Chapter 2

Making Decisions

In this chapter, students will explore the importance of decision-making to managers and learn how to make effective decisions.

LEARNING OBJECTIVES

1. Describe the eight steps in the decision-making process.
   - Develop your skill at being creative.
2. Explain the four ways managers make decisions.
3. Classify decisions and decision-making conditions.
4. Describe how biases affect decision making.
   - Know how to recognize when you're using decision-making errors and biases and what to do about it.
5. Identify effective decision-making techniques.

It's Your Career

Be a Better Decision Maker

Decisions are an essential part of your life, personally and professionally. Each and every day is a series of decisions, from minor to significant, and everything in between. Good decision-making is a skill, and like any skill, it can be learned and improved. So, how can you improve your decision-making skills? The chapter outlines four things students need to know; each numbered item will be described further in the chapter:

1. Know, understand, and use the decision-making process. Yes, there is a "method" to making decisions that takes you from identifying problems to evaluating the effectiveness of your decision. It works. Know it. Understand it. Use it.
2. Know when and how to use rational or intuitive decision-making or both. Different types of problems and different types of conditions will influence how you approach making a decision.
3. Know your decision-making style. Not everyone approaches decision making the same way. But you do need to recognize how you're most comfortable when making a decision—and how others around you make decisions.
4. Know, recognize, and understand the biases and errors that may influence your decision-making. Biases and errors can creep into your decision making. You may think you're making good decisions and may not even recognize you're doing these things. Yet, these errors and biases are likely undermining your ability to make good judgments and good choices. Beware! Be aware!

CHAPTER OUTLINE

2.1 THE DECISION-MAKING PROCESS

A **decision** is a choice made from two or more alternatives. The **decision-making process** is a set of eight steps that include identifying a problem, selecting an alternative, and evaluating the decision's effectiveness. (See **Exhibit 2-1** for an illustration of the decision-making process.)

A. **Step 1: Identify a Problem.** A **problem** is a discrepancy between an existing and a desired condition. In order to identify a problem, you, as a manager, should recognize and understand the three characteristics of problems:
   1. You must be aware of the problem. Be sure to identify the actual problem rather than a symptom of the problem.
   2. You must be under pressure to act. A true problem puts pressure on the manager to take action; a problem without pressure to act is a problem that can be postponed.
   3. You must have the authority or resources to act. When managers recognize a problem and are under pressure to take action but do not have the necessary resources, they usually feel that unrealistic demands are being put upon them.

B. **Step 2: Identify Decision Criteria. Decision criteria** are criteria that define what is relevant in a decision.

C. **Step 3: Allocate Weights to the Criteria.** The criteria identified in Step 2 of the decision-making process do not have equal importance, so the decision-maker must assign a weight to each of the items in order to give each item accurate priority in the decision. **Exhibit 2-2** lists the criteria and weights for Amanda's purchase decision for new computers.

D. **Step 4: Develop Alternatives.** The decision-maker must now identify viable alternatives that could resolve the problem.

E. **Step 5: Analyze Alternatives.** Each of the alternatives must now be critically analyzed by evaluating it against the criteria established in Steps 2 and 3. **Exhibit 2-3** shows the values that Amanda assigned to each of her alternatives for a new computer. **Exhibit 2-4** reflects the weighting for each alternative, as illustrated in **Exhibits 2-2** and **2-3**.

F. **Step 6: Select an Alternative.** This step to select the best alternative from among those identified and assessed is critical. If criteria weights have been used, the decision-maker simply selects the alternative that received the highest score in Step 5.

G. **Step 7: Implement the Alternative.** The selected alternative must be implemented by effectively communicating the decision to the individuals who will be affected by it and winning their commitment to the decision.

H. **Step 8: Evaluate Decision Effectiveness.** This last step in the decision-making process assesses the result of the decision to determine whether or not the problem has been resolved.

2.2 APPROACHES TO DECISION MAKING

At this point in the study of Chapter 2, students will learn about the manager as a decision-maker and how decisions are actually made in organizations. **Exhibit 2-5** shows how decision-making fits into the four functions of management.

In this section, students examine how decisions are made, the types of problems and decisions faced by real-life managers, the conditions under which managers make decisions, and decision-making styles.

