2 Describe the characteristics of the scientific method.

3 Below are some terms commonly found in a management setting. Are they concepts or constructs? Give two different operational definitions for each.
   a First-line supervisor.
   b Employee morale.
   c Assembly line.
   d Overdue account.
   e Line management.
   f Leadership.
   g Union democracy.
   h Ethical standards.

4 In your company's management development program, there was a heated discussion between some people who claimed, "Theory is impractical and thus no good," and others who claimed, "Good theory is the most practical approach to problems." What position would you take and why?

5 An automobile manufacturer observes the demand for its brand increasing as per capita income increases. Sales increases also follow low interest rates, which ease credit conditions. Buyer purchase behavior is seen to be dependent on age and gender. Other factors influencing sales appear to fluctuate almost randomly (competitor advertising, competitor dealer discounts, introductions of new competitive models).
   a If sales and per capita income are positively related, classify all variables as dependent, independent, moderating, extraneous, or intervening.
   b Comment on the utility of a model based on the hypothesis.

Making Research Decisions

6 You observe the following condition: "Our female sales representatives have lower customer defections than do our male sales representatives."
   a Propose the concepts and constructs you might use to study this phenomenon.
   b How might any of these concepts and/or constructs be related to explanatory hypotheses?

7 You are the office manager of a large firm. Your company prides itself on its high-quality customer service. Lately complaints have surfaced that an increased number of incoming calls are being misrouted or dropped. Yesterday, when passing by the main reception area, you noticed the receptionist fiddling with his hearing aid. In the process, a call came in and would have gone unanswered if not for your intervention. This particular receptionist had earned an unsatisfactory review three months earlier for tardiness. Your inclination is to urge this 20-year employee to retire or to fire him, if retirement is rejected, but you know the individual is well liked and seen as a fixture in the company.
   a Pose several hypotheses that might account for dropped or misrouted incoming calls.
   b Using the double movement of reflective thought, show how you would test these hypotheses.

Bringing Research to Life

8 Identify and classify all the variables in the Army's dud shell research.

9 What was Myra's hypothesis for the Army's dud shell research? What was the Army's hypothesis?

From Concept to Practice

10 Using Exhibits 2-2 and 2-3 as your guides, graph the inductions and deductions in the following statements. If there are gaps, supply what is needed to make them complete arguments.
   a Repeated studies indicate that economic conditions vary with—and lag 6 to 12 months behind—the changes in the national money supply. Therefore, we may conclude the money supply is the basic economic variable.
   b Research studies show that heavy smokers have a higher rate of lung cancer than do nonsmokers; therefore, heavy smoking causes lung cancer.
   c Show me a person who goes to church regularly, and I will show you a reliable worker.

>wwwexercise

Draw a conclusion via either induction or deduction about something happening at your school. Visit your school's Web site to determine if you can find evidence to support your conclusion.

>cases*

Campbell-Ewald: R-E-S-P-E-C-T Spells Loyalty

HeroBuilders.com

Open Doors: Extending Hospitality to Travelers with Disabilities

* All cases appear on the text CD; you will find abstracts of these cases in the Case Abstracts section of this text.

>chapter 3

The Research Process: An Overview

❝We keep moving forward, opening new doors, and doing new things, because we're curious and curiosity keeps leading us down new paths.❞

Walt Disney

>learningobjectives

After reading this chapter, you should understand . . .

1 Research is decision- and dilemma-centered.

2 The research question is tne result of careful exploration and analysis and sets the direction for the research project.

3 Planning research design demands an understanding of all the stages in the research process.

4 Reality testing at each stage of the process is critical to successful implementation of a research proposal.

On the return flight from Austin, Jason and Myra are euphoric. "That went really well," he says. "Better even than I hoped for."

"Yes. Terrific," she says. "Just fine. You handled yourself very well, Jason. You were so patient. Of course, we are not home free. We have lots of work ahead before we satisfy the big bosses at MindWriter. But it was a good start. Definitely."

"Definitely."

They toast each other and their visit with the MindWriter product people, especially Gracie Uhura, the product manager. They sit and sip their drinks, enjoying a feeling of accomplishment.

"On the other hand," says Jason, by and by, "there are going to be a few problems."

"Aren't there always?"

"Gracie wants the sun, the sky, and the moon. She wants everything. Wants to know the demographic characteristics of her users . . . their job descriptions . . . their salaries . . . their ethnicities . . . their education. Wants to know their perception of your company . . . of the quality of MindWriter's specific models. Wants to know their satisfaction with the purchase channel and with the service department, too."

"What's wrong with wanting all that, if MindWriter is willing to pay?"

"I may perceive the company as hugely profitable and a bottomless source of research dollars, but you and Gracie need to keep your eye on the bottom line. You can bet there is a bean counter somewhere who will want to know how you and Gracie can justify asking all these questions. They will ask, 'What is going to be the payoff in knowing the ethnicity of customers?' And if you or Gracie can't explain the justification for needing the information, if one of you can't establish that the dollar benefit of knowing is at least as great as the dollar cost of finding out, Mr. Bean Counter is going to strike the question off the list and reduce what MindWriter is willing to pay for."

"Is there no way we can justify knowing everything Gracie wants to know? After all, this is my first project with her. It certainly wouldn't hurt my reputation within MindWriter by showing how well I can deliver what my top executives want."

"Sure there is. Or at least there may be. We can do a pilot study for her of a few hundred customers and see if the ethnic background, or the salary level, or any other nonattitudinal item that Gracie cares about, is a good indicator of satisfaction, willingness to make a repeat purchase, postpurchase service satisfaction, and so forth. If it is, maybe more extensive measurement can be justified."

"Clever!"

"Well, that's why you came to me; we do exemplary research."

"So, am I right in believing you feel we need to propose an exploratory study for that problem first and propose a larger study later?"

"That would be standard practice. There are questions that have to be resolved before each side can commit to a major study. We want to minimize the risks to both sides. For example, Gracie wants to know the customers' perception of MindWriter's

overall quality. But we have to ask ourselves, 'Are these customers really qualified to form independent opinions, or will they simply be parroting what they have read in the computer magazines or what a dealer told them?' We will have to do a pilot study of a few hundred users to determine if it is really useful to ask them their overall impression of the product."

"I follow you!"

"On the other hand, the repair problem really interests me. We can be reasonably sure that the customers know their own minds when it comes to evaluating their firsthand experience with MindWriter's service department. This business of returning a computer for service is something you experience firsthand, not something in a magazine, and it's worth studying. I had a chance last night to look over the letters you gave me."

He digs into his briefcase and extracts a sheaf of photocopies. "These are the letters the service de-partment received about MindWriter. And here are notes on phone conversations that Gracie gave me. One person writes, 'My MindWriter was badly damaged on arrival. I could not believe its condition when I unpacked it.' And here, 'The service technicians seemed to be unable to understand my complaint, but once they understood it, they performed immediate repairs.' I will boil these down—and possibly dozens more like them—to a couple of representative questions that can be pilot-tested for clarity, reliability, and validity. The point is, MindWriter has to pay for everything Gracie says she wants, what she wants that has a payoff, what she wants that has a payoff and is researchable . . . We are going to be very busy in the next few weeks."

"You are starting to make good sense. I think we are going to get along."

"You know what, Myra? I'm starting to think you're right."
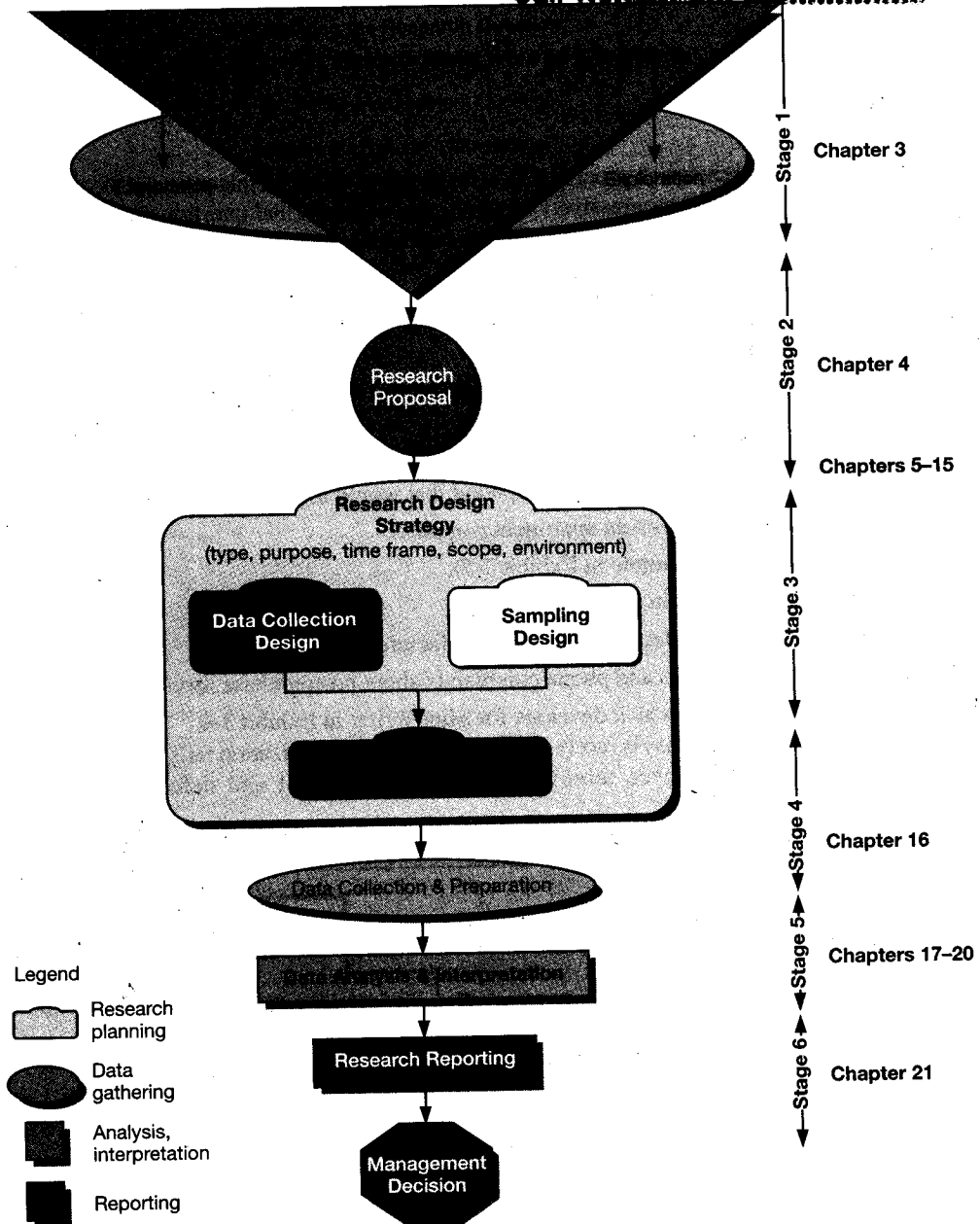
> The Research Process

Writers usually treat the research task as a sequential process involving several clearly defined steps. No one claims that research requires completion of each step before going to the next. Recycling, circumventing, and skipping occur. Some steps are begun out of sequence, some are carried out simultaneously, and some may be omitted. Despite these variations, the idea of a sequence is useful for developing a project and for keeping the project orderly as it unfolds.

Exhibit 3-1 models the sequence of the **research process.** We refer to it often as we discuss each step in subsequent chapters. Our discussion of the questions that guide project planning and data gathering is incorporated into the model (see the elements within the pyramid in Exhibit 3-1 and compare them with Exhibit 3-2). Exhibit 3-1 also organizes this chapter and introduces the remainder of the book.

The research process begins much as the vignette suggests. A management dilemma triggers the need for a decision. For MindWriter, a growing number of complaints about postpurchase service started the process. In other situations, a controversy arises, a major commitment of resources is called for, or conditions in the environment signal the need for a decision. For MindWriter, the critical event could have been the introduction by a competitor of new technology that would revolutionize the processing speed of laptops. Such events cause managers to reconsider their purposes or objectives, define a problem for solution, or develop strategies for solutions they have identified.

> **Exhibit 3-1** The Research Process

Legend

- Research planning
- Data gathering
- Analysis, interpretation
- Reporting

Stage 1	Chapter 3
Stage 2	Chapter 4
	Chapters 5–15
Stage 3	
Stage 4	Chapter 16
Stage 5	Chapters 17–20
Stage 6	Chapter 21

In our view of the research process, the management question—its origin, selection, statement, exploration, and refinement—is the critical activity in the sequence. Throughout the chapter we emphasize problem-related steps. A familiar quotation from Albert Einstein, no less apt today than when it was written, supports this view:

The formulation of a problem is far more often essential than its solution, which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle requires creative imagination and marks real advance in science.[1]

Whether the researcher is involved in basic or applied research, a thorough understanding of the management question is fundamental to success in the research enterprise.

