Part 2

Planning

Planning and Decision Making

Chapter 5

CHAPTER OUTLINE

STUDENT RESOURCES

ThomsonNOW On the Job and Biz Flix video applications, concept tutorial, and concept exercise

Xtra! Six exhibit worksheets, author FAQs, quiz, Management News, and the video clips from the chapter with exercises

Web (http://williams.swlearning.com) Quiz, PowerPoint slides, and glossary terms for this chapter

D.G. Yuengling & Son, Pottsville, Pennsylvania.[1] With beer sales dropping around the world, you should be ecstatic that sales of Yuengling (pronounced Ying-Ling) beer are up 225 percent in the last six years. But as you walk through the caves and tunnels of Yuengling's Eagle Brewery, carved into Sharp Mountain in 1831 to maintain a perfect 50-degree temperature for storing beer, you see not only the history of America's oldest brewery everywhere you turn, but also chipped paint, rusting pipes, and an aging plant that can't keep up with the growing demand for Yuengling beer. So far, thanks to hard work, dedicated workers, and some luck, you've doubled your production capacity from 250,000 to 500,000 barrels of beer a year, but if you push for more, the old brewery will break.

Yet with sales up so dramatically, the company faces a problem says CEO and owner Dick Yuengling, "We are sold out of beer. We run the risk of losing our customer base because we don't have any product on the shelves." Shortages are so bad that the advertising budget has been cut from $3 to $2 a barrel. Yuengling explains, "You can't fuel the fire when we can't get them beer anyway." Ironically, with production stuck at 500,000 barrels a year, Yuengling beer has become harder to find as it has become more popular. Sales representative Diane Adams said, "It was a little hairy. People were up in arms." So, rather than sacrifice sales in its home market of Pennsylvania, where Yuengling has its largest market share (10 percent), the company has temporarily stopped shipping beer to distributors in Maine, Massachusetts, and Rhode Island. Since that strategy won't help Yuengling grow outside Pennsylvania, you still face the question of how to permanently increase beer production to meet the growing demand.

What Would You Do?

You've identified five options. The first is to add new storage and finishing tanks to Eagle Brewery to increase production capacity by 10 percent to 550,000 barrels a year. Though doable, this is only a short-term solution. Second, you could outsource production to another company. This would be more cost-effective, but would Yuengling beer produced in non-Yuengling factories taste different? For a "specialty" beer, this could be a substantial risk. Still, outsourcing would be affordable, and Yuengling has done it before, outsourcing production of its Black and Tan beer to Pabst Blue Ribbon's brewery in Lehigh, Pennsylvania, until Pabst closed that facility four years ago. The third option is to buy another brewery, but there aren't many for sale and those that are would be expensive and require significant upgrades. For example, it would cost $13 million to buy and $5 million to fix Stroh's 1.5 million-barrel brewery in Tampa, Florida, which is far from Yuengling's northeastern markets. A fourth option is to build a new factory capable of producing 1.2 million barrels per year, but that would cost $50 million and take three years. The fifth and final option is simply to "do nothing." The company is already very profitable, has low overhead costs, and is very efficient. In other words, by "doing nothing" the company could still make a lot of money without incurring the risks inherent in the other options. And risk is a real consideration because everyone in the company remembers that Yuengling was losing money just a few years ago.

So, what's the best way to evaluate these options? Put another way, what's the best way to make this decision? Furthermore, what process or criteria should you use to decide which of these five options is best? Also, how can you build some flexibility into your plans, no matter what you decided? Doing this could be difficult, considering the expense involved in some of the options, but you don't want to be locked into only one option, especially if Yuengling's competitive environment changes. Finally, what's the best way to put together an effective action plan and then track your progress in implementing it? **If you were in charge at Yuengling beer, what would you do?**

STUDY TIP

Try to explain the key concepts of this chapter to a friend or family member who is not taking the class with you. This will help you identify which areas you need to review—and how much.

Even inexperienced managers know that planning and decision making are central parts of their jobs. Figure out what the problem is. Generate potential solutions or plans. Pick the best one. Make it work. Experienced managers, however, know how hard it really is to make good plans and decisions. One seasoned manager said: "I think the biggest surprises are the problems. Maybe I had never seen it before. Maybe I was protected by my management when I was in sales. Maybe I had delusions of grandeur, I don't know. I just know how disillusioning and frustrating it is to be hit with problems and conflicts all day and not be able to solve them very cleanly."[2]

This chapter begins by examining the benefits and pitfalls of planning. Next, you will learn how to make a plan that works. Then, you will look at the different kinds of plans that are used from the top to the bottom in most companies. In the second part of the chapter, we discuss the steps of rational decision making and also consider its limitations. We finish the chapter by discussing how managers can use groups and group decision techniques to improve decisions.

Planning

planning
Choosing a goal and developing a strategy to achieve that goal.

Planning is choosing a goal and developing a method or strategy to achieve that goal. Yuki Funo, who is in charge of Toyota's American sales division, says, "Once you grab a 10 percent share in most markets, consumers almost always put your product on their shopping list. My experience . . . tells me there's not a significant hurdle going from 10 percent to 20 percent."[3] So, with an 11.2 percent market share in the United States, Toyota's goal is to increase it to 15 percent by 2010. Achieving that goal would move Toyota, which is now the fourth largest car maker in the United States, ahead of DaimlerChrysler, which has a 14.1 percent market share. How does Toyota plan to meet its 15 percent market share goal? Two words: geography and trucks. In terms of geography, Toyota already has an 18 percent market share in California, but only 5 to 6 percent in the Midwest, where it has a tremendous opportunity to increase sales. Indeed, in a recent year Toyota sold more cars in the Chicago area than any other automaker. According to Funo, "That's a very symbolic sign of how customers' attitudes are shifting toward international nameplates in the Midwest." But, Funo adds, the only sure way for Toyota to get 15 percent market share nationally is with pickup trucks. With the addition of a new truck plant in San Antonio, Texas, Toyota should be able to double its annual truck production to 250,000 half-ton Toyota Tundra trucks. That level of production would give it exactly 10 percent of U.S. truck sales and help Toyota move toward its overall goal of a 15 percent market share.

After reading the next three sections, you should be able to

1. discuss the benefits and pitfalls of planning.
2. describe how to make a plan that works.
3. discuss how companies can use plans at all management levels, from top to bottom.

1 BENEFITS AND PITFALLS OF PLANNING

Are you one of those naturally organized people who always makes a daily to-do list, writes everything down so you won't forget, and never misses a deadline because you keep track of everything with your handy time-management notebook or your Palm PC? Or are you one of those flexible, creative, go-with-the-flow people who dislike planning and organizing because

it restricts your freedom, energy, and performance? Some people are natural planners. They love it and can only see its benefits. Others dislike planning and can only see its disadvantages. It turns out that both views are correct.

Planning has advantages and disadvantages. Let's learn about **1.1 the benefits** and **1.2 the pitfalls of planning.**

1.1 Benefits of Planning

Planning offers several important benefits: intensified effort, persistence, direction, and creation of task strategies.[4] First, as shown in Exhibit 5.1, managers and employees put forth greater effort when following a plan. Take two workers. Instruct one to "do his or her best" to increase production, and instruct the other to achieve a 2 percent increase in production each month. Research shows that the one with the specific plan will work harder.[5]

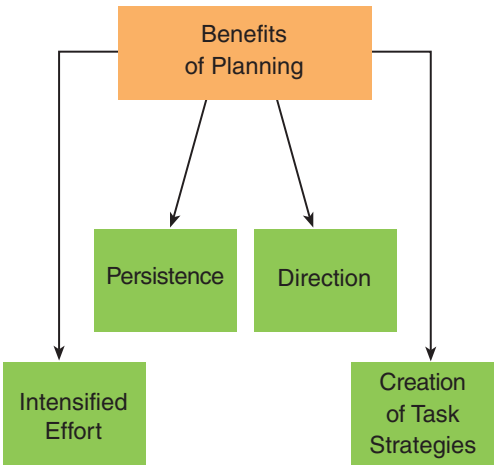
Second, planning leads to persistence, that is, working hard for long periods. In fact, planning encourages persistence even when there may be little chance of short-term success.[6] McDonald's founder Ray Kroc, keen believer in the power of persistence, had this quotation from President Calvin Coolidge hung in all of his executives' offices: "Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful men with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent."[7]

The third benefit of planning is direction. Plans encourage managers and employees to direct their persistent efforts *toward* activities that help accomplish their goals and *away* from activities that don't.[8] For example, a large insurance company wanted to improve the performance evaluation feedback its managers gave employees. To help the managers improve, company trainers taught them 43 effective performance feedback behaviors, such as, "I will give my subordinate a clear understanding of the results I expect him or her to achieve" and "During the performance appraisal interview, I will be very supportive, stressing good points before discussing needed improvement." During the training, managers were instructed to choose just 12 behaviors (out of the 43) on which they wanted to make the most improvement. When subordinates rated their managers on the 43 behaviors, it became clear that no matter which 12 behaviors different managers chose to concentrate on, they improved only on those 12 behaviors. Thus, plans direct behavior toward activities that lead to goal accomplishment and away from those that don't.

The fourth benefit of planning is that it encourages the development of task strategies. In other words, planning not only encourages people to work hard for extended periods and to engage in behaviors directly related to goal accomplishment, but it also encourages them to think of better ways to do their jobs.

Finally, perhaps the most compelling benefit of planning is that it has been proved to work for both companies and individuals. On average, companies with plans have larger profits and grow much faster than companies that don't.[9] The same holds true for individual managers and employees. There is no better way to improve the performance of the people who work in a company than to have them set goals and develop strategies for achieving those goals.

Exhibit 5.1
Benefits of Planning



1.2 Planning Pitfalls

Despite the significant benefits associated with planning, planning is not a cure-all. Plans won't fix all organizational problems. In fact, many management authors and consultants believe that planning can harm companies in several ways.[10]

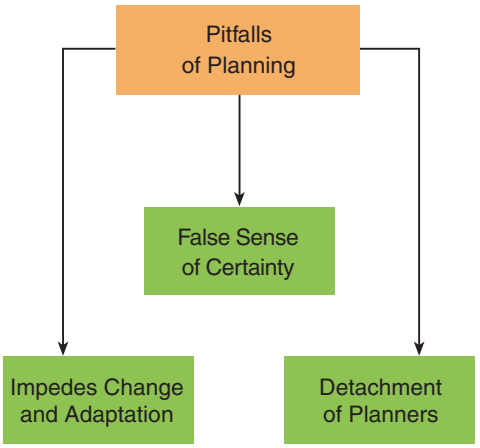


Exhibit 5.2
Pitfalls of Planning

As shown in Exhibit 5.2, the first pitfall of planning is that it can impede change and prevent or slow needed adaptation. Sometimes companies become so committed to achieving the goals set forth in their plans, or on following the strategies and tactics spelled out in them, that they fail to see that their plans aren't working or that their goals need to change. Ironically, Sony, which is famous for its Triniton (picture-tube) televisions, was one of the last major TV manufacturers to develop a line of flat-screen TVs. Sony's TV division was so committed to the old—and now outdated—Triniton picture-tube technology that its engineers were reluctant to turn to Sony's audio, videogame, and computer monitor divisions for help and expertise in designing new flat-screen TVs. Makoto Kogure, who headed Sony's TV division, admitted "We did everything inside the TV group."[11]

The second pitfall is that planning can create a false sense of certainty. Planners sometimes feel that they know exactly what the future holds for their competitors, their suppliers, and their companies. However, all plans are based on assumptions. "The price of gasoline will increase by 4 percent per year." "Exports will continue to rise." For plans to work, the assumptions on which they are based must hold true. If the assumptions turn out to be false, then the plans based on them are likely to fail.

The third potential pitfall of planning is the detachment of planners. In theory, strategic planners and top-level managers are supposed to focus on the big picture and not concern themselves with the details of implementation, that is, carrying out the plan. According to management professor Henry Mintzberg, detachment leads planners to plan for things they don't understand.[12] Plans are meant to be guidelines for action, not abstract theories. Consequently, planners need to be familiar with the daily details of their businesses if they are to produce plans that can work.

If you doubt that the "details" are important to good execution of a plan, imagine that you're about to have coronary bypass surgery to replace four clogged arteries. You can have either an experienced surgeon or a first-year medical intern perform your surgery. The intern is a fully qualified M.D. who clearly understands the theory and the plan behind bypass surgery, but has never performed such an operation. As you lie on the operating table, who is the last person you'd like to see as the anesthesia kicks in, the first-year intern who knows the plan but has never done a bypass or the experienced surgeon who has followed the plan hundreds of times? Planning works better when the people developing the plan are not detached from the process of executing the plan.

Review 1: Benefits and Pitfalls of Planning

Planning is choosing a goal and developing a method to achieve that goal. Planning is one of the best ways to improve organizational and individual performance. It encourages people to work harder (intensified effort), to work hard for extended periods (persistence), to engage in behaviors directly related to goal accomplishment (directed behavior), and to think of better ways to do their jobs (task strategies). But most important, companies that plan have larger profits and faster growth than companies that don't plan. However, planning also has three potential pitfalls. Companies that are overly committed to their plans may be slow to adapt to changes in their environment. Planning is based on assumptions about the future, and when those assumptions are wrong, plans are likely to fail. Finally, planning can fail when planners are detached from the implementation of plans.

