needs. Table below illustrates these five levels and provides suggestions for satisfying each need.

TABLE 1 Maslow's Hierarchy of Human Needs

Higher Level Needs	To Satisfy, Offer:
Self-actualization needs	Creative and challenging work
Participation in decision making	
	Job flexibility and autonomy
Esteem needs	Responsibility of an important job
	Promotion to higher status job
	Praise and recognition from boss
Lower Level Needs	*To Satisfy, Offer:*
Social needs	Friendly coworkers
	Interaction with customers
	Pleasant supervisor
Safety needs	Safe working conditions
	Job security
	Base compensation and benefits
Physiological needs	Rest and refreshment breaks
	Physical comfort on the job
	Reasonable work hours

Although research has not verified the strict deficit and progression principles of Maslow's theory, his ideas can help managers understand and satisfy the needs of employees.

Herzberg's Two-factor Theory

Frederick Herzberg offers another framework for understanding the motivational implications of work environments. In his **two-factor theory,** Herzberg identifies two sets of factors that impact motivation in the workplace:

- **Hygiene Factors** include salary, job security, working conditions, organizational policies, and technical quality of supervision. Although these factors do not motivate employees, they can cause dissatisfaction if they are missing. Something as simple as adding music to the office place or implementing a no-smoking policy can make people less dissatisfied with these aspects of their work. However, these improvements in hygiene factors do not necessarily increase satisfaction.

- **Satisfiers** or **Motivators** include such things as responsibility, achievement, growth opportunities, and feelings of recognition, and are the key to job satisfaction and motivation. For example, managers can find out what people really do in their jobs and make improvements, thus increasing job satisfaction and performance.

Following Herzberg's two-factor theory, managers need to ensure that hygiene factors are adequate and then build satisfiers into jobs.

Alderfer's ERG Theory

Clayton Alderfer's **ERG (Existence, Relatedness, and Growth) theory** is built upon Maslow's hierarchy of needs theory. To begin his theory, Alderfer collapses Maslow's five levels of needs into three categories.

- **Existence needs** are desires for physiological and material well-being. (In terms of Maslow's model, existence needs include physiological and safety needs)

- **Relatedness needs** are desires for satisfying interpersonal relationships. (In terms of Maslow's model, relatedness correspondence to social needs)

- **Growth needs** are desires for continued psychological growth and development. (In terms of Maslow's model, growth needs include esteem and self-realization needs)

This approach proposes that unsatisfied needs motivate behavior, and that as lower level needs are satisfied, they become less important. Higher level needs, though, become more important as they are satisfied, and if these needs are not met, a person may move down the hierarchy, which Alderfer calls the *frustration-regression principle.* What he means by this term is that an already satisfied lower level need can become reactivated and influence behavior when a higher level need cannot be satisfied. As a result, managers should provide opportunities for workers to capitalize on the importance of higher level needs.

McClelland's Acquired Needs Theory

David McClelland's acquired needs theory recognizes that everyone prioritizes needs differently. He also believes that individuals are not born with these needs, but that they are actually learned through life experiences. McClelland identifies three specific needs:

- **Need for achievement** is the drive to excel.
- **Need for power** is the desire to cause others to behave in a way that they would not have behaved otherwise.
- **Need for affiliation** is the desire for friendly, close interpersonal relationships and conflict avoidance.

McClelland associates each need with a distinct set of work preferences, and managers can help tailor the environment to meet these needs.

High achievers differentiate themselves from others by their desires to do things better. These individuals are strongly motivated by job situations with personal responsibility, feedback, and an intermediate degree of risk. In addition, high achievers often exhibit the following behaviors:

- Seek personal responsibility for finding solutions to problems
- Want rapid feedback on their performances so that they can tell easily whether they are improving or not
- Set moderately challenging goals and perform best when they perceive their probability of success as 50-50

An individual with a high need of power is likely to follow a path of continued promotion over time. Individuals with a high need of power often demonstrate the following behaviors:

- Enjoy being in charge

- Want to influence others

- Prefer to be placed into competitive and status-oriented situations

- Tend to be more concerned with prestige and gaining influence over others than with effective performance

People with the need for affiliation seek companionship, social approval, and satisfying interpersonal relationships. People needing affiliation display the following behaviors:

- Take a special interest in work that provides companionship and social approval

- Strive for friendship

- Prefer cooperative situations rather than competitive ones

- Desire relationships involving a high degree of mutual understanding

- May not make the best managers because their desire for social approval and friendship may complicate managerial decision making

Interestingly enough, a high need to achieve does not necessarily lead to being a good manager, especially in large organizations. People with high achievement needs are usually interested in how well they do personally and not in influencing others to do well. On the other hand, the best managers are high in their needs for power and low in their needs for affiliation.

4.1 Motivation Theories: Behavior

Process theories explain how workers select behavioral actions to meet their needs and determine their choices. The following theories each offer advice and insight on how people actually make choices to work hard or not work hard based on their individual preferences, the available rewards, and the possible work outcomes.

Equity theory

According to the equity theory, based on the work of J. Stacy Adams, workers compare the reward potential to the effort they must expend. Equity exists when workers perceive that rewards equal efforts (see Figure below).

Figure 1 The Equity Theory.

But employees just don't look at their potential rewards, they look at the rewards of others as well. Inequities occur when people feel that their rewards are inferior to the rewards offered to other persons sharing the same workloads.

Employees who feel they are being treated inequitably may exhibit the following behaviors:

- Put less effort into their jobs
- Ask for better treatment and/or rewards
- Find ways to make their work seem better by comparison
- Transfer or quit their jobs

The equity theory makes a good point: People behave according to their perceptions. What a manager thinks is irrelevant to an employee because the real issue is the way an employee perceives his or her situation. Rewards perceived as equitable should have positive results on job satisfaction and performance; those rewards perceived as inequitable may create job dissatisfaction and cause performance problems.

Every manager needs to ensure that any negative consequences from equity comparisons are avoided, or at least minimized, when rewards are allocated. Informed managers anticipate perceived negative inequities when especially visible rewards, such as pay increases or promotions, are allocated. Instead of letting equity concerns get out of hand, these managers carefully communicate the intended values of rewards being given, clarify the performance appraisals upon which these rewards are based, and suggest appropriate comparison points.

Expectancy Theory

Victor Vroom introduced one of the most widely accepted explanations of motivation. Very simply, the **expectancy theory** says that an employee will be motivated to exert a high level of effort when he or she believes that:

1. Effort will lead to a good performance appraisal.

2. A good appraisal will lead to organizational rewards.

3. The organizational rewards will satisfy his or her personal goals.

The key to the expectancy theory is an understanding of an individual's goals and the relationships between effort and performance, between performance and rewards, and finally, between the rewards and individual goal satisfaction. When an employee has a high level of expectancy and the reward is attractive, motivation is usually high. Therefore, to motivate workers, managers must strengthen workers' perceptions of their efforts as both possible and worthwhile, clarify expectations of performances, tie rewards to performances, and make sure that rewards are desirable.

Reinforcement Theory

The reinforcement theory, based on E. L. Thorndike's law of effect, simply looks at the relationship between behavior and its consequences. This theory focuses on modifying an employee's on-the-job behavior through the appropriate use of one of the following four techniques:

- **Positive reinforcement** rewards desirable behavior. Positive reinforcement, such as a pay raise or promotion, is provided as a reward for positive behavior with the intention of increasing the probability that the desired behavior will be repeated.

- **Avoidance** is an attempt to show an employee what the consequences of improper behavior will be. If an employee does not engage in improper behavior, he or she will not experience the consequence.

- **Extinction** is basically ignoring the behavior of a subordinate and not providing either positive or negative reinforcement. Classroom teachers often use this technique when they ignore students who are "acting out" to get attention. This technique should only be used when the supervisor perceives the behavior as temporary, not typical, and not serious.

- **Punishment** (threats, docking pay, suspension) is an attempt to decrease the likelihood of a behavior recurring by applying negative consequences.

The reinforcement theory has the following implications for management:

- Learning what is acceptable to the organization influences motivated behavior.

- Managers who are trying to motivate their employees should be sure to tell individuals what they are doing wrong and be careful not to reward all individuals at the same time.

- Managers must tell individuals what they can do to receive positive reinforcement.

- Managers must be sure to administer the reinforcement as closely as possible to the occurrence of the behavior.

- Managers must recognize that failure to reward can also modify behavior. Employees who believe that they deserve a reward and do not receive it will often become disenchanted with both their manager and company.

Goal-setting Theory

The goal-setting theory, introduced in the late 1960s by Edwin Locke, proposed that intentions to work toward a goal are a major source of work motivation. Goals, in essence, tell employees what needs to be done and how much effort should be expanded. In general, the more difficult the goal, the higher the level of performance expected. Managers can set the goals for their employees, or employees and managers can develop goals together. One advantage of employees participating in goal setting is that they may be more likely to work toward a goal they helped develop.

