

Decision Making

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In this article we have tried to define and make good and comprehensive explanations of decision making process in different situation. because of decision making importance in business we have tried to take a deep look different subjects that are direct and indirectly related to decision making so as we know decision making is the process of selecting a logical choice from among the available options to do that we need to evaluate, analyze and determine which alternative will be suited for our case of actions.

1. Introduction

By definition decision making is: The process of selecting a logical choice from among the available options. When trying to make a good decision, a person must weight the positives and negatives of each option, and consider all the alternatives. For effective decision making, a person must be able to forecast the outcome of each option as well, and based on all these items, determine which option is the best for that particular situation. [James Reason 1990]. Human performance in decision making terms has been the subject of active research from several perspectives. From a psychological perspective, it is necessary to examine individual decisions in the context of a set of needs, preferences an individual has and values they seek. From a cognitive perspective, the decision making process must be regarded as a continuous process integrated in the interaction with the environment. From a normative perspective, the analysis of individual decisions is concerned with the logic of decision making and rationality and the invariant choice it leads to.[Daniel Kahneman, Amos Tversky2000]

The ability to make wise, educated decisions is essential to living a successful and fulfilled life. Individuals, groups or teams make decisions every day. Some decisions are very important and affect a lot of people whereas other decisions are small and affect only one or two people. A decision-making process based on data leads to good decisions. A major concern in management has been to understand and improve decision making. [Isabel Briggs Myers|Myers, I. 1962]

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There have been two approaches to management decision making [Huber, 1980]. The first is concerned with development and application of normative decision rules based on formal logic derived from economics or statistics. The second involves descriptive accounts of how people actually go about making judgments, decisions, and choices. [Isabel Briggs Myers|Myers, I. (1962)] Decision making can usually be improved by breaking a problem into parts, working on the parts separately, and then combining them to make a final decision. It has been shown in a variety of works that business decision making environment is a unity of decision makers' experience, beliefs and perceptions on one side, and decision support tools and techniques – on the other side. In making important decisions, any information sources that contain relevant important information are going to be accessed and used. In this paper we are going to show decision making process, models, and types. And explain how we can make strategic decisions in different situations. In fact making decision in management has a significant role as Peter Drucker says 90 percent of activities in management is decision making, so we are going to discuss this important subject to show different aspect of it and find new ideas in this area of research. In this paper we consider and evaluate some issues as follow:

2. Decision Making Process and Steps

Decision making is the process of generating and evaluating alternatives and making choices among them. Is it always best to strive for optimal decisions? Probably not, shooting for perfect solutions can freeze decision makers into inaction. They become so afraid of not making the perfect decision that they create. When gathering data and information becomes more important than making decisions and taking action sometimes, it's better to make decisions, risk mistakes and then learn from the mistakes when you make them. After all, the saying isn't "decisions make perfect", its "practice make perfect". (S. Herper 2000)

As we know, the coca-cola story suggests the extensive need for decision making in business. A managerial decision typically affects a great number of people-customers, stockholders, employees and the general public. Coca-cola for example has more than 100000 shareholders of record and nearly that many employees. Professional managers see the results of their decisions reflected in the firm's earnings report, the welfare of employees, and the economic health of the community and the country. To strive and prosper, managers must be able to able to make professional decisions. Companies do not want dynamic failures; they want individuals who are properly equipped to make decisions. This does not mean that managers must be right 100 percent of the time: no one is perfect. It does suggest that successful managers have a higher batting average than less successful managers. (R.wayne mondy et al 1993)

Decision making does not occur in a vacuum. Elements of the organization's external environment are the same in a similar manner; the internal environment helps determine what decisions are made and who makes them. For example, the success of Pepsi-cola in gaining market share while coca-cola lost it helped convince Goizueta that change was needed. Whether a decision is programmed or none programmed and regardless of managers' choice of the classical, administrative, or political model of decision making, a decision making process typically has five steps: that are summarized as follow:

- 1) Identify the problem or opportunity
- 2) Develop alternative
- 3) Evaluate alternative
- 4) Choose and implement the best alternative
- 5) Evaluate the decision

2.1. Identify the problem or opportunity: according to Harold Leavitt, a business leader must have three major talents: problem solving and subsequent decision making, implementing and visionary and entrepreneurial talents. Some people view decision making only as problem solving, however, problems are usually better treated as opportunities. The first step in the decision making process should be to look more for decision-making opportunities than for problems. Eventually, problems will make themselves evident. Often, the distinction between a problem and an opportunity is not clear. In defining a problem (or opportunity), it is important to consider not just the problem itself but the underlying causes. The problem may be an increased number of defects coming off a production line. The causes of a problem must be understood before the problem can be corrected. Managers confront a decision requirement in the form of either a problem or an opportunity. A problem occurs when organizational accomplishment is less than established goals. An opportunity exists when managers see potential accomplishment that exceeds specified current goals.