2 HOW TO MAKE A PLAN THAT WORKS

Planning is a double-edged sword. If done right, planning brings about tremendous increases in individual and organizational performance. If planning is done wrong, however, it can have just the opposite effect and harm individual and organizational performance.

In this section, you will learn how to make a plan that works. As depicted in Exhibit 5.3, planning consists of **2.1 setting goals, 2.2 developing commitment to the goals, 2.3 developing effective action plans, 2.4 tracking progress toward goal achievement,** and **2.5 maintaining flexibility in planning.**

2.1 Setting Goals

Since planning involves choosing a goal and developing a method or strategy to achieve that goal, the first step in planning is to set goals. To direct behavior and increase effort, goals need to be specific and challenging.[13] For example, deciding to "increase sales this year" won't direct and energize workers as much as deciding to "increase North American sales by 4 percent in the next six months." Likewise, deciding to "drop a few pounds" won't motivate you as much as deciding to "lose 15 pounds." Specific, challenging goals provide a target for which to aim and a standard against which to measure success.

One way of writing effective goals for yourself, your job, or your company is to use the S.M.A.R.T. guidelines. **S.M.A.R.T. goals** are **S**pecific, **M**easurable, **A**ttainable, **R**ealistic, and **T**imely.[14] Let's see how a heating, ventilation, and air-conditioning (HVAC) company might use S.M.A.R.T. goals in its business.

S.M.A.R.T. goals
Goals that are specific, measurable, attainable, realistic, and timely.

The HVAC business is cyclical. It's extremely busy at the beginning of summer, when homeowners find that their air-conditioning isn't working, and at the beginning of winter, when furnaces and heat pumps need repair. During these times, most HVAC companies have more business than they can handle. But at other times of year, business can be very slow. So a *specific* goal would be to increase sales by 50 percent during the fall and spring, when business is slower. This goal could be **m***easured* by keeping track of the number of annual maintenance contracts sold to customers. This goal of increasing sales during the off-seasons is **a***ttainable* because maintenance contracts typically include spring tune-ups (air-conditioning systems) and fall tune-ups (furnace or heating systems). Moreover, a 50 percent increase in sales during the slow seasons is **r***ealistic*. Because customers want their furnaces and air conditioners to work

Exhibit 5.3
How to Make a Plan That Works

DOING THE RIGHT THING

STRETCH GOALS: AVOID THE "15 PERCENT DELUSION"

Stretch goals are extremely ambitious goals that you don't know how to reach.[17] The purpose of stretch goals is to achieve extraordinary improvements in company performance. Stretch goals are so demanding that they force managers and workers to throw away old comfortable solutions and adopt radical, never-used solutions. Though stretch goals may encourage large improvements, they may also pressure people to do anything to meet "the numbers." The most common stretch goal CEOs set is "15 percent annual growth," the magical number that doubles corporate earnings every five years. But with earnings growth averaging just 8 percent over the last 40 years, the chances of achieving 15 percent growth every year are extremely low. So instead of promising generally unobtainable results, managers should set more realistic stretch goals. When Bob Eckert became CEO of Mattel, he dumped the company's stated goals of 15 percent annual earnings growth and 10 percent revenue growth. Said Eckert, "They were not realistic. We were not going to play that game anymore."[18]

the first time it gets cold (or hot) each year, they are likely to buy service contracts that ensure their equipment is in working order. Tune-up work can then be scheduled during the slow seasons, increasing sales at those times. Finally, this goal can be made *timely* by asking the staff to push sales of maintenance contracts before Labor Day, the traditional end of summer, when people start thinking about the cold days ahead, and in March, when winter-weary people start longing for hot days in air-conditioned comfort. The result would be more work during the slow fall and spring seasons.

2.2 Developing Commitment to Goals

Just because a company sets a goal doesn't mean that people will try to accomplish it. If workers don't care about a goal, then the goal won't encourage them to work harder or smarter. Thus, the second step in planning is to develop commitment to goals.[15]

Goal commitment is the determination to achieve a goal. Commitment to achieve a goal is not automatic. Managers and workers must choose to commit themselves to a goal. For example, Professor Edwin Locke, the foremost expert on how, why, and when goals work, told a story about an overweight friend who finally lost 75 pounds. Locke said, "I asked him how he did it, knowing how hard it was for most people to lose so much weight." His friend responded, "Actually, it was quite simple. I simply decided that I *really wanted* to do it."[16] Put another way, goal commitment is really wanting to achieve a goal.

goal commitment
The determination to achieve a goal.

So how can managers bring about goal commitment? The most popular approach is to set goals participatively. Rather than assigning goals to workers ("Johnson, you've got till Tuesday of next week to redesign the flex capacitor so it gives us 10 percent more output"), managers and employees choose goals together. The goals are more likely to be realistic and attainable if employees participate in setting them.

Another technique for gaining commitment to a goal is to make the goal public. For example, college students who publicly communicated their semester grade goals ("This semester, I'm shooting for a 3.5") to significant others (usually a parent or sibling) were much more committed to achieving their grades. More important, those students earned grades that were nearly a half-grade higher than the grades of students who did not tell others about their grade goals.[19] So, one way to increase commitment to goals is to "go public" by having individuals or work units tell others about their goals.

Another way to increase goal commitment is to obtain top management's support. Top management can show support for a plan or program by providing funds, speaking publicly about the plan, or participating in the plan itself.

2.3 Developing Effective Action Plans

action plan
The specific steps, people, and resources needed to accomplish a goal.

The third step in planning is to develop effective action plans. An **action plan** lists the specific steps (how), people (who), resources (what), and time period (when) for accomplishing a goal. For example, for some time, Severn Sound, a popular water recreational area in Ontario, Canada, had to restrict swimming and fishing because of pollution and reduced oxygen levels in the water. Now, however, thanks to steps implemented over the last decade, the ecosystem has been restored and walleye fish, once nearly eliminated, are abundant again. Cities and towns reduced and treated storm-water runoff; farmers and local residents

reduced agricultural and yard fertilizer runoff; farmers reduced animal waste runoff by erecting fences to keep livestock away from streams that fed the sound; local residents reduced human waste runoff by connecting their homes to municipal sewer systems and better maintaining their septic systems; 129,000 trees and shrubs were planted to reduce erosion; and finally, the Department of Fisheries and Oceans mapped fish habitats to determine which areas of the sound could be developed for housing without adversely affecting the sound or its fish population.[20]

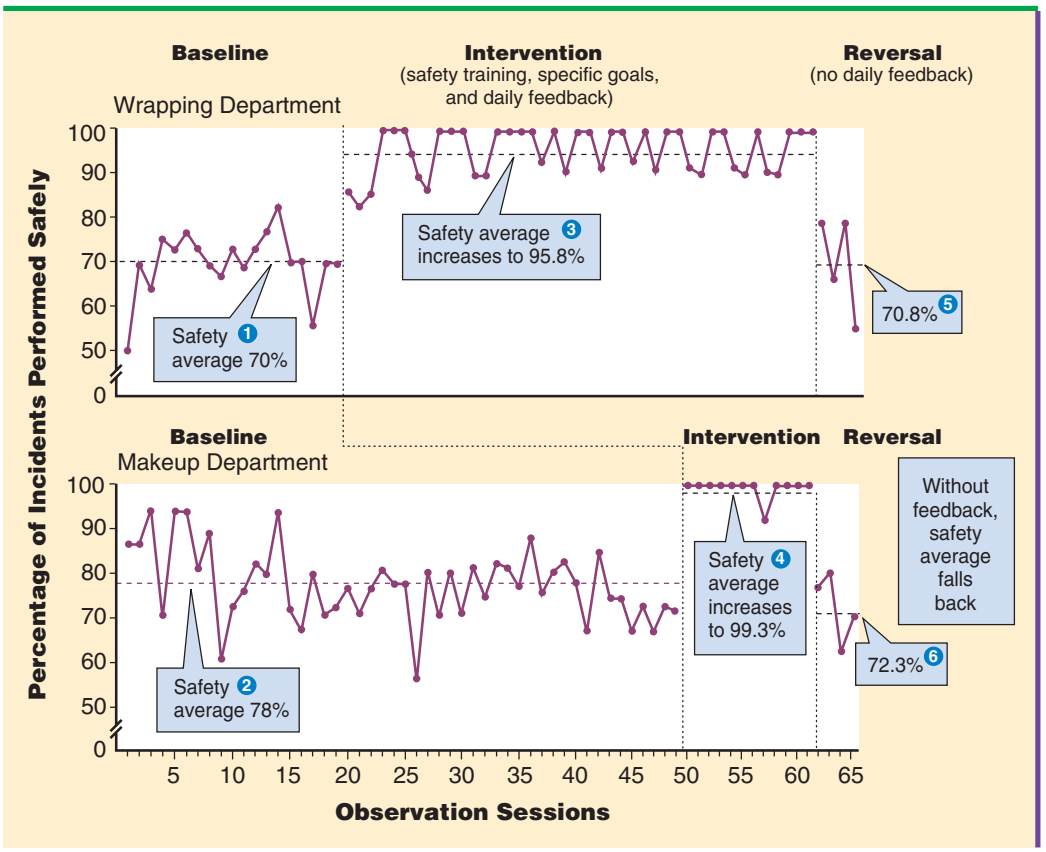
2.4 Tracking Progress

The fourth step in planning is to track progress toward goal achievement. There are two accepted methods of tracking progress. The first is to set proximal goals and distal goals. **Proximal goals** are short-term goals or subgoals, whereas **distal goals** are long-term or primary goals.[21] The idea behind setting proximal goals is that achieving them may be more motivating and rewarding than waiting to reach far-off distal goals. In a research study, Massachusetts Institute of Technology students were given a complex proofreading assignment; they were paid 10 cents for each error they found, but were penalized $1 a day for turning in their work late. One group of students was given a single deadline, that is, a distal goal, and told to turn in all of their work three weeks from the start of the study. A second group of students was given weekly deadlines, that is, proximal goals, and told to turn in one-third of their work each week. A third group of students was allowed to set their own deadlines; that is, they set their own proximal goals. The single-deadline students (i.e., no proximal goals,

proximal goals
Short-term goals or subgoals.

distal goals
Long-term or primary goals.

Exhibit 5.4
Effects of Goal Setting, Training, and Feedback on Safe Behavior in a Bread Factory



Source: (c) 1978 by the American Psychological Association. "A Behavioral Approach to Occupational Safety: Pinpointing and Reinforcing Safe Performance in a Food Manufacturing Plant." Komaki, J., Barwick, K. D., & Scott, L. R., *Journal of Applied Psychology,* 1978, V63. Reprinted with permission.

just a distal goal) were the worst performers: they turned in their work 12 days late and corrected only 70 errors. The students who were assigned weekly goals (i.e., proximal goals) were the best performers: they turned in their work only a half day late and corrected 136 errors. Next best were the students who set their own proximal goals: they turned in their work 6.5 days late and corrected 104 errors.[22] The lesson for managers is clear. If you want people to do a better job of tracking the quality and timeliness of their work, use proximal goals to set multiple deadlines.[23]

The second method of tracking progress is to gather and provide performance feedback. Regular, frequent performance feedback allows workers and managers to track their progress toward goal achievement and make adjustments in effort, direction, and strategies.[24] For example, Exhibit 5.4 shows the result of providing feedback on safety behavior to the makeup and wrapping workers in a large bakery company. The company had a worker safety record that was two-and-a-half times worse than the industry average. During the baseline period, workers in the wrapping department, who measure and mix ingredients, roll the bread dough, and put it into baking pans, performed their jobs safely about 70 percent of the time (see arrow 1 in Exhibit 5.4). The baseline safety record for workers in the makeup department, who bag and seal baked bread and assemble, pack, and tape cardboard cartons for shipping, was a bit better at 78 percent (see arrow 2). After the company gave workers 30 minutes of safety training, set a goal of 90 percent safe behavior, and then provided daily feedback (such as a chart similar to Exhibit 5.4), performance improved dramatically. During the intervention period, the percentage of safely performed behaviors rose to an average of 95.8 percent for wrapping workers (see arrow 3) and 99.3 percent for workers in the makeup department (see arrow 4), and never fell below 83 percent. Thus, the combination of training, a challenging goal, and feedback led to a dramatic increase in performance.

The importance of feedback alone can be seen in the reversal stage, when the company quit posting daily feedback on safe behavior. Without daily feedback, the percentage of safely performed behavior returned to baseline levels, 70.8 percent for the wrapping department (see arrow 5)and 72.3 percent for the makeup department (see arrow 6). For planning to be effective, workers need both a specific, challenging goal and regular feedback to track their progress. Indeed, additional research indicates that the effectiveness of goal setting can be doubled by the addition of feedback.[25]

2.5 Maintaining Flexibility

Because action plans are sometimes poorly conceived and goals sometimes turn out not to be achievable, the last step in developing an effective plan is to maintain flexibility. One method of maintaining flexibility while planning is to adopt an options-based approach.[26] The goal of **options-based planning** is to keep options open by making small, simultaneous investments in many options or plans. Then, when one or a few of these plans emerge as likely winners, you invest even more in these plans while discontinuing or reducing investment in the others. In part, options-based planning is the opposite of traditional planning. For example, the purpose of an action plan is to commit people and resources to a particular course of action. In contrast, the purpose of options-based planning is to leave those commitments open by maintaining **slack resources,** that is, a cushion of resources, such as extra time, people, money, or production capacity, that can be used to address and adapt to unanticipated changes, problems, or opportunities.[27] Holding options open gives you choices, and choices, combined with slack resources, give you flexibility. Options-based planning is especially useful when uncertainty is high and you don't know how things will change or what will work in the future.

options-based planning
Maintaining planning flexibility by making small, simultaneous investments in many alternative plans.

slack resources
A cushion of extra resources that can be used with options-based planning to adapt to unanticipated changes, problems, or opportunities.