No matter who sets the goal, however, employees do better when they get feedback on their progress. In addition to feedback, four other factors influence the goals-performance relationship:

- The employee must be committed to the goal.
- The employee must believe that he is capable of performing the task.
- Tasks involved in achieving the goal should be simple, familiar, and independent.
- The goal-setting theory is culture bound and is popular in North American cultures.

If the goal-setting theory is followed, managers need to work with their employees in determining goal objectives in order to provide targets for motivation. In addition, the goals that are established should be specific rather than general in nature, and managers must provide feedback on performance.

4.2   Motivation Strategies

To some extent, a high level of employee motivation is derived from effective management practices. To develop motivated employees, a manager must treat people as individuals, empower workers, provide an effective reward system, redesign jobs, and create a flexible workplace.

Empowering Employees

Empowerment occurs when individuals in an organization are given autonomy, authority, trust, and encouragement to accomplish a task. Empowerment is designed to unshackle the worker and to make a job the worker's responsibility. In an attempt to empower and to change some of the old bureaucratic ideas, managers are promoting corporate intrapreneurships. **Intrapreneurship** encourages employees to pursue new ideas and gives them the authority to promote those ideas. Obviously, intrapreneurship is not for the timid, because old structures and processes are turned upside down.

Providing an Effective Reward System

Managers often use rewards to reinforce employee behavior that they want to continue. A *reward* is a work outcome of positive value to the individual. Organizations are rich in rewards for people whose performance accomplishments help meet organizational objectives. People receive rewards in one of the following two ways:

- **Extrinsic rewards** are externally administered. They are valued outcomes given to someone by another person, typically a supervisor or higher level manager. Common workplace examples are pay bonuses, promotions, time off, special assignments, office fixtures, awards, verbal praise, and so on. In all cases, the motivational stimulus of extrinsic rewards originates outside the individual.

- **Intrinsic rewards** are self-administered. Think of the "natural high" a person may experience after completing a job. That person feels good because she has a feeling of competency, personal development, and self-control over her work. In contrast to extrinsic rewards, the motivational stimulus of intrinsic rewards is internal and doesn't depend on the actions of other people.

To motivate behavior, the organization needs to provide an effective reward system. An effective reward system has four elements:

- Rewards need to satisfy the basic needs of all employees.

- Rewards need to be included in the system and be comparable to ones offered by a competitive organization in the same area.

- Rewards need to be available to people in the same positions and be distributed fairly and equitably.

- The overall reward system needs to be multifaceted. Because all people are different, managers must provide a range of rewards—pay, time off, recognition, or promotion. In addition, managers should provide several different ways to earn these rewards.

This last point is worth noting. With the widely developing trend toward empowerment in American industry, many employees and employers are beginning to view traditional pay systems as inadequate. In a traditional system, people are paid according to the positions they hold, not the contributions they make. As organizations adopt approaches built upon teams, customer satisfaction, and empowerment, workers need to be paid differently. Many companies have already responded by designing numerous pay plans, designed by employee design teams, which base rewards on skill levels. Rewards demonstrate to employees that their behavior is appropriate and should be repeated. If employees don't feel that their work is valued, their motivation will decline.

Redesigning Jobs

Many people go to work every day and go through the same, unenthusiastic actions to perform their jobs. These individuals often refer to this condition as burnout. But smart managers can do something to improve this condition before an employee becomes bored and loses motivation. The concept of *job redesign,* which requires a knowledge of and concern for the human qualities people bring with them to the organization, applies motivational theories to the structure of work for improving productivity and satisfaction

When redesigning jobs, managers look at both job scope and job depth. Redesign attempts may include the following:

- **Job Enlargement.** Often referred to as *horizontal job loading,* job enlargement increases the variety of tasks a job includes. Although it doesn't increase the quality or

the challenge of those tasks, job enlargement may reduce some of the monotony, and as an employee's boredom decreases, his or her work quality generally increases.

- **Job Rotation**. This practice assigns people to different jobs or tasks to different people on a temporary basis. The idea is to add variety and to expose people to the dependence that one job has on other jobs. Job rotation can encourage higher levels of contributions and renew interest and enthusiasm. The organization benefits from a cross-trained workforce.

- **Job Enrichment.** Also called *vertical job loading*, this application includes not only an increased variety of tasks, but also provides an employee with more responsibility and authority. If the skills required to do the job are skills that match the jobholder's abilities, job enrichment may improve morale and performance.

Creating Flexibility

Today's employees value personal time. Because of family needs, a traditional nine-to-five workday may not work for many people. Therefore, **flextime,** which permits employees to set and control their own work hours, is one way that organizations are accommodating their employees' needs. Here are some other options organizations are trying as well:

- A **compressed workweek** is a form of flextime that allows a full-time job to be completed in less than the standard 40-hour, five-day workweek. Its most common form is the 4/40 schedule, which gives employees three days off each week. This schedule benefits the individual through more leisure time and lower commuting costs. The organization should benefit through lower absenteeism and improved performance. Of course, the danger in this type of scheduling is the possibility of increased fatigue.

- **Job Sharing** or **Twinning** occurs when one full-time job is split between two or more persons. Job sharing often involves each person working one-half day, but it can also be done on weekly or monthly sharing arrangements. When jobs can be split and shared, organizations can benefit by employing talented people who would otherwise be unable to work full-time. The qualified employee who is also a parent may not want to be in the office for a full day but may be willing to work a half-day. Although adjustment problems sometimes occur, the arrangement can be good for all concerned.

- **Telecommuting,** sometimes called *flexiplace,* is a work arrangement that allows at least a portion of scheduled work hours to be completed outside of the office, with work-at-home as one of the options. Telecommuting frees the jobholder from needing to work fixed hours, wearing special work attire, enduring the normal constraints of commuting, and having direct contact with supervisors. Home workers often demonstrate increased productivity, report fewer distractions, enjoy the freedom to be their own boss, and appreciate the benefit of having more time for themselves.

- Of course, when there are positives, there are also negatives. Many home workers feel that they work too much and are isolated from their family and friends. In addition to the feelings of isolation, many employees feel that the lack of visibility at the office may result in the loss of promotions.

Classical Schools of Management

5.0 Classical Schools of Management

One of the first schools of management thought, the **classical management theory,** developed during the Industrial Revolution when new problems related to the factory system began to appear. Managers were unsure of how to train employees (many of them non-English speaking immigrants) or deal with increased labor dissatisfaction, so they began to test solutions. As a result, the classical management theory developed from efforts to find the "one best way" to perform and manage tasks. This school of thought is made up of two branches: classical scientific and classical administrative, described in the following sections.

5.1 Classical Scientific School

The **classical scientific branch** arose because of the need to increase productivity and efficiency. The emphasis was on trying to find the best way to get the most work done by examining how the work process was actually accomplished and by scrutinizing the skills of the workforce. The classical scientific school owes its roots to several major contributors, including Frederick Taylor, Henry Gantt, and Frank and Lillian Gilbreth.

Frederick Taylor is often called the "**father of scientific management**." Taylor believed that organizations should study tasks and develop precise procedures. As an example, in 1898, Taylor calculated how much iron from rail cars Bethlehem Steel plant workers could be unloading if they were using the correct movements, tools, and steps. The result was an amazing 47.5 tons per day instead of the mere 12.5 tons each worker had been averaging. In addition, by redesigning the shovels the workers used, Taylor was able to increase the length of work time and therefore decrease the number of people shoveling from 500 to 140. Lastly, he developed an incentive system that paid workers more money for meeting the new standard. Productivity at Bethlehem Steel shot up overnight. As a result, many theorists followed Taylor's philosophy when developing their own principles of management.

Taylor's management principles were concluded to be:

- To develop a science for each element of the workers job that replaces the rule of thumb.
- Establish standards with respect to the methods adopted
- Adopt scientific selection of the workers
- Introduce Wage incentives which should be part of each job

- Job specialization should be part of each job
- Adopt planning for all organization activities

Henry Gantt, an associate of Taylor's, developed the Gantt chart, a bar graph that measures planned and completed work along each stage of production. Based on time instead of quantity, volume, or weight, this visual display chart has been widely used in planning and control as a powerful tool since its development in 1910. More details will be explored when we look at Project Management chapter.

Frank and Lillian Gilbreth, a husband-and-wife team, studied job motions. In Frank's early career as an apprentice bricklayer, he was interested in standardization and method study. He watched bricklayers and saw that some workers were slow and inefficient, while others were very productive. He discovered that each bricklayer used a different set of motions to lay bricks. From his observations, Frank isolated the basic movements necessary to do the job and eliminated unnecessary motions. Workers using these movements raised their output from 1,000 to 2,700 bricks per day. This was the first **motion study** designed to isolate the best possible method of performing a given job. Later, Frank and his wife Lillian studied job motions using a motion-picture camera and a split-second clock. When her husband died at the age of 56, Lillian continued their work. Thanks to these contributors and others, the basic ideas regarding scientific management developed. They include the following:

- Developing new standard methods for doing each job
- Selecting, training, and developing workers instead of allowing them to choose their own tasks and train themselves
- Developing a spirit of cooperation between workers and management to ensure that work is carried out in accordance with devised procedures
- Dividing work between workers and management in almost equal shares, with each group taking over the work for which it is best fitted

5.2   Classical Administrative School

Whereas, scientific management focused on the productivity of individuals, the classical administrative approach concentrates on the total organization. The emphasis is on the development of managerial principles rather than work methods.