A. **Rationality.** Managerial decision-making is assumed to be rational—that is, making choices that are consistent and value-maximizing within specified constraints. If a manager could be perfectly rational, he or she would be *completely* logical and objective.

1. Rational decision-making assumes that the manager is making decisions in the best interests of the *organization*, not in his or her own interests.
2. The assumptions of rationality can be met **if** the manager is faced with a simple problem in which (1) goals are clear and alternatives limited, (2) time pressures are minimal and the cost of finding and evaluating alternatives is low, (3) the organizational culture supports innovation and risk taking, and (4) outcomes are concrete and measurable.

B. **Bounded Rationality.** In spite of these limits to perfect rationality, managers are expected to be rational as they make decisions. Because the *perfectly* rational model of decision-making isn't realistic, managers tend to operate under assumptions of bounded rationality, which is decision-making behavior that is rational, but limited (bounded) by an individual's ability to process information.

1. Under bounded rationality, managers make **satisficing** decisions, in which they accept solutions that are "good enough."
2. Managers' decision-making may be strongly influenced by the organization's culture, internal politics, power considerations, and by a phenomenon called **escalation of commitment**—an increased commitment to a previous decision despite evidence that it may have been wrong.

C. **Intuition.** Managers also regularly use their intuition. Intuitive decision-making is a subconscious process of making decisions on the basis of experience and accumulated judgment. **Exhibit 2-6** describes the five different aspects of intuition.

1. Making decisions on the basis of gut feeling doesn't necessarily happen independently of rational analysis; the two complement each other.
2. Although intuitive decision-making will not replace the rational decision-making process, it does play an important role in managerial decision-making.

D. **Evidence-Based Management.** The premise behind **evidence-based management (EBMgt)** is that any decision-making process is likely to be enhanced through the use of relevant and reliable evidence. EBMgt promotes the use of the best available evidence to improve management practice.

1. The four essential elements of EBMgt are the decision-maker's expertise and judgment; external evidence that's been evaluated by the decision-maker; opinions, preferences, and values of those who have a stake in the decision; and relevant organizational (internal) factors such as context, circumstances, and organizational members.
2. The strength or influence of each of these elements on a decision will vary with each decision.

3. The key for managers is to recognize and understand the mindful, conscious choice as to which element(s) are most important and should be emphasized in making a decision.

2.3 TYPES OF DECISIONS AND DECISION-MAKING CONDITIONS

A. **Types of Decisions.** Managers encounter different types of problems and use different types of decisions to resolve them.
   1. Structured problems are straightforward, familiar, and easily defined. In dealing with structured problems, a manager may use a programmed decision, which is a repetitive decision that can be handled by a routine approach. Managers rely on three types of programmed decisions:
      a. A procedure is a series of interrelated sequential steps that can be used to respond to a structured problem.
      b. A rule is an explicit statement that tells managers what they can or cannot do.
      c. A policy is a guideline for making decisions.
   2. **Unstructured problems** are problems that are new or unusual and for which information is ambiguous or incomplete. These problems are best handled by a **nonprogrammed decision** that is a unique decision that requires a custom-made solution.
   3. **Exhibit 2-7** describes differences between programmed versus nonprogrammed decisions.
      a. At higher levels in the organizational hierarchy, managers deal more often with difficult, unstructured problems and make nonprogrammed decisions in attempting to resolve these problems and challenges.
      b. Lower-level managers handle routine decisions themselves, using programmed decisions. They let upper-level managers handle unusual or difficult decisions.

B. **Decision-Making Conditions.**
   1. **Certainty** is a situation in which a manager can make accurate decisions because all outcomes are known. Few managerial decisions are made under the condition of certainty.
   2. More common is the situation of **risk,** in which the decision-maker is able to estimate the likelihood of certain outcomes. **Exhibit 2-8** shows an example of how a manager might make decisions using “expected value,” considering the conditions of risk.

FUTURE VISION: Crowdsourcing Decisions

Instead of looking internally for a solution to keeping chocolate cool during shipping, Hershey is asking the crowd. Finding innovative solutions to problems is one of several uses of crowdsourcing in organizations. Crowdsourcing can help managers gather insights from customers, employees, or other groups to help make decisions such as what products to develop, where they should invest, or even who to promote. Today’s Internet connectivity provides businesses quick and easy access to insights from customers and employees, effectively tapping into their cumulative wisdom. This revolution in the decision-making process could challenge conventional management practices, requiring new skills from managers.