NBA/GETTY IMAGES

Designers of the SBC Center in San Antonio built flexibility into their plans. As such, the arena can accommodate crowds of 18,000 for Spurs games, like this one, or smaller audiences for events like concerts.

For example, in the National Basketball Association, new stadiums quickly become obsolete. As player salaries rise, teams are demanding new arenas with two key features: luxury seating (luxury boxes rent for $125,000 per season and higher) and more seats. The Miami Heat left a 12-year-old arena to play in the brand new $280 million American Airlines arena. The Charlotte Hornets moved to New Orleans when the city of Charlotte, North Carolina, wouldn't replace their 14-year-old arena. To avoid such instant obsolescence, the San Antonio Spurs worked with their architects to build flexibility into their new arena, the $190 million SBC Center. For instance, with no physical barriers around the most expensive "club" seats, prime seating can easily be increased. Likewise, the arena's 40 terrace-level luxury boxes can easily convert to larger party suites and back again, depending on whether high-paying customers want more or less room. Finally, a high-tech curtain system allows the arena to be reconfigured to accommodate a sold-out Spurs game with 18,000 in attendance or a concert with an audience of 5,000. Says lead architect Bill Crockett, "We've built in a lot of flexibility that should keep the building viable for another 30 years without major changes."[28]

Another method of maintaining flexibility while planning is to take a learning-based approach. In contrast to traditional planning, which assumes that initial action plans are correct and will lead to success, **learning-based planning** assumes that action plans need to be continually tested, changed, and improved as companies learn better ways of achieving goals.[29] For example, Knight-Ridder Corporation, which owns the second-largest newspaper chain in the United States, continues to test a number of different plans as it tries to reverse the 9 percent decline in its newspaper circulation over the last decade.[30] To increase readership among young adults, only 41 percent of whom read newspapers, Knight-Ridder newspapers have added sections with music and movie reviews and a wide listing of entertainment events. They've also switched to shorter articles, more color, and better layouts and indexes to make it easier for younger readers to find what they're looking for. So far, young adult readership hasn't budged, so four Knight-Ridder newspapers are experimenting with price cuts, slashing the cost of their papers to 25 cents on weekdays and $1 on Sundays. Since the price cuts, some papers have seen daily and Sunday circulation increase. The company will continue to test and revise its plans until it learns how to increase readership.[31]

learning-based planning
Learning better ways of achieving goals by continually testing, changing, and improving plans and strategies.

Review 2: How to Make a Plan That Works

There are five steps to making a plan that works: (1) Set S.M.A.R.T. goals—goals that are **S**pecific, **M**easurable, **A**ttainable, **R**ealistic, and **T**imely. (2) Develop commitment to the goals from the people who contribute to goal achievement. Managers can increase workers' goal commitment by encouraging worker participation in goal setting, making goals public, and getting top management to show

support for workers' goals. (3) Develop action plans for goal accomplishment. (4) Track progress toward goal achievement by setting both proximal and distal goals and by providing workers with regular performance feedback. (5) Maintain flexibility. Keeping options open through options-based planning and seeking continuous improvement through learning-based planning help organizations maintain flexibility as they plan.

3 PLANNING FROM TOP TO BOTTOM

Planning works best when the goals and action plans at the bottom and middle of the organization support the goals and action plans at the top of the organization. In other words, planning works best when everybody pulls in the same direction. Exhibit 5.5 illustrates this planning continuity, beginning at the top with a clear definition of the company vision and ending at the bottom with the execution of operational plans.

Let's see how **3.1 top managers create the organizational vision and mission, 3.2 middle managers develop tactical plans and use management by objectives to motivate employee efforts toward the overall vision and mission,** and **3.3 first-level managers use operational, single-use, and standing plans to implement the tactical plans.**

3.1 Starting at the Top

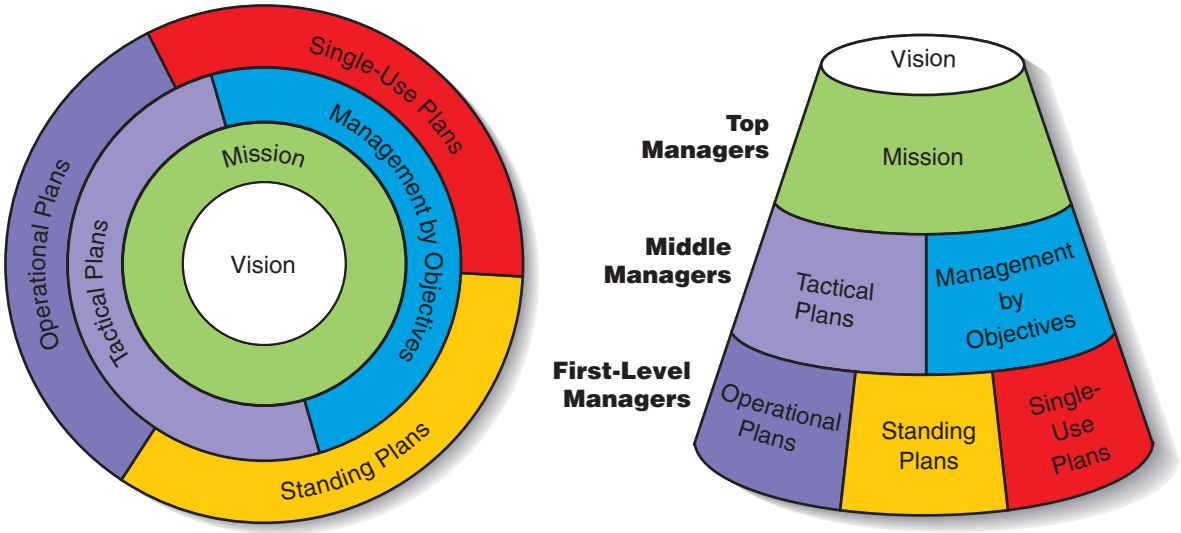
strategic plans
Overall company plans that clarify how the company will serve customers and position itself against competitors over the next two to five years.

vision
An inspirational statement of an organization's enduring purpose.

As shown in Exhibit 5.6, top management is responsible for developing long-term **strategic plans** that make clear how the company will serve customers and position itself against competitors in the next two to five years. (The strategic planning and management process is reviewed in its entirety in Chapter 6.) Strategic planning begins with the creation of an organizational vision and an organizational mission.

A **vision** is a statement of a company's purpose or reason for existing.[32] Vision statements should be brief—no more than two sentences. They should also be enduring, inspirational, clear, and consistent with widely shared company beliefs and values. For example, consider the vision statement of Merck & Co., a leading pharmaceutical firm, shown in Exhibit 5.7. It is the same whether Merck uses natural or synthetic chemical compounds or whether its researchers use high-tech gene-splicing equipment or low-tech petri dishes. The vision of "innovations and

Exhibit 5.5
Planning from Top to Bottom



solutions that improve the quality of life," "meaningful work," and "superior rate of return" stays the same. Furthermore, the vision is clear, inspirational, and consistent with Merck's company values, also shown in Exhibit 5.7. Other examples of organizational visions are Walt Disney Company's "to make people happy" and Schlage Lock Company's "to make the world more secure."[33]

The **mission**, which flows from the vision, is a more specific goal that unifies company-wide efforts, stretches and challenges the organization, and possesses a finish line and a time frame. For example, in 1961, President John F. Kennedy established an organizational mission for NASA with this simple statement: "Achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to earth."[34] NASA achieved this goal on 20 July 1969, when astronaut Neil Armstrong walked on the moon. Once a mission has been accomplished, a new one should be chosen. Again, however, the new mission must grow out of the organization's vision, which does not change significantly over time. For example, NASA's new mission is to return to the moon "as early as 2015 and no later than 2020" and to use the moon "as a stepping stone for more ambitious missions" to Mars and beyond."[35]

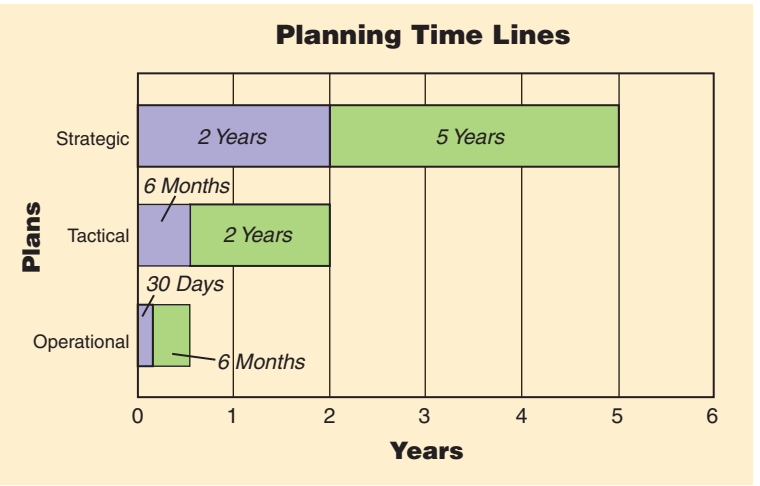


Exhibit 5.6
Time Lines for Strategic, Tactical, and Operational Plans

mission
A statement of a company's overall goal that unifies company-wide efforts toward its vision, stretches and challenges the organization, and possesses a finish line and a time frame.

3.2 Bending in the Middle

Middle management is responsible for developing and carrying out tactical plans to accomplish the organization's mission. **Tactical plans** specify how a company will use resources, budgets, and people to accomplish specific goals within its mission. Whereas strategic plans and objectives are used to focus company efforts over the next two to five years, tactical plans and objectives are used to direct behavior, efforts, and attention over the next six months to two years. For example, Craig Knouf, CEO of Associated Business Systems, a 110-person business that sells office equipment in Portland, Oregon, reviews his company's 30-page business plan monthly, semiannually, and annually to compare the company's actual performance with the goals set forth in the plan. When Knouf noticed that over a six-month period the company had sold more high-volume scanners than before, he changed his business plan to put more emphasis on scanners and scanning software. As a result, sales of scanning products, which will double this year compared to last, now account for one-third of all sales. Working without his business plan, says Knouf, "would be like driving a car with no steering wheel."[36]

tactical plans
Plans created and implemented by middle managers that specify how the company will use resources, budgets, and people over the next six months to two years to accomplish specific goals within its mission.

Management by objectives is a management technique often used to develop and carry out tactical plans. **Management by objectives**, or MBO, is a four-step process in which managers and their employees (1) discuss possible goals; (2) participatively select goals that are challenging, attainable, and consistent with the company's overall goals; (3) jointly develop tactical plans that lead to the accomplishment of tactical goals and objectives; and (4) meet regularly to review progress toward accomplishment of those goals. Lee Iacocca, the CEO who brought the former Chrysler Corporation back from the verge of bankruptcy, credits MBO (though he called it a "quarterly review system") for his 30 years of extraordinary success as a manager. Iacocca said, "Over the years, I've regularly asked my key people—and I've had them ask *their* key people, and so on down the line—a few basic questions: 'What are your objectives for the next ninety days? What are your plans, your priorities, your hopes? And how do you intend to go about achieving them?'"[37]

management by objectives (MBO)
A four-step process in which managers and employees discuss and select goals, develop tactical plans, and meet regularly to review progress toward goal accomplishment.

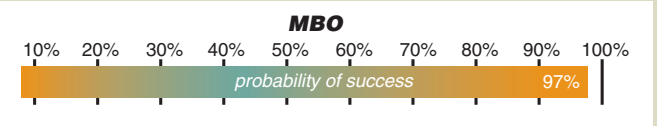
Management by Objectives

For years, both managers and management researchers have wondered how much effect planning has on organizational performance or whether it really makes any difference at all. While proponents argued that planning encourages workers to work hard, persist in their efforts, engage in behaviors directly related to goal accomplishment, and develop better strategies for achieving goals, opponents argued that planning impedes organizational change and adaptation, creates the illusion of managerial control, and artificially separates thinkers and doers.

Now, however, the results from 70 different organizations strongly support the effectiveness of management by objectives (i.e., short-term planning).

