

A **risk environment** lacks complete information but offers "probabilities" of the likely outcomes for possible action alternatives.

Risk Environment

A basic fact of managerial decision making is that many, if not most, management problems emerge in **risk environments** where facts and information on action alternatives and their consequences are incomplete. Decision making in risk environments requires the use of *probabilities* to estimate the likelihood that a particular outcome will occur (e.g., 4 chances out of 10). Because probabilities are only possibilities, people vary in how they act under risk conditions. Some of us are risk takers and some are risk avoiders; some of us gain from taking risks and others lose.

Dominio's Pizza CEO J. Patrick Doyle is a risk taker. When deciding to change the firm's pizza recipe, he ran a television ad admitting that customers really disliked the old one because it was "totally devoid of flavor" and had a crust "like cardboard." Whereas some executives might want to hide or downplay such customer reviews, Doyle used them to help launch the new recipe. He says it was a "calculated risk" and that "we're proving to our customers that we are listening to them by brutally accepting the criticism that's out there."²³

General Motors' former Vice Chairman of Global Product Development, Bob Lutz, wasn't a risk taker. He once said: "GM had the technology to do hybrids back when Toyota was launching the first Prius, but we opted not to ask the board to approve a product program that'd be destined to lose hundreds of millions of dollars."²⁴ He and other GM executives either miscalculated the probabilities of positive payoffs from hybrid vehicles or didn't believe the probabilities were high enough to justify the financial risk. Their Japanese competitors, facing the same risk environment, decided differently and gained the early mover advantage.

An **uncertain environment** lacks so much information that it is difficult to assign probabilities to the likely outcomes of alternatives.

Uncertain Environment

When facts are few and information is so poor that managers are unable to even assign probabilities to the likely outcomes of alternatives, an **uncertain environment** exists. This is the most difficult decision-making condition. The high level of uncertainty forces managers to rely heavily on intuition, judgment, informed guessing, and hunches—all of which leave considerable room for error. Perhaps there is no better example of the challenges of uncertainty than the situation faced by government and business leaders as they struggle to deal with global economic turmoil. Even as they struggle to find the right paths forward, great political, social, and economic uncertainties make their tasks difficult and the outcomes of their decisions hard to predict.

Learning Check 2

TAKEAWAY QUESTION 2 How do managers address problems and make decisions?

BE SURE YOU CAN • describe how IT influences the four functions of management • define *problem solving* and *decision making* • explain systematic and intuitive thinking • list four cognitive styles in decision making • differentiate programmed and nonprogrammed decisions • describe the challenges of crisis decision making • explain decision making in certain, risk, and uncertain environments

The Decision-Making Process

TAKEAWAY 3 What are the steps in the decision-making process?

LEARN MORE ABOUT | Identify and define the problem • Generate and evaluate alternative courses of action
Choose a preferred course of action • Implement the decision
Evaluate results • At all steps—check ethical reasoning

All of those case studies, experiential exercises, class discussions, and even essay exam questions in your courses are intended to get students to experience some of the complexities involved in managerial decision making, the potential problems and pitfalls, and even the pressures of crisis situations. From the classroom forward, however, it's all up to you. Only you can determine whether you step up and make the best out of very difficult problems, or collapse under pressure.

Figure 7.4 describes five steps in the **decision-making process**: (1) Identify and define the problem, (2) generate and evaluate alternative solutions, (3) choose a preferred course of

The **decision-making process** begins with identification of a problem and ends with evaluation of results.

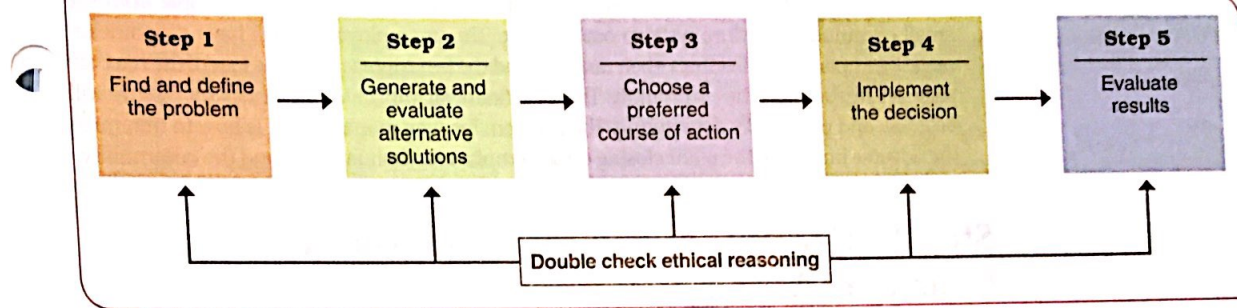


FIGURE 7.4 Steps in the decision-making process.

action, (4) implement the decision, and (5) evaluate results.²⁵ Importantly, ethical reasoning should be double-checked in all five steps. The decision-making process can be understood within the context of the following short case.