The following discussion questions are posed:
Talk About It 1: How can crowdsourcing help managers make better decisions?

Talk About It 2: What are some risks in using crowdsourcing to make decisions?

Student answers to these questions will vary.

3. **Uncertainty** is a situation in which the decision-maker is not certain and cannot even make reasonable probability estimates concerning outcomes of alternatives.
    a. The choice of alternative is influenced by the limited amount of information available to the decision-maker.
    b. It's also influenced by the psychological orientation of the decision-maker.
        1) An optimistic manager will follow a *maximax* choice, maximizing the maximum possible payoff.
        2) A pessimistic manager will pursue a *maximin* choice, maximizing the minimum possible payoff. (see **Exhibit 2-9)**
        3) The manager who desires to minimize the maximum "regret" will opt for a *minimax* choice. (see **Exhibit 2-10)**

LEADER MAKING A DIFFERENCE

Elon Musk is not your typical CEO. In 2002, he sold his second Internet startup, PayPal, to eBay for $1.5 billion. Currently, Musk is CEO of Space Exploration Technologies (SpaceX) and Tesla Motors, and chairman and largest shareholder of SolarCity, an energy technology company. Each of these ventures has transformed (or is transforming) an industry: PayPal—Internet payments; Tesla—automobiles; SpaceX—aeronautics; and SolarCity—energy. As a decision-maker, Musk deals mostly with unstructured problems in risky conditions. However, like other business innovators, Musk is comfortable with that and in pursuing what many might consider "crazy" idea territory. His genius has been compared to that of the late Steve Jobs and Fortune magazine named him the 2013 Businessperson of the Year.

What can you learn from this leader making a difference?

2.4 DECISION-MAKING BIASES AND ERRORS

Managers use different styles and "rules of thumb" (**heuristics**) to simplify their decision-making.

A. See **Exhibit 2-11** for the common decision-making biases.

1. *Overconfidence bias* occurs when decision-makers tend to think that they know more than they do or hold unrealistically positive views of themselves and their performance.
2. *Immediate gratification bias* describes decision-makers who tend to want immediate rewards and avoid immediate costs.
3. The *anchoring effect* describes when decision-makers fixate on initial information as a starting point and then, once set, fail to adequately adjust for subsequent information.
4. *Selective perception bias* occurs when decision-makers selectively organize and interpret events based on their biased perceptions.
5. *Confirmation bias* occurs when decision-makers seek out information that reaffirms their past choices and discount information that contradicts their past judgments.
6. *Framing bias* occurs when decision-makers select and highlight certain aspects of a situation while excluding others.
7. *Availability bias* is seen when decision-makers tend to remember events that are the most recent and vivid in their memory.
8. Decision-makers who show *representation bias* assess the likelihood of an event based on how closely it resembles other events or sets of events.
9. *Randomness bias* describes the effect when decision-makers try to create meaning out of random events.
10. The s*unk costs error* is when a decision-maker forgets that current choices cannot correct the past. Instead of ignoring sunk costs, the decision-maker cannot forget them. In assessing choices, the individual fixates on past expenditures rather than on future consequences.
11. *Self-serving bias* is exhibited by decision-makers who are quick to take credit for their successes and blame failure on outside factors.
12. *Hindsight bias* is the tendency for decision-makers to falsely believe, once the outcome is known, that they would have accurately predicted the outcome.

B. **Overview Managerial Decision-Making.**

1. **Exhibit 2-12** provides an overview of managerial decision-making. Managers want to make good decisions because doing so is in their best interests.
2. Regardless of the decision, it has been shaped by a number of factors, which are discussed in Chapter 7.

2.5 EFFECTIVE DECISION-MAKING FOR TODAY'S WORLD

Today's business world revolves around making decisions, which are often risky ones made with incomplete or inadequate information and under intense time pressure. How can managers make effective decisions under these conditions?

