

11.2: Understanding Decision Making

Learning Objectives

1. Define decision making.
2. Understand different types of decisions.

Decision making refers to making choices among alternative courses of action—which may also include inaction. While it can be argued that management is decision making, half of the decisions made by managers within organizations ultimately fail (Ireland & Miller, 2004; Nutt, 2002; Nutt, 1999). Therefore, increasing effectiveness in decision making is an important part of maximizing your effectiveness at work. This chapter will help you understand how to make decisions alone or in a group while avoiding common decision-making pitfalls.

Individuals throughout organizations use the information they gather to make a wide range of decisions. These decisions may affect the lives of others and change the course of an organization. For example, the decisions made by executives and consulting firms for Enron ultimately resulted in a \$60 billion loss for investors, thousands of employees without jobs, and the loss of all employee retirement funds. But Sherron Watkins, a former Enron employee and now-famous whistleblower, uncovered the accounting problems and tried to enact change. Similarly, the decision made by firms to trade in mortgage-backed securities is having negative consequences for the entire economy in the United States. All parties involved in such outcomes made a decision, and everyone is now living with the consequences of those decisions.

Types of Decisions

Most discussions of decision making assume that only senior executives make decisions or that only senior executives' decisions matter. This is a dangerous mistake.

Peter Drucker

Despite the far-reaching nature of the decisions in the previous example, not all decisions have major consequences or even require a lot of thought. For example, before you come to class, you make simple and habitual decisions such as what to wear, what to eat, and which route to take as you go to and from home and school. You probably do not spend much time on these mundane decisions. These types of straightforward decisions are termed **programmed decisions**, or decisions that occur frequently enough that we develop an automated response to them. The automated response we use to make these decisions is called the **decision rule**. For example, many restaurants face customer complaints as a routine part of doing business. Because complaints are a recurring problem, responding to them may become a programmed decision. The restaurant might enact a policy stating that every time they receive a valid customer complaint, the customer should receive a free dessert, which represents a decision rule.



Figure 11.2.3: In order to ensure consistency around the globe such as at this St. Petersburg, Russia, location, McDonald's Corporation trains all restaurant managers at Hamburger University where they take the equivalent to 2 years of college courses and learn how to make decisions on the job. The curriculum is taught in 28 languages. [Wikimedia Commons](#) – public domain.

On the other hand, unique and important decisions require conscious thinking, information gathering, and careful consideration of alternatives. These are called **nonprogrammed decisions**. For example, in 2005 McDonald's Corporation became aware of the need to respond to growing customer concerns regarding the unhealthy aspects (high in fat and calories) of the food they sell. This is a nonprogrammed decision, because for several decades, customers of fast-food restaurants were more concerned with the taste and price of the food, rather than its healthiness. In response to this problem, McDonald's decided to offer healthier alternatives such as the choice to substitute French fries in Happy Meals with apple slices and in 2007 they banned the use of trans fat at their restaurants.

A crisis situation also constitutes a nonprogrammed decision for companies. For example, the leadership of Nutrorim was facing a tough decision. They had recently introduced a new product, ChargeUp with Lipitrene, an improved version of their popular sports drink powder, ChargeUp. At some point, a phone call came from a state health department to inform them of 11 cases of gastrointestinal distress that might be related to their product, which led to a decision to recall ChargeUp. The decision was made without an investigation of the information. While this decision was conservative, it was made without a process that weighed the information. Two weeks later it became clear that the reported health problems were unrelated to Nutrorim's product. In fact, all the cases were traced back to a contaminated health club juice bar. However, the damage to the brand and to the balance sheets was already done. This unfortunate decision caused Nutrorim to rethink the way decisions were made when under pressure. The company now gathers information to make informed choices even when time is of the essence (Garvin, 2006).

Decisions can be classified into three categories based on the level at which they occur. **Strategic decisions** set the course of an organization. **Tactical decisions** are decisions about how things will get done. Finally, **operational decisions** refer to decisions that employees make each day to make the organization run. For example, think about the restaurant that routinely offers a free dessert when a customer complaint is received. The owner of the restaurant made a strategic decision to have great customer service. The manager of the restaurant implemented the free dessert policy as a way to handle customer complaints, which is a tactical decision. Finally, the servers at the restaurant are making individual decisions each day by evaluating whether each customer complaint received is legitimate and warrants a free dessert.