Contributors to this school of thought include; Max Weber, Henri Fayol, Mary Parker Follett, and Chester I. Barnard. These theorists studied the flow of information within an organization and emphasized the importance of understanding how an organization operated.

In the late 1800s, **Max Weber** disliked that many European organizations which were managed on a "personal" family-like basis and that employees were loyal to individual supervisors rather than to the organization. He believed that organizations should be managed impersonally and that a formal organizational structure, where specific rules were followed, was important. In other words, he didn't think that authority should be based on a person's personality. He thought authority should be something that was part of a person's job and passed from individual to individual as one person left and another took over. This non-personal, objective form of organization was called a **bureaucracy.**

Bureaucracy is defined as the idea or pure form of organization characterized by division of labour, hierarchy of authority, and selection of members on the basis of their qualifications and strict rules and procedures. Weber believed that all bureaucracies have the following characteristics:

- **A well-defined hierarchy.** All positions within a bureaucracy are structured in a way that permits the higher positions to supervise and control the lower positions. This clear chain of command facilitates control and order throughout the organization.

- **Division of labor and specialization.** All responsibilities in an organization are specialized so that each employee has the necessary expertise to do a particular task.

- **Rules and regulations.** Standard operating procedures govern all organizational activities to provide certainty and facilitate coordination.

- **Impersonal relationships between managers and employees.** Managers should maintain an impersonal relationship with employees so that favoritism and personal prejudice do not influence decisions.

- **Competence.** Competence, not "who you know," should be the basis for all decisions made in hiring, job assignments, and promotions in order to foster ability and merit as the primary characteristics of a bureaucratic organization.

- **Records.** A bureaucracy needs to maintain complete files regarding all its activities.

Henri Fayol, a French mining engineer, developed 14 principles of management based on his management experiences. These principles provide modern-day managers with general guidelines on how a supervisor should organize her department and manage her staff. Although later research has created controversy over many of the following principles, they are still widely used in management theories. These principles specify rules for successfully managing and structuring an organization and they are:

- **Division of work:** Division of work and specialization produces more and better work with the same effort.

- **Authority and responsibility:** Authority is the right to give orders and the power to exact obedience. A manager has official authority because of her position, as well as personal authority based on individual personality, intelligence, and experience. Authority creates responsibility.

- **Discipline:** Obedience and respect within an organization are absolutely essential. Good discipline requires managers to apply sanctions whenever violations become apparent.

- **Unity of command:** An employee should receive orders from only one superior.

- **Unity of direction:** Organizational activities must have one central authority and one plan of action.

- **Subordination of individual interest to general interest:** The interests of one employee or group of employees are subordinate to the interests and goals of the organization.

- **Remuneration of personnel:** Salaries — the price of services rendered by employees — should be fair and provide satisfaction both to the employee and employer.

- **Centralization:** The objective of centralization is the best utilization of personnel. The degree of centralization varies according to the dynamics of each organization.

- **Scalar chain:** A chain of authority exists from the highest organizational authority to the lowest ranks. Managers in the hierarchical structure are part of the chain of superiors ranging from highest authority to the lowest. Communication flow up and down.

- **Order:** Organizational order for materials and personnel is essential. The right materials and the right employees are necessary for each organizational function and activity.

- **Equity:** In organizations, equity is a combination of kindliness and justice. Both equity and equality of treatment should be considered when dealing with employees.

- **Stability of tenure of personnel:** To attain the maximum productivity of personnel, a stable work force is needed.

- **Initiative:** Thinking out a plan and ensuring its success is an extremely strong motivator. Zeal, energy, and initiative are desired at all levels of the organizational ladder.

- **Esprit de corps:** Teamwork is fundamentally important to an organization. Work teams and extensive face-to-face verbal communication encourages teamwork.

Mary Parker Follett stressed the importance of an organization establishing common goals for its employees. However, she also began to think somewhat differently than the other theorists of her day, discarding command-style hierarchical organizations where employees were treated like robots. She began to talk about such things as ethics, power, and leadership. She encouraged managers to allow employees to participate in decision making. She stressed the importance of people rather than techniques — a concept very much before her time. As a result, she was a pioneer and often not taken seriously by management scholars of her time. But times change and innovative ideas from the past suddenly take on new meanings. Much of what managers do today is based on the fundamentals that Follett established more than 80 years ago.

Chester Barnard, who was president of New Jersey Bell Telephone Company, introduced the idea of the **informal organization** — *cliques* (exclusive groups of people) that naturally form within a company. He felt that these informal organizations provided necessary and vital communication functions for the overall organization and that they could help the organization accomplish its goals. Barnard felt that it was particularly important for managers to develop a sense of common purpose where a willingness to cooperate is strongly encouraged. He is credited with developing the **acceptance theory of management,** which emphasizes the willingness of employees to accept that managers have legitimate authority to act. Barnard felt that there are **four factors affected the willingness of employees to accept authority**:

- The employees must understand the communication.

- The employees accept the communication as being consistent with the organization's purposes.

- The employees feel that their actions will be consistent with the needs and desires of the other employees.

- The employees feel that they are mentally and physically able to carry out the order.

Barnard's sympathy for and understanding of employee needs positioned him as a bridge to the behavioral school of management, the next school of thought to emerge.

5.3   Behavioral Management Theory

As management research continued in the 20th century, questions began to come up regarding the interactions and motivations of the individual within organizations. Management principles developed during the classical period were simply not useful in dealing with many management situations and could not explain the behavior of individual employees. In short, classical theory ignored employee motivation and behavior. As a result, the behavioral school was a natural outgrowth of this revolutionary management experiment.

The **behavioral management theory** is often called the human relations movement because it addresses the human dimension of work. Behavioral theorists believed that a better understanding of human behavior at work, such as motivation, conflict, expectations, and group dynamics, improved productivity. The theorists who contributed to this school viewed employees as individuals, resources, and assets to be developed and worked with — not as machines, as in the past. Several individuals and experiments contributed to this theory.

Elton Mayo's contributions came as part of the *Hawthorne Studies,* a series of experiments that rigorously applied classical management theory only to reveal its shortcomings. The Hawthorne experiments consisted of two studies conducted at the Hawthorne Works Plant of the Western Electric Company in Chicago from 1924 to 1932. The first study was conducted by a group of engineers seeking to determine the relationship of lighting levels to worker productivity. Surprisingly enough, they discovered that worker productivity increased as the lighting levels decreased — that is, until the employees were unable to see what they were doing, after which performance naturally declined.

A few years later, a second group of experiments began. Harvard researchers Mayo and F. J. Roethlisberger supervised a group of five women in a bank wiring room. They gave the women special privileges, such as the right to leave their workstations without permission, take rest periods, enjoy free lunches, and have variations in pay levels and workdays. This experiment also resulted in significantly increased rates of productivity.

In this case, Mayo and Roethlisberger concluded that the increase in productivity resulted from the supervisory arrangement rather than the changes in lighting or other associated worker benefits. Because the experimenters became the primary supervisors of the employees, the intense interest they displayed for the workers was the basis for the increased motivation and resulting productivity. Essentially, the experimenters became a part of the study and influenced its outcome. This is the origin of the term *Hawthorne effect,* which describes the special attention researchers give to a study's subjects and the impact that attention has on the study's findings.

The general conclusion from the Hawthorne studies was that human relations and the social needs of workers are crucial aspects of business management. This principle of human motivation helped revolutionize theories and practices of management.

Abraham Maslow, a practicing psychologist, developed one of the most widely recognized **need theories,** a theory of motivation based upon a consideration of human needs. His theory of human needs had three assumptions namely:

- Human needs are never completely satisfied.

- Human behavior is purposeful and is motivated by the need for satisfaction.

- Needs can be classified according to a hierarchical structure of importance, from the lowest to highest.

Maslow broke down the needs hierarchy into five specific areas:

- **Physiological needs.** Maslow grouped all physical needs necessary for maintaining basic human well-being, such as food and drink, into this category. After the need is satisfied, however, it is no longer is a motivator.

- **Safety needs.** These needs include the need for basic security, stability, protection, and freedom from fear. A normal state exists for an individual to have all these needs generally satisfied. Otherwise, they become primary motivators.

- **Belonging and love needs.** After the physical and safety needs are satisfied and are no longer motivators, the need for belonging and love emerges as a primary motivator. The individual strives to establish meaningful relationships with significant others.

- **Esteem needs.** An individual must develop self-confidence and wants to achieve status, reputation, fame, and glory.