> The Management-Research Question Hierarchy

A useful way to approach the research process is to state the basic dilemma that prompts the research and then try to develop other questions by progressively breaking down the original question into more specific ones. You can think of the outcome of this process as the **management-research question hierarchy.** Exhibit 3-2 provides examples of the kinds of questions asked at each level of the hierarchy, while Exhibit 3-3 further explains the process in management terms. (Exhibit 3-4 follows the MindWriter example through the process, and Exhibit 3-5 provides example questions at each stage for SalePro, a national sales organization facing unexplained sales variations by territory.)
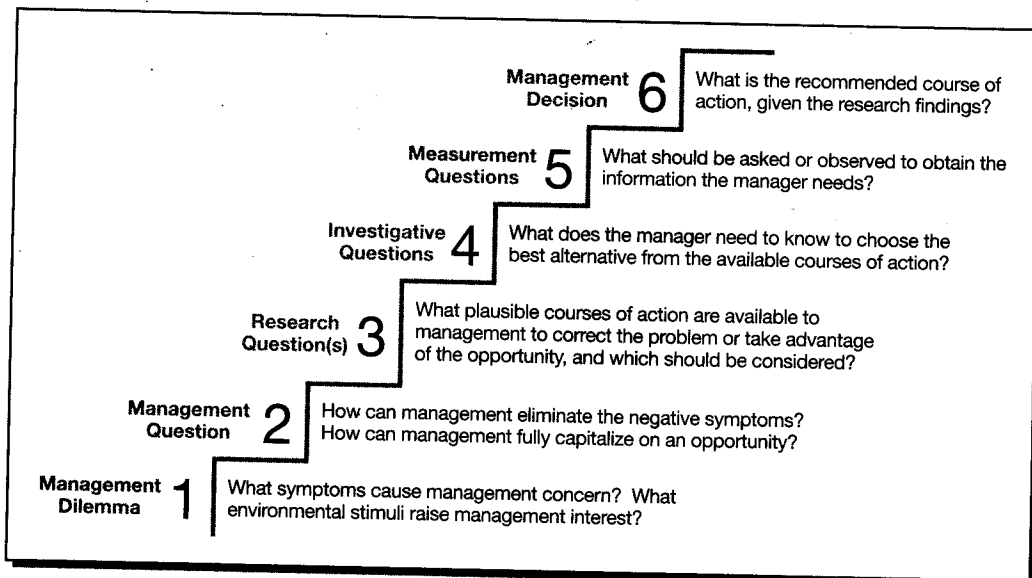
The process begins at the most general level with the **management dilemma.** This is usually a symptom of an actual problem, such as:

- Rising costs.

- The discovery of an expensive chemical compound that would increase the efficacy of a drug.

- Increasing tenant move-outs from an apartment complex.

- Declining sales (follow the example in Exhibit 3-5).

- Increasing employee turnover in a restaurant.

- A larger number of product defects during the manufacture of an automobile.

- An increasing number of letters and phone complaints about postpurchase service (as in MindWriter).
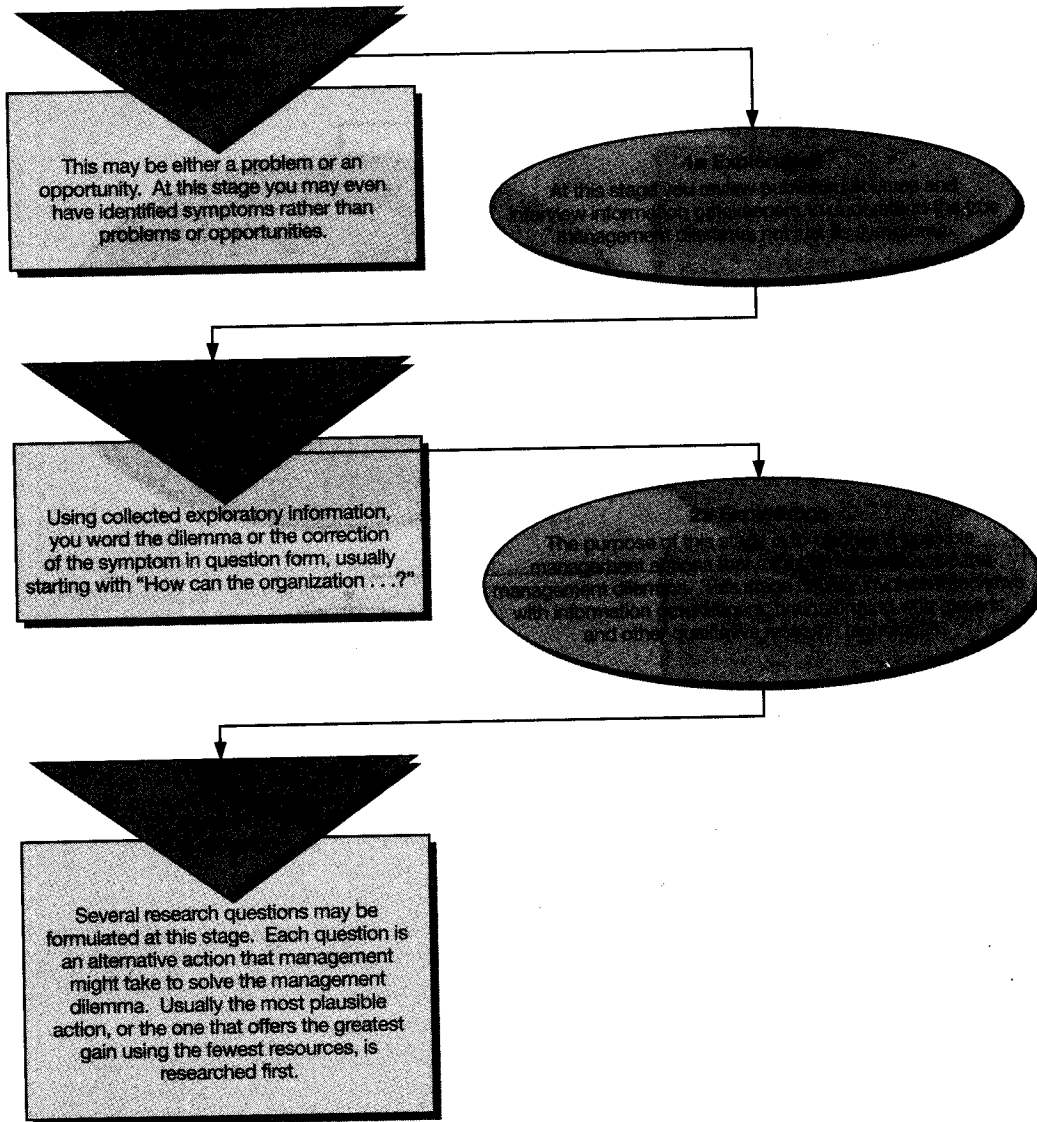
You can follow the research process as it develops for MindWriter in Exhibit 3-4.

Identifying management dilemmas is rarely difficult (unless the organization fails to track its performance factors—like sales, profits, employee turnover, manufacturing output and defects, on-time deliveries,

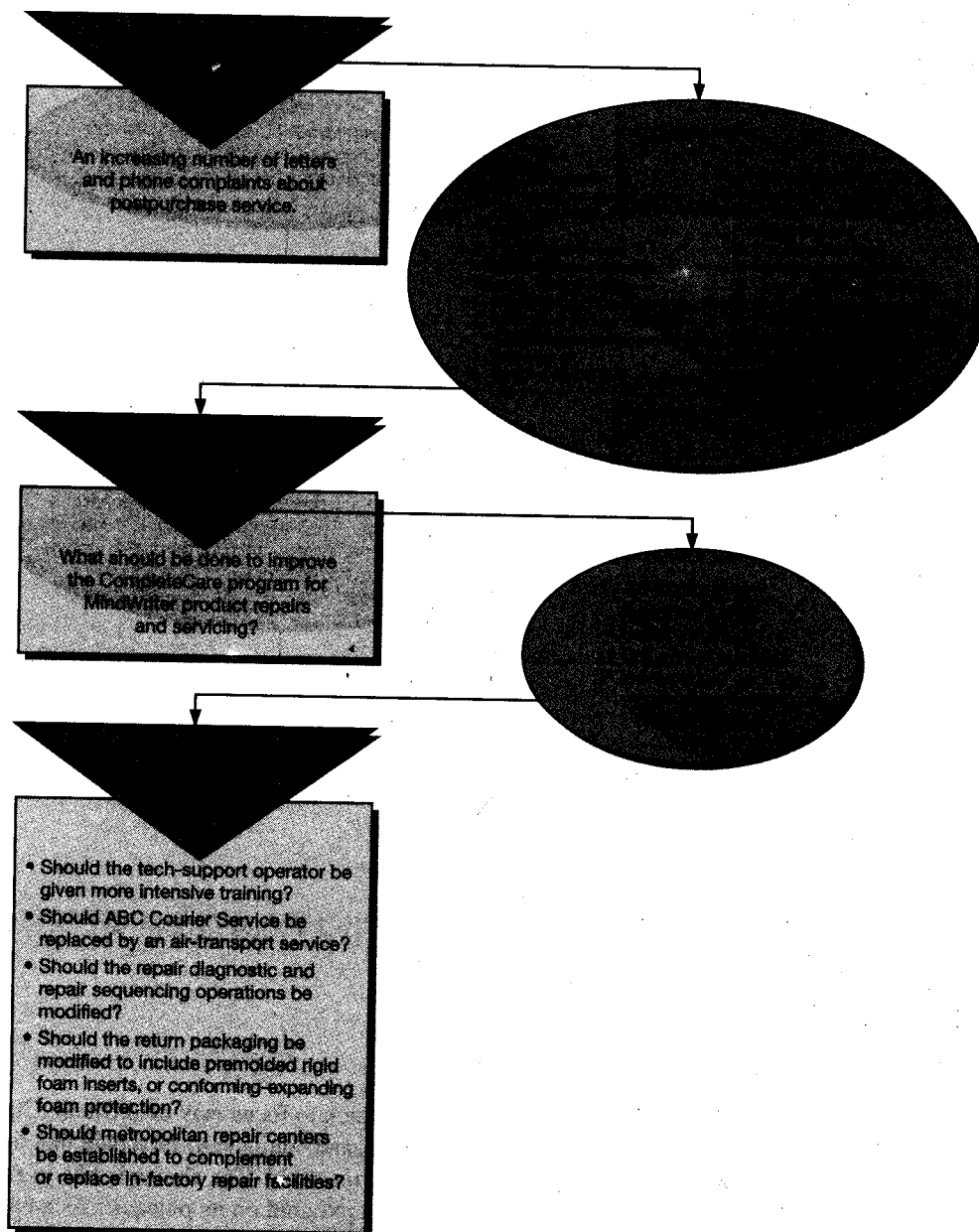> **Exhibit 3-2** Management-Research Question Hierarchy

Management Decision	**6**	What is the recommended course of action, given the research findings?
Measurement Questions	**5**	What should be asked or observed to obtain the information the manager needs?
Investigative Questions	**4**	What does the manager need to know to choose the best alternative from the available courses of action?
Research Question(s)	**3**	What plausible courses of action are available to management to correct the problem or take advantage of the opportunity, and which should be considered?
Management Question	**2**	How can management eliminate the negative symptoms? How can management fully capitalize on an opportunity?
Management Dilemma	**1**	What symptoms cause management concern? What environmental stimuli raise management interest?

> **Exhibit 3-3** Formulating the Research Question

This may be either a problem or an opportunity. At this stage you may even have identified symptoms rather than problems or opportunities.

Using collected exploratory information, you word the dilemma or the correction of the symptom in question form, usually starting with "How can the organization . . .?"

Several research questions may be formulated at this stage. Each question is an alternative action that management might take to solve the management dilemma. Usually the most plausible action, or the one that offers the greatest gain using the fewest resources, is researched first.

customer satisfaction, etc.). However, choosing one dilemma on which to focus may be difficult. Choosing incorrectly will direct valuable resources (time, manpower, money, and equipment) on a path that may not provide critical decision-making information (the purpose of good research). The choice is like learning to balance a pencil on its point on your finger, a coin on its edge, or a pyramid on its pinnacle: As a manager, only practice makes you proficient. For new managers, or established managers facing new responsibilities, developing several management-research question hierarchies, each starting with a different dilemma, will assist in the choice process. In all figures related to the research process model, in this and subsequent chapters, we use a pyramid to represent the management-research question hierarchy and to reinforce the precarious nature of the foundation decisions in the research process.