Figure 11.4 Examples of Decisions Commonly Made Within Organizations

Level of Decision	Examples of Decision	Who Typically Makes Decisions
Strategic Decisions	Should we merge with another company? Should we pursue a new product line? Should we downsize our organization?	Top Management Teams, CEOs, and Boards of Directors
Tactical Decisions	What should we do to help facilitate employees from the two companies working together? How should we market the new product line? Who should be let go when we downsize?	Managers
Operational Decisions	How often should I communicate with my new coworkers? What should I say to customers about our new product? How will I balance my new work demands?	Employees throughout the organization

In this chapter we are going to discuss different decision-making models designed to understand and evaluate the effectiveness of nonprogrammed decisions. We will cover four decision-making approaches, starting with the rational decision-making model, moving to the bounded rationality decision-making model, the intuitive decision-making model, and ending with the creative decision-making model.

Making Rational Decisions

The **rational decision-making model** describes a series of steps that decision makers should consider if their goal is to maximize the quality of their outcomes. In other words, if you want to make sure that you make the best choice, going through the formal steps of the rational decision-making model may make sense.

Let's imagine that your old, clunky car has broken down, and you have enough money saved for a substantial down payment on a new car. It will be the first major purchase of your life, and you want to make the right choice. The first step, therefore, has already been completed—we know that you want to buy a new car. Next, in step 2, you'll need to decide which factors are important to you. How many passengers do you want to accommodate? How important is fuel economy to you? Is safety a major concern? You only have a certain amount of money saved, and you don't want to take on too much debt, so price range is an important factor as well. If you know you want to have room for at least five adults, get at least 20 miles per gallon, drive a car with a strong safety rating, not spend more than \$22,000 on the purchase, and like how it looks, you have identified the **decision criteria**. All the potential options for purchasing your car will be evaluated against these criteria. Before we can move too much further, you need to decide how important each factor is to your decision in step 3. If each is equally important, then there is no need to weigh them, but

if you know that price and mpg are key factors, you might weigh them heavily and keep the other criteria with medium importance. Step 4 requires you to generate all [alternatives](#) about your options. Then, in step 5, you need to use this information to evaluate each alternative against the criteria you have established. You choose the best alternative (step 6), and then you would go out and buy your new car (step 7).

Of course, the outcome of this decision will influence the next decision made. That is where step 8 comes in. For example, if you purchase a car and have nothing but problems with it, you will be less likely to consider the same make and model when purchasing a car the next time.