- **Self-Actualization needs.** Assuming that all the previous needs in the hierarchy are satisfied, an individual feels a need to find himself.

Maslow's hierarchy of needs theory helped managers visualize employee motivation. The Maslow hierarchy of needs is illustrated below:

Douglas McGregor was heavily influenced by both the Hawthorne studies and Maslow. He believed that two basic kinds of managers exist. One type, the **Theory-X Manager**, has a negative view of employees and assumes that they are lazy, untrustworthy, and incapable of assuming responsibility. On the other hand, the **Theory-Y Manager** assumes that employees are not only trustworthy and capable of assuming responsibility, but also have high levels of motivation. An important aspect of McGregor's idea was his belief that managers who hold either set of assumptions can create **self-fulfilling prophecies** — that through their behavior, these managers create situations where subordinates act in ways that confirm the manager's original expectations. As a group, these theorists discovered that people worked for inner satisfaction and not materialistic rewards, shifting the focus to the role of individuals in an organization's performance.

Theory-X Assumptions

- People do not like work and try to avoid it.

- Managers have to control, direct, coerce, and threaten employees to get them to work toward organizational goals.

- People prefer to be directed, to avoid responsibility, and to want security; they have little ambition.

Theory-Y Assumptions

- People do not dislike work; work is a natural part of their lives.

- People are internally motivated to reach objectives to which they are committed.

- People are committed to goals to the degree that they receive rewards when they reach their objectives.

Quantitative School of Management

6.0   Quantitative School of Management

During World War II, mathematicians, physicists, and other scientists joined together to solve military problems. The **quantitative school of management** is a result of the research conducted during World War II. The **quantitative approach** to management involves the use of quantitative techniques, such as statistics, information models, and computer simulations, to improve decision making. This school consists of several branches, described in the following sections.

Advantages of Quantitative methods

- They enhance the rationality of the problem solver.
- They can simplify complex problems and help managers organize them more efficiently.
- They provide a means of evaluating risk and estimate of risk levels.
- Improved user friendly software allows managers with limited computer skills to employ qualitative methods.

Disadvantages of Quantitative methods

- They employ models that are simplified version of reality
- There is resistance to change to computers and quantitative methods initially
- Not every problem can be modeled satisfactorily using quantitative methods, such as interpersonal problems are difficulty to quantify.
- Lack of full understanding of quantitative methods by most managers
- Insufficient time to solve extreme complex problems limits the use and applicability of these methods.

6.1   Management Science

The management science school emerged to treat the problems associated with global warfare. Today, this view encourages managers to use mathematics, statistics, and other quantitative techniques to make management decisions. Managers can use computer models to figure out the best way to do something — saving both money and time. Managers use several science applications.

- **Mathematical forecasting** helps make projections that are useful in the planning process.

- **Inventory modeling** helps control inventories by mathematically establishing how and when to order a product.

- **Queuing theory** helps allocate service personnel or workstations to minimize customer waiting and service cost.

- **Break-even Analysis** this is used to determine the particular point of operation at which the total revenue equal total cost and profit is zero.

- **Linear Programming** the model that determines the best way to allocate limited resources to reach an optimal solution.

- **Other methods are Simulations and probability Analysis**

Operations Management

Operations management is a narrow branch of the quantitative approach to management. It focuses on managing the process of transforming materials, labor, and capital into useful goods and/or services. The product outputs can be either goods or services; effective operations management is a concern for both production/manufacturing and service organizations. The resource inputs, or factors of production, include the wide variety of raw materials, technologies, capital information, and people needed to create finished products. The transformation process, in turn, is the actual set of operations or activities through which various resources are utilized to produce finished goods or services of value to customers or clients. Operations management today pays close attention to the demands of quality, customer service, and competition. The process begins with attention to the needs of customers: What do they want? Where do they want it? When do they want it? Based on the answers to these questions, managers line up resources and take any action necessary to meet customer expectations.
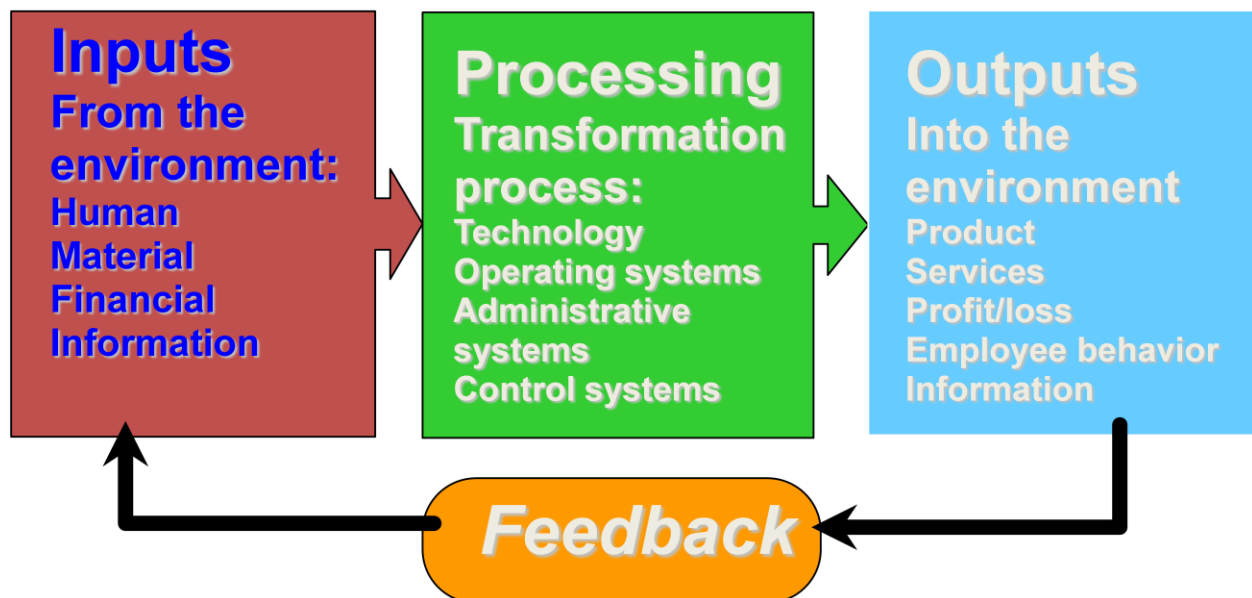
Management Information Systems

Management Information Systems (MIS) is the most recent subfield of the quantitative school. A management information system organizes past, present, and projected data from both internal and external sources and processes it into usable information, which it then makes available to managers at all organizational levels. The information systems are also able to organize data into usable and accessible formats. As a result, managers can identify alternatives quickly, evaluate alternatives by using a spreadsheet program, pose a series of "what-if" questions, and finally, select the best alternatives based on the answers to these questions.

Systems Management Theory

The **systems management theory** has had a significant effect on management science. A system is an interrelated set of elements functioning as a whole. An organization as a system composed of four elements:

- **Inputs** — material or human resources
- **Transformation processes** — technological and managerial processes
- **Outputs** — products or services
- **Feedback** — reactions from the environment

Inputs
From the environment:
Human
Material
Financial
Information

Processing
Transformation process:
Technology
Operating systems
Administrative systems
Control systems

Outputs
Into the environment
Product
Services
Profit/loss
Employee behavior
Information

Feedback

In relationship to an organization, *inputs* include resources such as raw materials, money, technologies, and people. These inputs go through a transformation process where they're planned, organized, motivated, and controlled to ultimately meet the organization's goals. The *outputs* are the products or services designed to enhance the quality of life or productivity for customers/clients. Feedback includes comments from customers or clients using the products. This overall systems framework applies to any department or program in the overall organization.

Systems theory may seem quite basic. Yet decades of management training and practices in the workplace have not followed this theory. Only recently, with tremendous changes facing organizations and how they operate, have educators and managers come to face this new way of looking at things. This interpretation has brought about a significant change in the way management studies and approaches organizations. The systems theory encourages managers to look at the organization from a broader perspective. Managers are beginning to recognize the various parts of the organization, and, in particular, the interrelations of the parts.

Contemporary system theorists find it helpful to analyze the effectiveness of organizations according to the degree that they are open or closed. The following terminology is important to your understanding of the systems approach:

- An organization that interacts little with its external environment (outside environment) and therefore, receives little feedback from it is called a **closed system.**
- An **open system,** in contrast, interacts continually with its environment. Therefore, it is well informed about changes within its surroundings and its position relative to these changes.
- A **subsystem** is any system that is part of a larger one.
- **Entropy** is the tendency of systems to deteriorate or break down over time.
- **Synergy** is the ability of the whole system to equal more than the sum of its parts.