Awareness of a problem or opportunity is the first step in the decision sequence and requires surveillance of the internal and external environment for issues that merit executive attention. [Richard L. Daft 2005]. Managers scan the world around them to determine whether the organization is satisfactorily progressing toward its goals. Some information comes from periodic financial reports, performance reports, and other sources that designed to discover problems before they become too serious. Managers also take advantage of informal sources. They talk to other managers, gather opinions on how things are going, and seek advice which problems should be talked or which opportunities embraced.

2.2. Develop alternatives: A problem can usually be solved in any of a number of ways. The choices that the decision maker has to decide on are alternatives. The only alternative that really counts is the one judged best among those

considered. At this point in the decision-making process, however, it is important to consider all feasible ways by which the problem can be solved. Once the problem or opportunity has been recognized and analyzed, decision makers begin to consider taking action. The next stage is to generate possible alternative solutions that will respond to the needs of the situation and correct the underlying causes. One study found that limiting the search for alternatives is a primary cause of decision failure in organizations. [Paul C. Nutt 1999] Decision alternatives can be thought of as the tools for reducing the difference between the organizations' current and desired performance. Once a problem or opportunity has come to a managers' attention, the understanding of the situation should be refined. Diagnosis is the step in the decision making process in which managers analyze underlying causal factors associated with the decision situation. Managers make a mistake here if they jump right into generating alternatives without first exploring the cause of the problem more deeply. [C. Kepner and B. Tregoe 1965].

2.3. Evaluate alternatives: usually, advantages and disadvantages can be found in every possible solution. One alternative may be clearly superior, but it may also have some weak points. The alternative of producing a new coke carried with it the risk of alienating Americans who liked the old coke. It is essential that managers realistically appraise arguments for or against a particular alternative. Sometimes an idea sounds good initially, but taking time to weigh the pro and cons of alternatives usually pays off. There are a number of ways of evaluating alternatives. One way is to list the pros and cons of each. Care should be taken, however, not to place too much emphasis on the number of pros and cons, but rather to consider the overall importance of those relating to each alternative. Another way is to determine the expected payoff associated with each alternative.

2.4. Choose and implement the best alternative: once feasible alternatives have been developed, one must be selected. The decision choice is the selection of the most promising of several alternative course of action. The best alternative is one in which the solution best fits the overall goals and values of the organization and achieves the desired results using the resources. Making choices depends on managers' personality factors and willingness to accept risk and uncertainty. This stage involves the use of managerial, administrative, and persuasive abilities to ensure that the chosen alternative is carried out. This is similar to the idea of strategic implementation. The ultimate success of the chosen alternative depends on whether it can be translated into action. In the evaluation stage of the decision process, decision makers gather information that tells them how well the decision was implemented and whether it was effective in achieving its goals. Feedback is important because decision making is a continuous, never ending process. Decision making is not completed when an executive or board of directors votes yes or no. Feedback provides decision makers with information that can precipitate a new decision cycle.

The ability to select the best course of action from several possible alternatives often separates successful managers from less successful ones. The alternative offering the highest promise of attaining the objective, taking into consideration the overall situation, should be selected. This step may sound easy, but for managers it is the toughest part of the job. Fear of making a wrong decision sometimes causes a manager to make no decision at all. It is no wonder that relatively high salaries are paid to managers with a reputation for having the fortitude to make decisions and for making correct ones most of the time.

2.5. Evaluate the decision: no decision-making process is complete until the decision has been exposed to the realities of the business environment. The problem requires an objective assessment of how the decision has solved the problem or taken advantage of the problem-turned into opportunity. The implementation of a decision does not complete the decision making process. [R.Wayne et al 2005]

3. Ethical Decision Making

One of the reasons that half of all decisions taken by managers do not solve the problems. They are supposed to address is that decision makers ignore ethical questions. When performing the management functions, you need to maintain high ethical standards and follow ethical guidelines, such as the stakeholders' approach to ethics. Even when making unpopular decisions that do not benefits all stake holders, such as lay0off, you can still be ethical. For example, by giving advance notice and helping people who lose their jobs find new ones within the company or elsewhere.

In many situations there may no simple right or wrong answers. Yet there are several questions that you can ask yourself and a couple of self-tests to help you make right ethical decision. First ask yourself, "Are there any legal restrictions or violations that will result from the action? If so, take different course of action, if not, ask you, "dose it violate my company's code of ethics?" If so again find a different path to follow. Third ask "does this meet the guidelines of my own ethical philosophy?" if the answer is "yes", then your decision must still pass two important tests. [Gitman et al 2008]

The feeling test: you must now ask, "How does it make me feel?" this enables you to examine your comfort level with a particular decision. Many people find that after reaching a decision on an issue they experience discomfort that may manifest itself in a loss of sleep or appetite. Front page of the newspaper test: the final test is the" front page of the newspaper" the question to be asked is how a critical and objective reporter would report your decision in a front-page story. [Gitman et al 2008]. Decisional roles: According to Mitzberg: the time managers spend obtaining and sharing information is not an end in itself. The time spent talking to and obtaining and sharing information with people inside and outside the company is useful to managers because it helps them make good decisions.