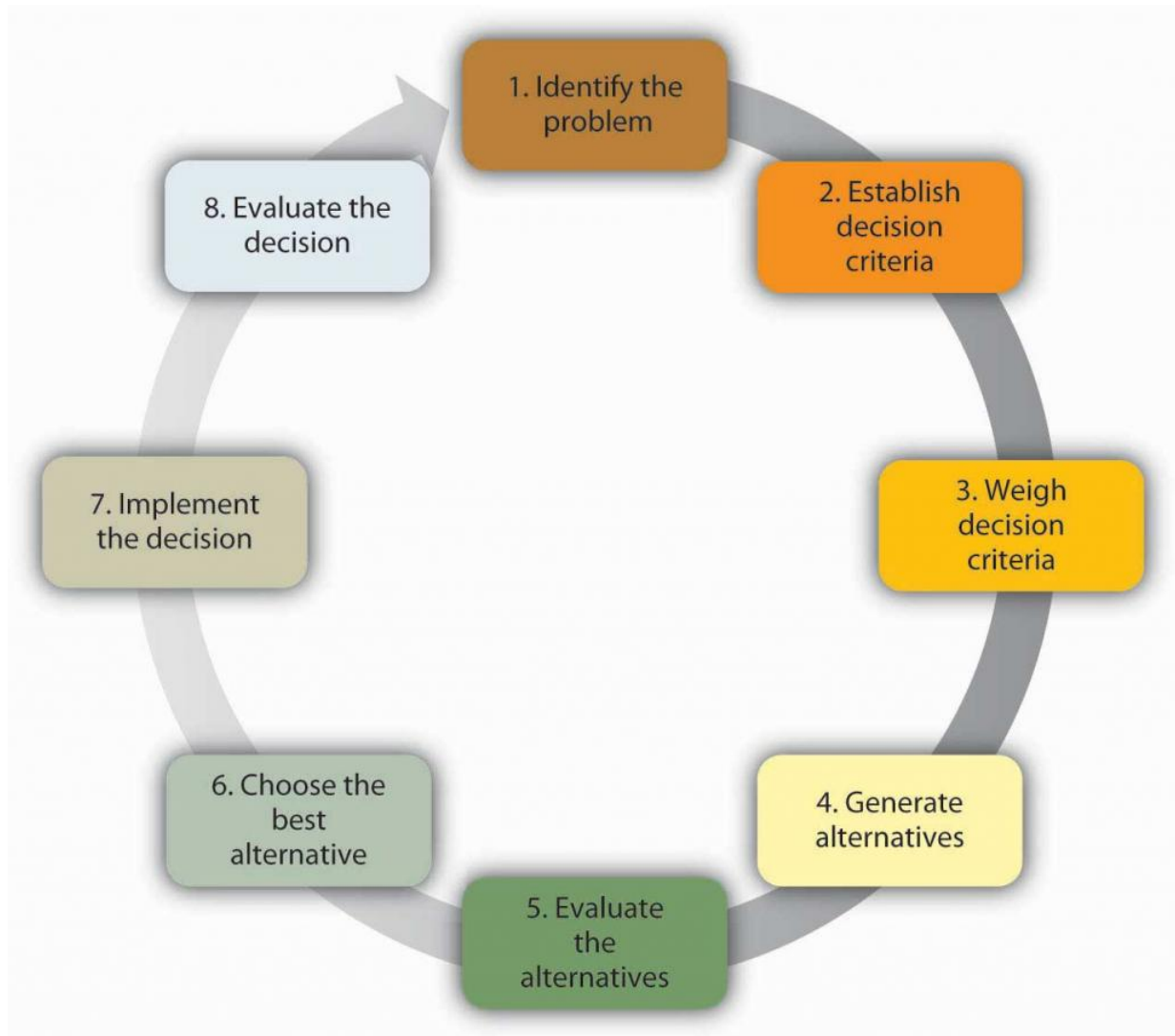


Figure 11.2.5: Steps in the Rational Decision-Making Model

While decision makers can get off track during any of these steps, research shows that searching for alternatives in the fourth step can be the most challenging and often leads to failure. In fact, one researcher found that no alternative generation occurred in 85% of the decisions he studied (Nutt, 1994). Conversely, successful managers know what they want at the outset of the decision-making process, set objectives for others to respond to, carry out an unrestricted search for solutions, get key people to participate, and avoid using their power to push their perspective (Nutt, 1998).

The rational decision-making model has important lessons for decision makers. First, when making a decision, you may want to make sure that you establish your decision criteria before you search for alternatives. This would prevent you from liking one option too much and setting your criteria accordingly. For example, let's say you started browsing cars online before you generated your decision criteria. You may come across a car that you feel reflects your sense of style and you develop an emotional bond with the car. Then, because of your love for the particular car, you may say to yourself that the fuel economy of the car and the innovative braking system are the most important criteria. After purchasing it, you may realize that the car is too small for your

friends to ride in the back seat, which was something you should have thought about. Setting criteria before you search for alternatives may prevent you from making such mistakes. Another advantage of the rational model is that it urges decision makers to generate all alternatives instead of only a few. By generating a large number of alternatives that cover a wide range of possibilities, you are unlikely to make a more effective decision that does not require sacrificing one criterion for the sake of another.

Despite all its benefits, you may have noticed that this decision-making model involves a number of unrealistic assumptions as well. It assumes that people completely understand the decision to be made, that they know all their available choices, that they have no perceptual biases, and that they want to make optimal decisions. Nobel Prize winning economist Herbert Simon observed that while the rational decision-making model may be a helpful device in aiding decision makers when working through problems, it doesn't represent how decisions are frequently made within organizations. In fact, Simon argued that it didn't even come close.