A. **Guidelines for Effective Decision-Making.**

1. Understand cultural differences.
2. Create standards for good decision-making.
3. Know when it is time to call it quits.

4. Use an effective decision-making process. Experts say an effective decision-making process has these six characteristics: a. It focuses on what's important.
   b. It's logical and consistent.
   c. It acknowledges both subjective and objective thinking and blends analytical with intuitive thinking.
   d. It requires only as much information and analysis as is necessary to resolve a particular dilemma.
   e. It encourages and guides the gathering of relevant information and informed opinion.
   f. It's straightforward, reliable, easy to use, and flexible.
5. Develop your ability to think clearly so that you can make better choices at work and in your life.

B. **Design Thinking and Decision-Making.**
Design thinking has been described as "approaching management problems as designers approach design problems." It can be useful when identifying problems and when identifying and evaluating alternatives.

C. **Big Data and Decision-Making.**
Big data is the vast amount of quantifiable information that can be analyzed by highly sophisticated data processing. One IT expert described big data with "3V's: high volume, high velocity, and/or high variety information assets". With this type of data at hand, decision-makers have very powerful tools to help them make decisions. However, experts caution that collecting and analyzing data for data's sake is wasted effort. Goals are needed when collecting and using this type of information.

ANSWERS TO REVIEW AND DISCUSSION QUESTIONS

Student answers to these questions will vary.

2-1. Why is decision-making often described as the essence of the manager's job?
Decisions are made throughout the performance of all four functions of management. Almost anything a manager does in terms of planning, organizing, leading, and controlling involves decision-making. The pervasiveness of decision-making in management explains why managers are often called decision-makers. (LO: 1, Describe the eight steps in the decision-making process, AACSB: Analytical thinking)

2-2. Describe the eight steps in the decision-making process.
The decision-making process consists of eight steps: (1) identify problem; (2) identify decision criteria; (3) weight the criteria; (4) develop alternatives; (5) analyze alternatives; (6) select alternative; (7) implement alternative; and (8) evaluate decision effectiveness. (LO: 1, Describe the eight steps in the decision-making process, AACSB: Analytical thinking)

2-3. Compare and contrast the four ways managers make decisions.

The assumptions of rationality are as follows: the problem is clear and unambiguous; a single, well-defined goal is to be achieved; all alternatives and consequences are known; and the final choice will maximize the payoff. Bounded rationality says that managers make rational decisions but are bounded (limited) by their ability to process information. Satisficing happens when decision-makers accept solutions that are good enough. With escalation of commitment, managers increase commitment to a decision even when they have evidence it may have been a wrong decision. Intuitive decision-making means making decisions on the basis of experience, feelings, and accumulated judgment. Using evidence-based management, a manager makes decisions based on the best available evidence. (LO: 2, Explain the four ways managers make change, AACSB: Analytical thinking)

2-4. Explain the two types of problems and decisions. Contrast the three decision-making conditions.
Programmed decisions are repetitive decisions that can be handled by a routine approach and are used when the problem being resolved is straightforward, familiar, and easily defined (structured). Nonprogrammed decisions are unique decisions that require a custom-made solution and are used when the problems are new or unusual (unstructured) and for which information is ambiguous or incomplete. Certainty is a situation in which a manager can make accurate decisions because all outcomes are known. Risk is a situation in which a manager can estimate the likelihood of certain outcomes. Uncertainty is a situation in which a manager is not certain about the outcomes and can't even make reasonable probability estimates. (LO: 3, Classify decisions and decision-making conditions, AACSB: Analytical thinking)

2-5. How can managers blend the guidelines for making effective decisions in today's world with the rationality and bounded rationality models of decision-making, or can they? Explain.
A balance is required. Under today's business conditions (such as intense time pressure and higher degrees of risk and uncertainty), managers must practice sound decision-making approaches. Knowing when it's time to quit, for example, is not inconsistent with rationality and bounded rationality. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

2-6. Is there a difference between wrong decisions and bad decisions? Why do good managers sometimes make wrong decisions? Bad decisions? How can managers improve their decision-making skills?
Time pressures, incomplete information, and higher levels of uncertainty in today's business environment may lead to ineffective decision-making. Managers can improve their decision-making skills by focusing on six characteristics of effective decision-making, including focusing on important criteria, logic and consistency; blending subjective and objective thinking with analysis; requiring the information necessary to resolve a particular dilemma; gathering relevant and informed opinions; and remaining flexible. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