According to Mintzberg, managers engage in four decisional sub roles: entrepreneur, disturbance handler, resource allocator, and negotiator. [Chuck Williams 2005]

4. Decision Models

Decision making models: there are two primary decision making models: the rational model and the bounded rationality model. With rational model (also called the classical model), the decision maker attempts to use optimizing, selecting the best possible alternative. In bounded rationality model (also called the administrative model), decision maker uses satisfying, selecting the first alternative that meets the minimal criteria. [Robert N. Lussier 2006]. Making better decisions: modern research shows that managers, who make the best decisions, don't overanalyze by relying on rational decision making model, nor do they oversimplify by relying solely on their intuition. Instead, many managers utilize a concept referred to as "recognition decision making". Recognition decision making leads to quicker decisions than rational decision making because it integrates the use of memory in the context of a situation in order to develop an immediate feel for the current situation. [Chuck Williams 2005]

The Rational Model: the approach managers use to make decisions usually falls into one of three types: The classical, the administrative and the political models. The choice of model depends on the managers' personal preference, whether the decision is programmed or non-programmed, and the extent to which the decision is characterized by risk, uncertainty, or ambiguity. Decision making involves effort both before and after the actual choice. Programmed and non-programmed decisions: management decisions typically fall into one of two categories: programmed and non-programmed. Programmed decisions are made in response to recurring organizational problems. The decision to reorder paper and other office supplies when inventories drop to a certain level is a programmed decision. [Richard L. Daft 2005]. Non-programmed decisions have important consequences for the organization. Many non-programmed decisions involve strategic planning, because uncertainty is great and decisions are complex. [Richard L. Daft 2005]

4.1. Classical model: the classical model of decision making is based on economic assumptions. This model has arisen within the management literature because managers are expected to make decisions that are economically sensible and fit the organizations' best economic interests. This model is considered to be normative, which means it defines how a decision maker should make decisions. It does not describe how managers actually make decisions so much as it provides guidelines or how to reach an ideal outcome for organization. [Richard L. Daft 2005]. Importance and limitations of rational decision-making: as a matter of fact, given an awareness of an opportunity and a goal, the decision making process is really the core of planning.

4.2. Rationality: it is frequently said that effective decision making must be rational. But what is rationality? When is a person thinking or deciding rationally? People acting or deciding rationally are attempting to reach some goals that can not be attained without action. They must have a clear understanding of alternative courses by which a goal can be reached under existing circumstances and limitations. They also must have information and the ability to analyze and evaluate alternatives in light of the goal sought. In many respects, the classical model represents an ideal model of decision making that is often unattainable by real people in real organizations. It is most valuable when applied to programmed decisions and to decisions characterized by certainty or risk, because relevant information is available and probabilities can be calculated. [Richard L. Daft 2005]. A programmed and non-programmed decision: a distinction can be made between programmed and non-programmed decisions. A programmed decision is applied to structured or routine problems. This kind of decision is used for routine and repetitive work: it relies primarily on previously established criteria. It is, in effect, decision-making by precedent.

4.3. Bounded rationality: means that people have limits, or boundaries, on how rational they can be. Because managers do not have the time or cognitive ability to process complete information about complex decisions, they must satisfy. Satisficing: means that decision makers choose the first solution alternative that satisfies minimal decision criteria. Rather than pursuing all alternatives to identify the single solution that will maximize economic returns, managers will opt for the first solution that appears to solve the problem, even if better solutions are presumed to exist. Limited or Bounded Rationality: a manager must settle for limited or bounded rationality. In other words, limitations of information, time and certainty limit rationality, even if a manager tries earnestly to be completely rational. Since managers can not be completely rational in practice. They sometimes allow their dislike of risk to interfere with the desire to reach the best solution under circumstances. Herbert Simon called this satisficing that is, picking a course of action that is satisfactory or good enough under circumstances. [Heinz Wehrich et al 2005]

4.4. Administrative model: this model of decision making describes how managers actually make decisions in difficult situations, such as those characterized by non-programmed decisions, uncertainty and ambiguity. Many management decisions are not sufficiently programmable to lend themselves to any degree of quantification. Managers are unable to make economically rational decisions even if they want to. Non-programmed decisions: are used for unstructured, novel, and ill-defined situations of a non-recurring nature. Example is the development of the four-wheel-drive passenger car by Audi. In fact strategic decisions, in general, are non-programmed decisions. Most decisions are neither completely programmed nor completely non-programmed: they are a combination of both. [Heinz Wehrich et al 2005].

The administrative model of decision making is based on the work of Herbert Simon. Simon proposed two concepts that were instrumental in shaping the administrative model: bounded rationality and satisfying. According to the administrative model:

Decision goals often are vague conflicting and lack consensus among managers. Managers often are unaware of problems or opportunities that exist in the organization. Rational procedures are not always used, and, when they are, they are confined to a simplistic view of the problem that does not capture the complexity of real organization view. Managers' searches for alternatives are limited, because of human, information and...ect. Most managers settle for a satisfying rather than a maximizing solution. The administrative model is considered to be descriptive, meaning that it describes how managers actually make decision in complex situations rather than dictating how they should make decisions according to a theoretical ideal. This model recognizes the human and environmental limitations that affect the degree to which managers can pursue a rational decision-making process.