Think about how you make important decisions in your life. It is likely that you rarely sit down and complete all 8 of the steps in the rational decision-making model. For example, this model proposed that we should search for all possible alternatives before making a decision, but that process is time consuming, and individuals are often under time pressure to make decisions. Moreover, even if we had access to all the information that was available, it could be challenging to compare the pros and cons of each alternative and rank them according to our preferences. Anyone who has recently purchased a new laptop computer or cell phone can attest to the challenge of sorting through the different strengths and limitations of each brand and model and arriving at the solution that best meets particular needs. In fact, the availability of too much information can lead to [analysis paralysis](#), in which more and more time is spent on gathering information and thinking about it, but no decisions actually get made. A senior executive at Hewlett-Packard Development Company LP admits that his company suffered from this spiral of analyzing things for too long to the point where data gathering led to “not making decisions, instead of us making decisions” (Zell, Glassman, & Duron, 2007). Moreover, you may not always be interested in reaching an optimal decision. For example, if you are looking to purchase a house, you may be willing and able to invest a great deal of time and energy to find your dream house, but if you are only looking for an apartment to rent for the academic year, you may be willing to take the first one that meets your criteria of being clean, close to campus, and within your price range.

Making “Good Enough” Decisions

The [bounded rationality model](#) of decision making recognizes the limitations of our decision-making processes. According to this model, individuals knowingly limit their options to a manageable set and choose the first acceptable alternative without conducting an exhaustive search for alternatives. An important part of the bounded rationality approach is the tendency to [satisfice](#) (a term coined by Herbert Simon from *satisfy* and *suffice*), which refers to accepting the first alternative that meets your minimum criteria. For example, many college graduates do not conduct a national or international search for potential job openings. Instead, they focus their search on a limited geographic area, and they tend to accept the first offer in their chosen area, even if it may not be the ideal job situation. Satisficing is similar to rational decision making. The main difference is that rather than choosing the best option and maximizing the potential outcome, the decision maker saves cognitive time and effort by accepting the first alternative that meets the minimum threshold.

Making Intuitive Decisions

The [intuitive decision-making model](#) has emerged as an alternative to other decision making processes. This model refers to arriving at decisions without conscious reasoning. A total of 89% of managers surveyed admitted to using intuition to make decisions at least sometimes and 59% said they used intuition often (Burke & Miller, 1999). Managers make decisions under challenging circumstances, including time pressures, constraints, a great deal of uncertainty, changing conditions, and highly visible and high-stakes outcomes. Thus, it makes sense that they would not have the time to use the rational decision-making model. Yet when CEOs, financial analysts, and health care workers are asked about the critical decisions they make, seldom do they attribute success to luck. To an outside observer, it may seem like they are making guesses as to the course of action to take, but it turns out that experts systematically make decisions using a different model than was earlier suspected. Research on life-or-death decisions made by fire chiefs, pilots, and nurses finds that experts do not choose among a list of well thought out alternatives. They don't decide between two or three options and choose the best one. Instead, they consider only one option at a time. The intuitive decision-making model argues that in a given situation, experts making decisions scan the environment for cues to recognize patterns (Breen, 2000; Klein, 2003; Salas & Klein, 2001). Once a pattern is recognized, they can play a potential course of action through to its outcome based on their prior experience. Thanks to training, experience, and knowledge, these decision makers have an idea of how well a given solution may work. If they run through the mental model and find that the solution will

not work, they alter the solution before setting it into action. If it still is not deemed a workable solution, it is discarded as an option, and a new idea is tested until a workable solution is found. Once a viable course of action is identified, the decision maker puts the solution into motion. The key point is that only one choice is considered at a time. Novices are not able to make effective decisions this way, because they do not have enough prior experience to draw upon.

Making Creative Decisions

In addition to the rational decision making, bounded rationality, and intuitive decision-making models, creative decision making is a vital part of being an effective decision maker. **Creativity** is the generation of new, imaginative ideas. With the flattening of organizations and intense competition among companies, individuals and organizations are driven to be creative in decisions ranging from cutting costs to generating new ways of doing business. Please note that, while creativity is the first step in the innovation process, creativity and innovation are not the same thing. Innovation begins with creative ideas, but it also involves realistic planning and follow-through. Innovations such as 3M's Clearview Window Tinting grow out of a creative decision-making process about what may or may not work to solve real-world problems.