> **Exhibit 3-4** Formulating the Research Question for MindWriter

To move from the management dilemma to the management question and subsequent research questions takes exploratory research. Such research may include examining previous studies, reviewing published studies and organizational records, and interviewing experts or information gatekeepers.

An increasing number of letters and phone complaints about postpurchase service.

What should be done to improve the CompleteCare program for MindWriter product repairs and servicing?

- Should the tech-support operator be given more intensive training?
- Should ABC Courier Service be replaced by an air-transport service?
- Should the repair diagnostic and repair sequencing operations be modified?
- Should the return packaging be modified to include premolded rigid foam inserts, or conforming-expanding foam protection?
- Should metropolitan repair centers be established to complement or replace in-factory repair facilities?

The Management Question

The manager must move from the management dilemma to the **management question** to proceed with the research process. The management question restates the dilemma in question form:

> **Exhibit 3-5** SalePro's Management-Research Question Hierarchy

Declining sales is one.of the most common symptoms serving as a stimulus for a research project, especially a continuing pattern that is unexplained. SalePro, a large manufacturer of industrial goods, faces this situation. Exploration (1) reveals that sales, in fact, should not be declining in the South and Northeast. Environmental factors there are as favorable as in the growing regions. Subsequent exploration (2, 3) leads management to believe that the problem is in one of three areas: salesperson compensation, product formulation, or trade advertising. Further exploration (4) has SalePro management narrowing the focus of its research to alternative ways to alter the sales compensation system, which (5) leads to a survey of all sales personnel in the affected regions.

1 Why are our sales declining in the South and Northeast, while sales are booming in the Southwest?

2 How can we improve sales in the South and Northeast?

3 Should we introduce a 2 percent incentive commission-based compensation system on all sales over quota for salespeople in the South and Northeast or a 5-percent-of-profit regional bonus to the region that increases sales by 10 percent over quota (to be shared proportionately among the salespeople in the region)? Should we modify the product formula for distribution in the South and Northeast? Should we increase the level of advertising via trade publications in South and Northeast editions?

4 What is the likelihood that we will lose excellent salespeople in the South and Northeast if we implement the compensation change? What is the likelihood that current customer satisfaction in these regions will decrease? What is the likelihood that future sales to existing customers will be lost?

5 Please rate your level of concern for each of the following outcomes if management were to change your compensation to a commission-based system compared to the current salary system. For each outcome, indicate a number between 1 and 7 where 7 = extreme concern, 4 = neither concerned nor unconcerned, and 1 = no concern at all.
_____ Lack of predictability of monthly pay.
_____ Increased internal competition for sales prospects.
_____ Reduced time for postsale servicing of customer needs.
_____ Reduced incentive for postsale servicing of customer needs.

- What should be done to reduce employee turnover?
- What should be done to increase tenant residency and reduce move-outs?
- What should be done to reduce costs?

Management Question Categories

Management questions are too numerous to list, but we can categorize them:

- Choice of purposes or objectives.
- Generation and evaluation of solutions.
- Troubleshooting or control situation.

The first type concerns the *choice of purposes or objectives*. The general question is, "What do we want to achieve?" At the company level the question might be, "Should we at XYZ Corporation reconsider our basic corporate objectives as they concern our public image?" More narrowly, a management question on objectives might ask, "What goals should XYZ try to achieve in its next round of labor negotiations?"

A second category of management questions concerns the *generation and evaluation of solutions*. The general question is, "How can we achieve the ends we seek?" Research projects in this group usually deal with concrete problems that managers quickly recognize as useful. Projects can involve questions such as:

- "How can we achieve our five-year goal of doubled sales and net profits?"
- "What should be done to improve the CompleteCare program for MindWriter product repairs and servicing?"
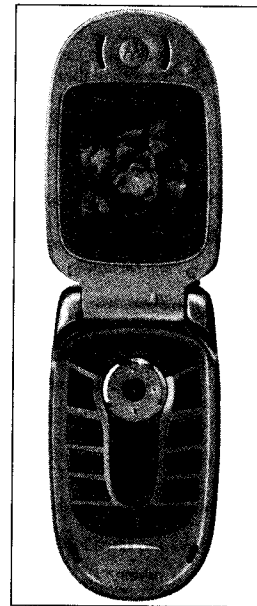- "What should be done to reduce postpurchase service complaints?"

A third class of management questions concerns the *troubleshooting* or *control situation*. The problem usually involves monitoring or diagnosing various ways in which an organization is failing to achieve its established goals. This group includes questions such as, "Why does our department incur the highest costs?" and "How well is our program meeting its goals?"

The definition of the management question sets the research task. So a poorly defined management question will misdirect research efforts.

No matter how the management question is defined, many research directions can be taken. A specific question can lead to many studies. Concern for MetalWorks's company image might lead to:

- A survey among various groups to discover their attitudes toward the company.
- Secondary research into what other companies are doing to polish their images.
- A study to forecast expected changes in social attitudes.

The question concerning MetalWorks's labor negotiation objectives might prompt research into recent settlements in the industry or a survey among workers to find out how well management has met its concerns about the quality of work life. It is the joint responsibility of the researcher and the manager to choose the most productive project.

>**pic**profile

The Nature of the Management Question

Assume, for example, a researcher is asked to help the new management of a bank. The president is concerned about erosion of the bank's profitability (the management dilemma) and wants to turn this situation around. BankChoice is the oldest and largest of three banks in a city with a population of about 50,000. Profits have stagnated in recent years. The president and the consultant discuss the problem facing the organization and settle on this management question: "How can we improve our profit picture?"

The management question does not specify what kind of research is to be done. This question is strictly managerial in thrust. It implies that the bank's management faces the task of developing a strategy for increasing profits. The question is broad. Notice that it doesn't indicate whether management should increase profits via increased deposits, downsizing of personnel, outsourcing of the payroll function, or some other means.

Further discussion between the bank president and the researcher shows there are really two questions to be answered. The problem of low deposit growth is linked to concerns of a competitive nature. While lowered deposits directly affect profits, another part of the profit weakness is associated with negative factors within the organization that are increasing costs of operation. The qualified researcher knows that the management question as stated is too broad to guide a definitive research project. As a starting point, the broadly worded question is fine, but BankChoice will want to refine its management question into these more specific subquestions:

To subdivide a broadly stated management question, look for the underlying causes of the management dilemma.

- "How can we increase deposits?"
- "How can we reduce costs?"

This separation of the management question into two subquestions may not have occurred without a discussion between the researcher and the manager.

The primary purpose of research is to reduce the level of risk of a business decision. Knowing that most new product introductions fail, this humorous ad from Greenfield Online suggests not all new product ideas are worthy of consideration and that well-executed research can save a firm from a costly mistake.

>snapshot

Robert Wood Johnson Foundation (RWJF), a health care philanthropy, sponsors the Covering Kids Initiative for one reason: millions of children in low- to moderate-income families who are eligible for the State Children's Health Insurance Program (SCHIP) are not enrolled. RWJF initially became involved because it was concerned that the federal government and the states were not actively or effectively publicizing Medicaid and SCHIP. The initial goal of RWJF's involvement was to make eligible families aware of SCHIP and Medicaid and encourage enrollment. To this end, RWJF obtained the services of advertising agency GMMB, research firm Wirthlin Worldwide, and veteran social marketer Elaine Bratic Arkin.

The Foundation initially asked, "What must be done to enroll the largest percentage of eligible children in Medicaid and SCHIP?" Before GMMB could move forward, the team needed to determine whether the communication program needed to correct misconceptions, communicate benefits, overcome perceived process complexities, or do some combination of these. Early exploratory research sought answers to "What keeps eligible families from taking advantage of the prescription and doctor-visit programs of SCHIP and Medicaid?" The team also asked, "Is a negative stigma attached to participation in government health care programs?" When research indicated the answer to this question was "No," subsequent efforts focused on identifying other critical factors that discouraged families from enrolling. After research revealed that most working parents did not realize their children were eligible for a government program, the management question was refined to "What must be communicated to parents of eligible children to get them to enroll their children in these programs?"

You work hard to take care of your kids...

Now there's help.

YOUR CHILD CAN BE COVERED FOR:
• DOCTOR VISITS • HOSPITALIZATION
• PRESCRIPTIONS • OTHER BENEFITS

CALL 1(877) KIDS-NOW TOLL FREE

Ultimately a creative combination of research design and data analysis revealed: (1) the winning communications framework: Being a good parent means raising happy, healthy children, and enrolling a program offering low-cost or free health care is a smart choice for families, and (2) every communication must give working parents an easy, foolproof way to determine if their children are eligible while reinforcing the logic that making the call to enroll their children would address parents' innate desire to be good parents.

www.wirthlin.com; www.gmmb.com; www.rwjf.org

Exploration

BankChoice has done no formal research in the past. It has little specific information about competitors or customers and has not analyzed its internal operations. To move forward in the management-research question hierarchy and define the research question, the client needs to collect some exploratory information on:

- What factors are contributing to the bank's failure to achieve a stronger growth rate in deposits?
- How well is the bank doing regarding work climate, efficiency of operations compared to industry norms, and financial condition compared to industry norms and competitors?

A small focus group is conducted among employees, and trade association data are acquired to compare financial and operating statistics from company annual reports and end-of-year division reports. From the

results of these two exploratory activities, it is obvious that BankChoice's operations are not as progressive as its competitors' but it has its costs well in line. So the revised management question becomes, "What should be done to make the bank more competitive?"

The process of exploration may surface within the research process in several locations (see Exhibit 3-3). An **exploration** typically begins with a search of published data. In addition, researchers often seek out people who are well informed on the topic, especially those who have clearly stated positions on controversial aspects of the problem. Take the case of TechByte, a company interested in enhancing its position in a given technology that appears to hold potential for future growth. This interest or need might quickly elicit a number of questions:

- How fast might this technology develop?
- What are the likely applications of this technology?
- What companies now possess it, and which ones are likely to make a major effort to get it?
- How much will it take in resources?
- What are the likely payoffs?

In the above investigation of opportunities, researchers would probably begin with specific books and periodicals. They would be looking only for certain aspects in this literature, such as recent developments, predictions by informed figures about the prospects of the technology, identification of those involved in the area, and accounts of successful ventures or failures by others in the field. After becoming familiar with the literature, researchers might seek interviews with scientists, engineers, and product developers who are well known in the field. They would give special attention to those who represent the two extremes of opinion in regard to the prospects of the technology. If possible, they would talk with persons having information on particularly thorny problems in development and application. Of course, much of the information will be confidential and competitive. However, skillful investigation can uncover many useful indicators.

For MindWriter, Myra searched her local library and company archives to discover PC industry studies on service and technical support (see Exhibit 3-4), as well as published customer satisfaction comparisons among companies and products. Then in the meeting in Austin, both Myra and Jason delved deeply for Gracie's knowledge and perceptions of the CompleteCare program. They also developed a more thorough understanding of production and distribution. Shortly after returning from Austin, however, Myra and Jason both realized from reviewing customer correspondence that they need more knowledge on product design, CompleteCare, and product handling, so they planned a second exploratory venture that will include expert interviews.

An unstructured exploration allows the researcher to develop and revise the management question and determine what is needed to secure answers to the proposed question.

> **> We discuss the usefulness of a literature search, experience survey, and focus groups in exploration in Chapter 6.**

The Research Question

Once the researcher has a clear statement of the management question, she and the manager must translate it into a research question. Consider the research question to be a fact-oriented, information-gathering question. There are many different ways to address most management dilemmas. It is at this point of formulating research questions where the insight and expertise of the manager come into play. Only reasonable alternatives should be considered. If the researcher is not part of the manager's decision-making environment, the researcher can be of minimal help in this translation. The manager's direction to the researcher is most important. If, however, the researcher is an integral part of the decision-making environment, she may assist the manager in evaluating which courses of action should and can be researched.

Focusing too early on correcting one problem versus another can misdirect the research, wasting valuable resources.

In their post-Austin brainstorming session (see Exhibit 3-4), Jason and Myra hypothesized several possible problems that could have resulted from the complaints in customer letters. Some problems are not as correctable as others (e.g., correcting parts shortages might not be within MindWriter's immediate control, but improving tech-line operator training clearly is). If MindWriter does not maintain a database of complaints, an exploratory study might have to be undertaken to determine which category of complaints is most troublesome. Incorrectly defining the research question is a fundamental weakness in the research process. Time and money can be wasted studying an alternative that won't help the manager rectify the dilemma.

The researcher's task is to assist the manager in formulating a research question that fits the need to resolve the management dilemma. A **research question** is the hypothesis of choice that best states the objective of the research study. It is a more specific management question that must be answered. It may be more than one question, or just one. A research process that answers this more specific question provides the manager with the information necessary to make the decision he or she is facing.