4.4.1. Intuition: another aspect of administrative decision making is intuition. Intuition represents a quick apprehension of a decision situation based on past experience but without conscious thought. [Weston. H, Agor 1986]. Intuitive decision making is not arbitrary or irrational, because it is based on years of practice and hand-on experience that enable managers to quickly identify solutions without going through painstaking computations.

4.5. Political model: the third model of decision making is used for making none programmed decisions when conditions are uncertain, information is limited and there is disagreement among managers about what goals to pursue or what course of action to take. The political model closely resembles the real environment in which most managers and decision makers operate. Decisions are complex and involve many people, information is often ambiguous, and disagreement and conflict over problems and solutions are normal. There are four basic assumptions of the political model. Organizations are made of groups with diverse interests, goals, and values. Information is ambiguous and incomplete. Managers do not have the time, resources, or mental capacity to identify all dimensions of the problem and process all relevant information. Managers engage in the push and pull of debate to decide goals and discuss alternatives. Decisions are the result of bargaining and discussion among coalition members. [Richard L. Daft 2005]

4.6. The Kepner-Tregoe method: this model combines the objective quantitative approach with some subjectivity. The subjectivity comes from determining "must" and "want" criteria and assigning weighted values to them. [Robert N. Lussier 2006]. The Kepner-Tregoe method is a technique for comparing alternative using the criteria selected in step 2 of the decision making model. [Robert N. Lussier 2006].

5. Individual Decision Making and Group Decision Making

when a problem exists, you must decide who should participate in solving it. As a rule of thumb, the key people involved with the problem should participate. However, the current trend in management favors increased employee participation. Although the trend is toward group decision making, some people want to be involved in decision making and other do not. Using group to improve decision making: according to a study reported in fortune magazine, 1 percent of U.S companies use teams and groups to solve specific problems. Individuals who are highly defensive in this manner show significantly greater left prefrontal cortex activity as measured by EEG than do less defensive individuals. [Blackhart, G. C., & Kline, J. P. 2005]

Group decision making: is frequently a shared process. For example meetings among groups of managers from different areas are an essential element for reaching consensus. The group may be involved in making a decision or in a decision related task, like creating a short list of acceptable alternatives or deciding on criteria for accepting an alternative. When a decision making group is supported electronically the supporter is referred to as group decision support system. [Turban, et al 2008]. Group method involved in decision making: decision making has been discussed as if it were a process carried out by the individual manager. In most organizations, individuals are responsible for the outcomes of decisions under their control. Effective decisions generally combine high quality with acceptance by those affected by the decision. Groups bring different resources to the decision making task. [R. Wayne et al 1993]

5.1. Potential advantages of group decision making: Better quality decision. Groups usually do a better job of solving complex problems than the best individual in the group. Special in case of significant none programmed decision and conditions of risk or uncertainty.

-More information, alternatives, creativity, and innovation: A group of people have more information than an individual. So they can be more creative and innovative. Better understanding of the decision. When people participate in decision making, they usually understand the alternatives presented and why the one selected was the best alternative.

-Greater communication to the decision: Researchers have shown that people involved in making a decision have increased communication to implementing the decision. Improved morale and motivation: Participation in problem solving and decision making is rewarding and personally satisfying to the people involved.

-Good training. Allowing participation in decision making trains people to work in groups by developing group process skills.

5.2. Potential disadvantages of group decision making:

- Wasted time and slower decision making

- Satisficing

- Domination and goal displacement: one group member or a subgroup may dominate the group decision. Goal replacement occurs when an individual or subgroup tries to get group to accept a particular alternative or dominates the group for reasons, rather than pursuing the original goal of finding the best solution.

- Conformity and groupthink: group members may feel pressured to go along with the group decision without questioning it out of fear of not being accepted or because they do not want to cause conflict. [Robert N. Lussier 2006] For creating, creative alternative solutions in group decision making there are five popular techniques:

- Brainstorming
- Synectics
- Nominal grouping
- Consensus mapping
- Delphi technique

Brainstorming is the process of suggesting many possible alternatives without evaluation.

Synectics is the process of generating novel alternative through role playing and fantasizing

Nominal grouping is the process of generating and evaluating alternatives using a structured voting method. This process usually involves six steps: listing, recording, clarification, ranking, discussion and vote

Consensus mapping is the process of developing group agreement on a solution to a problem.