The five steps to creative decision making are similar to the previous decision-making models in some key ways. All the models include problem identification, which is the step in which the need for problem solving becomes apparent. If you do not recognize that you have a problem, it is impossible to solve it. Immersion is the step in which the decision maker consciously thinks about the problem and gathers information. A key to success in creative decision making is having or acquiring expertise in the area being studied. Then, incubation occurs. During incubation, the individual sets the problem aside and does not think about it for a while. At this time, the brain is actually working on the problem unconsciously. Then comes illumination, or the insight moment when the solution to the problem becomes apparent to the person, sometimes when it is least expected. This sudden insight is the "eureka" moment, similar to what happened to the ancient Greek inventor Archimedes, who found a solution to the problem he was working on while taking a bath. Finally, the verification and application stage happens when the decision maker consciously verifies the feasibility of the solution and implements the decision.



Figure 11.2.6: The Creative Decision-Making Process

A NASA scientist describes his decision-making process leading to a creative outcome as follows: He had been trying to figure out a better way to de-ice planes to make the process faster and safer. After recognizing the problem, he immersed himself in the literature to understand all the options, and he worked on the problem for months trying to figure out a solution. It was not until he was sitting outside a McDonald's restaurant with his grandchildren that it dawned on him. The golden arches of the M of the McDonald's logo inspired his solution—he would design the de-icer as a series of Ms.^[1] This represented the illumination stage. After he tested and verified his creative solution, he was done with that problem, except to reflect on the outcome and process.

How Do You Know If Your Decision-Making Process Is Creative?

Researchers focus on three factors to evaluate the level of creativity in the decision-making process. **Fluency** refers to the number of ideas a person is able to generate. **Flexibility** refers to how different the ideas are from one another. If you are able to generate several distinct solutions to a problem, your decision-making process is high on flexibility. **Originality** refers to how unique a person's ideas are. You might say that Reed Hastings, founder and CEO of Netflix Inc. is a pretty creative person. His decision-making process shows at least two elements of creativity. We do not know exactly how many ideas he had over the course of his career, but his ideas are fairly different from each other. After teaching math in Africa with the Peace Corps, Hastings was accepted at Stanford, where he earned a master's degree in computer science. Soon after starting work at a software company, he invented a successful debugging tool, which led to his founding of the computer troubleshooting company Pure Software LLC in 1991. After a merger and the subsequent sale of the resulting company in 1997, Hastings founded Netflix, which revolutionized the DVD rental business with online rentals delivered through the mail with no late fees. In 2007, Hastings was elected to Microsoft's board of directors. As you can see, his ideas are high in originality and flexibility (Conlin, 2007).