2-7. What is big data? How can organizations effectively use big data to improve decision making? Should managers be cautious in using big data?
Big data refers to the vast amount of quantifiable information that can be analyzed by highly sophisticated data processing. Big data gives decisions makers powerful tools to

help them make decisions. However, it’s important that managers approach big data with a degree of caution keeping in mind that while big data provides information on correlations between variables it does not explain which correlations are meaningful. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

PERSONAL INVENTORY ASSESSMENTS

Student answers to these questions will vary.

ETHICS DILEMMA

Student answers to these questions will vary.

This dilemma describes a situation where a Little League team manager and district administrator falsified documents to allow boys who lived outside the team’s boundaries to play on the team. The team was eventually stripped of its championship as a result. This caused an outcry from various groups including the White House who argued that the players should not be penalized for the actions of the adults. However, Little League officials claimed that it was important to the integrity of the organization to ensure that all rules are properly followed.

Ask the students:
2-10. Was the decision by the Little League CEO to strip the title from the Chicago team and hand it over to the Las Vegas team appropriate? Explain both “why” and “why not.”

2-11. If you were a manager, how would you use this incident to “teach” employees about ethics and decision-making?

(LO: 2, Explain the four ways managers make change, AACSB: Ethical understanding and reasoning)

SKILLS EXERCISE: DEVELOPING YOUR CREATIVITY SKILL

Creativity is an important skill for all managers—not just those in marketing and R&D. In this exercise, students work on developing their creativity skills using eight steps suggested by the authors. To practice their new creativity skills, students can engage in a brainstorming exercise where they see how many words can be made from the letters in the word ‘brainstorm.’ To illustrate the usefulness of brainstorming, this could be done as an entire class with someone assigned to write down the created words. There are 95 possible words that can be generated. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

WORKING TOGETHER: TEAM EXERCISE

In this team-based activity, small groups of students are to discuss previous decision-making experiences. They should discuss whether they feel they made good/bad decisions and what happened during the decision-making process that contributed to the quality of the decision. The group should develop a list of practical suggestions for making good decisions.

In preparation for this exercise, you might initiate a class discussion centered on a particular decision-making situation. Ask the class if anyone is considering making a large purchase, such as a car, stereo, computer, or house. Students can help this individual make the decision by offering suggestions following the eight steps of the decision-making process for making a "good decision." Compiling a variety of decision criteria for a car purchase, for instance, and weighting each criterion can create interest and provide insight for students. Although one student may think that having heated car seats is a must, others may totally disregard this criterion. This class activity should help students to become more comfortable and skillful in using the decision-making process. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

MY TURN TO BE A MANAGER

- Consider a big decision that you have made. Write a description of the decision using the steps in the decision-making process as your guide. What could you have done differently in the process to improve your decision? (LO: 1, Describe the eight steps in the decision-making process, AACSB: Analytical thinking)

- Write a procedure, a rule, and a policy for your instructor to use in your class. Be sure that each one is clear and understandable. And be sure to explain how it fits the characteristics of a procedure, a rule, or a policy. (LO: 1, Describe the eight steps in the decision-making process, AACSB: Analytical thinking)

- Find three examples of managerial decisions described in any of the popular business periodicals (Wall Street Journal, BusinessWeek, Fortune, etc.). Write a paper describing each decision and any related information, such as what led to the decision, what happened as a result of the decision, etc. What did you learn about decision-making from these examples? (LO: 3, Classify decisions and decision-making conditions, AACSB: Analytical thinking)

- Interview two managers and ask them for suggestions on what it takes to be a good decision-maker. Write down their suggestions and be prepared to present them in class. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

- Do a web search on the phrase "101 dumbest moments in business." Get the most current version of this end-of-year list. Choose three of the examples and describe what happened. What's your reaction to each example? How could the managers have made better decisions? (LO: 4, Describe different decision-making styles and discuss how biases affect decision making, AACSB: Analytical thinking)

- Visit the Mindtools website (www.mindtools.com) and find the decision-making toolkit. Explore the decision making tools suggested and select one tool to use the next time you need to make a decision. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

CASE APPLICATION 1 QUESTIONS

Student answers to these questions will vary.