One of the letters Jason reads on the flight back to Florida from the MindWriter meeting in Austin describes the deplorable condition of a MindWriter laptop upon delivery to the customer. After consulting Gracie, Jason and Myra identify several credible options:

- Reinforce the shipping carton with rigid foam inserts (in place of the current plastic sling) to prevent damage to the laptop case during shipping.
- Use conforming-expanding foam insulation in the shipping carton.
- Leave the shipping carton specification as is but ship via an overnight air delivery service rather than using the current ground courier service.
- Establish authorized repair facilities in major cities so that a customer could deliver a MindWriter for repair, eliminating shipping altogether.

These choices lead to several research questions:

- Should MindWriter change the laptop shipping specifications to include rigid foam or conforming-expanding foam or stay with the current plastic sling?
- Should MindWriter change its shipping carrier from ABC Courier Service to an air transportation service?
- Should MindWriter establish metropolitan repair centers to complement or replace its existing in-factory repair facilities?

Meanwhile at BankChoice, the president has agreed to have the research be guided by the following research question: "Should BankChoice position itself as a modern, progressive institution (with appropriate changes in services and policies) or maintain its image as the oldest, most reliable institution in town?"

Fine-Tuning the Research Question

The term *fine-tuning* might seem to be an odd usage for research, but it creates an image that most researchers come to recognize. Fine-tuning the question is precisely what a skillful practitioner must do after the exploration is complete. At this point, a clearer picture of the management and research questions begins to emerge. After a preliminary review of the literature, a brief exploratory study, or both, the project begins to crystallize in one of two ways:

1. It is apparent the question has been answered and the process is finished.
2. A question different from the one originally addressed has appeared.

The research question does not have to be materially different, but it will have evolved in some fashion. This is not cause for discouragement. The refined research question(s) will have better focus and will move the research forward with more clarity than the initially formulated question(s).

>snapshot

If your product earns rave reviews for dependability/reliability, quality, workmanship, and manufacturer reputation, that's good, right? If your firm delivers on the promise of your long-held promotional tagline—the "Pursuit of Perfection"—that's great, right? "Not good enough," claims Mark Miller, associate director of strategic planning, Team One Advertising, "when Toyota is determined to infuse the Lexus brand with passion."

Toyota faced some troubling statistics in the 1997–1999 model years. While the Lexus brand was setting sales records and overall the luxury coupe category was growing, its Lexus coupe sales were declining. And while Lexus scored well on the rational motivators, it lacked the emotional motivators deemed critical for luxury coupe success, especially against Corvette, Porsche, and Mercedes. Toyota engineers had developed a concept car in Japan, the SC 430. This car was Toyota's first luxury convertible and sported a technologically advanced, retractable hard top rather than the more usual soft "rag" top.

Team One was charged with developing the communications program to launch the SC 430. Understanding that this car was and needed to be a departure from traditional Lexus brand imagery, Team One needed information to accomplish

Toyota's more aggressive agenda: "(1) evolve the Lexus brand using the SC 430 convertible as the emotional flagship, (2) stimulate desire for the Lexus brand, as well as desire for the SC 430 convertible, (3) make a connection with luxury convertible buyers beyond the rational, and (4) inject more passion into our Pursuit of Perfection." Using syndicated tracking studies by Allison-Fisher and innovative quantitative research by Diagnostic Research Inc., along with strategic marketing clinic research by the Lexus team, and data mining Toyota's Consolidated Dynamic Study, Team One created its innovative French-language American-aired campaign. The Cabriolet Nouveau campaign married the association of the French with seduction, love, and romance to the "stylish, sophisticated, sexy" Lexus SC 430. The results were award-winning in numerous ways, including earning the 2002 David Ogilvy Research Award in the durables category.

Using the management-research question hierarchy, identify the management dilemma, management question(s), and research question(s) that would drive this research. Watch for the special icon that indicates a continuation of this research story example.

www.lexus.com; www.teamoneadv.com; www.diagnostic.com; www.allison-fisher.com
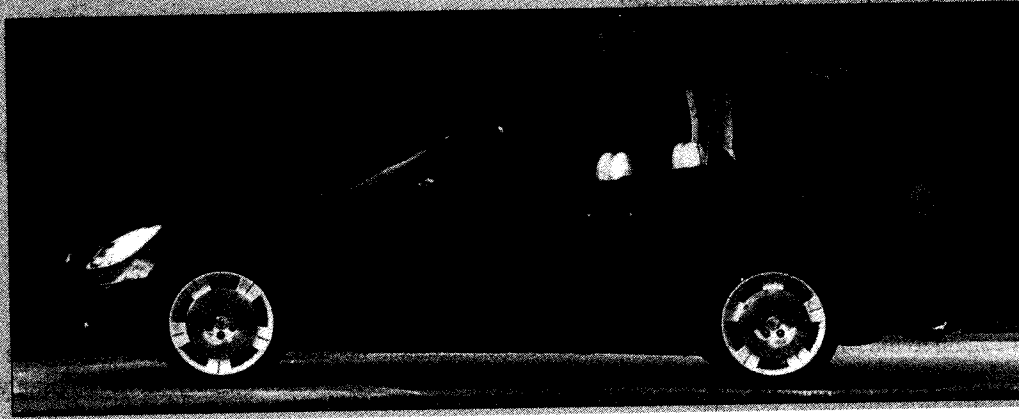
In addition to fine-tuning the original question, other research question-related activities should be addressed in this phase to enhance the direction of the project:

1. Examine the concepts and constructs to be used in the study. Are they satisfactorily defined? Have operational definitions been employed where appropriate?
2. Review the research questions with the intent of breaking them down into specific second- and third-level questions.

3. If hypotheses are used, be certain they meet the quality tests mentioned in the preceding chapter.
4. Determine what evidence must be collected to answer the various questions and hypotheses.
5. Set the scope of the study by stating what is *not* a part of the research question. This will establish a boundary to separate contiguous problems from the primary objective.

When the characteristics or plausible causes of the problem are well defined and the research question is clearly stated, it is possible to deduce the essential subquestions that will guide the project planning at this stage of the research process. However, if the research question is somewhat or very poorly defined, the researcher will need further exploration and question revision to refine the original question and generate the material for constructing investigative questions.

Investigative Questions

Once the research question(s) has been selected, researcher thinking moves to a more specific level, that of investigative questions (see Exhibit 3-5). These questions reveal the specific pieces of information the manager feels he or she needs to know to answer the research question.

Investigative questions are questions the researcher must answer to satisfactorily arrive at a conclusion about the research question. To formulate them, the researcher takes a general research question and breaks it into more specific questions about which to gather data. This fractionating process can continue down through several levels of increasing specificity. Investigative questions should be included in the research proposal, for they guide the development of the research design. They are the foundation for creating the research data collection instrument.

The researcher working on the BankChoice project develops two major investigative questions for studying the market with several subquestions under each. The questions provide insight into the lack of deposit growth:

1. What is the public's position regarding financial services and their use?
   a. What specific financial services are used?
   b. How attractive are various services?
   d. What bank-specific and environmental factors influence a person's use of a particular service?
2. What is the bank's competitive position?
   a. What are the geographic patterns of our customers and of our competitors' customers?
   b. What demographic differences are revealed among our customers and those of our competitors?
   c. What words or phrases does the public (both customers and noncustomers) associate with BankChoice? With BankChoice's competitors?
   d. How aware is the public of the bank's promotional efforts?
   e. What opinion does the public hold of the bank and its competitors?
   f. How does growth in services compare among competing institutions?

Return again to the MindWriter situation. What does management need to know to choose among the different packaging specifications? As you develop your information needs, think broadly. In developing your list of investigative questions, include:

• Performance considerations (like the relative costs of the options, the speed of packing serviced laptops, and the condition of test laptops packaged with different materials).

• Attitudinal issues (like perceived service quality).

• Behavioral issues (like employees' ease of use in packing with the considered materials).

Measurement Questions

Measurement questions should be outlined by completion of the project-planning activities but usually await pilot testing for refinement. There are two types of measurement questions: predesigned, pretested questions and custom-designed questions. Predesigned measurement questions are questions that have been formulated and tested by previous researchers, are recorded in the literature, and may be applied literally or be adapted for the project at hand. Some studies lend themselves to the use of these readily available measurement devices. This provides enhanced validity and can reduce the cost of the project. More often, however, the measurement questions should be custom-tailored to the investigative questions. The resources for this task will be the collective insights from all the activities in the research process completed to this point, particularly insights from exploration. Later, during pilot testing of the data collection instrument(s), these custom-designed questions will be refined.

Measurement questions constitute the fifth level of the hierarchy (see Exhibit 3-2). In surveys, **measurement questions** are the questions we actually ask the respondents. They appear on the questionnaire. In an observation study, measurement questions are the observations researchers must record about each subject studied.

BankChoice conducts a survey of local residents. The questionnaire contains many measurement questions seeking information that will provide answers to the investigative questions. Two hundred residents complete questionnaires, and the information collected is used to guide a reorientation of the bank's image.

The assumptions and facts used to structure the management-research question hierarchy set the direction of the project. Using the hierarchy is a good way to think methodically about the various issues. Think of the hierarchy as six sequential levels moving from the general to the specific. While our approach suggests six discrete levels—concluding with the management decision—the hierarchy is actually more of a continuum. The investigative question stage, in particular, may involve several levels of questioning before it is possible to develop satisfactory measurement questions.

>closeup

MindWriter's Research Process

>closeupcont'd

> **Exhibit 3-6** A Gantt Chart of the MindWriter Project

8/20	8/27	9/3	9/10	9/17	9/24	10/1	10/8	10/15	10/22	10/29	11/1

Start
Preparation
Site visit
Planning session
Discuss with Gracie
Service/support interviews
Proposal
Go ahead
Design questionnaire
Make post office arrangements
Test questions
Revise questionnaire
Graphics layout
Questionnaire approval
Printing
Ship to Austin
Austin starts postcards
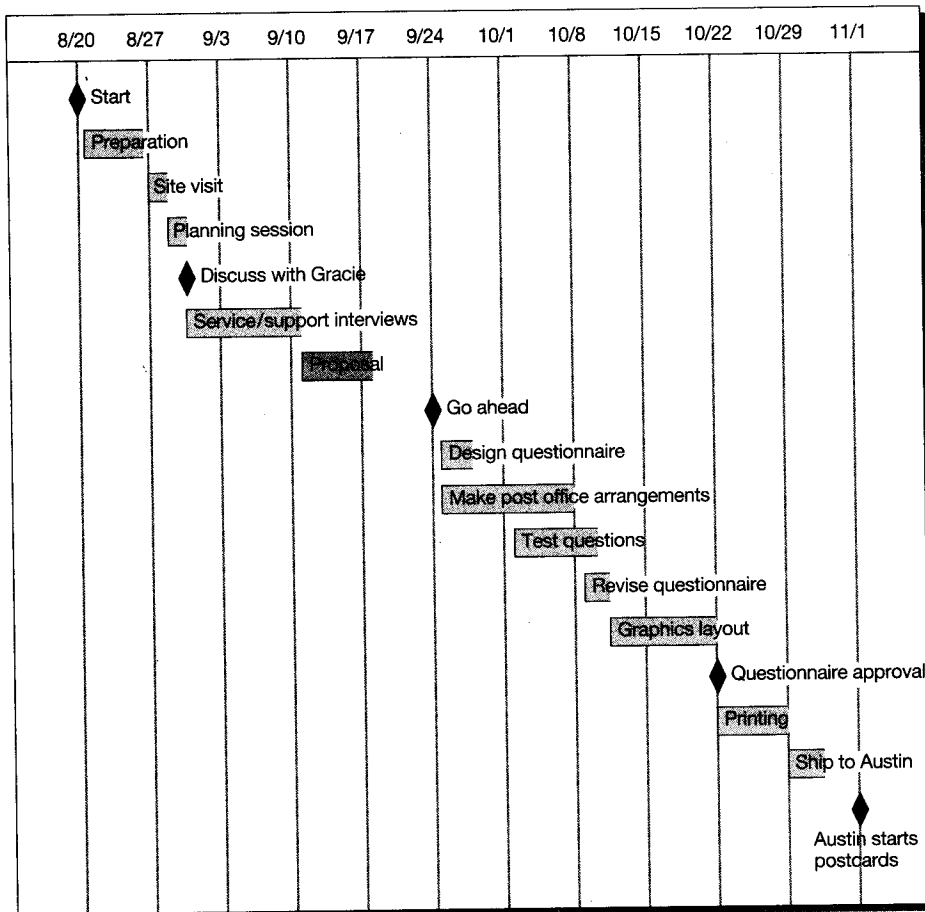
> Research Process Issues

Although it is desirable for research to be thoroughly grounded in management decision priorities, studies can wander off target or be less effective than they should be.