The Delphi technique involves using a series of confidential questionnaires to refine a solution. [Robert N. Lussier 2006]

5.3. Personal decision making: imagine you were a manager at, GM, a local movie theater or the public library. How would you go about making important decisions that might shape the future of your department or company? As we now a number of factors may effect how managers make decisions. For example decisions may be programmed or none programmed, situations are characterized by various level of uncertainty, and managers may use the classical, administrative, or political model of decision making. [Richard L. Daft 2005]

Improving individual decision making: in theory, rational decision making leads to optimal decisions. In practice, however we know that real-world constraints, common decision making mistakes, and risky situations make fully rational decisions difficult to achieve. So managers can make better decisions by using decision rules, multi variable testing, and decision software and by avoiding common decision making error called escalation of commitment. [Chuck Williams 2005] Why do so many companies use teams and groups? Because, when, group decision making, done properly can lead to much better decision than those decisions which typically made by individuals. But we know that in group decision making there are disadvantages. [Chuck Williams 2005]

6. Decision Making Style:

Styles and methods of decision making were elaborated by the founder of Predispositioning Theory, Aron Katsenelinboigen. In his analysis on styles and methods Katsenelinboigen referred to the game of chess, saying that “chess does disclose various methods of operation, notably the creation of predisposition—methods which may be applicable to other, more complex systems.”[Katsenelinboigen, Aron 1979]

6.1. In his book Katsenelinboigen states that apart from the methods (reactive and selective) and sub-methods (randomization, predispositioning, and programming), there are two major styles – positional and combinational. Both styles are utilized in the game of chess. According to Katsenelinboigen, the two styles reflect two basic approaches to the uncertainty: deterministic (combinational style) and in deterministic (positional style). Katsenelinboigen’s definitions of the two styles are the following:

A very narrow, clearly defined, primarily material goal, and
A program that links the initial position with the final outcome.

In defining the combinational style in chess, Katsenelinboigen writes:

The combinational style features a clearly formulated limited objective, namely the capture of material (the main constituent element of a chess position). The objective is implemented via a well defined and in some cases in a unique sequence of moves aimed at reaching the set goal. As a rule, this sequence leaves no options for the opponent. Finding a combinational objective allows the player to focus all his energies on efficient execution, that is, the player’s analysis may be limited to the pieces directly partaking in the combination. This approach is the crux of the combination and the combinational style of play.[Katsenelinboigen, Aron 1979] but in management world we can find some styles that have been used by some of the managers that are as follow:

Reflexive (directive) style: a reflexive decision maker likes to make quick decisions without taking the time to get all the information that may be needed and without considering alternatives.

Reflective (analytical) style: a reflective decision maker likes to take plenty of time to make decisions, gathering considerable information and analyzing several alternatives.

Consistent (conceptual) style: consistent decision makers tend to make decisions without either rushing or wasting time. They know when they have enough information and alternatives to make a sound decision. They tend to have the best record for making good decisions.

Participation decision style: Vroom identified five leadership styles based on the level of participation of group members in the decision:

1) decide, 2) consult individuals, 3) consult group, 4) facilitate, 5) delegate. [Robert N. Lussier 2006] the role of the leader is to answer questions and provide encouragement and resources. The behavioral style: is often the style adopted by managers having a deep concern for others as individuals. Managers in this style like to talk to people one-on-one and understand their feelings about the problem, and the effect of a given decision upon them. [Richard L. Daft 2005]

The positional style is distinguished by a positional goal and a formation of semi-complete linkages between the initial step and final outcome. "Unlike the combinational player, the positional player is occupied, first and foremost, with the elaboration of the position that will allow him to develop in the unknown future. In playing the positional style, the player must evaluate relational and material parameters as independent variables. (...) The positional style gives the player the opportunity to develop a position until it becomes pregnant with a combination. However, the combination is not the final goal of the positional player—it helps him to achieve the desirable, keeping in mind a predisposition for the future development. The Pyrrhic victory is the best example of one's inability to think positionally." [V. Ulea 2002]

The positional style serves to

- a) Create a predisposition to the future development of the position;
- b) induce the environment in a certain way;
- c) absorb an unexpected outcome in one's favor;
- d) avoid the negative aspects of unexpected outcomes.

The positional style gives the player the opportunity to develop a position until it becomes pregnant with a combination. [Selected Topics 1989]

7. Decision Making and Problem Solving

A decision refers to a choice made between two or more alternatives. Decisions are diverse in nature and made continuously by both individuals and groups. The purposes of decision making in organizations can be classified into two broad

categories: problem solving and opportunity exploiting. In either case, managers must make decisions. The ability to make crisp decisions was rated first in importance in a study conducted by the Harbridge House in Boston, Massachusetts. About 6,500 managers in more than 100 companies, including many large, blue-chip corporations, were asked how important it was that managers employ certain management practices. They also were asked how well, in their estimation, managers performed these practices. From a statistical distillation of these answers, Harbridge ranked "making clear-cut decisions when needed" as the most important of 10 management practices. Ranked second in importance was "getting to the heart of the problems rather than dealing with less important issues."