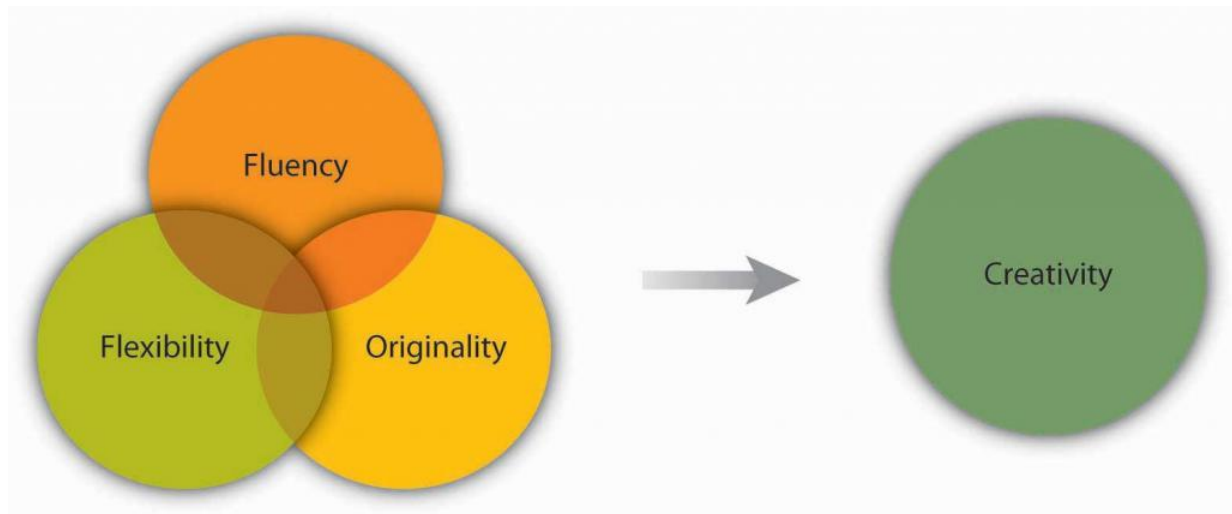


Figure 11.2.7: Dimensions of Creativity

Some experts have proposed that creativity occurs as an interaction among three factors: people's personality traits (openness to experience, risk taking), their attributes (expertise, imagination, motivation), and the situational context (encouragement from others, time pressure, physical structures) (Amabile, 1988; Amabile et al., 1996; Ford & Gioia, 2000; Tierney, Farmer, & Graen, 1999; Woodman, Sawyer, & Griffin, 1993). For example, research shows that individuals who are open to experience, less conscientious, more self-accepting, and more impulsive tend to be more creative (Feist, 1998).

OB Toolbox: Ideas for Enhancing Organizational Creativity

- Team Composition
 - *Diversify your team* to give them more inputs to build on and more opportunities to create functional conflict while avoiding personal conflict.
 - *Change group membership* to stimulate new ideas and new interaction patterns.
 - *Leaderless teams* can allow teams freedom to create without trying to please anyone up front.
- Team Process
 - *Engage in brainstorming* to generate ideas. Remember to set a high goal for the number of ideas the group should come up with, encourage wild ideas, and take brainwriting breaks.
 - *Use the nominal group technique* (see Tools and Techniques for Making Better Decisions below) *in person or electronically* to avoid some common group process pitfalls. Consider anonymous feedback as well.
 - *Use analogies* to envision problems and solutions.
- Leadership
 - *Challenge teams* so that they are engaged but not overwhelmed.
 - *Let people decide how to achieve goals*, rather than telling them what goals to achieve.
 - *Support and celebrate creativity* even when it leads to a mistake. Be sure to set up processes to learn from mistakes as well.
 - *Role model* creative behavior.
- Culture
 - *Institute organizational memory* so that individuals do not spend time on routine tasks.
 - *Build a physical space conducive to creativity* that is playful and humorous—this is a place where ideas can thrive.
 - *Incorporate creative behavior* into the performance appraisal process.

Sources: Adapted from ideas in Amabile, T. M. (1998). How to kill creativity. *Harvard Business Review*, 76, 76–87; Gundry, L. K., Kickul, J. R., & Prather, C. W. (1994). Building the creative organization. *Organizational Dynamics*, 22, 22–37; Keith, N., & Frese, M. (2008). Effectiveness of error management training: A meta-analysis. *Journal of Applied Psychology*, 93, 59–69. Pearsall, M. J., Ellis, A. P. J., & Evans, J. M. (2008). Unlocking the effects of gender faultlines on team creativity: Is activation the key? *Journal of Applied Psychology*, 93, 225–234. Thompson, L. (2003). Improving the creativity of organizational work groups. *Academy of Management Executive*, 17, 96–109.

There are many techniques available that enhance and improve creativity. Linus Pauling, the Nobel Prize winner who popularized the idea that vitamin C could help strengthen the immune system, said, “The best way to have a good idea is to have a lot of ideas.”^[2] One popular method of generating ideas is to use brainstorming. **Brainstorming** is a group process of generating ideas that follow a set of guidelines, including no criticism of ideas during the brainstorming process, the idea that no suggestion is too crazy, and building on other ideas (piggybacking). Research shows that the quantity of ideas actually leads to better idea quality in the end, so setting high **idea quotas**, in which the group must reach a set number of ideas before they are done, is recommended to avoid process loss and maximize the effectiveness of brainstorming. Another unique aspect of brainstorming is that since the variety of backgrounds and approaches give the group more to draw upon, the more people are included in the process, the better the decision outcome will be. A variation of brainstorming is **wildstorming**, in which the group focuses on ideas that are impossible and then imagines what would need to happen to make them possible (Scott, Leritz, & Mumford, 2004).