The Ajax Case. On December 31, the Ajax Company decided to close down its Murphysboro plant. Market conditions were forcing layoffs, and the company could not find a buyer for the plant. Some of the 172 employees had been with the company as long as 18 years; others as little as 6 months. All were to be terminated. Under company policy, they would be given severance pay equal to one week's pay per year of service.

This case reflects how competition, changing times, and the forces of globalization can take their toll on organizations, the people who work for them, and the communities in which they operate. Think about how you would feel as one of the affected employees. Think about how you would feel as the mayor of this small town in Illinois. Think about how you would feel as a corporate executive forced to make the difficult business decision to close the plant down.

Step 1—Identify and Define the Problem

The first step in decision making is to find and define the problem. Information gathering and deliberation are critical in this stage. The way a problem is defined can have a major impact on how it is resolved, and it is critical here to clarify exactly what a decision should accomplish. The more specific the goals, the easier it is to evaluate results after the decision is actually implemented. But, three common mistakes can occur in this critical first step in decision making.²⁶

Mistake number one is defining the problem too broadly or too narrowly. To take a classic example, the problem stated as "build a better mousetrap" might be better defined as "get rid of the mice." Managers should define problems in ways that give them the best possible range of problem-solving options.

Mistake number two is focusing on symptoms instead of causes. Symptoms are indicators that problems may exist, but they shouldn't be mistaken for the problems themselves. Although managers should be alert to spot problem symptoms (e.g., a drop in performance), they must also dig deeper to address root causes (such as discovering that workers need training in the use of a new IT system).

Mistake number three is choosing the wrong problem to deal with at a particular point in time. For example, which of these three problems would you address first on a busy workday? 1—An e-mail message from your boss requesting a proposal "as soon as possible" on how to handle employees' complaints about lack of flexibility in their work schedules. 2—One of your best team members has just angered another by loudly criticizing her work. 3—Your spouse has left you a voice mail that your daughter is sick at school.

insight > LEARN ABOUT YOURSELF

> *Lacking in confidence, procrastination becomes easy. Too many of us have difficulty deciding, and we have difficulty acting.*

Self-Confidence Builds Better Decisions

Does confidence put a spring into your step and a smile on your face? It's a powerful force, something to be nurtured and protected. Managers need the **self-confidence** not only to make decisions but to take the actions required to implement them. Once decisions are made, managers are expected to rally people to utilize resources and take effective action. This is how problems actually get solved and opportunities get explored. But lacking in confidence, procrastination becomes easy. Too many of us have difficulty deciding, and we have difficulty acting.

How would you proceed with the situation in the box—option A, or B, or C?

Jeff McCracken was the team leader who actually had to deal with this situation. He acted deliberately, with confidence, and in a collaborative fashion. After extensive consultations with the team, he decided to salvage the old track. The team worked 24 hours a day and finished in less than a week. McCracken called it a "colossal job" and said the satisfaction came from "working with people from all parts of the company and getting the job done without anyone getting hurt."

Self-confidence doesn't have to mean acting alone, but it does mean being willing to act. Management consultant Ram Charan calls self-confidence a willingness to "listen to your own voice" and "speak your mind and act decisively." It is, he says, an "emotional fortitude" that counteracts "emotional insecurities."

Decision Time

Situation: A massive hurricane has damaged a railroad bridge over a large lake. The bridge is critical for relief efforts to aid a devastated city. You are leading a repair team of 100. Two alternatives are on the table: Rebuild using new tracks, or rebuild with old track salvaged from the lake.

Question: How do you proceed?

- A. Decide to rebuild with new tracks; move quickly to implement.
- B. Decide to rebuild with old tracks; move quickly to implement.
- C. Consult with team; make decision; move quickly to implement.

GET TO KNOW YOURSELF BETTER

Opportunities to improve your self-confidence are everywhere but you have to act in order to take advantage of them. What about your involvement in student organizations, recreational groups, intramural sports teams, and community activities? Do a self-check: Make a list of things you are already doing that offer ways to build your self-confidence. What are you gaining from these experiences? Make another list that describes what you could do to gain more experience and add more self-confidence to your skills portfolio between now and graduation. Becoming an officer in a club where you are a member? Starting a new student organization? Organizing a community service project for you and your friends? Becoming a tutor for a class where you did well? Volunteering at a local food bank or homeless shelter?