Most the remaining eight management practices were related directly or indirectly to decision making. The researchers also found that only 10 percent, mainly due to the difficult decision making environment. It seems that the trial and error method, which might have a practical approach to decision making in the past, is too expensive or ineffective today in many instances. [Turban, Leidner et al 2008] When you do not meet your objectives, you have a problem. When you have a problem, you must make decisions. [Robert N. Lussier 2006]. The better you can develop plans that prevent problems before they occur, the fewer problems you will have and the more time you will have to take advantage of opportunities. A problem exists whenever objectives are not being met. In other words, you have a problem whenever there is a difference between what is actually happening and what you and your boss want to happen. If the objective is to produce 15,000 units per day but the department produces only 14,900, a problem exists. Problem solving is the process of taking corrective action to meet objectives. Decision making is the process of selecting a course of action that will solve a problem.

8. Decision Making In Crisis

No matter how well managers plan, they often find themselves in crisis situations. Decisions in such situations are significantly more important, urgent, and risky than usual. For instance suppose a piece of equipment has broken down on Thursday afternoon and the manager has to get a crucial order out by Friday. Effective managers should not be afraid such crises. Rather they should see them as providing opportunities to show exceptional competence. The successful handling of one crisis might earn a manager as much respect as would several years of good performance. A few things should not be done in a crisis situation. First, some managers pretend that nothing unusual is happening and conduct business as usual. They may prefer not to see the problem. Second, some managers overreact in crises. They take more extreme action than is needed to solve the problem. Calling everyone in on overtime when one worker would be sufficient is an example. Third, managers sometimes treat a crisis decision like any other decision. This type of decision is different, however, because of its

importance, urgency, and riskiness, the manager must exert more than usual effort. [R. Wayne et al 1993]

IT and decision making: the ideal managers of the 21st century use facts, information, and knowledge to make decision. [Robert N. Lussier 2006]. Decisions should be based on solid information rather than simply intuition. However, when generating alternatives, the question for many managers is, "how much information and how many alternatives do I need, and where should I get them? There is no simple answer. The more important the decisions, generally, the more information and/or alternatives you need. However, if you get too much information or too many alternatives, the decision becomes too complex and the best alternative may not be selected. [Robert N. Lussier 2006] the technology, especially telecommunications and computers, has shown considerable potential for assisting with problem solving and decision making. Idea generating computer software helps individuals develop alternative solutions more creatively. [Robert N. Lussier 2006]

9. Decision Making Rules

Because decision making is involved constantly in most of our activities, there are literally millions of **decision making rules**. So the problem is to isolate the most important ones that involve our basic activities and are based on good analysis.

I have abstracted from the literature and present on this paper some basic decision making rules. Those which follow are presented elsewhere on the paper and are summarized here.

Decision making rules:

- Decision making is the process of making choices among competing courses of action as described on the first page of the Research Report section titled Introduction to Decision Making.
- The most reliable process of making choices has been found to be the scientific method, as it is also the complete method of creative problem solving and decision making.
- The best researched model formula for decision making is the scientific method consisting of eleven mental activity steps or stages (usually accompanied by physical activities) and three supporting ingredients.
- A well-trained decision maker uses the following in the process of complex decision making:

A. Intuition

- B. Short model formula for decision making
- C. Full model formula for the complete method of creative decision making
- D. Specific individual “sciences” of features of decision making

A Few Decision Making Theories Often Mentioned in the Literature about Decision Making:

Rational Decision Making: "Rational" people make decisions in this theory based on the optimal choice of greatest benefit to them.

Tradeoffs: Tradeoffs are often involved in decision making. To obtain one thing we want, we may have to sacrifice one or more things we want.

Biases: Managers are often overoptimistic about the outcome of projects. We choose people and actions that please us.

Behavior Decision Making Psychology: We all have different personal attributes, characteristics, and ways of thinking that affect our decision making. Be sure to read the page with the above title in my booklet.

Resistance to Change: People in most cases resist radical change.

Normative and Descriptive Questions

Normative decision making analysis involves the nature of rationality and logic of decision making. The descriptive analysis, unlike the normative, covers peoples' beliefs and preferences as they are rather than as they should be.

10. Principles of Good Administrative Decision Making

The principles of good administrative decision making include:

- ▼ Understand the Act
- ▼ Relevant/irrelevant considerations

A decision maker is obliged to consider all matters relevant to the decision to be made. Relevant matters are the factors which the decision maker should rely on. A decision maker is obliged to consider those matters expressly referred to in the Act, or those factors which may arise by implication from its subject matter, scope and purpose.

If the Act does not specify any relevant considerations and leaves the discretionary power largely unconfined, then it is for the decision maker to determine which matters are relevant and the level of importance to be attached to them. This determination of what is relevant must be consistent with the goals of the Act. However, a decision maker is not obliged to make an exhaustive list of all matters that might conceivably be relevant to a decision and then consider them all. Relevant matters are those which must be considered, or relied on, for the exercise of the power. Agents should make sure they consider all matters relevant to the decision to be made.

Taking into account an irrelevant consideration can be just as fatal to a decision as failing to take into account a relevant consideration. Whether a matter is irrelevant (like whether a matter is relevant) is a matter of understanding the Act conferring the power. Reliance on an incorrect or unsubstantiated fact may be treated as an irrelevant consideration. Agents should take care to avoid relying on an 'insupportable finding' or 'mere conjecture'. Agents must ignore irrelevant matters and consider only relevant matters.