The Favored-Technique Syndrome

Some researchers are method-bound. They recast the management question so that it is amenable to their favorite methodology—a survey, for example. Others might prefer to emphasize the case study, while still others wouldn't consider either approach. Not all researchers are comfortable with experimental designs. The past reluctance of most social scientists to use experimental designs is believed to have retarded the development of scientific research in that arena.

The availability of technique is an important factor in determining how research will be done or whether a given study can be done. Persons knowledgeable about and skilled in some techniques but not in others are too often blinded

It is the role of the manager sponsoring the research to spot an inappropriate technique-driven research proposal.

by their special competencies. Their concern for technique dominates the decisions concerning what will be studied (both investigative and measurement questions) and how (research design).

> **> We discuss research techniques and when each is appropriate in Chapters 7–11.**

Since the advent of total quality management (TQM), numerous, standardized customer satisfaction questionnaires have been developed. Jason may have done studies using these instruments for any number of his clients. Myra should be cautious. She must not let Jason steamroll her into the use of an instrument he has developed for another client, even though he might be very persuasive about its success in the past. Such a technique might not be appropriate for MindWriter's search to resolve postpurchase service dissatisfaction.

Company Database Strip-Mining

The existence of a pool of information or a database can distract a manager, seemingly reducing the need for other research. As evidence of the research-as-expense-not-investment mentality mentioned in Chapter 1, managers frequently hear from superiors, "We should use the information we already have before collecting more." Modern management information systems are capable of providing massive volumes of data. This is not the same as saying modern management information systems provide substantial knowledge.

Each field in a database was originally created for a specific reason, a reason that may or may not be compatible with the management question facing the organization. The MindWriter service department's database, for example, probably contains several fields about the type of problem, the location of the problem, the remedy used to correct the problem, and so forth. Jason and Myra can accumulate facts concerning the service, and they can match each service problem with a particular MindWriter model and production sequence (from a production database), and, using yet another database (generated from warranty registration), they can match each problem to a name and address of an owner. But, having done all that, they still aren't likely to know how a particular owner uses his or her laptop or how satisfied an owner was with MindWriter's post-purchase service policies and practices.

> *In this text, we emphasize projects that tend to be nonroutine, nonrecurring, and complex, rather than those that rely solely on database management.*

Mining management information databases is fashionable, and all types of organizations increasingly value the ability to extract meaningful information. While such data mining is often a starting point in decision-based research, rarely will such activity answer all management questions related to a particular management dilemma.

Unresearchable Questions

Not all management questions are researchable, and not all research questions are answerable. To be researchable, a question must be one for which observation or other data collection can provide the answer. Many questions cannot be answered on the basis of information alone.

Questions of value and policy often must be weighed in management decisions. In the MetalWorks study, management may be asking, "Should we hold out for a liberalization of the seniority rules in our new labor negotiations?" While information can be brought to bear on this question, such additional considerations as "fairness to the workers" or "management's right to manage" may be important to the decision. It may be possible for many of these questions of value to be transformed into questions of fact. Concerning "fairness to the workers," one might first gather information from which to estimate the extent and degree to which workers will be affected by a rule change; then one could gather opinion statements by the workers about the fairness of seniority rules. Even so, substantial value elements remain. Questions left unanswered include "Should we argue for a policy that will adversely affect the security and well-being of older workers who are least equipped to cope with this adversity?" Even if a question can be answered by facts alone, it might not be researchable because currently accepted and tested procedures or techniques are inadequate.

Ill-Defined Management Problems

Some categories of problems are so complex, value-laden, and bound by constraints that they prove to be intractable to traditional forms of analysis. These questions have characteristics that are virtually the opposite of those of well-defined problems. One author describes the differences like this:

> To the extent that a problem situation evokes a high level of agreement over a specified community of problem solvers regarding the referents of the attributes in which it is given, the operations that are permitted, and the consequences of those operations, it may be termed unambiguous or well defined with respect to that community. On the other hand, to the extent that a problem evokes a highly variable set of responses concerning referents of attributes, permissible operations, and their consequences, it may be considered ill-defined or ambiguous with respect to that community.[2]

Another author points out that ill-defined research questions are least susceptible to attack from quantitative research methods because such problems have too many interrelated facets for measurement to handle with accuracy.[3] Yet another authority suggests there are some research questions of this type for which methods do not presently exist or, if the methods were to be invented, still might not provide the data necessary to solve them.[4] Novice researchers should avoid ill-defined problems. Even seasoned researchers will want to conduct a thorough exploratory study before proceeding with the latest approaches.

Politically Motivated Research

It is important to remember that a manager's motivations for seeking research are not always obvious. Managers might express a genuine need for specific information on which to base a decision. This is the ideal scenario for quality research. Sometimes, however, a research study may not really be desirable but is authorized anyway, chiefly because its presence may win approval for a certain manager's pet idea. At other times, research may be authorized as a measure of personal protection for a decision maker in case he or she is criticized later. In these less-than-ideal cases, the researcher may find it more difficult to win the manager's support for an appropriate research design.

> Designing the Study

The **research design** is the blueprint for fulfilling objectives and answering questions. Selecting a design may be complicated by the availability of a large variety of methods, techniques, procedures, protocols, and sampling plans. For example, you may decide on a secondary data study, case study, survey, experiment, or simulation. If a survey is selected, should it be administered by mail, computer, telephone, the Internet, or personal interview? Should all relevant data be collected at one time or at regular intervals? What kind of structure will the questionnaire or interview guide possess? What question wording should be employed? Should the responses be scaled or open-ended? How will reliability and validity be achieved? Will characteristics of the interviewer influence responses to the measurement questions? What kind of training should the data collectors receive? Is a sample or a census to be taken? What types of sampling should be considered? These questions represent only a few of the decisions that have to be made when just one method is chosen.

Here we distinguish secondary data in exploration from secondary data collection as the principal methodology to resolve the management dilemma.

> **We discuss identifying and classifying various research designs in Chapter 6, while in Part III we provide information on specific methodologies.**

The creative researcher actually benefits from this confusing array of options. The numerous combinations spawned by the abundance of tools may be used to construct alternative perspectives on the same problem. By creating a design using diverse methodologies, researchers are able to achieve greater insight than if they followed the most frequent method encountered in the literature or suggested by a disciplinary bias. Although it must be

>snapshot

If you were Kraft and discovered that, while sales of sliced cheese were increasing, your brand's sales were decreasing, you might turn to advertising to reverse the slide. But just what would you say—and how? Faced with this situation, Kraft sent ethnographers from Strategic Frameworking to talk with moms aged 25–64 who were fixing sandwiches in their kitchens. Focus groups then reinforced that moms feel good about giving their kids cheese because of its nutritional value. Focus groups also revealed that even though their kids preferred Kraft slices, a price difference could persuade moms to purchase a competitive brand. A subsequent phone survey by Market Facts revealed moms would buy the pricier Kraft slices due to extra calcium. Next came TV commercial tests for two spots featuring the "good-taste-plus-the-calcium-they-need" message. A spot featuring a straightforward mes-

sage didn't score as high as one featuring kids scarfing down gooey grilled cheese sandwiches, but the male voice-delivered "2-out-of-5-kids-don't-get-enough-calcium" message generated guilt, not positive purchase intentions. A revised commercial featured the cheese-scarfing kids while the Dairy Fairy (an animated cow) delivered the calcium message. Subsequently, Millward Brown Group discovered through copy-testing research that the dual message had finally gotten through. The TV commercial aired, delivering an 11.8 percent increase in sales and a 14.5 percent increase in base volume. Sixty-five percent of the growth in sales was attributed to the campaign.

www.kraft.com; www.strategicframeworking.com; www.marketfacts.com; www.millwardbrown.com; www.jwt.com

conceded that students or managers rarely have the resources to pursue a single problem from a multimethod, multistudy strategy, the advantages of several competing designs should be considered before settling on a final one.

Jason's preference for MindWriter is to collect as much information as possible from an exploration of company records, company managers of various departments, and multiple phone surveys. Financial constraints, however, might force the substitution of a less expensive methodology: a self-administered study in the form of a postcard sent to each CompleteCare program user with his or her returned laptop, followed by phone contact with nonresponders.

> Sampling Design

Another step in planning the design is to identify the target population and select the sample if a census is not desired. The researcher must determine who and how many people to interview, what and how many events to observe, or what and how many records to inspect. A **sample** is a part of the target population, carefully selected to represent that population. When researchers undertake sampling studies, they are interested in estimating one or more population values and/or testing one or more statistical hypotheses.

If a study's objective is to examine the attitudes of U.S. automobile assemblers about quality improvement, the population may be defined as the entire adult population of auto assemblers employed by the auto industry in the United States. Definition of the terms *adult* and *assembler* and the relevant job descriptions included under "assembly" and "auto industry" may further limit the population under study. The investigator may also want to restrict the research to readily identifiable companies in the market, vehicle types, or assembly processes.

> We describe types of samples, sample frames, and the determination of sample size in Chapter 15 and its appendix.

The sampling process must then give every person within the target population a known nonzero chance of selection if probability sampling is used. If there is no feasible alternative, a nonprobability approach may be used. Jason knows that his target population comprises MindWriter customers who have firsthand experience with the CompleteCare program. Given that a list of CompleteCare program users (a sample frame) is readily available each month, a probability sample is feasible.

> Resource Allocation and Budgets

General notions about research budgets have a tendency to single out data collection as the most costly activity. Data collection requires substantial resources but perhaps less of the budget than clients expect. Employees must be paid, training and travel must be provided, and other expenses incurred must be paid; but this phase of the project often takes no more than one-third of the total research budget. The geographic scope and the number of observations required do affect the cost, but much of the cost is relatively independent of the size of the data-gathering effort. Thus, a guide might be that (1) project planning, (2) data gathering, and (3) analysis, interpretation, and reporting each shares about equally in the budget.

Without budgetary approval, many research efforts are terminated for lack of resources (see Exhibit 3-7). A budget may require significant development and documentation as in grant and contract research, or it may require less attention as in some in-house projects or investigations funded out of the researcher's own resources. The researcher who seeks funding must be able not only to persuasively justify the costs of the project but also to identify the sources and methods of funding. One author identifies three types of budgets in organizations where research is purchased and cost containment is crucial:

- *Rule-of-thumb budgeting* involves taking a fixed percentage of some criterion. For example, a percentage of the prior year's sales revenues may be the basis for determining the marketing research budget for a manufacturer.

- *Departmental or functional area budgeting* allocates a portion of total expenditures in the unit to research activities. Government agencies, not-for-profits, and the private sector alike will frequently manage research activities out of functional budgets. Units such as human resources, marketing, or engineering then have the authority to approve their own projects.

- *Task budgeting* selects specific research projects to support on an ad hoc basis. This type is the least proactive but does permit definitive cost-benefit analysis.[5]

> Valuing Research Information

There is a great deal of interplay between budgeting and value assessment in any management decision to conduct research. An appropriate research study should help managers avoid losses and increase sales or profits; otherwise, research can be wasteful. The decision maker wants a firm cost estimate for a project and an equally precise assurance that useful information will result from the study. Even if the researcher can give good cost and information estimates, the managers still must judge whether the benefits outweigh the costs.

Conceptually, the value of applied research is not difficult to determine. In a business situation, the research should produce added revenues or reduce expenses in much the same way as any other investment of resources. One source suggests that the value of research information may be judged in terms of "the difference between the result of decisions made with the information and the result that would be made without it."[6] While such a criterion is simple to state, its actual application presents difficult measurement problems.

Evaluation Methods

Ex Post Facto Evaluation

If there is any measurement of the value of research, it is usually an after-the-fact event. Twedt reports on one such effort, an evaluation of marketing research done at a major corporation.[7] He secured "an objective estimate of the contribution of each project to corporate profitability." He reports that most studies were intended

to help management determine which one of two (or more) alternatives was preferable. He guesses that in 60 percent of the decision situations, the correct decision would have been made *without* the benefit of the research information. In the remaining 40 percent of the cases, the research led to the correct decision. Using these data, he estimates that the return on investment in marketing research in this company was 3.5 times for the year studied. However, he acknowledges the return-on-investment figure was inflated because only the direct research costs were included.

This effort at cost-benefit analysis is commendable even though the results come too late to guide a current research decision. Such analysis may sharpen the manager's ability to make judgments about future research proposals. However, the critical problem remains, that of project evaluation *before* the study is done.

> **> We discuss the two-stage study in Chapter 6.**

Prior or Interim Evaluation

A proposal to conduct a thorough management audit of operations in a company may be a worthy one, but neither its costs nor its benefits are easily estimated in advance. Such projects are sufficiently unique that managerial experience seldom provides much aid in evaluating such a proposal. But even in these situations, managers can make some useful judgments. They may determine that a management audit is needed because the company is in dire straits and management does not understand the scope of its problems. The management information need may be so great as to ensure that the research is approved. In such cases, managers may decide to control the research expenditure risk by doing a study in stages. They can then review costs and benefits at the end of each stage and give or withhold further authorization.