6.2 Contingency School of Management

The contingency school of management can be summarized as an "it all depends" approach. The appropriate management actions and approaches depend on the situation. Managers with a contingency view use a flexible approach, draw on a variety of theories and experiences, and evaluate many options as they solve problems. Contingency management recognizes that there is no one best way to manage. In the contingency perspective, managers are faced with the task of determining which managerial approach is likely to be most effective in a given situation. For example, the approach used to manage a group of teenagers working in a fast-food restaurant would be very different from the approach used to manage a medical research team trying to find a cure for a disease. Contingency thinking avoids the classical "one best way" arguments and recognizes the need to understand situational differences and respond appropriately to them. It does not apply certain management principles to any situation. Contingency theory is recognition of the extreme importance of individual manager performance in any given situation. The contingency approach is highly dependent on the experience and judgment of the manager in a given organizational environment.

Fiedler's Contingency Theory

Fred E. Fiedler's contingency theory centers on the belief that there is no best way for managers to lead. Different situations create different leadership style requirements for managers. The style that works in one environment may not work in another. Fiedler looked at three elements that dictate a leader's situational control. These elements are:

- **Task structure.** Is the job highly structured, fairly unstructured, or somewhere in between? The spelling out in detail (favorable) of what is required of subordinates affects task structure.

- **Leader/member relations.** This element applies to the amount of loyalty, dependability, and support that a leader receives from his or her employees. In a favorable relationship, a manager has a highly formed task structure and is able to reward and/or punish employees without any problems. In an unfavorable relationship, the task structure is usually poorly formed, and the leader possesses limited authority.

- **Positioning power.** Positioning power measures the amount of power or authority a manager perceives the organization has given him or her for the purpose of directing, rewarding, and punishing subordinates. Positioning powers of managers depends on the taking away (favorable) or increasing (unfavorable) of the decision-making power of employees.

Fiedler then rated managers as to whether they were relationship oriented or task oriented. **Task-oriented managers** tended to do better in situations with good leader/member relationships, structured tasks, and either weak or strong position power. They also did well when the tasks were unstructured but position power was strong, as well as when the leader/member relations were moderate to poor and the tasks were unstructured. Relationship-oriented managers, on the other hand, do better in all other situations. The task-motivated style leader experiences pride and satisfaction in task accomplishment for his or her organization, while the relationship-motivated style leader seeks to build interpersonal relations and extend extra help for team development in his or her organization. Judging whether a leadership style is good or bad can be difficult. Each manager has his or her own preferences for leadership. Task-motivated leaders are at their best when their teams perform successfully—such as achieving new sales records or outperforming major competitors. **Relationship-oriented leaders** are at their best when greater customer satisfaction is gained and positive company images are established.

To determine the appropriate leadership style to use in a given situation, a leader must first determine the maturity levels of his or her followers in relationship to the specific task. As employee maturity levels increase, a leader should begin to reduce task behavior and increase relationship behavior until his or her followers reach moderate maturity levels. As the employees move into above-average maturity levels, the leader should decrease not only task behavior but also relationship behavior. Once maturity levels are identified, a manager can determine the appropriate leadership style: telling, selling, participating, or delegating.

- **Telling.** This style reflects high task/low relationship behavior (S1). The leader provides clear instructions and specific direction. Telling style is best matched with a low follower readiness level.

- **Selling.** This style reflects high task/high relationship behavior (S2). The leader encourages two-way communication and helps build confidence and motivation on the part of the employee, although the leader still has responsibility and controls decision making. Selling style is best matched with a moderate follower readiness level.

- **Participating.** This style reflects high relationship/low task behavior (S3). With this style, the leader and followers share decision making and no longer need or expect the relationship to be directive. Participating style is best matched with a moderate follower readiness level.

- **Delegating.** This style reflects low relationship/low task behavior (S4). Delegating style is appropriate for leaders whose followers are ready to accomplish a particular task and are both competent and motivated to take full responsibility. This style is best matched with a high follower readiness level.

House's Path-Goal Theory

The path-goal theory, developed by Robert House, is based on the expectancy theory of motivation. A manager's job is to coach or guide workers to choose the best paths for reaching their goals. Based on the goal-setting theory, leaders engage in different types of leadership behaviors depending on the nature and demands of a particular situation. A leader's behavior is acceptable to subordinates when viewed as a source of satisfaction. He or she is motivational when need satisfaction is contingent on performance; this leader facilitates, coaches, and rewards effective performance. Path-goal theory identifies several leadership styles:

- **Achievement-oriented.** The leader sets challenging goals for followers, expects them to perform at their highest levels, and shows confidence in their abilities to meet these expectations. This style is appropriate when followers lack job challenges.

- **Directive.** The leader lets followers know what is expected of them and tells them how to perform their tasks. This style is appropriate when followers hold ambiguous jobs.

- **Participative.** The leader consults with followers and asks them for suggestions before making a decision. This style is appropriate when followers are using improper procedures or are making poor decisions.

- **Supportive.** The leader is friendly and approachable. He or she shows concern for the followers' psychological well-being. This style is appropriate when followers lack confidence.

Path-goal theory assumes that leaders are flexible and that they can change their styles as situations require. This theory proposes two contingency variables that moderate the leader behavior-outcome relationship:

- **Environment** characteristics are outside the control of followers, task structure, authority system, and work group. Environmental factors determine the type of leader behavior required if follower outcomes are to be maximized.

- **Follower** characteristics are the focus of control, experience, and perceived ability. Personal characteristics of subordinates determine how the environment and leader behavior are interpreted.

Effective leaders clarify the path to help their followers achieve their goals, and make their journeys easier by reducing roadblocks and pitfalls. Research demonstrates that employee performance and satisfaction are positively influenced when leaders compensate for shortcomings in either their employees or the work settings.

Quality School of Management

7.0   Quality School of Management

The quality school of management is a comprehensive concept for leading and operating an organization, aimed at continually improving performance by focusing on customers while addressing the needs of all stakeholders. In other words, this concept focuses on managing the total organization to deliver high quality to customers.

The Quality School of Management considers the following in its theory:

- **Organization makeup.** Organizations are made up of complex systems of customers and suppliers. Every individual, executive, manager, and worker functions as both a supplier and a customer.

- **Quality of goods and services.** Meeting the customers' requirements is a priority goal and presumed to be a key to organizational survival and growth.

- **Continuous Improvement in goods and services.** Recognizing the need to pinpoint internal and external requirements and continuously strive to improve. It is an idea that says, "The Company is good, but it can always become better."

- **Employees working in teams.** These groups are primary vehicles for planning and problem solving.

- **Developing openness and trust.** Confidence among members of the organization at all levels is an important condition for success.

Quality management involves employees in decision making as a way to prevent quality problems. The **Kaizen** (pronounced *ky-***zen**) **approach** uses incremental, continuous improvement for people, products, and processes. The **reengineering approach** focuses on sensing the need to change, seeing change coming, and reacting effectively to it when it comes. Both approaches are described in the following sections.

Kaizen Approach

The very notion of continuous improvement suggests that managers, teams, and individuals learn from both their accomplishments and their mistakes. Quality managers help their employees gain insights from personal work experiences, and they encourage everyone to share with others what they have learned. In this way, everyone reflects upon his or her own

work experiences, including failures, and passes their newfound knowledge to others. Sharing experiences in this manner helps to create an organization that is continuously discovering new ways to improve. Kaizen is the commitment to work toward steady, continual improvement. The best support for continuous improvement is an organization of people who give a high priority to learning. In this process, everyone in the organization participates by identifying opportunities for improvement, testing new approaches, recording the results, and recommending changes.

Reengineering Approach

The reengineering approach to management focuses on creating change — big change — and fast. It centers on sensing the need to change, seeing change coming, and reacting effectively to change when it comes. **Reengineering** — is the radical redesign of business processes to achieve dramatic improvements in cost, quality, service, and speed — requires that every employee and manager look at all aspects of the company's operation and find ways to rebuild the organizational systems to improve efficiency, identify redundancies, and eliminate waste in every possible way. Reengineering is neither easy nor cheap, but companies that adopt this plan have reaped remarkable results. Reengineering efforts look at how jobs are designed, and raise critical questions about how much work and work processes can be optimally configured. Although many people believe that reengineering is a euphemism for downsizing or outsourcing, this is not true. Yes, downsizing or outsourcing may be a byproduct of reengineering. However, the goal of reengineering is to bring about a tight fit between market opportunities and corporate abilities. After organizations are able to find this fit, new jobs should be created.

So, what is 'Quality', anyway?

According to Webster Dictionary, Quality is "The degree of excellence of a thing". While American Society for Quality defines it as, "The totality of features and characteristics that satisfy needs". Others suggest that, its fitness for purpose. We can see that Quality may be defined in so many ways; however, the underlying principle is that, it should satisfy all the stakeholders' needs.