▼The role of policy and discretion

Discretion is a term often used when discussing statutory decision making. It refers to the element of choice a decision maker has in forming their view or making their decision. Discretion may be obvious where the Act uses the term 'may' instead of the term 'must'. However, this is not a definitive test of the existence of discretion. Discretions are vested in the decision maker. A decision maker may act improperly if they act at the command of another person. Limits to the exercise of discretion may be found in the Act or in the nature of the decision making function itself. For example: Agents should always consider the limits of their discretion and ensure they act reasonably and in accordance with the legislative framework.

In addition to statutory limits and in order to ensure administrative consistency, discretion should be exercised in accordance with the VWA's policies and procedures. Agent staff exercising statutory powers should comply with all relevant and applicable VWA policies and procedures, including the Claims Manual. However, care needs to be taken to ensure that VWA policies and procedures do not inappropriately interfere with a decision maker's discretion. That is, policies and procedures can help agents exercise their discretion by, for example, identifying relevant criteria or setting out a consultation process. However, policies and procedures should not be followed blindly - agents still need to use their discretion to make a decision considering all of the circumstances of the particular matter.

▼Best available information

Decisions should be based on and supported by the best available evidence. Courts may imply into statutes an obligation to consider the most recent and accurate information available to the decision maker.

In some situations, there is an obligation to seek out relevant information. For example, the Act may make clear there is an obligation to conduct an inquiry to discover relevant information. However, even without such an express obligation, the courts may hold the obligation exists where:

- it is obvious that information is readily available that is centrally relevant to the decision to be made
- the decision maker is on notice the information existed but chooses not to seek it out (known as 'constructive knowledge' or 'willful blindness')
- the information available to make a decision is clearly inadequate

▼ Proper, genuine, realistic consideration

A decision maker must act reasonably and give proper, genuine and realistic consideration to the merits of a decision. File notes and evidence used to reach the decision (decision record) should reflect this, in case there is a challenge to a decision.

While the failure to mention a matter expressly will not necessarily give rise to an inference that it was not considered, it is nevertheless good practice to list all matters considered

11. Conclusion

Many **decision making theories** are simple and easy to understand. However, our academic community has developed a "science" of decision making in which they discuss some very complex decision making theories. Textbooks on the subject and internet articles under "decision making theories" cover them for those interested. It is very difficult to make good decisions without valid relevant information. Information is needed for each phase and activity in the decision making process. Making decisions while processing information manually is growing increasingly difficult. Decisions range from simple to very complex. Complex decisions are composed of a sequence of interrelated sub decisions. The generic decision making process involves specific tasks. Automation of certain tasks can save time, increase consistency, and enable better decisions to be made. Thus the more tasks we can automate in the process, the better. A logical question that follows is this: is it possible to completely automate the managers' job? In general, it has been found that the job of middle

managers is the most likely job to be automated. Middle level managers make fairly routine decisions, and these can be fully automated. Manager at lower level do not spend much time on decision making. Instead, they supervise, train, and motivate non managers. Some of their routine decisions, such as scheduling, can be automated: other decisions that involve behavioral aspects can not. But even if we completely automate their decisional role, we can not automate their jobs. In addition communication and collaboration tools that provide indirect support to decision making, several other information technologies have been successfully used to support managers.

The ability to make wise, educated decisions is essential to living a successful and fulfilled life. When is the right time for your company to change its business model?

-Is moving across the country for a new job the best option for you and your family?

- At what point do you roll out a new product or service currently being tested?

- Should you sell your house now, or wait until the housing market improves?

Whether simple or complex, private or public, decisions are an essential part of your life. Not only do decisions affect your own life for good or ill, they can also affect the lives of your friends, your family, and your community. But making a good decision and avoiding a horrible one is not a chance act. It's a skill one that can be learned, honed, and perfected. Mastering the art of critical decision making is the key to improving your life at home, at work, or in your community. When you understand the necessary components of a smart decision, you can examine mistakes you might have made in the past and sidestep potential mistakes in the future. And when you know the underlying psychological, social, and emotional components that influence decision making—whether they are your own decisions or the decisions of others—you can make sounder choices that produce better results.

Now you can learn to approach the critical decisions in your life with a more seasoned, educated eye with *The Art of Critical Decision Making*, a fascinating 24-lecture course that explores how individuals, groups, and organizations make effective decisions and offers you tips and techniques to enhance the effectiveness of your own decision making. Taught by award-winning Professor Michael A. Roberto of Bryant University—a scholar of leadership, managerial decision making, and business strategy—this dynamic course is an engaging and practical guide to one of the most fundamental activities in your life. *Three Levels of Decision Making* at the heart of this accessible course is a thorough examination of decision making at three key levels.

The individual level: Studying how individuals make decisions reveals a wealth of insights into how—and why—they make particular choices. Most individuals do not examine every possible alternative but instead draw on experience and rules of thumb. Most of us, it turns out, are susceptible to what psychologists call

cognitive biases: decision traps that can cause us to make certain systematic mistakes when making choices. You also learn how intuition, surprisingly, is more than just a gut instinct and represents instead a powerful pattern recognition capability.