Figure 11.8

Decision Making Model	Use This Model When:
Rational	<ul style="list-style-type: none"> • Information on alternatives can be gathered and quantified. • The decision is important. • You are trying to maximize your outcome.
Bounded Rationality	<ul style="list-style-type: none"> • The minimum criteria are clear. • You do not have or you are not willing to invest much time to make the decision. • You are not trying to maximize your outcome.
Intuitive	<ul style="list-style-type: none"> • Goals are unclear. • There is time pressure and analysis paralysis would be costly. • You have experience with the problem.
Creative	<ul style="list-style-type: none"> • Solutions to the problem are not clear. • New solutions need to be generated. • You have time to immerse yourself in the issues.

Which decision-making model should I use?

Key Takeaways

Decision making is choosing among alternative courses of action, including inaction. There are different types of decisions ranging from automatic, programmed decisions to more intensive nonprogrammed decisions. Structured decision-making processes include rational, bounded rationality, intuitive, and creative decision making. Each of these can be useful, depending on the circumstances and the problem that needs to be solved.

Exercises

1. What do you see as the main difference between a successful and an unsuccessful decision? How much does luck versus skill have to do with it? How much time needs to pass to know if a decision is successful or not?
2. Research has shown that over half of the decisions made within organizations fail. Does this surprise you? Why or why not?
3. Have you used the rational decision-making model to make a decision? What was the context? How well did the model work?
4. Share an example of a decision in which you used satisficing. Were you happy with the outcome? Why or why not? When would you be most likely to engage in satisficing?
5. Do you think intuition is respected as a decision-making style? Do you think it should be? Why or why not?

References

- Amabile, T. M. (1988). A model of creativity and innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, vol. 10 (pp. 123–167) Greenwich, CT: JAI Press.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39, 1154–1184.

- Breen, B. (2000, August). What's your intuition? *Fast Company*, 290.
- Burke, L. A., & Miller, M. K. (1999). Taking the mystery out of intuitive decision making. *Academy of Management Executive*, 13, 91–98.
- Conlin, M. (2007, September 14). Netflix: Recruiting and retaining the best talent. *Business Week Online*. Retrieved March 1, 2008, from http://www.businessweek.com/managing/content/sep2007/ca20070913_564868.htm?campaign_id=rss_null.
- Feist, G. J. (1998). A meta-analysis of personality in scientific and artistic creativity. *Personality and Social Psychology Review*, 2, 290–309.
- Ford, C. M., & Gioia, D. A. (2000). Factors influencing creativity in the domain of managerial decision making. *Journal of Management*, 26, 705–732.
- Garvin, D. A. (2006, January). All the wrong moves. *Harvard Business Review*, 84, 18–23.
- Ireland, R. D., & Miller, C. C. (2004). Decision making and firm success. *Academy of Management Executive*, 18, 8–12.
- Klein, G. (2003). *Intuition at work*. New York: Doubleday.
- Nutt, P. C. (1994). Types of organizational decision processes. *Administrative Science Quarterly*, 29, 414–550.
- Nutt, P. C. (1998). Surprising but true: Half the decisions in organizations fail. *Academy of Management Executive*, 13, 75–90.
- Nutt, P. C. (1999). Surprising but true: Half the decisions in organizations fail. *Academy of Management Executive*, 13, 75–90.
- Nutt, P. C. (2002). *Why decisions fail*. San Francisco: Berrett-Koehler.
- Salas, E., & Klein, G. (2001). *Linking expertise and naturalistic decision making*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Scott, G., Leritz, L. E., & Mumford, M. D. (2004). The effectiveness of creativity training: A quantitative review. *Creativity Research Journal*, 16, 361–388.
- Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, 52, 591–620.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18, 293–321.
- Zell, D. M., Glassman, A. M., & Duron, S. A. (2007). Strategic management in turbulent times: The short and glorious history of accelerated decision making at Hewlett-Packard. *Organizational Dynamics*, 36, 93–104.

-
1. In person interview conducted by author at Ames Research Center, Mountain View, CA, 1990. ↩
 2. Quote retrieved May 1, 2008, from <http://www.whatquote.com/quotes/linus-pauling/250801-the-best-way-to-have.htm>. ↩
-

This page titled [11.2: Understanding Decision Making](#) is shared under a [CC BY-NC-SA 3.0](#) license and was authored, remixed, and/or curated by [Anonymous](#).