Option Analysis

Some progress has been made in the development of methods for assessing the value of research when management has a choice between well-defined options. Managers can conduct a formal analysis with each alternative judged in terms of estimated costs and associated benefits and with managerial judgment playing a major role.

If the research design can be stated clearly, one can estimate an approximate cost. The critical task is to quantify the benefits from the research. At best, estimates of benefits are crude and largely reflect an orderly way to estimate outcomes under uncertain conditions. To illustrate how the contribution of research is evaluated in such a decision situation, we must digress briefly into the rudiments of decision theory.

Decision Theory

When there are alternatives from which to choose, a rational way to approach the decision is to try to assess the outcomes of each action. The case of two choices will be discussed here, although the same approach can be used with more than two choices.

Two possible actions (A_1 and A_2) may represent two different ways to organize a company, provide financing, produce a product, and so forth. The manager chooses the action that affords the best outcome—the action choice that meets or exceeds whatever criteria are established for judging alternatives. Each criterion is a combination of a **decision rule** and a **decision variable.** The decision variable might be "direct dollar savings," "contribution to overhead and profits," "time required for completion of the project," and so forth. For MindWriter, the decision variable might be number of postservice complaints or the level of postservice satisfaction. Usually the decision variable is expressed in dollars, representing sales, costs, some form of profits or contribution, or some other quantifiable measure. The decision rule may be "choose the course of action with the lowest loss possibility" or perhaps "choose the alternative that provides the greatest annual

net profit." For MindWriter, the decision rule might be "choose the alternative that provides the highest level of postservice satisfaction."

You'll find an example of decision theory on the text CD.

The alternative selected (A_1 versus A_2) depends on the decision variable chosen and the decision rule used. The evaluation of alternatives requires that (1) each alternative is explicitly stated, (2) a decision variable is defined by an outcome that may be measured, and (3) a decision rule is determined by which outcomes may be compared.
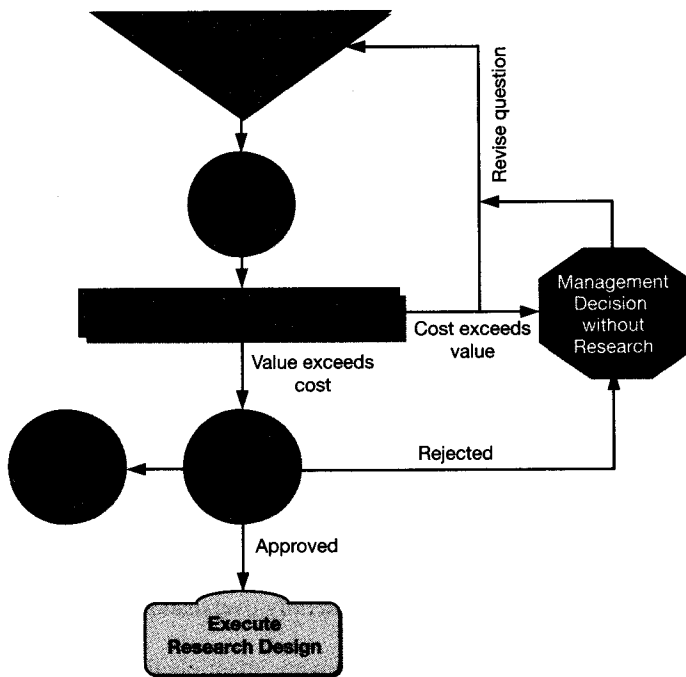
> The Research Proposal

Exhibit 3-1 depicts the research proposal as an activity that incorporates decisions made during early project planning phases of the study, including the management-research question hierarchy and exploration. The proposal thus incorporates the choices the investigator makes in the preliminary steps, as depicted in Exhibit 3-7.

A written proposal is often required when a study is being suggested. It ensures that the parties concur on the project's purpose and on the proposed methods of investigation. Time and budgets are often spelled out, as are other responsibilities and obligations. Depending on the needs and desires of the manager, substantial background detail and elaboration of proposed techniques may be included.

The length and complexity of research proposals range widely. Business research proposals normally range from 1 to 10 pages. Applicants for foundation or government research grants typically file an extensive proposal, often in a standardized format specified by the granting agency. A research proposal also may be oral, where all aspects of the research are discussed but not codified in writing. This is more likely when a manager directs his or her own research or the research activities of subordinates.

> **Exhibit 3-7** Proposing Research

Proposal Content

Every proposal, regardless of length, should include two basic sections:

- Statement of the research question.
- Brief description of research methodology.

In a brief memo-type proposal, the research question may be incorporated into a paragraph that also sets out the management dilemma, management question, and categories of investigative questions. The following statements present the management question facing the respective managers and point out the nature of the research that will be undertaken:

1. BankChoice, currently the leading bank in the city, has not been growing as fast as its major competitors. Before developing a long-range plan to enhance the bank's competitive position, it is important to determine the bank's present competitive status, its advantages and opportunities, and its major deficiencies. The primary objective of this proposed research is to develop a body of benchmark information about BankChoice, its major competitors, and the market for banking services.

2. ArtDeco Appliances must choose a location for a new plant to serve eastern markets. Before this location decision is made, a feasibility study should be conducted to determine, for each of five sites, the estimated:
   a. Costs of serving existing customers.
   b. Building, relocation, tax, and operating costs.
   c. Availability of local labor in the six major crafts used in production.
   d. Attractiveness of the living environment for professional and management personnel.

A second section includes a statement of what will be done: the bare bones of the research design. For BankChoice, the researcher might propose:

Personal interviews will be conducted with a minimum of 200 residents to determine their knowledge of, use of, and attitudes toward local banks. In addition, information will be gathered about their banking and financing practices and preferences. Other information of an economic or demographic nature also will be gathered from published sources and public agencies.

> **We describe more detailed research proposals in Chapter 4.**
Often research proposals are much more detailed and describe specific measurement devices that will be used, time and cost budgets, sampling plans, and many other details.

> Pilot Testing

The data-gathering phase of the research process typically begins with pilot testing. Pilot testing may be skipped when the researcher tries to condense the project time frame.

A **pilot test** is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample. It should, therefore, draw subjects from the target population and simulate the procedures and protocols that have been designated for data collection. If the study is a survey to be executed by mail, the pilot questionnaire should be mailed. If the design calls for observation by an unobtrusive researcher, this behavior should be practiced. The size of the pilot group may range from 25 to 100 subjects, depending on the method to be tested, but the respondents do not have to be statistically selected. In very small populations or special applications, pilot testing runs the risk of exhausting the supply of respondents and sensitizing them to the purpose of the study. This risk is generally overshadowed by the improvements made to the design by a trial run.

There are a number of variations on pilot testing. Some of them are intentionally restricted to data collection activities. One form, *pretesting,* may rely on colleagues, respondent surrogates, or actual respondents to

refine a measuring instrument. This important activity has saved countless survey studies from disaster by using the suggestions of the respondents to identify and change confusing, awkward, or offensive questions and techniques. One interview study was designed by a group of college professors for EducTV, an educational television consortium. In the pilot test, they discovered that the wording of nearly two-thirds of the questions was unintelligible to the target group, later found to have a median eighth-grade education. The revised instrument used the respondents' language and was successful. Pretesting may be repeated several times to refine questions, instruments, or procedures.

> Data Collection

The gathering of data may range from a simple observation at one location to a grandiose survey of multinational corporations at sites in different parts of the world. The method selected will largely determine how the data are collected. Questionnaires, standardized tests, observational forms, laboratory notes, and instrument calibration logs are among the devices used to record raw data.

But what are data? One writer defines **data** as the facts presented to the researcher from the study's environment. First, data may be further characterized by their abstractness, verifiability, elusiveness, and closeness to the phenomenon.[8] As *abstractions,* data are more metaphorical than real. For example, the growth in GDP cannot be observed directly; only the effects of it may be recorded. Second, data are processed by our senses—often limited in comparison to the senses of other living organisms. When sensory experiences consistently produce the same result, our data are said to be trustworthy because they may be *verified.* Third, capturing data is *elusive,* complicated by the speed at which events occur and the time-bound nature of observation. Opinions, preferences, and attitudes vary from one milieu to another and with the passage of time. For example, attitudes about spending during the late 1980s differed dramatically one decade later within the same population, due to the sustained prosperity within the final four years of the millennium. Finally, data reflect their truthfulness by *closeness to the phenomena. Secondary data* have had at least one level of interpretation inserted between the event and its recording. *Primary data* are sought for their proximity to the truth and control over error. These cautions remind us to use care in designing data collection procedures and generalizing from results.

Data are edited to ensure consistency across respondents and to locate omissions. In the case of survey methods, editing reduces errors in the recording, improves legibility, and clarifies unclear and inappropriate responses. Edited data are then put into a form that makes analysis possible. Because it is impractical to place raw data into a report, alphanumeric codes are used to reduce the responses to a more manageable system for storage and future processing. The codes follow various decision rules that the researcher has devised to assist with sorting, tabulating, and analyzing. Personal computers have made it possible to merge editing, coding, and data entry into fewer steps even when the final analysis may be run on a larger system.

> **We address data collection in detail in Part III.**

> Analysis and Interpretation

Managers need information, not raw data. Researchers generate information by analyzing data after its collection. **Data analysis** usually involves reducing accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques. Scaled responses on questionnaires and experimental instruments often require the analyst to derive various functions, as well as to explore relationships among variables. Further, researchers must interpret these findings in light of the client's research

question or determine if the results are consistent with their hypotheses and theories. Increasingly, managers are asking research specialists to make recommendations based on their interpretation of the data.

> **We address data analysis and interpretation in Chapters 16–20.**

A modest example involves a market research firm that polls 2,000 people from its target population for a new generation of wallet-sized portable telephones. Each respondent will be asked four questions:

1. "Do you prefer the convenience of Pocket-Phone over existing cellular telephones?"
2. "Are there transmission problems with Pocket-Phone?"
3. "Is Pocket-Phone better suited to worldwide transmission than your existing cellular phone?"
4. "Would cost alone persuade you to purchase Pocket-Phone?"

The answers will produce 8,000 pieces of raw data. Reducing the data to a workable size will yield eight statistics: the percentage of yes and no answers to each question. When a half-dozen demographic questions about the respondents are added, the total amount of data easily triples. If the researcher scaled the four key questions rather than eliciting yes-no responses, the analysis would likely require more powerful statistical analysis than summarization.

> Reporting the Results

Finally, it is necessary to prepare a report and transmit the findings and recommendations to the manager for the intended purpose of decision making. The researcher adjusts the style and organization of the report according to the target audience, the occasion, and the purpose of the research. The results of applied research may be communicated via conference call, letter, written report, oral presentation, or some combination of any or all of these methods. Reports should be developed from the manager's or information user's perspective. The sophistication of the design and sampling plan or the software used to analyze the data may help to establish the researcher's credibility, but in the end, the manager's foremost concern is solving the management dilemma. Thus, the researcher must accurately assess the manager's needs throughout the research process and incorporate this understanding into the final product, the research report.

The management decision maker occasionally shelves the research report without taking action. Inferior communication of results is a primary reason for this outcome. With this possibility in mind, a research specialist should strive for:

• Insightful adaptation of the information to the client's needs.

• Careful choice of words in crafting interpretations, conclusions, and recommendations.

> **We cover the research report in Chapter 21.**

Occasionally, organizational and environmental forces beyond the researcher's control argue against the implementation of results. Such was the case in a study conducted for the Association of American Publishers, which needed an ad campaign to encourage people to read more books. The project, costing $125,000, found that only 13 percent of Americans buy general-interest books in stores. When the time came to commit $14 million to the campaign to raise book sales, the membership's interest had faded and the project died.[9]

At a minimum, a research report should contain the following:

• An *executive summary* consisting of a synopsis of the problem, findings, and recommendations.
• An *overview of the research:* the problem's background, literature summary, methods and procedures, and conclusions.
• A section *on implementation strategies* for the recommendations.
• A *technical appendix* with all the materials necessary to replicate the project.

>summary

1 Research originates in the decision process. A manager needs specific information for setting objectives, defining tasks, finding the best strategy by which to carry out the tasks, or judging how well the strategy is being implemented.

A dilemma-centered emphasis—the problem's origin, selection, statement, exploration, and refinement—dominates the sequence of the research process. A management dilemma can originate in any aspect of an organization. A decision to do research can be inappropriately driven by the availability of coveted tools and databases. To be researchable, a problem must be subject to observation or other forms of empirical data collection.