Where to Locate Next

2-12. How does the GIS help Wendy's improve their decisions on store locations?
The GIS used by Wendy's helps the company assess the potential of a new location in terms of auto traffic, consumer demographics, area safety, competitors, commercial mix, and other factors. Using this information, Wendy's can predict and assess the value and risk associated with a location and whether other locations should be closed or relocated. (LO: 1, Describe the eight steps in the decision-making process, AACSB: Analytical thinking)

2-13. Are the store location decisions certain or uncertain decisions?
When a manager can make accurate decisions because all outcomes are known, the manager is making a certain decision. In contrast, an uncertain decision is made when a manager is not certain about the outcomes and has difficulty making reasonable probability estimates. Wendy uses GIS to limit the uncertainty in store location decisions, however the program makes predictions about some variables such as traffic. (LO: 3, Classify decisions and decision-making conditions, AACSB: Analytical thinking)

2-14. How can intuition contribute to Wendy's decision-making process?
Making good decisions in a today's complex and dynamic environment is challenging. Effective decision making includes both analytical skills and intuitive skills. (LO: 5, Identify effective decision-making techniques, AACSB: Analytical thinking)

ANSWERS TO CASE APPLICATION 2 QUESTIONS

Student answers to these questions will vary.

The Business of Baseball

2-15. In a general sense, what kinds of decisions are made in baseball? Would you characterize these decisions as structured or unstructured problems? Explain. What type(s) of decision-making condition would you consider this to be? Explain.
The answer to this question lies in which aspect of baseball you are referring. When it comes to actually playing the game and the decision involved, the problems are structured. For example, if a pop fly is hit to left field and there is a player on 1^{st}, where is the ball thrown? On the other hand, recruiting high profile players, building a new stadium, and trying to secure television contracts would be considered unstructured because the factors involved may be novel and untried. (LO: 2, Explain the four ways managers make change, AACSB: Analytical thinking)

2-16. Is it appropriate for baseball managers to use only quantitative, objective criteria in evaluating their players? What do you think? Why?
Students should see that qualitative criteria are also important because baseball is a sport that involves life-long fans and grudges. Many of the decisions involved in baseball are based on fan loyalty and a team's potential to sell tickets. Not all of these decisions involve objective measures. (LO: 3, Classify decisions and decision-making conditions, AACSB: Analytical thinking)

2-17. Do some research on Sabermetrics. What is it? What does it have to do with decision-making?
Sabermetrics is a quantification decision-making aid. By telling decision makers what to pay attention to and by providing weights for those criteria, it is easier to predict winners and losers. Students should check out this site: http://www-math.bgsu.edu/~albert/papers/saber.html (LO: 3, Classify decisions and decision-making conditions, AACSB: Analytical thinking)

2-18. Describe how baseball front office executives and college coaches could use each of the following to make better decisions: (a) rationality, (b) bounded rationality, (c) intuition, and (d) evidence-based management.
Baseball teams, like any organization, make a variety of different decisions each day. Students should see that high priority decisions should follow rational and evidence-based decision models, because they provide the most economical results. This would have included a thorough evaluation of the decision criteria, criteria weights, possible alternatives, and evaluation of those alternative's outcomes. On the other hand, other decisions that are not high priority and do not have a major impact on the organization are likely to follow less than ideal models, like bounded rationality or intuition. In a decision involving bounded rationality, the decision would have been made based on a limited set of criteria and alternatives. In the case of intuition, a number of factors would have been considered including past experience, manager feelings, manager's skills, subconscious mental process, and managerial values. (LO: 3, Classify decisions and decision-making conditions, AACSB: Analytical thinking)

2-19. Can there be too much information in managing the business of baseball? Discuss.
There is a term that students may be familiar with called paralysis of analysis. If you ever watch a sporting event, you will hear a bewildering number of statistics and how often something like weather, home field advantage, injuries, streaks, and other factors affect the outcome. Often, these variables predict little variation in the outcome of a game. (LO: 3, Classify decisions and decision-making conditions, AACSB: Analytical thinking)