Decisions often have **unintended consequences** in the form of unintended positive or negative side effects. If alternatives are given proper attention, some of these could be identified ahead of time and their implications used to modify and strengthen a decision. A growing number of states and localities, for example, are passing minimum wage laws higher than federal standards. Although the intent is to help low-wage workers fight poverty and cope with living costs, unintended consequences have appeared as affected employers struggle to maintain profits in face of higher labor costs. On the positive side, the higher wages have sometimes driven innovation—for example, a Carl's Jr. owner in California now filters shortening more frequently to extend its life and save costs. On the negative side, the higher wages have sometimes caused layoffs and reduced work hours—for example, a White Castle owner in Illinois eliminated two jobs to protect profit margins without raising prices.²⁷

One way to strengthen the search for alternatives is to actively seek consultation and the involvement of others. Adding more people to the process helps bring new perspectives and information to bear on a problem, generates more alternatives for consideration, reveals more about the possible consequences of the alternatives, and can result in a chosen course of action that is better for everyone involved in—and potentially affected by—the decision. Another way to strengthen the search for alternatives is to put each through a systematic and rigorous **cost-benefit analysis**. This compares what an alternative will cost in relation to what it will return in respect to expected benefits. At a minimum, the benefits of an alternative should be greater than its costs to stay in consideration. And, it should also be ethically sound.

Back to the Ajax Case. The Ajax plant is going to be closed. Given that, the possible alternative approaches that can be considered are (1) close the plant on schedule and be done with it; (2) delay the plant closing until all efforts have been made to sell it to another firm; (3) offer to sell the plant to the employees and/or local interests; (4) close the plant and offer transfers to other Ajax plant locations; or (5) close the plant, offer transfers, and help the employees find new jobs in and around the town of Murphysboro.

Step 3—Choose a Preferred Course of Action

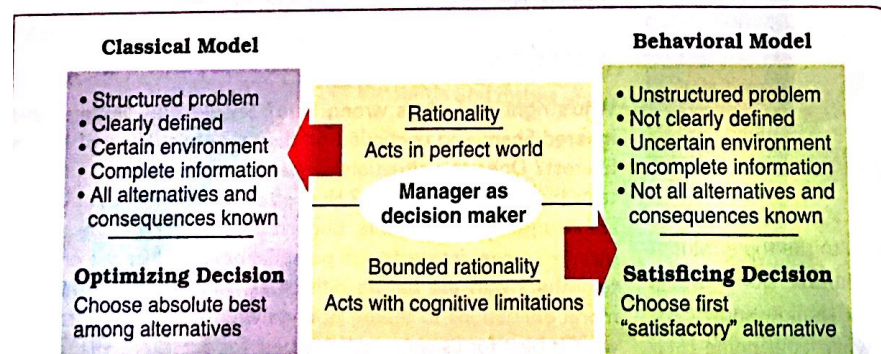
This is the point where an actual decision is made to select a preferred course of action. Just how this choice occurs and who makes it must be successfully resolved in each problem situation. Management theory recognizes rather substantial differences between the classical and behavioral models of decision making as shown in Figure 7.5.

Classical Decision Model

The **classical decision model** views the manager as acting rationally in a certain world. The assumption is that a rational choice of the preferred course of action will be made by a decision maker who is fully informed about all possible alternatives. Here, managers face a clearly defined problem and know all possible action alternatives, as well as their consequences. As a result, managers make an **optimizing decision** that gives the absolute best solution to the problem.

unanticipated positive or negative side effects that result from a decision.

Cost-benefit analysis involves comparing the costs and benefits of each potential course of action.



The **classical decision model** describes decision making with complete information.

An **optimizing decision** chooses the alternative giving the absolute best solution to a problem.

FIGURE 7.5 Differences in the classical and behavioral decision-making models.

describes decision making with limited information and bounded rationality.

satisficing decision is the choice of the first satisfactory alternative that comes to one's attention.

Because of cognitive limitations and bounded rationalities, the **behavioral decision model** assumes that people act with only partial knowledge about the available action alternatives and their consequences. As a consequence, the first alternative that appears to offer a satisfactory resolution to the problem is likely to be chosen. Simon, who won a Nobel Prize for his work, calls this the tendency to make **satisficing decisions**—choosing the first satisfactory alternative that comes to your attention. The behavioral model is useful in describing how many decisions get made in the ambiguous and fast-paced problem situations faced by managers today.

Back to the Ajax Case. Ajax executives decided to close the plant, offer transfers to company plants in another state, and offered to help displaced employees find new jobs in and around Murphysboro.