7.1   Total Quality Management

In today's organisations' all work is departmentalised and are more specialised. This creates a great challenge when it comes to address matters of quality. Total Quality Management (TQM) is a wider philosophy adopted by most world-class organizations to take a wider impression of quality. TQM is basically, a discipline of setting conformance to specifications as is quality assurance, except that it's done at a wider perspective. TQM approach started in the 1950's and became more popular since 1980's and is a description of the culture, attitude and organisation of the enterprise which is on a journey to excellence without a finishing point. It aims to continuously improve organization service delivery or products so as to satisfy their customers. Management and employees are all involved in this continuous improvement process. This combination of quality and management tools creates the target of increasing bottom-line performance of an organization. Among global organisations that have adopted the TQM approach includes:

- Ford Motors,
- Toyota Motor Corporation,
- General Motors, Motorola,
- Philips,
- Dell Computers,
- Nokia Corporation,
- Caterpillar,
- Barloworld,
- Citibank,
- Asea Brown Boveri (ABB),
- Bank of America,
- Lafarge,
- Equinox-Lumwana and Bwana Mkubwa Mines,
- Mopani,
- Ilovo - Zambia Sugar and many others today.

Hashmi (2006) defines Total Quality Management (TQM) as,

"A Management philosophy that seeks to integrate all organisations functions such as engineering, production, marketing, finance, design, customer service etc, to meet and exceed customer's expectations and organisational objectives."

Among the basis of total quality management activities includes:

- Meeting customer requirements
- Top Management commitment
- All Employees involvement
- Just in Time (JIT) delivery philosophy
- On Demand Production or Service System
- Reduction in Production costs and cycle time
- Continuous Improvement in the system and facilities
- Production Line Management Ownership
- Success Recognition and Celebration
- Best-in-Class Benchmarking and
- Strategic Repositioning and Planning

From the forgoing it is exposed that, TQM is about continuous improvement in all organisations activities starting from corporate level through to business and functional level on the shop floor to the janitor. It is about people, processes, technology and the entire value chain system.

There is no important topic in today's industries than Total Quality management (TQM). The future of every organization hinges on its ability to deliver quality products and services for both domestic and international consumption. Total Quality Management (TQM) is a philosophy that says that uniform commitment to quality in all areas of an organization to promotes an organizational culture that meets consumers' perceptions of quality.

The concept of TQM rests largely on five principles:

1. Produce quality work the first time.

2. Focus on the customer.

3. Have a strategic approach to improvement.

4. Improve continuously.

5. Encourage mutual respect and teamwork.

To be effective in improving quality, TQM must be supported at all levels of a firm, from the highest executive to the lowest-level hourly employee. TQM extends the definition of quality to all functional areas of the organization, including production, marketing, finance, and information systems. The process begins by listening to customers' wants and needs and then delivering goods and services that fulfill these desires. TQM even expands the definition of customer to include any person inside or outside the company to whom an employee passes his or her work. In a restaurant, for example, the cooks' customers are the waiters and waitresses. This notion encourages each member of the organization to stay focused on quality and remain fully aware of his or her contribution to it and responsibility for it.

The TQM philosophy focuses on teamwork, increasing customer satisfaction, and lowering costs. Organizations implement TQM by encouraging managers and employees to collaborate across functions and departments, as well as with customers and suppliers, to identify areas for improvement, no matter how small. Teams of workers are trained and empowered to make decisions that help their organization achieve high standards of quality. Organizations shift responsibility for quality control from specialized departments to all employees. Thus, total quality management means a shift from a bureaucratic to a decentralized approach to control. An effective TQM program has numerous benefits. Financial benefits include lower costs, higher returns on sales and investment, and the ability to charge higher rather than competitive prices. Other benefits include improved access to global markets, higher customer retention levels, less time required to develop new innovations, and a reputation as a quality firm. Only a small number of companies use TQM because implementing an effective program involves much time, effort, money, and patience. However, firms with the necessary resources may gain major competitive advantages in their industries by implementing TQM.

Major Contributors to TQM

Total quality management is a much broader concept than just controlling the quality of the product itself. Total quality management is the coordination of efforts directed at improving customer satisfaction, increasing employee participation, strengthening supplier partnerships, and facilitating an organizational atmosphere of continuous quality improvement. TQM is a way of thinking about organizations and how people should relate

and work in them. TQM is not merely a technique, but a philosophy anchored in the belief that long-term success depends on a uniform commitment to quality in all sectors of an organization.

W. Edwards Deming

The concept of quality started in Japan when the country began to rebuild after World War II. Amidst the bomb rubble, Japan embraced the ideas of W. Edwards Deming, an American whose methods and theories are credited for Japan's postwar recovery. Ironically enough, Deming's ideas were initially scoffed at in the U.S. As a result, TQM took root in Japan 30 years earlier than in the United States. American companies took interest in Deming's ideas only when they began having trouble competing with the Japanese in the 1980s. Deming's management system was philosophical, based on continuous improvement toward the perfect ideal. He believed that a commitment to quality requires transforming the entire organization. His philosophy is based on a system known as the Fourteen Points. These points express the actions an organization must take in order to achieve TQM:

1. **Create constancy of purpose for improvement of product and service.** Dr. Deming suggests a radical new definition of a company's role: A better way to make money is to stay in business and provide jobs through innovation, research, constant improvement, and maintenance.

2. **Adopt a new philosophy.** For the new economic age, companies need to change into "learning organizations." Furthermore, we need a new belief in which mistakes and negativism are unacceptable.

3. **Cease dependence on mass inspection.** Eliminate the need for mass inspection by building quality into the product.

4. **End awarding business on price.** Instead, aim at minimum total cost, and move towards single suppliers.

5. **Improve the system of production and service constantly.** Improvement is not a one-time effort. Management is obligated to continually look for ways to reduce waste and improve quality.

6. **Institute training.** Too often, workers learn their jobs from other workers who have never been trained properly.

7. **Institute leadership.** Leading consists of helping people to do a better job and to learn by objective methods.

8. **Drive out fear.** Many employees are afraid to ask questions or to take a position—even when they do not understand what their job is or what is right or wrong. The economic losses from fear are appalling. To assure better quality and productivity, it is necessary that people feel secure.

9. **Break down barriers between departments.** Often, company departments or units compete with each other or have goals that conflict. They do not work as a team; therefore they cannot solve or foresee problems. Even worse, one department's goal may cause trouble for another.

10. **Eliminate slogans, exhortations, and numerical targets for the workforce.** These never help anybody do a good job. Let workers formulate their own slogans; then they will be committed to the contents.

11. **Eliminate numerical quotas or work standards.** Quotas take into account only numbers, not quality or methods. They are usually a guarantee of inefficiency and high cost.

12. **Remove barriers that prevent workers from taking pride in their workmanship.** Too often, misguided supervisors, faulty equipment, and defective materials stand in the way of good performance. These barriers must be removed.

13. **Institute a vigorous program of education.** Both management and the work force will have to be informed of new knowledge and techniques.

14. **Take action to accomplish the transformation.** It will require a special top management team with a plan of action to carry out the quality mission. Workers cannot do it on their own, nor can managers. A critical mass of people in the company must understand the Fourteen Points.

Deming emphasized surveying customers, consulting production-line workers to help solve quality problems, and teamwork. His system was readily accepted in Japan, where workers and management were used to uniformity and allegiance to institutions. Japanese companies learned to collect data for the statistical monitoring and measuring of customer satisfaction. The goals of these companies were to produce many of the same consumer goods—better

and cheaper—that were produced in the U.S. These Japanese companies succeeded, much to the chagrin of companies in the U.S. Deming saw businesses as bedrock institutions in a society—much like churches and schools. Companies attain long-term success only if business leaders make their employees' contributions matter. If organizations use their employees' ideas, they will improve efficiency and productivity.

Most of the applications of Deming's ideas occurred in the 1950s and 1960s in Japan. In the United States, the desperation needed for executives to finally try a "radical" plan such as Deming's came from economic rather than wartime defeats. Most notably, in the 1980s, Japanese car manufacturers pushed their market share toward 25 percent, sending fear throughout Detroit. The Ford Motor Co. called on Deming after NBC featured his successes in a documentary, "If Japan Can, Why Can't We?" Deming took Ford's invitation as notice that his home country was finally ready for his program. He continued teaching seminars until his death, at age 93, in 1993.

Deming's system made such an impression that he is known at the Father of TQM. Following are some other significant quality experts and their works:

- **Joseph M. Juran** wrote *The Quality Control Handbook*. Recognized in Japan with the Order of Sacred Treasure. Followers: DuPont, Monsanto, Mobil.

- **Armand V. Feigenbaum** wrote *Total Quality Control.* Argued that quality should be company-wide, not confined to the quality control departments.

- **Philip B. Crosby wrote** *Quality Is Free.*

- **Michael Hammer and James Champy** wrote *Reengineering the Corporation.*

- **James Champy** wrote *Reengineering Management.*

- **Peter Drucker** wrote *Post-Capitalist Society.*

Although several individuals (mentioned above) contributed to the concept of TQM, the three mostly widely cited "masters" of quality are W. Edwards Deming (1900−1993), Joseph M. Juran, and Philip Crosby. Even though each has promoted the importance of quality emphasis, their ideas and backgrounds are not always consistent.