2 How one structures the research question sets the direction for the project. A management problem or opportunity can be formulated as a hierarchical sequence of questions. At the most general level is the management dilemma. This is translated into a management question and then into a research question—the major objective of the study. In turn, the research question is further expanded into investigative questions. These questions represent the various facets of the problem to be solved, and they influence research design, including design strategy, data collection planning, and sampling. At the most specific level are measurement questions that are answered by respondents in a survey or answered about each subject in an observational study.

3 Exploration of the problem is accomplished through familiarization with the available literature, interviews with experts, focus groups, or some combination. Revision of the management or research questions is a desirable outcome of exploration and enhances the researcher's understanding of the options available for developing a successful design.

Decisions concerning the type of study, the means of data collection, measurement, and sampling plans must be made when planning the design. Most researchers undertake sampling studies because of an interest in estimating population values or testing a statistical hypothesis. Carefully constructed delimitations are essential for specifying an appropriate probability sample. Nonprobability samples are also used.

4 Budgets and value assessments determine whether most projects receive necessary funding. Their thorough documentation is an integral part of the research proposal. Proposals are required for many research projects and should, at a minimum, describe the research question and the specific task the research will undertake.

Pilot tests are conducted to detect weaknesses in the study's design, data collection instruments, and procedures. Once the researcher is satisfied that the plan is sound, data collection begins. Data are collected, edited, coded, and prepared for analysis.

Data analysis involves reduction, summarization, pattern examination, and the statistical evaluation of hypotheses. A written report describing the study's findings is used to transmit the results and recommendations to the intended decision maker. By cycling the conclusions back into the original problem, a new research iteration may begin, and findings may be applied.

>key terms

data 77	management dilemma 56	research design 71
data analysis 77	management question 58	research process 54
decision rule 74	management-research question	research question(s) 64
decision variable 74	hierarchy 56	sample 72
exploration 63	measurement questions 67	
investigative questions 66	pilot test 76	

>discussion questions

Terms in Review

1 Some questions are answerable by research and others are not. Using some management problems of your choosing, distinguish between them.

2 Discuss the problems of trading off exploration and pilot testing under tight budgetary constraints. What are the immediate and long-term effects?

3 A company is experiencing a poor inventory management situation and receives alternative research proposals. Proposal 1 is to use an audit of last year's transactions as a basis for recommendations. Proposal 2 is to study and recommend changes to the procedures and systems used by the materials department. Discuss issues of evaluation in terms of:

a Ex post facto versus prior evaluation.

b Evaluation using option analysis and decision theory.

Making Research Decisions

4 Confronted by low productivity, the president of Oaks International Inc. asks a research company to study job satisfaction in the corporation. What are some of the important reasons that this research project may fail to make an adequate contribution to the solution of management problems?

5 You have been approached by the editor of *Gentlemen's Magazine* to carry out a research study. The magazine has been unsuccessful in attracting shoe manufacturers as advertisers. When the sales force tried to secure advertising from shoe manufacturers, they were told men's clothing stores are a small and dying segment of their business. Since *Gentlemen's Magazine* goes chiefly to men's clothing stores, the manufacturers reasoned that it was, therefore, not a good vehicle for their advertising. The editor believes that a survey (via mail questionnaire) of men's clothing stores in the United States will probably show that these stores are important outlets for men's shoes and are not declining in importance as shoe outlets. He asks you to develop a proposal for the study and submit it to him. Develop the management-research question hierarchy that will help you to develop a specific proposal.

6 Based on an analysis of the last six months' sales, your boss notices that sales of beef products are declining in your chain's restaurants. As beef entrée sales decline, so do profits. Fearing beef sales have declined due to several newspaper stories reporting *E. coli* contamination discovered at area grocery

stores, he suggests a survey of area restaurants to see if the situation is pervasive.

a What do you think of this research suggestion?

b How, if at all, could you improve on your boss's formulation of the research question?

Bringing Research to Life

7 Take one of the possible problems causing MindWriter's management dilemma (see the Closeup on page 67 and Exhibit 3-3) and develop plausible management and research questions.

8 Using the "uneven courier performance" problem or the "product damaged during repair" problem (see the Closeup on page 67 and Exhibit 3-3), develop some exploration activities that would let Jason or Myra proceed to develop a more refined research question dealing with this problem.

9 Using the MindWriter postservicing packaging alternative as the research question, develop appropriate investigative questions within the management-research question hierarchy by preparing an exhibit similar to Exhibit 3-4.

From Concept to Practice

10 Develop the management-research question hierarchy (Exhibits 3-2 and 3-3), citing management dilemma, management question, and research question(s) for each of the following:

a The production manager of a shoe factory.

b The president of a home health care services firm.

c The vice president of labor relations for an auto manufacturer.

d The retail advertising manager of a major metropolitan newspaper.

e The chief of police in a major city.

11 Develop the management-research question hierarchy for a management dilemma you face at work or with an organization for which you volunteer.

12 Develop a memo-proposal for a research study in which 300 interviews are conducted to address the management question you defined in question 11.

>wwwexercises

1 Learn more about business intelligence from industry leader MicroStrategy. Visit its Web site and participate in a free Web seminar on a current case study. (**http://www.microstrategy.com/events/online_seminars/index.asp**)

2 *Quirk's* magazine is one of the most respected for research reporting. Visit the quirks.com site on the Web and select an article. Tie the content of the article to one or more concepts within the first three chapters of this text.

>cases*

Agri Comp	NCRCC: Teeing Up a New Strategic Direction
BBQ Product Crosses over the Lines of Varied Tastes	Overdue Bills
Calling Up Attendance	Ramada Demonstrates Its *Personal Best*™
Donatos: Finding the New Pizza	Retailers Unhappy with Displays from Manufacturers
HeroBuilders.com	State Farm: Dangerous Intersections
Inquiring Minds Want to Know—NOW!	Sturgel Division
Mastering Teacher Leadership	T-Shirt Designs
McDonald's Tests Catfish Sandwich	USTA: Come Out Swinging

* All cases appear on the text CD; you will find abstracts of these cases in the Case Abstracts section of this text. Video cases are indicated with a video icon.

>chapter 4

6 6 The most serious mistakes are not being made as a result of wrong answers. The truly dangerous thing is asking the wrong questions. **9 9**

<div align="right">

Peter Drucker, author

</div>

>learningobjectives

After reading this chapter, you should understand . . .

1 The purpose of the request for proposal and the proposal and how each is used by the researcher and management decision maker.

2 The types of proposals and the contents of each.

3 The processes for evaluating the quality of proposals and when each is used.

"Come on over here and meet Robert Buffet." The president of the Economic Development Council seizes Sally Arens by the elbow and propels her across the dining room to meet a tall young man suited in navy blue pinstripes. She recognizes his name: He is the local manager of a national accounting firm.

"Robert Buffet, meet Sally Arens, consumer affairs manager for MindWriter."

"Hello, Robert," she says. She studies him carefully, from his brightly shined black shoes to his razor-cut hair. He is about the same age as her new partner, Jason Henry, but something in the way he holds himself suggests an arrogance that Jason has not yet developed. This young man dresses like a banker, while Jason suggests a sincere yet somehow impatient librarian.

"And what a pleasure it is to meet you," he says in a ripe baritone voice, smiling with his lips but not his eyes, which wander to a prominent banker who is chatting with a competing CPA.

"Here's the situation, Sally," says the president. "The state commerce secretary has been concerned for some time about the extent to which entrepreneurial companies, which are popping up all over the state, are actually investing in job-building technology. They have contracted with Robert's firm to study the situation in five counties, assess job cre-

ation and the like, and report this back to Tallahassee."

Sally asks, "Am I right in suspecting that the governor is worried that these start-up companies are investing in robotics and computers and not creating new manufacturing jobs?"

"Basically, that is the concern, Sally," says the tall young man. "We have already cut the contract, you see, in Tallahassee, and so we have the green light to select our five sites and commence the interviewing."

"The thing is, Sally," says the president, "before their task force can come into a county and start interviewing and collecting data, they have got to have the sponsorship of a business group. In this county, it is our council that has to look over their proposal and assure the business community it is in their best interests to cooperate."

"And you want me to critically examine their proposal and let you know what I think."

"By two weeks from Friday, please," says the president, "as a favor."

"Here is a copy of our proposal," says Buffet. "How awfully nice chatting with you." He grasps her hand, gives it one shake, pats the council president on the shoulder, and heads for the refreshment table, where a local auto dealer presents an easy target for a sales pitch.

> Proposing Research

Many students and some business researchers view the proposal process as unnecessary work. In actuality, the more inexperienced a researcher is, the more important it is to have a well-planned and adequately documented proposal. The proposal process, Exhibit 4-1, uses two primary documents: the *request for proposal (RFP)* and the *research proposal.* When the organization has research specialists on the payroll, the internal research proposal is often all that is needed. Often, however, companies do not have adequate capacity, resources, or the specialized talents in-house to execute a project, so they turn to outside research suppliers (including research specialists, universities, research centers, and consulting firms). We will explore the second scenario first.

> The Request for Proposal (RFP)

The **request for proposal (RFP)** is the formal document issued by a corporate research department, a decision maker, or some other sponsor (such as the Economic Development Council in the opening vignette) to solicit services from research suppliers. Developing a well-written RFP takes time and planning. However, the benefit to the sponsoring organization is an opportunity to formalize the process of documenting,

> **Exhibit 4-1** The Research Proposal Process
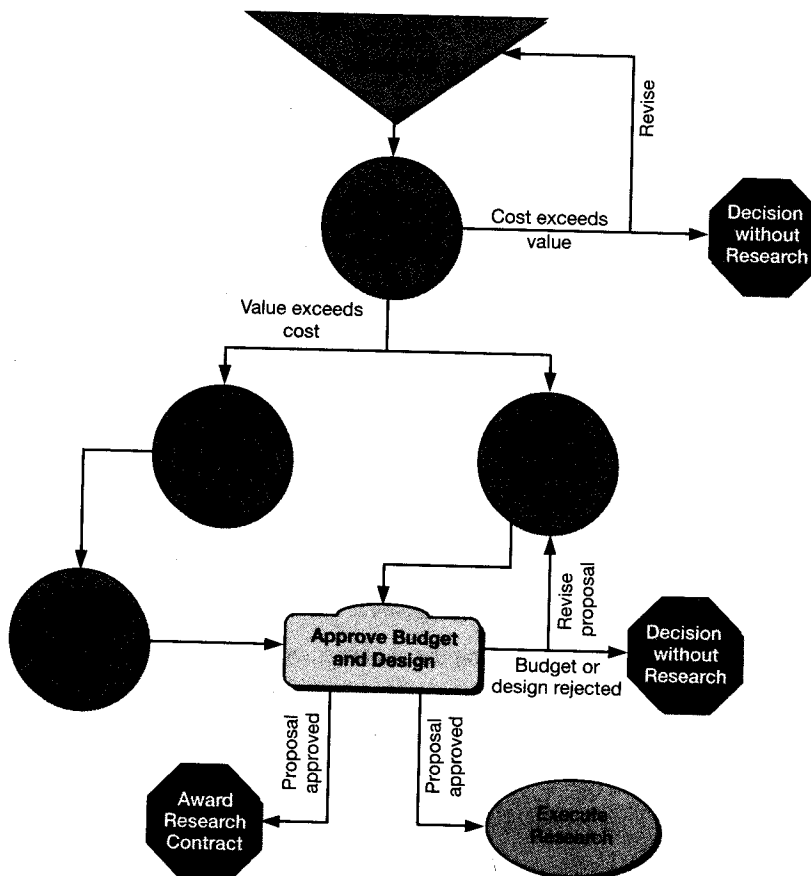
justifying, and authorizing the procurement of research. RFPs also provide a chance to evaluate different solutions and offer the means of establishing, monitoring, and controlling the performance of the winning supplier.

The researcher invites a qualified supplier to submit a proposal in accordance with a specific, detailed format—delivered by a deadline. Prescribing a common format makes comparison of competing proposals much easier. Each firm has its own requirements, and these are reflected not only in the form of the RFPs but in how they're distributed. The government, for example, is required by law to publicly announce RFPs. Private firms may limit supplier invitations to bidders that they have solicited before, to vendors that have provided past services, or to a single bidder (sole source). Both technical merit and the supplier's estimate of project cost determine how contracts are awarded.

> **> See Appendix 4a for a sample RFP.**

Research suppliers consider RFPs an important source of future business. Thus, they must be vigilant to retain credibility with current and past clients and must seek to achieve positive word of mouth. Professional guides or business listing services (such as the trade associations discussed in Chapter 1) promote the supplier's visibility. Companies sometimes avoid the formal RFP as a means of contacting suppliers. They may invite you to propose a project during a conversation and later ask you to formalize it in writing. Moreover, not all projects are conducive to the RFP process. However, in the next section, we will discuss how an organization requests state-of-the-art proposals for dealing with complex research problems.