MANAGEMENT BY OBJECTIVES (MBO)

Management by objectives is a process in which managers and subordinates at all levels in a company sit down together to jointly set goals, share information and discuss strategies that could lead to goal achievement, and regularly meet to review progress toward accomplishing those goals. Thus, MBO is based on goals, participation, and feedback. On average, companies that effectively use MBO will outproduce those that don't use MBO by an incredible 44.6 percent! And in companies where top management is committed to MBO, that is, where objective setting begins at the top, the average increase in performance is an even more astounding 56.5 percent. By contrast, when top management does not participate in or support MBO, the average increase in productivity drops to 6.1 percent. In all, there is a 97 percent chance that companies that use MBO will outperform those that don't! Thus, MBO can make a very big difference to the companies that use it.[38]



When done right, MBO is an extremely effective method of tactical planning. Still, MBO is not without disadvantages.[39] Some MBO programs involve excessive paperwork, requiring managers to file annual statements of plans and objectives, plus quarterly or semiannual written reviews assessing goal progress. Today, however, electronic and Web-based management systems and software, which automate the MBO process, are making it easier for managers and employees to set goals, link them to the organization's strategic direction, and continuously track and evaluate their progress.[40] Another difficulty is that managers are frequently reluctant to give employees feedback about their performance. A third disadvantage is that managers and employees sometimes have difficulty agreeing on goals. And when employees are forced to accept goals that they don't want, goal commitment and employee effort suffer. Last, because MBO focuses on quantitative, easily measured goals, employees may neglect important but unmeasured parts of their jobs. In other words, if your job performance is judged only by whether you reduce costs by 3 percent or raise revenues by 5 percent, then you are unlikely to give high priority to the unmeasured, but still important parts of your job, such as mentoring new employees or sharing knowledge and skills with coworkers.

3.3 Finishing at the Bottom

operational plans
Day-to-day plans, developed and implemented by lower-level managers, for producing or delivering the organization's products and services over a 30-day to six-month period.

Lower-level managers are responsible for developing and carrying out **operational plans**, which are the day-to-day plans for producing or delivering the organization's products and services. Operational plans direct the behavior, efforts, and priorities of operative employees for periods ranging from 30 days to six months. There are three kinds of operational plans: single-use plans, standing plans, and budgets.

MERCK'S VISION
. . . to provide society with superior products and services by developing innovations and solutions that improve the quality of life and satisfy customer needs, and to provide employees with meaningful work and advancement opportunities, and investors with a superior rate of return.
MERCK'S VALUES
1. **Our business is preserving and improving human life.** All of our actions must be measured by our success in achieving this goal. We value, above all, our ability to serve everyone who can benefit from the appropriate use of our products and services, thereby providing lasting consumer satisfaction.
2. **We are committed to the highest standards of ethics and integrity.** We are responsible to our customers, to Merck employees and their families, to the environments we inhabit, and to the societies we serve worldwide. In discharging our responsibilities, we do not take professional or ethical shortcuts. Our interactions with all segments of society must reflect the high standards we profess.
3. **We are dedicated to the highest level of scientific excellence and commit our research to improving human and animal health and the quality of life.** We strive to identify the most critical needs of consumers and customers, and we devote our resources to meeting those needs.
4. **We expect profits, but only from work that satisfies customer needs and benefits humanity.** Our ability to meet our responsibilities depends on maintaining a financial position that invites investment in leading-edge research and that makes possible effective delivery of research results.
5. **We recognize that the ability to excel—to most competitively meet society's and customers' needs—depends on the integrity, knowledge, imagination, skill, diversity and teamwork of our employees, and we value these qualities most highly.** To this end, we strive to create an environment of mutual respect, encouragement and teamwork—an environment that rewards commitment and performance and is responsive to the needs of our employees and their families.

Source: "The Merck Corporate Philosophy," [Online] available at **http://www.merck.com/about/mission.html,** 17 February 2005. Copyright © 1995–2003 Merck & Co., Inc., Whitehouse Station, NJ, USA. All rights reserved. Used with permission.

Exhibit 5.7
Merck & Co.'s Vision and Values

Single-use plans deal with unique, one-time-only events. For example, Philip Morris is relocating its headquarters and 682 employees from Park Avenue in New York City to Henrico County, Virginia. Although the move will cost $120 million, the company will save $60 million a year in operating costs. While stressing that this was a "difficult decision to make because of our company's long corporate history in New York City and the impact it will have on our employees," Philip Morris's chairman and CEO said, "This move will help to streamline our business operations, increase efficiencies and deliver significant cost savings over the long run."[41]

single-use plans
Plans that cover unique, one-time-only events.

Unlike single-use plans that are created, carried out, and then never used again, **standing plans** save managers time because once the plans are created, they can be used repeatedly to handle frequently recurring events. If you encounter a problem that you've seen before, someone in your company has probably written a standing plan that explains how to address it. There are three kinds of standing plans: policies, procedures, and rules and regulations.

standing plans
Plans used repeatedly to handle frequently recurring events.

Policies indicate the general course of action that company managers should take in response to a particular event or situation. A well-written policy will also specify why the policy exists and what outcome the policy is intended to produce. Because the average employee surfs the Internet 11.1 hours per week, many companies have policies of either monitoring or blocking access to non-work-related Web sites. After its monitoring policy failed, Chaparral Energy, an oil and gas company, switched to software that blocks access to religious, political, or sexually oriented Web sites. Systems engineer Richard Underwood explains, "Out in the field offices [where oil and gas exploration occurs], there was an established rule that they weren't going by the [monitoring] rule. We wanted to make sure policies were followed."[42] Employee Web surfing has now dropped from an hour to less than 15 minutes a day.

policy
A standing plan that indicates the general course of action that should be taken in response to a particular event or situation.

procedure
A standing plan that indicates the specific steps that should be taken in response to a particular event.

Procedures are more specific than policies because they indicate the series of steps that should be taken in response to a particular event. A manufacturer's procedure for handling defective products might include the following steps: Step (1) Rejected material is locked in a secure area with "reject" documentation attached. Step (2) Material Review Board (MRB) identifies the defect and how far outside the standard the rejected products are. Step (3) MRB determines the disposition of the defective product as either scrap or as rework. Step (4) Scrap is either discarded or recycled, and rework is sent back through the production line to be fixed. Step (5) If delays in delivery will result, MRB member notifies customer.[43]

rules and regulations
Standing plans that describe how a particular action should be performed, or what must happen or not happen in response to a particular event.

Rules and regulations are even more specific than procedures because they specify what must happen or not happen. They describe precisely how a particular action should be performed. For instance, many companies have rules and regulations forbidding managers from writing job reference letters for employees who have worked at their firms because a negative reference may prompt a former employee to sue for defamation of character.[44]

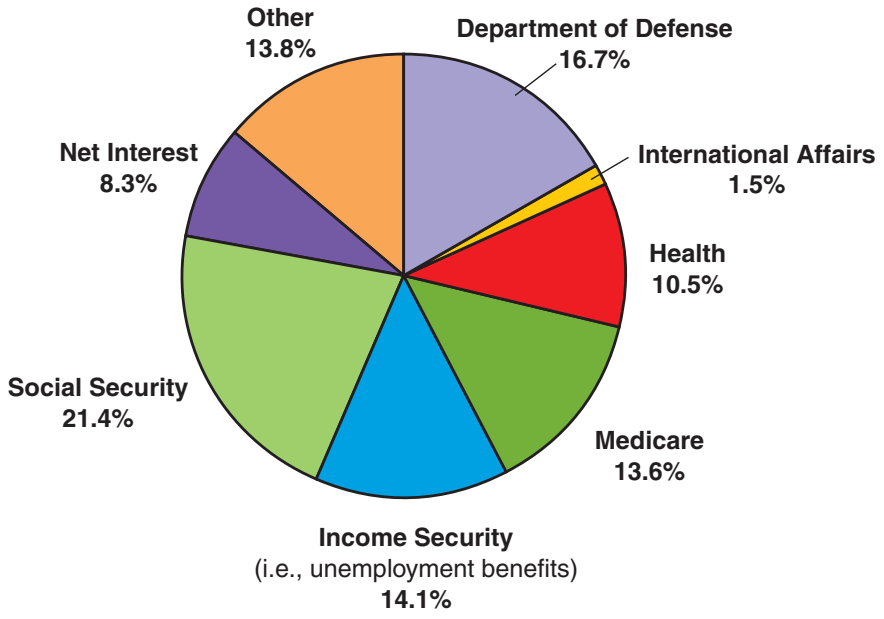
budgeting
Quantitative planning through which managers decide how to allocate available money to best accomplish company goals.

Budgets are the third kind of operational plan. **Budgeting** is quantitative planning because it forces managers to decide how to allocate available money to best accomplish company goals. According to Jan King, author of *Business Plans to Game Plans*, "Money sends a clear message about your priorities. Budgets act as a language for communicating your goals to others." For example, Exhibit 5.8 shows the operating budget outlays for the U.S. federal government. Together, social programs (Social Security and income security, or welfare) and health-care programs (Medicare and health) account for nearly 60 percent of the federal budget. Budgeting is a critical management task—one that most managers could do better. For more detailed information about budgeting, see *Essential Managers: Managing Budgets* by Stephen Brookson or *Budgeting Basics & Beyond: A Complete Step-by-Step Guide for Nonfinancial Managers* by Jae K. Shim and Joel G. Siegel. Both books are written for budget beginners.

Review 3: Planning from Top to Bottom

Proper planning requires that the goals at the bottom and middle of the organization support the objectives at the top of the organization. Top management develops strategic plans that indicate how a company will serve customers and position itself against competitors over a two- to five-year period. Strategic planning starts with the creation of an organizational vision and mission. Middle managers use techniques like management by objectives to develop tactical plans that direct behavior, efforts, and priorities over the next six months to two years. Finally, lower-level managers develop operational plans that guide daily activities in producing or delivering an organization's products and services. Operational plans typically span periods ranging from 30 days to six months. There are three kinds of operational plans: single-use plans, standing plans (policies, procedures, and rules and regulations), and budgets.

Exhibit 5.8
2006 U.S. Federal Government Budget Outlays



Source: "B-80. Federal Receipts and Outlays, by Major Category, and Surplus or Deficit, Fiscal Years 1940–2006," *Economic Report of the President: 2005 Report Spreadsheet Tables,* [Online] Available at **http://a257.g.akamaitech.net/7/257/2422/17feb20051700/www.gpoaccess.gov/eop/2005/B80.xls,** 17 February 2005.

What Is Rational Decision Making?

Imagine that you've been away on business. On your first day back at the office, you sort through your phone messages and find this voice mail from the boss:

You're a computer nut, aren't you? Whaddya call yourself, an Internet geek? Well, you know more about this stuff than anyone else in the office. Here's what I need from you. You've got three weeks to get it done. I want you to prepare a presentation and write a report that details the problems we've been having with our computers. It should also summarize our current and future computer needs. Talk to everyone. Find out what they need and want. Be sure to consider upgrade options. I don't want to spend a ton of money to improve our systems, only to have them be obsolete in two years. Finally, come up with at least five plans or options for getting us where we need to be. Hey, almost forgot, you're probably going to have to do some educating here. Most of us in management don't speak "computer geek." Heck, half of the dinosaurs we've got in upper management think computers are $1,500 paperweights—don't repeat that, okay? So be sure to explain in everyday language how we can decide which plans or options are best. Have a rough draft on my desk in three weeks.

When your boss delegated this "computer problem," what he really wanted from you is a rational decision. **Decision making** is the process of choosing a solution from available alternatives.[45] **Rational decision making,** is a systematic process in which managers define problems, evaluate alternatives, and choose optimal solutions that provide maximum benefits to their organizations. Thus, your boss expects you to define and analyze the computer problem and explore alternatives. Furthermore, your solution has to be "optimal," because the department is going to live with the computer equipment you recommend for the next three years.

decision making
The process of choosing a solution from available alternatives.

rational decision making
A systematic process of defining problems, evaluating alternatives, and choosing optimal solutions.

After reading the next two sections, you should be able to

4 explain the steps and limits to rational decision making.

5 explain how group decisions and group decision-making techniques can improve decision making.

4 STEPS AND LIMITS TO RATIONAL DECISION MAKING

Exhibit 5.9 shows the six steps of the rational decision-making process. Let's learn more about each of these steps: **4.1 define the problem, 4.2 identify decision criteria, 4.3 weight the criteria, 4.4 generate alternative courses of action, 4.5 evaluate each alternative,** and **4.6 compute the optimal decision.** Then we'll consider **4.7 limits to rational decision making.**

4.1 Define the Problem

The first step in decision making is identifying and defining the problem. A **problem** exists when there is a gap between a desired state (what is wanted) and an existing state (the situation you are actually facing). Because it can hold 550 to 850 passengers, Airbus's new A380 super-jumbo jetliner could generate tremendous revenues for airlines. But with wings larger than a small passenger jet and wheels so large that it takes a crane to move them, the A380 was several tons too heavy. Randy Baseler of Boeing, Airbus's competitor, said, "If the plane's heavier, it consumes more fuel. That drives up landing and navigation fees, and also maintenance costs, especially for wheels, tires and brakes."[46] Fearing exorbitant costs, the airlines told Airbus they wouldn't buy the A380 unless it was substantially lighter.[47]

problem
A gap between a desired state and an existing state.