Step 4—Implement the Decision

Once a decision is made, actions must be taken to fully implement it. Nothing new can or will happen unless action is taken to actually solve the problem. Managers not only need the

ethics > KNOW RIGHT FROM WRONG

> "Human life is far more important than just getting to the top of a mountain."

Climber Left to Die on Mount Everest



Bobby Model/Getty Images, Inc.

Some 40 climbers are winding their ways to the top of Mount Everest. About 1,000 feet below the summit sits a British mountain climber in trouble, collapsed in a shallow snow cave. Most of those on the way up just look while continuing their

climbs. Sherpas from one passing team pause to give him oxygen before moving on. Within hours David Sharp, 34, is dead of oxygen deficiency on the mountain.

A climber who passed by says: "At 28,000 feet it's hard to stay alive yourself . . . he was in very poor condition . . . it was a very hard decision . . . he wasn't a member of our team."

Someone who made the summit in the past says: "If you're going to go to Everest . . . I think you have to accept responsibility that you may end up doing something that's not ethically nice . . . you have to realize that you're in a different world."

After hearing about this case, the late Sir Edmund Hillary, who reached the top in 1953, said: "Human life is far more important than just getting to the top of a mountain."

WHAT DO YOU THINK?

Who's right and who's wrong here? Should the climbers have ignored Sharp and continued on their way to the top of Mount Everest? Does this situation happen in real life—not on mountains but in our workplaces? How often do we meet people who are struggling or in trouble, but just pass them by as we pursue our own career interests and personal goals? When we encounter others who are having difficulties, what are our ethical or moral obligations to them? How do we make choices between what is best for us versus what is best for others?

determination and creativity to arrive at a decision, they also need the ability and willingness to implement it.

Difficulties encountered when decisions get implemented may trace to **lack-of-participation error**. This is a failure to adequately involve in the process individuals whose support is necessary to put the decision into action. Managers who use participation wisely get the right people involved in problem solving from the beginning. When they do, implementation typically follows quickly, smoothly, and to the satisfaction of all stakeholders.

Back to the Ajax Case. Ajax ran ads in the local and regional newspapers. The ad called attention to an "Ajax skill bank" composed of "qualified, dedicated, and well-motivated employees with a variety of skills and experiences." Interested employers were urged to contact Ajax for further information.

Lack-of-participation error is failure to involve in a decision the persons whose support is needed to implement it.

Step 5—Evaluate Results

The decision-making process is not complete until results are evaluated. If the desired outcomes are not achieved or if undesired side effects result, corrective action should be taken. Evaluation is a form of managerial control. It involves gathering data to measure performance results and compare these results against established goals. If results are less than what was desired, it is time to reassess and return to earlier steps. In this way, problem solving becomes a dynamic and ongoing activity within the management process. Evaluation is always easier when clear goals, measurable targets, and timetables are established at the outset of the process.

Back to the Ajax Case. How effective were Ajax's decisions? We don't know for sure. But after the advertisement ran for two weeks, the plant's industrial relations manager said: "I've been very pleased with the results." That's all we know, and more information would certainly be needed for a good evaluation of how well management handled this situation. Wouldn't you like to know how many of the displaced employees got new jobs locally and how the local economy held up? You can look back on the case as it was described and judge for yourself. Perhaps you would have approached the situation and the five decision making steps somewhat differently.

At All Steps—Check Ethical Reasoning

Each step in the decision-making process can and should be linked with ethical reasoning.²⁹ The choices made often have moral dimensions that might easily be overlooked. For example, job eliminations in the prior Ajax case might not be sufficiently considered for their implications on all stakeholders, including the affected persons, their families, and the local community. We sometimes have to take special care to stay tuned into *virtues*—things like fairness, kindness, compassion, and generosity—and guard against *vices*—things like greed, anger, ignorance, and lust.³⁰

One way to check ethical reasoning in decision making is to ask and answer pointed questions that bring critical thinking into the process. Gerald Cavanagh and his associates, for example, suggest that a decision should test positive on these four ethics criteria.³¹

1. *Utility*—Does the decision satisfy all constituents or stakeholders?
2. *Rights*—Does the decision respect the rights and duties of everyone?
3. *Justice*—Is the decision consistent with the canons of justice?
4. *Caring*—Is the decision consistent with my responsibilities to care?

Another way to test ethical reasoning is to consider a decision in the context of full transparency and the prospect of shame.³² Three **spotlight questions** can be powerful in this regard. Ask: "How would I feel if my family found out about this decision?" Ask: "How would

The **spotlight questions** test the ethics of a decision by exposing it to scrutiny through the eyes of family, community