Joseph Juran

Joseph Juran started out professionally as an engineer in 1924. In 1951, his first Quality Control Handbook was published and led him to international prominence. The Union of Japanese Scientists and Engineers (JUSE) invited Juran to Japan in the early 1950s. He arrived in 1954 and conducted seminars for top- and middle-level executives. His lectures had a strong managerial flavor and focused on planning, organizational issues, management's responsibility for quality, and the need to set goals and targets for improvement. He emphasized that quality control should be conducted as an integral part of management control.

Intrinsic to Juran's message is the belief that quality does not happen by accident; it must be planned. Juran sees quality planning as part of the quality trilogy of quality planning, quality control, and quality improvement. The key elements in implementing company-wide strategic quality planning are in turn seen as: identifying customers and their needs; establishing optimal quality goals; creating measurements of quality; planning processes capable of meeting quality goals under operating conditions; and producing continuing results in improved market share, premium prices, and a reduction of error rates in the office and factory. Juran's formula for results is to establish specific goals to be reached, and then to establish plans for reaching those goals; assign clear responsibility for meeting the goals; and base the rewards on results achieved. Juran believes that the majority of quality problems are the fault of poor management, not poor workmanship, and that long-term training to improve quality should start at the top with senior management.

Philip Crosby

Philip Crosby is another major contributor to the quality movement. In 1979, he left ITT (International Telephone and Telegraph) and wrote his book, *Quality is Free,* in which he argues that dollars spent on quality and the attention paid to it always return greater benefits than the costs expended on them. Whereas Deming and Juran emphasized the sacrifice required for a quality commitment, Crosby takes a less philosophical and more practical approach, asserting instead that high quality is relatively easy and inexpensive in the long run. Crosby is the only American quality expert without a doctorate. He is responsible for the **zero defects** program, which emphasizes "doing it right the first time," (DIRFT) with 100 percent acceptable output. Unlike Deming and Juran, Crosby argues that quality is

always cost effective. Like Deming and Juran, Crosby does not place the blame on workers, but on management. Crosby also developed a 14-point program, which is again more practical than philosophical. It provides managers with actual concepts that can help them manage productivity and quality. His program is built around four Absolutes of Quality Management:

1. Quality must be viewed as conformance to specifications. If a product meets design specifications, then it is a high-quality product.

2. Quality should be achieved through the prevention of defects rather than inspection after the production process is complete.

   According to Crosby, the traditional quality control approach taken by American firms is not cost effective. Instead, production workers should be granted the authority and responsibility to ensure that quality goods or services are produced at every step of the process.

3. Managers need to demonstrate that a higher standard of performance can lead to perfection—to zero defects. Crosby believed that the company goal should be zero defects.

4. Quality should be measured by the price of nonconformity. Crosby contends that the costs associated with achieving quality should be part of a company's financial system.

The Implementation of TQM

The implementation of total quality management is similar to that of other decentralized control methods. In developing TQM, companies need to understand how consumers define quality in both the goods and services offered. If a company pays more attention to quality in its production process, fewer problems will occur later when the product is in the consumer's hands. One way to measure product performance and quality is through customer surveys, which can help managers identify design or manufacturing problems. According to quality consultant Armand V. Feigenbaum, the end user best defines quality, which means that quality is open to subjective interpretations. Consumer perceptions have to be changed if a company wants to change a product's quality image. Extended service programs and improved warranties can help accomplish this feat. As examples, Whirlpool

Corporation promises that parts for all models will be available for 15 years, and Mercedes-Benz provides technical roadside assistance after service hours. Another means of ensuring a commitment to quality "after the sale" is via a product or service guarantee. Wal-Mart is known for its no-hassles return policy for any product—with or without a receipt. Mail-order house L. L. Bean will replace a pair of hunting boots purchased ten years earlier with new boots. Saturn automobile retailers provide total refunds for vehicles within 30 days if the customer is not fully satisfied. However, many companies are not willing to incur the short-run costs associated with such guarantees.

Commitment throughout the Organization

To be effective, the TQM philosophy must begin at the top. From the board of directors to the hourly line employees, TQM must be supported at all levels if the firm is to realize any real improvements in quality. In addition to commitment from the top, the organization must meet these requirements if TQM is to succeed:

- A change in corporate culture about the importance of quality
- Forging of internal team partnerships to achieve quality, process, and project improvements, and the creation of external partnerships with customers and suppliers
- Audits to assure quality techniques
- Removal of obstacles to successful implementation, such as lack of time or money in the short run

Typically, two to ten years are needed to reap the benefits of a successful TQM program.

7.2   World-Class Quality: ISO 9000 Certification

With the highly competitive nature of the current business world, customers can dictate who, what, when, where, why, and how much regarding market commodities and services. In other words, quality has never counted more. As a result, management and organizations must heed these calls and specifically cater to the ever-changing expectations of their international clientele. Globally, customers expect quality whether they are buying a consumer product or receiving a service. As a result, many countries have adopted the quality standards set by the International Standards Organization (ISO) in Geneva, Switzerland. Businesses that want to compete as world-class companies are increasingly expected to have *ISO 9000 Certification* at various levels. To gain certification in this family of quality standards, businesses must undergo a rigorous assessment by outside auditors to determine whether they meet ISO requirements. Increasingly, the ISO stamp of approval is viewed as a necessity in international business; the ISO certification provides customers with an assurance that a set of solid quality standards and processes are in place. The commitment to total quality operations is now a way of life in world-class firms. In the United States, the Malcolm Baldridge National Quality Awards were established to benchmark excellence in quality achievements. The following list of award criteria indicates the full extent of the day-to-day commitment that is essential to gaining competitive advantage through a commitment to total quality:

- Top executives incorporate quality values into day-to-day management.
- The organization works with suppliers to improve the quality of their goods and/or services.
- The organization trains workers in quality techniques and implements systems that ensure high-quality products.
- The organization's products are as good as or better than those of its competitors.
- The organization meets customers' needs and wants and gets customer satisfaction ratings equal to or better than those of competitors.
- The organization's quality system yields concrete results such as increased market share and lower product cycle times.

7.3 Quality Management Systems

Quality Management System (QMS) came from the idea of how to lead organisations to excellence. The first idea was and still valid today. If organisations can identify and see what the customers want and like, and deliver these services or products, in the same required format every time, the customers will become noble to the organizations services or products. They will tell others about the products and in turn the organization will become more successful. Another factor behind Quality Management is that, which concerns efficiency in all organisations operation activities. The most efficient and effective methods, processes and techniques ought to be used, so that the non-value adding time is reduced or eliminated. This will help reduce wastage of resources, materials and defects in products or service delivery. If all this is achieved, the organisation will become more successful. Quality leads organisations to improved performance by reducing on the costs, improving customer services and higher profit margins. Failing to manage quality is equivalent to obsolescing an organisation for the future; hence value delivery to the customer becomes impossible. Among the lessons that quality revolution may have laid over the years include:

- Total understanding of what customers want in products or services which will in turn help the organisation deliver only that which is perceived as fit for purpose.
- Establishing detailed specifications from market research by taking into account the voice of the customer. This includes appropriate delivery in conformance to specifications.
- Putting in place appropriate process control to minimise or eliminate deviations from specifications in the delivery of services or products.
- Correctly recording of information on the processes so as to establish any deviations.

Quality Management System Characteristics

Management of quality characteristics in organizations may include:

- Typically using a documented system
- Develop and implement a policy for quality
- Identification and monitoring of organization processes
- Provision of the required resources for quality programmes
- Development of quality plans to assure implementation
- Provide control and responsibility for actions
- Developing records as evidence of success and failure

7.4   ISO 9000: Quality Management Systems

Organizations today compete on a global scale for the same market. In order to remain competitive, organizations must adapt to the new corporate climate. One obstacle many organizations are facing today is the ever-increasing standards of quality customers expect from their respective products or services organizations provide. To overcome this obstacle, many organizations have begun or have completed the implementation of ISO 9000 series, which is a quality system and describes the fundamentals of the Quality Management Systems (QMS). Fundamentally, they are a set of rules that can be followed by any type of organization in order for a company to understand the wants and needs of their customers. ISO 9000 is a generic system, allowing the standard to be applied in virtually any situation. Formed in 1947, in Geneva, Switzerland, ISO is a nickname used for the International Organization for Standardization. ISO aims to *develop a common set of manufacturing, services, common trade and communications standards.* The equivalent in the United States is called the "American National Standards Institute" and is commonly abbreviated as ANSI.

The word "ISOS" means, "equal" in Greek, and that is what ISO 9000 attempts to establish. The ISO 9000 standard is used in order to create organizations that are equal when it comes to customer service and meeting customer needs. ISO 9000 is a European standard; however, it is being adapted throughout the world. The International Organization for Standardization believes that, there are two main points that should be understood in order to undertake ISO 9000 implementation. One is to *promote development of standardization* to facilitate international exchange of goods and services. This is to allow international organizations to compete on the same level in regards to goods and services. The second is to *promote cooperation* in intellectual, scientific, technological and economic activity. Sharing information allows organizations to grow as well as allow both parties to benefit.