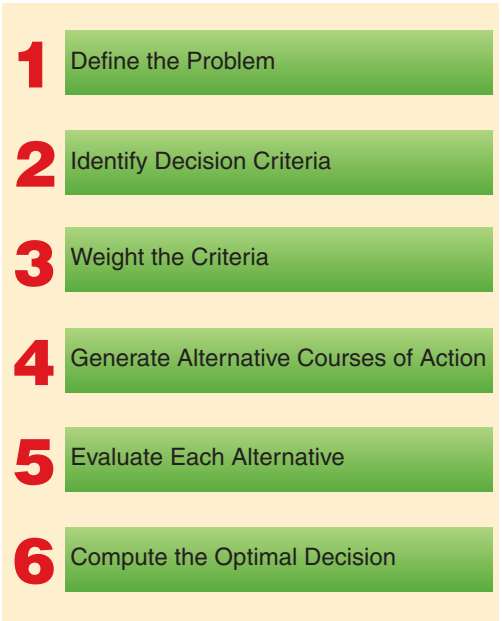
The existence of a gap between an existing state and a desired state is no guarantee that managers will make decisions to solve problems. Three things must occur for this to happen.[48] First, managers have to be aware of the gap. They have to know there is a problem before they can begin solving it. For example, after noticing that people were spending more money on their pets, a new dog food company created an expensive, high-quality dog food. To emphasize its quality, the dog food was sold in cans and bags with gold labels, red letters, and detailed information about its benefits and nutrients. Yet the product did not sell very well, and the company went out of business in less than a year. Its founders didn't understand why. When they asked a manager at a competing dog food company what their biggest mistake had been, the answer was, "Simple. You didn't have a picture of a dog on the package."[49] This problem would have been easy to solve, if management had only been aware of it.

Being aware of the gap between a desired state and an existing state isn't enough to begin the decision-making process. Managers also have to be motivated to reduce the gap. For example, business people have complained for years about unreasonable workplace regulation. Nevertheless, Congress was not interested in solving this "problem" until the Congressional Accountability Act subjected Congress to the same laws as private businesses. Now, like any business, Congress must give overtime pay to anyone who works more than 40 hours a week. Legislative and office assistants, all of whom used to work 60 hours a week, are now limited by law to just 40. To limit hours and overtime pay, no one is allowed to work during lunch (even if they want to). Computers are turned off. Phones go unanswered. Employees can't even watch C-Span while eating their sandwiches. At 6:00 P.M., office managers walk through the offices, ringing loud bells and turning off lights to force employees who want to keep working to go home. Not surprisingly, these changes have motivated many in Congress to take a second look at the unintended effects that workplace laws and regulations have on businesses.[50]

decision criteria
The standards used to guide judgments and decisions.

Finally, it's not enough to be aware of a problem and be motivated to solve it. Managers must also have the knowledge, skills, abilities, and resources to fix the problem. So, how did Airbus reduce the weight of its A380 super-jumbo jet? Engineers achieved the biggest weight savings by substituting a light carbon-fiber composite material for heavier aluminum in the rear fuselage and the large structural ribs in the wings. Altogether, these changes and others reduced the A380's weight by four tons.[51]

Exhibit 5.9
Steps of the Rational Decision-Making Process



4.2 Identify Decision Criteria

Decision criteria are the standards used to guide judgments and decisions. Typically, the more criteria a potential solution meets, the better that solution should be.

Let's return to the employee who was given the responsibility for making a rational decision about the office computer setup. What general factors would be important when purchasing computers for the office? Reliability, price, warranty, on-site service, and compatibility with existing software, printers, and computers would all be important, but you would also have to consider the technical details. What specific factors would you want the office computers to have? Well, with technology changing so quickly, you'll probably want to buy computers with as much capability as you can afford. At the minimum, according to *PC Magazine*, you'll probably want a 64-bit 3-gigahertz Pentium 4 or Athlon chip, with 2 to 4 gigabytes of memory, a 160-gig hard drive, a DVD/CD-RW combination drive holding 8 gigabytes of data, a 100 megabit to 1 gigabyte per second network card for high-speed Internet connections, multiple USB and firewire ports to connect external devices like digital cameras and zip

drives, and a 17-inch flat-screen monitor—all for a price of $1,000 or less![52] These general and specific factors represent the criteria that could guide the purchase of computer equipment.

REUTERS/LANDOV

Airbus A380 is the largest passenger jet ever built. It's understandable that potential buyers of the two-story super-jumbo jet would be concerned about weight and fuel usage. Nose to tail, it's longer than this section of terminal where it's gated, and its 263-foot wingspan is nearly as long as a football field.

4.3 Weight the Criteria

After identifying decision criteria, the next step is deciding which criteria are more or less important. Although there are numerous mathematical models for weighting decision criteria, all require the decision maker to provide an initial ranking of the criteria. Some use **absolute comparisons**, in which each criterion is compared to a standard or ranked on its own merits. For example, *Consumer Reports* uses this checklist when it rates and recommends new cars: predicted reliability, previous owners' satisfaction, predicted depreciation (the price you could expect if you sold the car), ability to avoid an accident, fuel economy, crash protection, acceleration, ride, and front seat comfort.[53]

Exhibit 5.10 shows the absolute weights that someone buying a car might use. Because these weights are absolute, each criterion is judged on its own importance, using a five-point scale, with "5" representing "critically important" and "1" representing "completely unimportant." In this instance, predicted reliability, fuel economy, and front seat comfort were rated most important, and acceleration and predicted depreciation were rated least important.

Another method uses **relative comparisons**, in which each criterion is compared directly to every other criterion.[54] For example, Exhibit 5.11 shows six criteria that someone might use when buying a house. Moving down the first column of Exhibit 5.11, we see that the time of the daily commute has been rated less important (–1) than school system quality; more important (+1) than having an inground pool, sun room, or a quiet street, and just as important as the house being brand new (0). Total weights, which are obtained by summing the scores in each column, indicate that the daily commute and school system quality are the most important factors to this home buyer, while an inground pool, sun room, and a quiet street are the least important. So with relative comparision, criteria are directly compared to each other.

absolute comparisons
A process in which each decision criterion is compared to a standard or ranked on its own merits.

relative comparisons
A process in which each decision criterion is compared directly to every other criterion.

4.4 Generate Alternative Courses of Action

After identifying and weighting the criteria that will guide the decision-making process, the next step is to identify possible courses of action that could solve the problem. In general, at this step, the idea is to generate as many alternatives as possible. For instance, let's assume that you're trying to select a city in Europe to be the location of a major office. After meeting with your staff, you generate a list of possible alternatives: Amsterdam, the Netherlands; Barcelona or Madrid, Spain; Berlin or Frankfurt, Germany; Brussels, Belgium; London, England; Milan, Italy; Paris, France; and Zurich, Switzerland.

4.5 Evaluate Each Alternative

The next step is to systematically evaluate each alternative against each criterion. Because of the amount of information that must be collected, this step can take much longer and be much more expensive than other steps in the decision-making process. For example, in selecting a European city for your office, you could contact economic development offices in each city, systematically interview businesspeople or executives who operate there, retrieve and use published government data on each location, or rely on published studies such as Cushman

	5 critically important 4 important 3 somewhat important 2 not very important 1 completely unimportant					
1.	Predicted reliability	1	2	3	4	**5**
2.	Owner satisfaction	1	**2**	3	4	5
3.	Predicted depreciation	**1**	2	3	4	5
4.	Avoiding accidents	1	2	3	**4**	5
5.	Fuel economy	1	2	3	4	**5**
6.	Crash protection	1	2	3	**4**	5
7.	Acceleration	**1**	2	3	4	5
8.	Ride	1	2	**3**	4	5
9.	Front seat comfort	1	2	3	4	**5**

Exhibit 5.10
Absolute Weighting of Decision Criteria for a Car Purchase

& Wakefield Healy & Baker's *European Monitor*, which conducts an annual survey of more than 500 senior European executives who rate 30 European cities on 12 business-related criteria.[55]

No matter how you gather the information, once you have it, the key is to systematically use that information to evaluate each alternative against each criterion. For example, Exhibit 5.12 shows how each of the 10 cities on your staff's list fared on each of the 12 criteria (higher scores are better), from qualified staff to freedom from pollution. Although Paris has good access to markets and very good travel to and from the city, it has a poor business climate and relatively few different languages are spoken in its business community. On the other hand, Barcelona has the lowest costs for employing staff, but weak access to markets and poor ease of travel to and from the city.

4.6 Compute the Optimal Decision

The final step in the decision-making process is to compute the optimal decision by determining each alternative's optimal value. This is done by multiplying the rating for each criterion (Step 5) by the weight for that criterion (Step 3), and then summing those scores for each alternative course of action that you generated (Step 4). For example, the 500 executives participating in Cushman & Wakefield Healy & Baker's survey of the best European cities for business rated the 12 decision criteria in terms of importance as follows: qualified staff (59 percent), access to major markets (57 percent), travel to and from the city (51 percent), good telecommunications (46 percent), positive business climate (34 percent), cost of staff (32 percent), cost and value of office space (30 percent), availability of office space (27 percent), travel within the city (21 percent), languages spoken in the business community (20 percent), quality of life (18 percent), and freedom from pollution (12 percent). Those weights are then multiplied by the ratings in each category. For example, Amsterdam's optimal value of 1.75 (i.e., weighted average) is determined by the following calculation:

$$(.59 \times .32) + (.57 \times .44) + (.51 \times .64) + (.46 \times .31) + (.34 \times .56) + (.32 \times .25) + (.30 \times .37) + (.27 \times .34) + (.21 \times .35) + (.20 \times .98) + (.18 \times .31) + (.12 \times .38) = 1.75$$

Exhibit 5.11
Relative Comparison of Home Characteristic

HOME CHARACTERISTICS	L	SSQ	IP	SR	QS	NBH
Daily commute (L)		+1	–1	–1	–1	0
School system quality (SSQ)	–1		–1	–1	–1	–1
Inground pool (IP)	+1	+1		0	0	+1
Sun room (SR)	+1	+1	0		0	0
Quiet street (QS)	+1	+1	0	0		0
Newly built house (NBH)	0	+1	–1	0	0	
Total weight	**+2**	**+5**	**–3**	**–2**	**–2**	**0**

The weighted average (or optimal) scores in the next to last row of Exhibit 5.12 show that London clearly ranks as the best location for your company's new European office because of its large number of qualified staff, easy access to markets, outstanding ease of travel to, from, and within the city, excellent telecommunications, and top-notch business climate.

4.7 Limits to Rational Decision Making

In general, managers who diligently complete all six steps of the rational decision-making model will make better decisions than those who don't. So, when they can, managers should try to follow the steps in the rational decision-making model, especially for big decisions with long-range consequences.

It's highly doubtful, however, that rational decision making can always help managers choose *optimal* solutions that provide *maximum* benefits to their organizations. The terms *optimal* and *maximum* suggest that rational decision making leads to perfect or near-perfect decisions. Of course, for managers to make perfect decisions, they have to operate in perfect worlds with no real-world constraints. For example, in an optimal world, the manager who was given three weeks to define, analyze, and fix computer problems in the office would have followed *PC Magazine's* advice to buy all employees the "perfect personal computer" (i.e., 3-gigahertz chip, 2 to 4 gigabytes of memory, etc.). And in arriving at that decision, our manager would not have been constrained by price ("$3,000 per computer? Sure, no problem.") or time ("Need six more months to decide? Sure, take as long as you need."). Furthermore, without any constraints, our manager could identify and weight an extensive list of decision criteria, generate a complete list of possible solutions, and then test and evaluate each computer against each decision criterion. Finally, our manager would have the necessary experience and knowledge with computers to easily make sense of all these sophisticated tests and information.

Of course, it never works like that in the real world. Managers face time and money constraints. They often don't have time to make extensive lists of decision criteria. And they often don't have the resources to test all possible solutions against all possible criteria.

The rational decision-making model describes the way decisions *should* be made. In other words, decision makers wanting to make optimal decisions *should not* have to face time and cost constraints. They *should* have unlimited resources and time to generate and test all alternative solutions against all decision criteria. And they *should* be willing to recommend any decision that produces optimal benefits for the company, even if that decision would harm their own jobs or departments. Of course, very few managers actually make rational decisions the way they *should*. The way in which managers actually make decisions is more accurately described as "bounded (or limited) rationality." **Bounded rationality** means that managers try to take a rational approach to decision making, but are restricted by real-world constraints, incomplete and imperfect information, and their own limited decision-making capabilities.

In theory, fully rational decision makers **maximize** decisions by choosing the optimal solution. In practice, however, limited resources, along with attention, memory, and expertise problems, make it nearly impossible for managers to maximize decisions. Consequently, most managers don't maximize—they "satisfice." Whereas maximizing is choosing the best alternative, **satisficing** is choosing a "good enough" alternative. With 24 decision criteria, 50 alternative computers to choose from, two computer labs with hundreds of thousands of dollars of equipment, and unlimited time and money, our manager could test all alternatives against all decision criteria and choose the "perfect PC." In reality, however, our manager's limited time, money, and expertise mean that only a few alternatives will be assessed against a few decision criteria. In practice, our manager will visit two or three computer or electronic stores, read

bounded rationality
A decision-making process restricted in the real world by limited resources, incomplete and imperfect information, and managers' limited decision-making capabilities.

maximizing
Choosing the best alternative.

satisficing
Choosing a "good enough" alternative.