The group level: Because you don't always make choices on your own, it's important to understand decision making at the level of group or team. Here, you try to answer the question of whether groups are "smarter" and more capable of making critical decisions than individuals. The lectures show you problems that typically arise in group decision-making scenarios, including groupthink (the notorious tendency for groups to be pressured into conforming to a particular view) and a lack of synergy between team members. You also learn how groups can overcome these and other problems to make better decisions.

The organizational level: Studying decision making on the organizational level requires you to grasp how the structure, systems, and culture of a particular organization shape the behavior of its individual teams and members. Professor Roberto shows you how history's wrong decisions usually cannot be attributed to one wrong decision or poor leader. He also demonstrates how some organizations have encouraged and reliably performed vigilant decision making in the face of risky scenarios.

The Key to Effective Decision Making

The Art of Critical Decision Making reveals that bad decisions are usually made because of a poorly thought-out decision-making process. If decision makers put more emphasis on how to make a decision, ensure that they remove personal biases, collect information beforehand, glean the diverse perspectives of others, and perform a number of other constructive activities, they can vastly improve the strength and success of the process. Professor Roberto employs the case method used by America's most prestigious business schools, including Harvard University. Designed to expose students to a breadth and depth of real-world examples and scenarios, the case method allows you to compare and contrast various situations as a way to recognize patterns. In doing so, you refine your ability to distinguish between smart and poor decision making. Among the many compelling case studies you engage in throughout the course are these:

* IDEO's appropriate use of expertise: You study the decision-making practices of this California-based design consultancy. One of the key lessons you learn is that IDEO uses experts and their knowledge in an appropriate manner—recognizing that sometimes expertise as defined by past successes is not always ideal in a quickly changing environment.

* Improving patient care in hospitals: Professor Roberto's independent study of hospital staff demonstrated how experienced nurses can positively influence patient care through intuition. By relying on an understanding of warning signs

and using the Socratic method of asking questions, veteran nurses were able to prevent patients from experiencing life-threatening problems and reduced the rates for heart attacks and mortality.

* General Motors' financial woes: In 1972, General Motors was the nation's most profitable company, but in late 2008 the carmaker's profitability sank drastically. According to Professor Roberto, the management team's assumptions during the 1970s—including the persistence of energy sources and the internal promotion of managers—were proved false in the near and long term and only perpetuated outdated ways of thinking in the company.

Compelling historical and contemporary examples provide a captivating window through which to see the process of decision making at work. In taking key principles that great scholars and leaders have studied from history, business, and the modern world, Professor Roberto helps you understand exactly how the successful and unsuccessful decisions involved in these and other events are relevant to your own life.
Learn to Make Smarter Decisions

Whether you're the head of a Fortune 500 company, a government agency, or an everyday household, you constantly make decisions important to you and those immediately around you. The Art of Critical Decision Making offers you a toolbox of practical knowledge and skills that you can apply to various decisions—whether large or small—in your everyday life and work. Professor Roberto's lively lectures are packed with useful anecdotes, tools, and advice designed to improve your own ability to make informed decisions. Among the many insights you gain from these lectures are that a large part of making a good decision is not just solving a problem but accurately defining it; framing a decision in terms of what may be lost usually causes us to take greater risks than if a problem is framed in terms of potential gains; and hidden problems, not visible ones, are the true enemies of effective critical decision making.

Become a Better Critical Thinker
While a thorough exploration of decision making can be a complex endeavor, it takes a professor as knowledgeable and comprehensible as Professor Roberto to expose just how easy to grasp this science is. Warm, engaging, and vibrant, Professor Roberto possesses a passion for his field that is undeniably contagious. According to behavioralist Isabel Briggs Myers, a person's decision making process depends to a significant degree on their cognitive style.[Isabel Briggs Myers|Myers, I. (1962)] Myers developed a set of four bi-polar dimensions, called the Myers-Briggs Type Indicator (MBTI). The terminal points on these dimensions are: thinking and feeling; extroversion and introversion; judgment and perception; and sensing and intuition. She claimed that a person's decision making style correlates well with how they score on these four dimensions. For

example, someone who scored near the thinking, extroversion, sensing, and judgment ends of the dimensions would tend to have a logical, analytical, objective, critical, and empirical decision making style.

Other studies suggest that these national or cross-cultural differences exist across entire societies. For example, Maris Martinsons has found that American, Japanese and Chinese business leaders each exhibit a distinctive national style of decision making. [Martinsons, Maris G 2001]. We actively screen-out information that we do not think is important. In one demonstration of this effect, discounting of arguments with which one disagrees (by judging them as untrue or irrelevant) was decreased by selective activation of right prefrontal cortex.[Drake, R. A. 1993]. Wishful thinking or optimism bias – We tend to want to see things in a positive light and this can distort our perception and thinking.[Chua, E. F et al 2004]

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