A commitment to ISO 9000 is necessary in order for it to be successful. Once a commitment is made, it is only a matter of time until the organization is compliant with ISO 9000. Once the commitment is made, the organization must come up with a plan in order to see what is feasible. Implementation of the plan will commence and then, once completed, an ISO 9000 Certificate can be issued. Once ISO 9000 is implemented, it will benefit the organization in many ways. Customers will recognize the certification, as it holds an important place when most organizations are looking to purchase from others. This will allow increased sales, while the actual implementation is contributing to higher quality and improved service delivery. The organization on a whole will benefit, as it will allow the employees to operate in a more efficient way, and this has shown for the early adopter that it increases worker morale and teamwork efficiency. Among the auditing and certification, organizations that are normally called the

"registrar" include; British Standards Institute commonly referred to as BSi Group,[1] SGS Group,[2] South Africa Bureau of Standards[3] commonly referred to as SABS and Zambia Bureau of Standards[4] abbreviated as ZABS among others. ISO's formal review process requires continual review to keep standards up to date. This must be initiated within three years of publication of a standard.[5] User group inputs from various sectors when updating the standards include:

- A global user questionnaire or survey
- A market justification study
- Suggestions arising from the interpretation process
- Opportunities for increased compatibility with ISO 14001
- The need for greater clarity, ease of use and improved translation
- Current trends keeping up with recent developments in management system and regulatory practices

ISO 9000 Based Document Structure

The tiers that are required for the ISO 9000 based quality management systems are shown in figure 1.0 below and include:

- Quality Manual
- Procedures
- Work Instructions
- Traceable Records
- Structure required

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[1] British Standards Institute founded in 1901, http://www.bsi-global.com/en/About-BSI/

[2] http://www.sgs.com/

[3] https://www.sabs.co.za/

[4] http://www.zabs.org.zm/

[5] http://www.iso.org/iso/iso_catalogue/management_standards/iso_9000_iso_14000/iso_9001_2008/faqs_on_iso_9001.htm
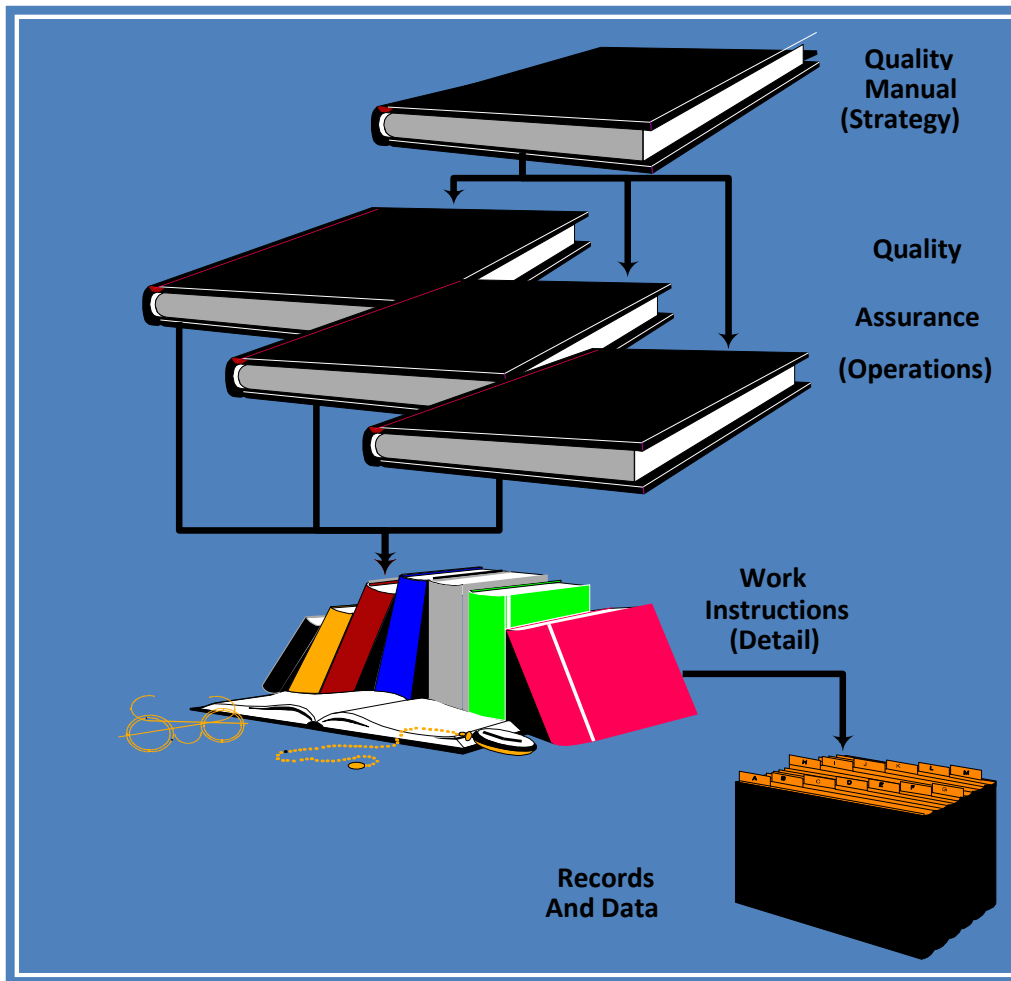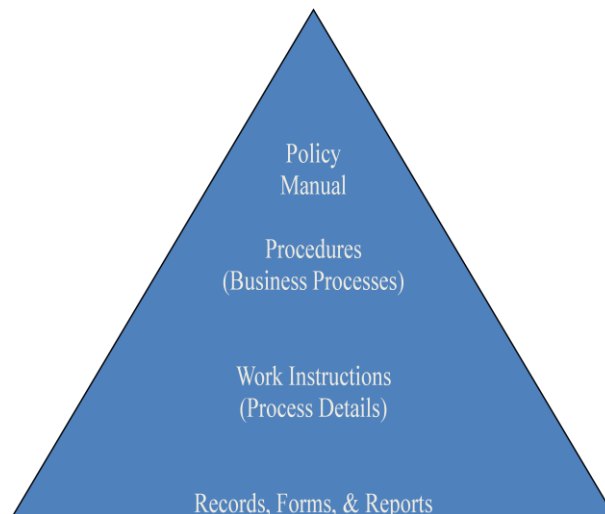
Figure 1.0: Tiers Required for ISO 9000 Quality Management System

General Requirements

Generation of documentation should not be an end to itself, but should be a value-adding activity. The extent of the documentation can vary due to:

- Size of organization
- Organization activities
- Complexity of processes
- Competence of personnel

There are five sections in the standard that specify activities that need to be considered when you implement your system:

- Overall requirements for the quality
- Management system and documentation
- Management responsibility, focus, policy, planning and objectives
- Resource management and allocation
- Product realization and process management, and
- Measurement, monitoring, analysis and improvement

Productivity in Organizations

Productivity is the relationship between a given amount of output and the amount of input needed to produce it. Profitability results when money is left over from sales after costs are paid. The expenditures made to ensure that the product or service meets quality specifications affect the final or overall cost of the products and/or services involved. Efficiency of costs will be an important consideration in all stages of the market system from manufacturing to consumption. Quality affects productivity. Both affect profitability. The drive for any one of the three must not interfere with the drive for the others. Efforts at improvement need to be coordinated and integrated. The real cost of quality is the cost of avoiding nonconformance and failure. Another cost is the cost of not having quality—of losing customers and wasting resources. As long as companies continually interact with their customers and various partners, and develop learning relationships between all levels of management and employees, the levels of productivity and quality should remain high.

Management in the Future

Modern management approaches respect the classical, human resource, and quantitative approaches to management. However, successful managers recognize that although each theoretical school has limitations in its applications, each approach also offers valuable insights that can broaden a manager's options in solving problems and achieving organizational goals. Successful managers work to extend these approaches to meet the demands of a dynamic environment.

Modern management approaches recognize that people are complex and variable. Employee needs change over time; people possess a range of talents and capabilities that can be developed. Organizations and managers, therefore, should respond to individuals with a wide variety of managerial strategies and job opportunities.

Key themes to be considered, as the twenty-first century progresses, include the following:

- The commitment to meet customer needs 100 percent of the time guides organizations toward quality management and continuous improvement of operations.

- Today's global economy is a dramatic influence on organizations, and opportunities abound to learn new ways of managing from practices in other countries.

- Organizations must reinvest in their most important asset, their people. If organizations cannot make the commitment to lifelong employment, they must commit to using attrition to reduce head count. They will not receive cooperation unless they make it clear that their people will not be working themselves out of a job.

- Managers must excel in their leadership responsibilities to perform numerous different roles.