DOING THE RIGHT THING

PLUS—A PROCESS FOR ETHICAL DECISION MAKING

People are often unsure how to include ethics in their decision-making processes. To help them, the Ethics Resource Center recommends using the following PLUS guidelines throughout the various steps of the rational decision-making model:

- **P is for policies. Is your decision consistent with your organization's policies, procedures, and guidelines?**
- **L is for legal. Is your decision acceptable under applicable laws and regulations?**
- **U is for universal. Is your decision consistent with your organization's values and principles?**
- **S is for self. Does your decision satisfy your personal sense of right, good, and fair?**

The PLUS guidelines can't guarantee ethical decisions, but they can help employees be more attentive to ethical issues as they define problems, evaluate alternatives, and choose solutions.[56]

	WEIGHTS	Amsterdam	Barcelona	Berlin	Brussels	Frankfurt	London	Madrid	Milan	Paris	Zurich
QUALIFIED STAFF	**59%**	0.32	0.22	0.33	0.38	0.65	1.39	0.24	0.34	0.84	0.23
ACCESS TO MARKETS	**57%**	0.44	0.18	0.23	0.51	0.72	1.44	0.28	0.41	1.14	0.20
TRAVEL TO/ FROM CITY	**51%**	0.64	0.14	0.17	0.49	1.20	1.69	0.17	0.22	1.43	0.25
TELECOMMU-NICATIONS	**46%**	0.31	0.08	0.37	0.32	0.76	1.36	0.10	0.18	0.94	0.33
BUSINESS CLIMATE	**34%**	0.56	0.37	0.30	0.35	0.19	0.65	0.40	0.20	0.24	0.36
COST OF STAFF	**32%**	0.25	0.71	0.23	0.20	0.09	0.21	0.61	0.29	0.16	0.05
COST & VALUE OF OFFICE SPACE	**30%**	0.37	0.69	0.38	0.41	0.26	0.24	0.42	0.21	0.30	0.14
AVAILABLE OFFICE SPACE	**27%**	0.34	0.41	0.52	0.38	0.45	0.60	0.46	0.26	0.40	0.18
TRAVEL WITHIN CITY	**21%**	0.35	0.48	0.45	0.31	0.39	1.17	0.30	0.21	1.13	0.43
LANGUAGES SPOKEN	**20%**	0.98	0.14	0.25	0.96	0.51	1.35	0.21	0.22	0.65	0.51
QUALITY OF LIFE	**18%**	0.31	0.99	0.27	0.28	0.14	0.43	0.54	0.33	0.71	0.41
FREEDOM FROM POLLUTION	**12%**	0.38	0.44	0.13	0.20	0.17	0.12	0.09	0.05	0.13	0.85
WEIGHTED AVERAGE [OPTIMAL SCORE]		**1.75**	**1.37**	**1.22**	**1.65**	**2.28**	**4.26**	**1.23**	**1.08**	**3.15**	**1.13**
RANKING		**4**	**6**	**8**	**5**	**3**	**1**	**7**	**10**	**2**	**9**

Source: "European Cities Monitor," Cushman & Wakefield Healy & Baker, [Online] available at **http://www.frankfurt.de/sixcms_upload/media, 26 April 2004.**

Exhibit 5.12
Criteria Ratings Used to Determine the Best Locations in Europe for a New Office

a couple of recent computer reviews, and get bids from a couple of local computer stores that sell complete computer systems at competitive prices, as well as from Dell, Gateway, and Hewlett-Packard. The decision will be complete when our manager finds a "good enough" computer that meets a few decision criteria.

Review 4: Steps and Limits to Rational Decision Making

Rational decision making is a six-step process in which managers define problems, evaluate alternatives, and compute optimal solutions. The first step is identifying and defining the problem. Problems exist where there is a gap between desired and existing states. Managers won't begin the decision-making

process unless they are aware of the gap, motivated to reduce it, and possess the necessary resources to fix it. The second step is defining the decision criteria that are used when judging alternatives. In Step 3, an absolute or relative comparison process is used to rate the importance of the decision criteria. Step 4 involves generating as many alternative courses of action (i.e., solutions) as possible. Potential solutions are assessed in Step 5 by systematically gathering information and evaluating each alternative against each criterion. In Step 6, criterion ratings and weights are used to compute the optimal value for each alternative course of action. Rational managers then choose the alternative with the highest optimal value.

The rational decision-making model describes how decisions should be made in an ideal world without limits. However, bounded rationality recognizes that in the real world, managers' limited resources, incomplete and imperfect information, and limited decision-making capabilities restrict their decision-making processes. These limitations often prevent managers from being rational decision makers.

5 USING GROUPS TO IMPROVE DECISION MAKING

According to a study reported in *Fortune* magazine, 91 percent of U.S. companies use teams and groups to solve specific problems (i.e., make decisions).[57] Why do so many companies use teams and groups? The reason is that, when done properly, group decision making can lead to much better decisions than decisions typically made by individuals. In fact, numerous studies show that groups consistently outperform individuals on complex tasks.

Let's explore the **5.1 advantages and pitfalls of group decision making** and see how the following group decision-making methods—**5.2 structured conflict, 5.3 the nominal group technique, 5.4 the Delphi technique, 5.5 the stepladder technique,** and **5.6 electronic brainstorming**—can be used to improve decision making.

5.1 Advantages and Pitfalls of Group Decision Making

Groups can do a much better job than individuals in two important steps of the decision-making process: defining the problem and generating alternative solutions. Four reasons explain why.

First, because group members usually possess different knowledge, skills, abilities, and experiences, groups are able to view problems from multiple perspectives. Being able to view problems from different perspectives, in turn, can help groups perform better on complex tasks and make better decisions than individuals.[58]

Second, groups can find and access much more information than can individuals alone. At Vignette Corporation, which makes software to help online businesses attract and keep customers, instead of being interviewed by one manager, applicants who pass the initial phone screening are interviewed by eight people with eight different areas of expertise. At the end of the day, when the team meets to decide whether to make a job offer, it has eight kinds of information and eight times as much information to consider.[59]

Third, the increased knowledge and information available to groups make it easier for them to generate more alternative solutions. Studies show that generating lots of alternative solutions is critical to improving the quality of decisions. Fourth, if groups are involved in the decision-making process, group members will be more committed to making chosen solutions work.

Although groups can do a better job of defining problems and generating alternative solutions, group decision making is subject to some pitfalls that can quickly erase these gains. One possible pitfall is groupthink. **Groupthink** occurs in highly cohesive groups when group members feel intense pressure to agree

groupthink
A barrier to good decision making caused by pressure within the group for members to agree with each other.

with each other so that the group can approve a proposed solution.[60] Because groupthink leads to consideration of a limited number of solutions and restricts discussion of any considered solutions, it usually results in poor decisions. Groupthink is most likely to occur under the following conditions:

- The group is insulated from others with different perspectives.
- The group is insulated from others with different perspective.
- The group leader begins by expressing a strong preference for a particular decision.
- There is no established procedure for systematically defining problems and exploring alternatives.
- Group members have similar backgrounds and experiences.[61]

NASA's decision to launch the ill-fated space shuttle *Challenger* is an example of groupthink.[62] Despite cold weather that would normally have postponed a launch, NASA put heavy pressure on Morton Thiokol (maker of the shuttle's) O-rings and other engineering firms involved in the launch decision to give their approval to launch. After being told twice that a launch was not recommended, NASA administrators pressured Morton Thiokol one last time for an OK. Because of the pressure and time constraints, Thiokol reversed its decision. Tragically, as Thiokol had originally feared, the O-rings failed, and the shuttle exploded, killing all aboard. There are indications that groupthink, also played a role in the loss of the space shuttle *Columbia*, in 2003.

A second potential problem with group decision making is that it takes considerable time. It takes time to reconcile schedules (so that group members can meet). Furthermore, it's a rare group that consistently holds productive task-oriented meetings to effectively work through the decision process. Some of the most common complaints about meetings (and thus decision making) are that the meeting's purpose is unclear, participants are unprepared, critical people are absent or late, conversation doesn't stay focused on the problem, and no one follows up on the decisions that were made. Not surprisingly, given these difficulties, the *Valley News Dispatch*, a small paper in Tarentum, Pennsylvania, has this sign in the company conference room: "Are you lonely? Working on your own? Hate making decisions? HOLD A MEETING!"[63]

A third possible pitfall is that sometimes one or two people, perhaps the boss or a strong-willed, vocal group member, dominate group discussion, restricting consideration of different problem definitions and alternative solutions. Another potential problem is that, unlike with their own decisions and actions, group members may not feel accountable for the decisions made and actions taken by the group.

Although these pitfalls can lead to poor decision making, this doesn't mean that managers should avoid using groups to make decisions. When done properly, group decision making can lead to much better decisions. The pitfalls of group decision making are not inevitable. Managers can overcome most of them by using the various techniques described next.

5.2 Structured Conflict

c-type conflict (cognitive conflict)
Disagreement that focuses on problem- and issue-related differences of opinion.

Most people view conflict negatively. Yet the right kind of conflict can lead to much better group decision making. **C-type conflict**, or "cognitive conflict," focuses on problem- and issue-related differences of opin-ion.[64] In c-type conflict, group members disagree because their different experiences and expertise lead them to view the problem and its potential solutions differently. C-type conflict is also characterized by a willingness to examine, compare, and reconcile those differences to produce the best possible solution. Alteon WebSystems, now a division

of Nortel Networks, makes critical use of c-type conflict. Top manager Dominic Orr described Alteon's c-type conflict this way:

People arrive with a proposal or a solution—and with the facts to support it. After an idea is presented, we open the floor to objective, and often withering, critiques. And if the idea collapses under scrutiny, we move on to another: no hard feelings. We're judging the idea, not the person. At the same time, we don't really try to regulate emotions. Passionate conflict means that we're getting somewhere, not that the discussion is out of control. But one person does act as referee—by asking basic questions like "Is this good for the customer?" or "Does it keep our time-to-market advantage intact?" By focusing relentlessly on the facts, we're able to see the strengths and weaknesses of an idea clearly and quickly.[65]

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When groups have no established procedure for systematically defining problems and exploring alternatives, the consequences can be disastrous. As with the *Challenger*, reports indicate that groupthink played a role in the *Columbia* disaster.

By contrast, **a-type conflict**, meaning "affective conflict," refers to the emotional reactions that can occur when disagreements become personal rather than professional. A-type conflict often results in hostility, anger, resentment, distrust, cynicism, and apathy. Unlike c-type conflict, a-type conflict undermines team effectiveness by preventing teams from engaging in the activities characteristic of c-type conflict that are critical to team effectiveness. Examples of a-type conflict statements are "your idea," "our idea," "my department," "you don't know what you are talking about," or "you don't understand our situation." Rather than focusing on issues and ideas, these statements focus on individuals.[66]

a-type conflict (affective conflict)
Disagreement that focuses on individuals or personal issues.

Two methods of introducing structured c-type conflict into the group decision-making process are devil's advocacy and dialectical inquiry. **Devil's advocacy** creates c-type conflict by assigning an individual or a subgroup the role of critic. The following five steps establish a devil's advocacy program:

1. Generate a potential solution.
2. Assign a devil's advocate to criticize and question the solution.
3. Present the critique of the potential solution to key decision makers.
4. Gather additional relevant information.
5. Decide whether to use, change, or not use the originally proposed solution.[67]

devil's advocacy
A decision-making method in which an individual or a subgroup is assigned the role of a critic.

Dialectical inquiry creates c-type conflict by forcing decision makers to state the assumptions of a proposed solution (a thesis) and then generate a solution that is the opposite (antithesis) of the proposed solution. The following are the five steps of the dialectical inquiry process:

1. Generate a potential solution.
2. Identify the assumptions underlying the potential solution.
3. Generate a conflicting counterproposal based on the opposite assumptions.
4. Have advocates of each position present their arguments and engage in a debate in front of key decision makers.
5. Decide whether to use, change, or not use the originally proposed solution.[68]

dialectical inquiry
A decision-making method in which decision makers state the assumptions of a proposed solution (a thesis) and generate a solution that is the opposite (antithesis) of that solution.

BMW uses dialectical inquiry in its design process, typically creating six internal design teams to compete against each other to design a new car. After a front-runner or leading design emerges from one of the teams, another team is assigned to design a car that is "diametrically opposed" to the leading design (Step 3 of the dialetical inquiry method).[69]

When properly used, both the devil's advocacy and dialectical inquiry approaches introduce c-type conflict into the decision-making process. Further, contrary to the common belief that conflict is bad, studies show that these methods lead to less a-type conflict, improved decision quality, and greater acceptance of decisions once they have been made.[70] See the "What Really Works" feature for more information on both techniques.

5.3 Nominal Group Technique

nominal group technique
A decision-making method that begins and ends by having group members quietly write down and evaluate ideas to be shared with the group.

"Nominal" means "in name only." Accordingly, the **nominal group technique** received its name because it begins with "quiet time," in which group members independently write down as many problem definitions and alternative solutions as possible. In other words, the nominal group technique begins by having group members act as individuals. After the "quiet time," the group leader asks each group member to share one idea at a time with the group. As they are read aloud, ideas are posted on flipcharts or wallboards for all to see. This step continues until all ideas have been shared. In the next step, the group discusses the advantages and disadvantages of the ideas. The nominal group technique closes with a second "quiet time," in which group members independently rank the ideas presented. Group members then read their rankings aloud, and the idea with the highest average rank is selected.[71]

The nominal group technique improves group decision making by decreasing a-type conflict. In doing so, however, it also restricts c-type conflict. Consequently, the nominal group technique typically produces poorer decisions than do the devil's advocacy and dialectical inquiry approaches. Nonetheless, more than 80 studies have found that nominal groups produce better ideas than those produced by traditional groups.[72]

5.4 Delphi Technique

Delphi technique
A decision-making method in which members of a panel of experts respond to questions and to each other until reaching agreement on an issue.

In the **Delphi technique**, the members of a panel of experts respond to questions and to each other until reaching agreement on an issue. The first step is to assemble a panel of experts. Unlike other approaches to group decision making, however, it isn't necessary to bring the panel members together in one place. Because the Delphi technique does not require the experts to leave their offices or disrupt their schedules, they are more likely to participate. For example, a colleague and I were asked to conduct a Delphi technique assessment of the "10 most important steps for small businesses." With the help of the dean of my business school and a former mayor of the city, we assembled a panel of local top-level managers and CEOs.

The second step is to create a questionnaire consisting of a series of open-ended questions for the experts. For example, we asked our panel to answer these questions: "What is the most common mistake made by small-business persons?" "Right now, what do you think is the biggest threat to the survival of most small businesses?" "If you had one piece of advice to give to the owner of a small business, what would it be?"

In Step 3, the panel members' written responses are analyzed, summarized, and fed back to the panel for reactions until the members reach agreement. In our Delphi study, it took about a month to get the panel members' written responses to the first three questions. Then we summarized their responses in a brief report (no more than two pages). We sent the summary to the panel members and asked them to explain why they agreed or disagreed with these conclusions from the

Devil's Advocacy, Dialectical Inquiry, and Considering Negative Consequences

Ninety percent of the decisions managers face are well-structured problems that recur frequently under conditions of certainty. For example, for most retailers, a customer's request for a refund on a returned item without a receipt is a well-structured problem. It happens every day (recurs frequently), and it's easy to determine if a customer has a receipt.

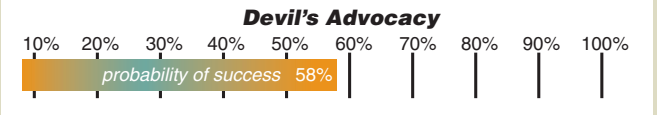
Well-structured problems are solved with programmed decisions, in which a policy, procedure, or rule clearly specifies how to solve the problem. Thus, there's no mystery about what to do when someone shows up without a receipt. You allow the item to be exchanged for one of similar value, but you don't give a refund.

In some sense, programmed decisions really aren't decisions because anyone with any experience knows what to do. No thought is required. What keeps managers up at night is the other 10 percent of problems. Ill-structured problems that are novel (no one's seen them before) and exist under conditions of uncertainty are solved with nonprogrammed decisions. Nonprogrammed decisions do not involve standard methods of resolution. Every time managers make a nonprogrammed decision, they have to figure out a new way of handling a new problem. That's what makes the decisions so tough.

Both the devil's advocacy and dialectical inquiry approaches to decision making, along with a related approach, considering negative consequences, can be used to improve nonprogrammed decision making. All three work because they force decision makers to identify and criticize the assumptions underlying the nonprogrammed decisions that they hope will solve ill-structured problems.

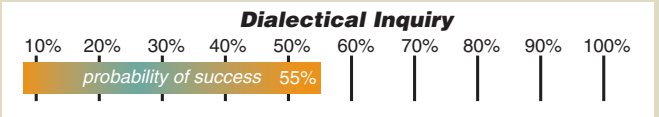
DEVIL'S ADVOCACY

There is a 58 percent chance that decision makers who use the devil's advocacy approach to criticize and question their solutions will produce better decisions than decisions based on the advice of experts.



DIALECTICAL INQUIRY

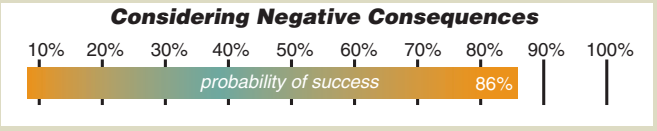
There is a 55 percent chance that decision makers who use the dialectical inquiry approach to criticize and question their solutions will produce better decisions than decisions based on the advice of experts.



Note that each technique has been compared to decisions obtained by following experts' advice. So, although these probabilities of success, 55 percent and 58 percent, seem small, they very likely understate the effects of both techniques. In other words, the probabilities of better decisions would have been much larger if both techniques had been compared to unstructured decision-making processes.

GROUP DECISION MAKING AND CONSIDERING NEGATIVE CONSEQUENCES

Considering negative consequences, such as with a devil's advocate or via critical inquiry, means pointing out the potential disadvantages of proposed solutions. There is an 86 percent chance that groups that consider negative consequences will produce better decisions than those that don't.[73]



first round of questions. Asking the members why they agree or disagree is important because it helps uncover their unstated assumptions and beliefs. Again, this process of summarizing panel feedback and obtaining reactions to that feedback continues until the panel members reach agreement. For our study, it took just one more round for the panel members' to reach a consensus. In all, it took approximately three-and-a-half months to complete our Delphi study.

Managers should not use the Delphi technique for common decisions. Because it is a time-consuming, labor-intensive, and expensive process, the Delphi technique is best reserved for important long-term issues and problems.

Nonetheless, the judgments and conclusions obtained from it are typically better than those you would get from one expert.

5.5 Stepladder Technique

stepladder technique
A decision-making method in which group members are added to a group discussion one at a time (i.e., like a stepladder). The existing group members listen to each new member's thoughts, ideas, and recommendations; then the group shares the ideas and suggestions that it had already considered, discusses the new and old ideas, and makes a decision.

The stepladder technique improves group decision making by ensuring that each member's contributions are independent, and are considered and discussed by the group. As shown in Exhibit 5.13, the **stepladder technique** begins with discussion between two group members, who share their thoughts, ideas, and recommendations before jointly making a tentative decision. At each step, as other group members are added to the discussion one at a time, like a stepladder, the existing group members take the time to listen to each new member's thoughts, ideas, and recommendations. The existing members share the ideas and suggestions that they had already considered, and then the group discusses the new and old ideas and makes a tentative decision. This process (new member's ideas are heard, group shares previous ideas and suggestions, discussion is held, tentative group decision is made) continues until each group member's ideas have been discussed.

For the stepladder technique to work, group members must have enough time to consider the problem or decision on their own, to present their ideas to the group, and to thoroughly discuss all ideas and alternatives with the group at each step. Rushing through a step destroys the advantages of this technique. Also, groups must make sure that subsequent group members are completely unaware of previous discussions and suggestions. This will ensure that each member who joins the group brings truly independent thoughts and suggestions, thus greatly increasing the chances of making better decisions.

One study found that compared to traditional groups in which all group members are present for the entire discussion, groups using the stepladder technique produced significantly better decisions. Moreover, the stepladder groups performed better than the best individual member of their group 56 percent of the time, whereas traditional groups outperformed the best individual member of their group only 13 percent of the time.[74] Besides better performance, groups using the stepladder technique also generated more ideas and were more satisfied with the decision-making process. This technique also works particularly well with audioconferencing, in which geographically dispersed group members make decisions via a telephone conference call.[75]

5.6 Electronic Brainstorming

brainstorming
A decision-making method in which group members build on each others' ideas to generate as many alternative solutions as possible.

electronic brainstorming
A decision-making method in which group members use computers to build on each others' ideas and generate many alternative solutions.

production blocking
A disadvantage of face-to-face brainstorming in which a group member must wait to share an idea because another member is presenting an idea.

Brainstorming, in which group members build on others' ideas, is a technique for generating a large number of alternative solutions. Brainstorming has four rules:

1. The more ideas, the better.
2. All ideas are acceptable, no matter how wild or crazy they might seem.
3. Other group members' ideas should be used to come up with even more ideas.
4. Criticism or evaluation of ideas is not allowed.

Though brainstorming is great fun and can help managers generate a large number of alternative solutions, it does have a number of disadvantages. Fortunately, **electronic brainstorming**, in which group members use computers to communicate and generate alternative solutions, overcomes the disadvantages associated with face-to-face brainstorming.[76]

The first disadvantage that electronic brainstorming overcomes is **production blocking**, which occurs when you have an idea but have to wait to share it because someone else is already presenting an idea to the group. During this short

delay, you may forget your idea or decide that it really wasn't worth sharing. With electronic brainstorming, production blocking doesn't happen. All group members are seated at computers, so everyone can type in ideas whenever they occur. There's no "waiting your turn" to be heard by the group.

The second disadvantage that electronic brainstorming overcomes is **evaluation apprehension**, that is, being afraid of what others will think of your ideas. With electronic brainstorming, all ideas are anonymous. When you type in an idea and hit the "Enter" key to share it with the group, group members see only the idea. Furthermore, many brainstorming software programs also protect anonymity by displaying ideas in random order. So, if you laugh maniacally when you type "Cut top management's pay by 50 percent!" and then hit the "Enter" key, it won't show up immediately on everyone's screen. This makes it doubly difficult to determine who is responsible for which comments.

evaluation apprehension
Fear of what others will think of your ideas.

In the typical layout for electronic brainstorming, all participants sit in front of computers around a U-shaped table. This configuration allows them to see their computer screens, each other, a large main screen, and a meeting leader or facilitator. Exhibit 5.14 shows what the typical electronic brainstorming group member will see on his or her computer screen. The first step in electronic brainstorming is to anonymously generate as many ideas as possible. Groups commonly generate 100 ideas in a half-hour period. Step 2 is to edit the generated ideas, categorize them, and eliminate redundancies. Step 3 is to rank-order the categorized ideas in terms of quality. Step 4, the last step, has three parts: generate a series of action steps, decide the best order for accomplishing these steps, and identify who is responsible for each step. All four steps are accomplished with computers and electronic brainstorming software.[77]

Studies show that electronic brainstorming is much more productive than face-to-face brainstorming. Four-person electronic brainstorming groups produce 25 to 50 percent more ideas than four-person regular brainstorming groups, and 12-person electronic brainstorming groups produce 200 percent more ideas than regular groups of the same size! In fact, because production

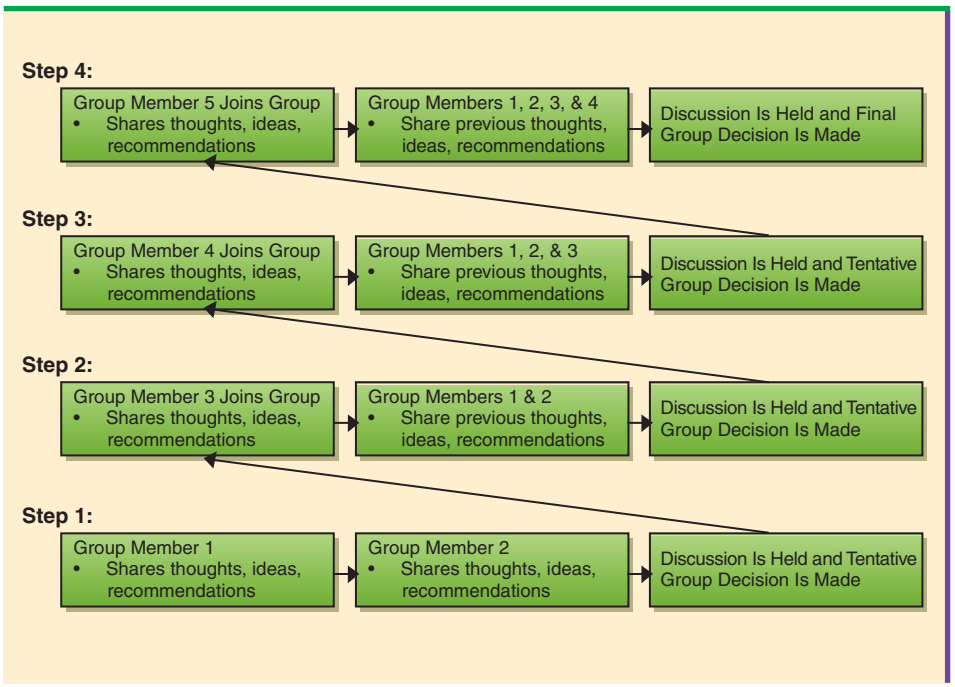


Exhibit 5.13
Stepladder Technique for Group Decision Making

blocking (i.e., waiting your turn) is not a problem for electronic brainstorming, the number and quality of ideas generally increase with group size.[78]

Even though it works much better than traditional brainstorming, electronic brainstorming has disadvantages, too. An obvious problem is the expense of computers, networks, software, and other equipment. As these costs continue to drop, however, electronic brainstorming will become cheaper.

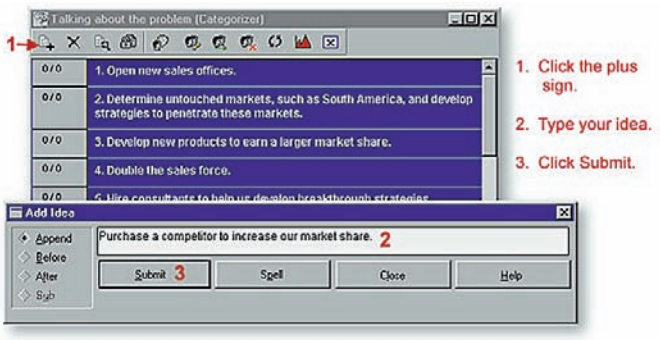
Another problem is that the anonymity of ideas may bother people who are used to having their ideas accepted by virtue of their position (i.e., the boss). On the other hand, one CEO said, "Because the process is anonymous, the sky's the limit in terms of what you can say, and as a result it is more thought-provoking. As a CEO, you'll probably discover things you might not want to hear but need to be aware of."[79]

A third disadvantage is that outgoing individuals who are more comfortable expressing themselves verbally may find it difficult to express themselves in writing. Finally, the most obvious problem is that participants have to be able to type. Those who can't type, or who type slowly, may be easily frustrated and find themselves at a disadvantage to experienced typists. For example, one meeting facilitator was tipped off that an especially fast typist was pretending to be more than one person. Said the facilitator, "He'd type 'Oh, I agree' and then 'Ditto, ditto' or 'What a great idea,' all in quick succession, using different variations of uppercase and lowercase letters and punctuation. He tried to make it seem like a lot of people were concurring, but it was just him." Eventually, the person sitting next to him got suspicious and began watching his screen.[80]

Review 5: Using Groups to Improve Decision Making

When groups view problems from multiple perspectives, use more information, have a diversity of knowledge and experience, and become committed to solutions they help choose, they can produce better solutions than individual decision makers. However, group decisions can suffer from these disadvantages: groupthink, slowness, discussions dominated by just a few individuals, and unfelt responsibility for decisions. Group decisions work best when group members encourage c-type conflict. However, group decisions don't work as well when groups become mired in a-type conflict. The devil's advocacy and dialectical inquiry approaches improve group decisions because they bring structured c-type conflict into the decision-making process. By contrast, the nominal group technique and the Delphi technique both improve decision making by reducing a-type conflict through limited interactions between group members. The stepladder technique improves group decision making by adding each group member's independent contributions to the discussion one at a time. Finally, because it overcomes the problems of production blocking and evaluation apprehension, electronic brainstorming is a more effective method of generating alternatives than face-to-face brainstorming.

Exhibit 5.14
What You See on the Computer during Electronic Brainstorming



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Key Terms

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Concept Check

1. What are the benefits and costs of planning?
2. Describe the steps involved in making a plan that works.
3. What are S.M.A.R.T. goals?
4. What are proximal and distal goals? Which type of goals is more effective?
5. How can companies build flexibility into their plans?
6. How do companies use plans at all levels of management?
7. Describe the steps in rational decision making.
8. What are decision criteria and how are they used in decision making?
9. What are the advantages and disadvantages of group decision making?
10. Identify the methods of group decision making and give a brief description of each.

Self-Assessment

SELF-MANAGEMENT

A key part of planning is setting goals and tracking progress toward their achievement. As a manager, you will be involved in some type of planning in an organization. But the planning process is also used in a personal context, where it is called self-management. Self-management involves setting goals for yourself, developing a method or strategy to achieve them, and then carrying it out. For some people, self-management comes naturally. Everyone seems to know someone who is highly organized, self-motivated, and disciplined. That someone may even be you. If that someone is not you, however, then you will need to develop your self-management skills as a means to becoming a better manager. To gain insights into your level of self-management, take the 35-question assessment on page 616 of the Self-Assessment Appendix. That assessment will give you some baseline information as a foundation for your later self-management goals (i.e., where you are now so that you can see what you need to do to get where you want to be).

Management Decision

DRUG TESTING

The end of the week is always a relief, but this Friday, after everyone clocks out, you have a meeting with the company's front-line managers to discuss various problems that have been occurring in the warehouse. You've been bracing for the challenge since Monday.

Once all the managers are assembled, you begin to list the troubles that have been plaguing the warehouse. Petty theft and minor accidents have increased markedly in a relatively short period of time. Employees have run forklifts into walls and dropped pallets of boxes onto the floor as they were being moved. Items have disappeared from shipments being held by the company for its trucking customers. There have even been rumors that marijuana is being bought and sold on the premises. After you recite the laundry list of problems, you tell your managers that you don't think any single employee is the source of all these problems. Instead, you boldly state your suspicion: drug use is probably the root of the problems in the warehouse.

A discernible mumble circles the room, but no one wants to discuss the issue openly. Some managers look worried, others shocked, and the rest—you can't tell. So you begin slowly by saying, "I think we need to do drug testing. I'm sure we can't blame all our problems on drug use, but I'm convinced it's a contributing factor." You cite several successful companies that are committed to a drug-free workplace and some statistics on how much drug use costs U.S. businesss—$81 billion per year. Testing 100 employees over the course of a year will cost only about $5,000, but the average substance abuser costs his or her employer between $11,000 and $13,000 per year. Adding to the cost savings, the state gives a 5 percent rebate on workers' compensation insurance to certified drug-free workplaces. You conclude by saying, "I'll put together some materials for us to review next week."

Some of your managers nod perfunctorily, but others just raise an eyebrow. As they file out of the room in absolute silence, you murmur under your breath, "That went well," and let out a sigh. "I might as well get started now. Waiting is not going to make the task easier. But what do I really need to do? And how restrictive should I be?"[81]

Questions

1. What do you need to establish a drug-free workplace: a policy, a set of procedures, or rules and regulations—or maybe all three?
2. As the manager in question, draft the appropriate operational plan(s) for this situation. Think about issues like random versus regular testing, current employees versus future applicants only, all employees or only warehouse workers, the consequences of testing positive, and so forth.
3. Imagine that your drug-testing policy, whatever form it takes, has resulted in your company losing 40 percent of its work force. (That has actually happened to real companies.) What changes, if any, will you make as a result?

Management Team Decision

SELLING TO WAL-MART

Because of your company's success, the end-of-the-year accounting review is usually an upbeat occasion, and this December is no different. Your company manufactures an innovative kickstand that reduces injuries by keeping a child's bike from falling all the way to the ground. After the device was written up in a parents' magazine recently, sales to specialty bike shops—your primary customers—have started to climb. Despite the increased demand, you can still make kickstands to order.

At a meeting with your management team, you remark that although sales are increasing at a slow but steady rate, the company still has a large amount of excess capacity. A colleague agrees and then enthusiastically announces, "I know how to take care of that. Let's sell to Wal-Mart!" A hush falls over the meeting. Becoming a Wal-Mart supplier would be a tremendous commitment for your company. The retailing behemoth gives suppliers a 30-second window to deliver their goods to Wal-Mart distribution centers; you currently ship product via UPS ground. Wal-Mart requires serious price concessions from all its suppliers, a practice that has forced many American manufacturers to outsource production overseas in order to get their production costs low enough to meet Wal-Mart's pricing mandates. Master Lock, Carolina Mills, Levi's, and, a bit closer to home, Huffy Bicycle are a few examples. Your company uses local suppliers for metal, paint, plastics, and packaging, and it pays its 25 workers above-market wages. Thankfully, at the moment your company is the only manufacturer of the kickstand, so you have more freedom to set a competitive price on that item. If you begin selling through Wal-Mart, however, imitators will soon follow, and that would definitely affect your already modest margins. Not to mention that Wal-Mart uses historical price data about a company and its competitors to drive prices down across industries. Suppliers are rarely if ever granted a price increase; on the contrary, they are asked for regular price decreases!

In addition, if vendors want their products on Wal-Mart's shelves, they have to implement Wal-Mart's "customized business plans." Each year, the big retailer hands its suppliers detailed "strategic business planning packets." Wal-Mart grades them on weekly, quarterly, and annual report cards. And when it comes to discussion of price, there is no real negotiation even for household brands. Plus, Wal-Mart often requires its suppliers to underwrite the costs of the retailer's supply chain productivity initiatives, like using radio-frequency identification (RFID) tags on their products for inventory tracking, a system that can cost between $13 million and $23 milion to put in place. Trying to meet Wal-Mart's requirements has pushed many small- and medium-sized businesses into bankruptcy. Though business that stay afloat have generally done so by outsourcing to China (in areas like shoes, housewares, and apparel, 80 to 90 percent of Wal-Mart's inventory comes from China).

But there are also benefits to selling to Wal-Mart. You have instant access to the world's largest global retailing network. Doing things the "Wal-Mart way" inevitably leads to more efficient operations. And the volume! You could sell exponentially more kickstands through Wal-Mart than through the small specialty retailers to whom you currently sell. If doing business with Wal-Mart is so bad, why do Unilever, P&G, and Dial sell 6, 17, and 28 percent of their goods, respectively, to the giant retailer? A former president of Huffy Bicycle once said that Wal-Mart gives you "a chance to compete. If you can't compete, that's your problem." You agree, to a point. Before you can voice any of the pros and cons, another manager expertly sums up the dilemma by saying, "The only thing worse than selling to Wal-Mart is not selling to Wal-Mart."[82]

Before you begin this Management Team Decision, each team member will probably need to do some preliminary research on Wal-Mart's business practices; the Business and Company Resource Center (BCRC) can help you find articles on topics like productivity, inventory management, and even Wal-Mart's business practices. A visit to the Wal-Mart stores Web site (**http://www.walmartstores.com**) can give you a wealth of information on how the company manages its suppliers. You may also wish to visit the Web site for Frontline's program on Wal-Mart (**http://www.pbs.org/wgbh/pages/frontline/shows/walmart/secrets/**).

Questions

1. As a team, use this exercise to practice one of the group decision-making techniques discussed in the chapter. Work together to decide which technique to use.
2. Do you apply to become a Wal-Mart supplier, with all that entails? Why or why not?
3. If you become a Wal-Mart supplier, what key areas of your operations will need to change and how?
4. Think about how the decision-making technique you chose affected the outcome of your decision. Do you think your collective decision would have been different if you had used, say, dialectical inquiry instead of the stepladder technique?

Develop Your Career Potential

WHAT DO YOU WANT TO BE WHEN YOU GROW UP?

What do you want to be when you grow up?[83] Still not sure? Ask around. You're not alone. Chances are, your friends and relatives aren't certain either. Sure, they may have jobs and careers, but you're likely to find that, professionally, many of them don't want to be where they are today. Sometimes, people's interests change, or they may experience burnout. And some people are unhappy with their current jobs or careers because they were never in the right one to begin with.

Getting the job and career you want is not easy. It takes time, effort, and persistence. And even though you will probably follow multiple career paths in your life, your career-planning process will be easier (and more effective) if you take the time to develop a personal career plan.

Begin by answering the following questions. (*Hint*: Treat this seriously. If you do it effectively, this plan could guide your career decisions for the next five to seven years.)

1. Describe your strengths and weaknesses. Don't just rely on your opinions of your abilities. Ask your parents, relatives, friends, and employers what they think, too. Encourage them to be honest and then be prepared to hear some things that you may not want to hear. Remember, though, this information can help you pick the right job or career.
2. Write an advertisement for the job you want to have five years from now. Be specific. Describe the company, title, responsibilities, required education, and experience, salary, and benefits. Use employment ads in the Sunday job listings as inspiration.
3. Create a detailed plan to obtain this job. In the short term, what classes do you need to take? Should you change your major? Do you need a business major or minor or maybe a minor in a foreign language? What kind of summer work experience will move you closer to getting the job you want five years from now? What job do you need to get right out of college to obtain the work experience you need? Create a specific plan for each of the five years in your career plan, keeping in mind that the plans for later years are likely to change. The value in planning is that it forces you to think about what you want and the steps you can take now to help achieve those goals.
4. Decide when you will monitor and evaluate the progress you're making with your plan. Career experts suggest that every six months is about right. Pick two dates and write them in your schedule. Furthermore, right now, before you forget, set five specific, challenging goals that you need to accomplish in the next six months in order to achieve your career plans.

Biz Flix
The Bourne Identity

Jason Bourne (Matt Damon) cannot remember who he is, but others believe he is an international assassin. Bourne tries to learn his identity with the help of his new friend and lover Marie (Franka Potente). Meanwhile, while CIA agents pursue him across Europe trying to kill him, Bourne slowly discovers that he is an extremely well-trained and lethal agent. The story is loosely based on Robert Ludlum's 1981 novel.

This scene is an edited version of the "Bourne's Game" sequence near the end of the film. Jason Bourne kills the hired assassin who tried to kill him the day after Jason and Marie arrived at the home of Eamon (Tim Dutton). Eamon is Marie's friend but is a stranger to Jason. Jason uses the dead man's cell phone after returning to his apartment in Paris, France. He presses the redial button, which connects him to Conklin (Chris Cooper), the CIA manager who is looking for him. Listen carefully to Jason's conversation with Conklin.

What to Watch for and Ask Yourself

1. Does Bourne describe a plan to Conklin? If he does, what are the plan's elements? What is Bourne's goal?
2. Does Bourne assess the plan's execution to determine if it conforms to his goal? If so, what does he do?
3. Was Bourne's plan successfully carried out? Why or why not? How does this scene relate to organizational strategic planning?

Management Workplace
Community Insurance Center

Planning is a crucial part of solid business practices. That's not to say that you won't be successful if you don't plan, but planning can bring clarity and focus to your operation. Community Insurance Center was launched in 1962 in a suburb of Chicago, and over the company's history, owner Milton Moses has had numerous opportunities to plan and make decisions.

What to Watch for and Ask Yourself

1. When Milton Moses says, "We have a basic plan," what kind of plan is he talking about?
2. How does Community Insurance maintain flexibility in planning?
3. At one point, Milton Moses fired roughly 70 percent of his staff. Using the steps to rational decision making outlined in the chapter, re-create the process Moses likely used to make this risky decision.

Activity

1. Use the decision regarding the music and headphones as a base for practicing the devil's advocacy approach to group decision making. Put together a team of four to five students and assign one team member to play Milton Moses in the role of devil's advocate, arguing for quiet so people can concentrate. Compare the outcome of your group decision with what happened at Community Insurance.