Creating the RFP

The first step is to define and understand fully the problem being addressed. In formal RFP processes, internal experts define the problem. They may be brand managers, new product specialists, or representatives from other functions. Alternatively, an expert or a group of experts may be retained to assist in defining the problem and then writing the RFP. In the tourism study, members of the commerce department and experts in the hospitality, travel, advertising, and entertainment fields would have participated at the request of the governor. Once the problem is defined, the technical section of the RFP can be written.

> **< We discussed techniques for problem definition and clarification in Chapter 3.**

Besides a definition of the technical requirements of the desired research, critical components of the RFP include project management, pricing, and contract administration. These sections allow the potential research supplier to understand and meet the expectations of the sponsoring management team for the contracted services. Also, a section on proposal administration, including important dates, is included.

An important activity that precedes this is qualifying potential suppliers. Sponsors must determine which vendors have the capability to complete the project on time. When the process is not open to all bidders, criteria such as industry experience, reputation, geographic location, quality of previous work, size of staff, and strategic alliances with other vendors determine which bidders will be eligible to receive the RFP.

Although RFPs differ somewhat from firm to firm, the general components are:

- Proposal administration information.
- Summary statement of the problem.
- Technical section.
- Management section.
- Contracts and license section.
- Pricing section.

Proposal Administration

This section is an overview of important information on the administration of the project itself. It establishes the dates of the RFP process—when the RFP is released, when the RFP team is available for questions, the

>snapshot

The Robert Wood Johnson Foundation (RWJF) knew it wanted a collaborative partner to do the research for its Covering Kids initiative. Elaine Arkin, a social issues marketing specialist, was recruited to develop the request for proposal (RFP). The RFP described the Covering Kids initiative, as well as the type of marketing research needed, but stopped short of specifying the methodology. "We knew we needed to talk with low-income parents," shared Arkin. "And we wanted some baseline information, as well as some pre-testing of advertising." The RWJF team put together a search list by contacting firms that had managed large communication initiatives in the past. These contacts recommended a dozen firms that were then asked to describe their capabilities to do quantitative and qualitative research, as well as their experience with social issue research and with minority and low-income populations. In all, six firms were asked to submit detailed research proposals. A committee consisting of RWJF staffers, the team

from GMMB (the agency charged with developing the campaign), and several research specialists reviewed all six proposals. "We were working on a very tight deadline. The research would need to be started and finished quickly, with the results incorporated into the GMMB-designed campaign—all in less than three months," indicated RWJF senior communications officer Stuart Schear. Each firm's proposal was reviewed for the feasibility of the methodology and the cost, as well as the firm's ability to meet the time constraints. "Two firms could not meet the constraints, and another two were deemed too small to deliver the quantitative and qualitative research needed," explained Arkin. Less than one week after receipt of the proposals, the review committee selected Wirthlin Worldwide to provide the research. Wirthlin started the research immediately.

www.rwjf.org; www.wirthlinworldwide.com; www.gmmb.com

date the proposal is expected, and the dates of the evaluation and supplier selections. It includes all requirements for preparing the proposal and describes how proposals will be evaluated. Contact names, addresses, and relevant telephone and fax numbers are listed. In the opening vignette, Sally Arens has been recruited to head the proposal review team but was not part of the team that created the RFP.

Summary Statement of the Problem

The summary statement can be an abstract of the technical section, or it can be included as the first page of the technical section. It often takes the form of a letter introducing the organization that issued the RFP and explaining its needs. As an example, let's use a problem statement from MindWriter, that deals with a customer satisfaction issue:

The call center in MindWriter's new CompleteCare facility currently operates without an automated recording and monitoring process. We have 10 dedicated reviewers sustaining this function. In addition, our call center supervisors spend six hours per month monitoring the quality of our reviewers. The reviewers rely on a manually generated schedule to select representatives and times for monitoring. When representatives are on active calls during the monitoring schedule, it is problematic to trace them. However, reviewers have access to the online scheduling software. Thus, they can view the account screens selected by the representative using our own software tool.

The quality of our customer service and the resulting satisfaction are of vital importance to MindWriter. We need to significantly increase the efficiency of our customer call monitoring through automation and a recorded database for agent review. We also need to discover the extent to which these technical changes to our process improve customer perceptions of service.

Technical Section

Technical information needed by the supplier to create the proposal is presented in this section. It begins by describing the problem(s) to be addressed and the technical details of each requirement. It loosely describes the services to be performed and the equipment, software, and documentation required. This section should be neither too specific nor too general to allow the suppliers reasonable flexibility and creativity in research

design but should also restrict them in meeting the needs of the sponsor. Typically, the following would be included:

- Problem statement.
- Description of functional requirements (what actual phases will be included in the research).
- Identification of constraints (what might limit research design creativity).

The sponsor's functional requirements assist suppliers in testing the comprehensiveness of their proposed solutions. Often, sponsors ask the proposed researcher to answer questions. In MindWriter's RFP, the writers have considered a wide range of functional issues:

Recording
- What proportion of calls does your proposed solution record?
- To what degree is your proposed system scalable?
- Can the representatives detect that they are being recorded?

System Integration and Retrieval
- Can you integrate multiple sources of information to the recording platform?
- Does your proposed solution offer redundancy in the event of a failure?
- Does your proposed solution store conversations along with their corresponding call-tag data in a single database?
- Can the recorded calls be replayed immediately?
- How does your proposed solution search calls for replay?
- What volume of long-term archived storage is available?

Evaluation and Analysis
- Can call data be displayed visually for analysis?
- How are calls selected for evaluation/scoring?
- Can values be assigned to each question and "rep performance" or "rep skill" category?
- Does your solution offer data mining capabilities?
- In what ways does your solution support managerial analysis of operations and business performance?
- How does your solution support the CompleteCare customer satisfaction philosophy at MindWriter?
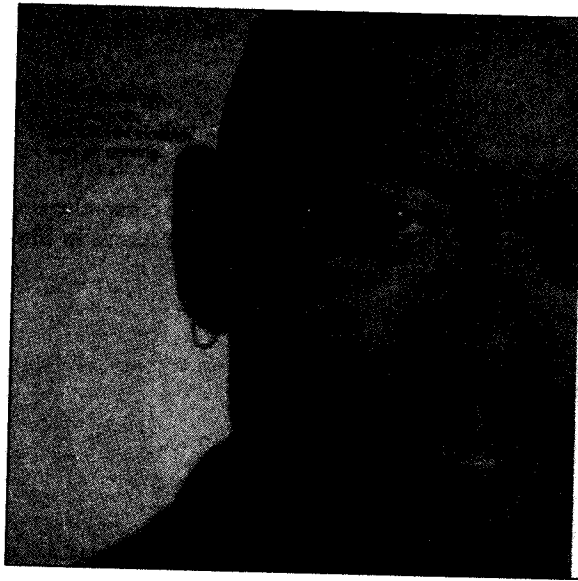
Strategies for dealing with constraints include specifying what is anticipated. If the sponsor requires that the supplier offer creative solutions, the RFP describes the constraints within which solutions must work. A client of Jason Henry's provides an example, below, of sampling constraints in its RFP. The client is interested in using the benchmarks from previous studies and thus needs consistency in its current project.

- The sample sizes and breakdowns for various markets are:
  - Europe: 500 completed surveys.
  - Asia: 500 completed surveys.
  - United States: 300 completed surveys.
    - Regional differences.
    - Differentiation by segment and brand.
- Proposed sample proportion for distributors/resellers:
  - Resellers = 90–95% of respondents.
  - Distributors = 5–10%.

Building technical quality control into the RFP will subsequently strengthen the project. When the technical section contains thorough specifications and clear criteria for evaluating proposals, even low bidders must provide the requisite quality for consideration. In addition, when the RFP requires that the supplier provide technical reports during the project, project management is less costly for the firm. When a thorough understanding of the constraints is unknown, sponsors may schedule a planning meeting with possible researchers prior to their RFP response to clarify and examine options.

Luth Research is a full-service research provider, doing online focus groups as well as mail and phone surveys with extensive CATI facilities. A full-service provider is able to adapt its methodologies to the RFP at hand. When an RFP specifies a range of research services, a full-service provider may be able to fulfill a firm's requirements. In this ad, Luth showcases its *SurveySavvy* online panel, a service that helps clients involve specific participants that are necessary for a research project—even IT professionals who wear earrings.
www.luthresearch.com

Management Section

Each project requires some level of management. The sponsor's timing on schedules, plans, and reports is included in this section. The management section also lists the requirements for implementation schedules, training and reporting schedules, quality control, and other documentation. If specific supplier qualifications are needed, they should be shown here. References from the supplier's customers may also be requested. Increasingly, detailed documentation Web sites are used to provide additional information to those invited to submit proposals. These Web site URLs are documented in the RFP.

Contracts and License Section

The types of contracts the supplier is expected to sign and any nondisclosure agreements are included in this section. The supplier of research is often privy to a firm's strategies and tactics long before such competitive moves are undertaken. The supplier is also aware of challenges facing the firm and actions being considered to address those challenges. Nondisclosure of such information is therefore critical. It is in this context that the sponsor should discuss the safeguarding of intellectual property and the use of copyrights. Terms of payment and required benchmarks are also set forth here. Typically, a sample purchase contract would be included. Since the RFP document is usually a part of the final contract, it should be worded precisely to avoid problems of interpretation. If a task is not described in the RFP or during contract negotiations, the firm may not be able to require that the supplier complete it.

Pricing Section

To cost the proposal, all information needed by the supplier must be provided. By using a format that lists all anticipated activities, proposals with different approaches can be compared on cost. The following list shows examples of items that could be included:

- Services
- Data collection
- Data analysis
- Meetings with client
- Travel
- Respondent survey incentives
- Mail and telephone costs
- Design meetings
- Internet design and activation
- Facilities and equipment
- Extensions to work agreements
- Pilot tests

- Report preparations
- Computer models
- Project management
- Questionnaire and reproduction costs
- Manpower costs
- Deliverables:
  - Training
  - Brochures/literature
  - Videotapes
  - Reports
  - Promotionals

ethic**?**ssues

Ethical standards are integral to designing the pricing section. For example, a sponsor would not send a vendor an RFP to (1) help the sponsor plan its project budget, (2) estimate costs and ideas for a project the sponsor intends to execute in-house, or (3) create the impression of a competitive bid when the sponsor intends to sole-source the project.

> **We discuss the sponsor's ethical requirements in Chapter 5.**

Format

The format requirements for RFPs differ widely. The sections above reflect informational requirements rather than an RFP outline. A typical format might contain the following elements:

- Instructions to bidders
- Background
  - Overview or profile of the buyer's company
  - Project overview
  - Project requirements
- Vendor information
  - Company profile
  - History and description
  - Legal summary (active lawsuits or pending litigation)
  - Partnerships and alliances
  - References
- Proposed solution
- Services and support
- Cost proposal
  - Services pricing
  - Maintenance pricing
  - Contractual terms and conditions

As each research project is often unique, industry practices suggest that careful consideration should be used when qualifying potential research suppliers. Exhibit 4-2 offers a checklist developed from recommendations of industry practitioners and associations.

To recap, the manager, research department, or research sponsor should achieve several objectives in the RFP process: qualify potential vendors, write and distribute the RFP eight to ten weeks before the requested date, be available to answer supplier questions or hold prebidding conferences, evaluate submissions on known criteria, award contracts and start the project on published dates, and provide a critique to all suppliers who submitted proposals. The latter will help unsuccessful bidders become competitive in the future and maintain your goodwill for future projects.

> **Exhibit 4-2** Checklist for Qualifying Research Suppliers

❑ Research experience and industry status including appropriate accreditation
   ❑ Scope/type of research performed (quantitative vs. qualitative vs. both; advertising creative development, product testing, site location, etc.)
      ❑ Knowledge of specific research methodologies (e.g. research with children, visual ethnography, conjoint analysis)
   ❑ Types of clients
      ❑ Knowledge of specific markets
         ❑ International links or associations, if needed
   ❑ No conflicts of interest
❑ Code of ethical performance

❑ Skill and experience to manage the project
❑ Skill and experience to conduct desired research
   ❑ Specialist skills, when needed (psychologists, anthropologists, Internet technologists, etc.)
❑ Understanding of the various business functions

❑ Compatible project management system
❑ Compatible contractual arrangements, including billing
❑ Compatible client complaint and satisfaction handling procedures
❑ Desired quality assurance procedures
❑ Desired organization, procedures, and appropriate facilities
   ❑ Data collection (interviewers, interviewer training, CATI, CAPI, proprietary methodologies, etc.)
      ❑ Field operations
      ❑ Lab settings (taste testing, product testing, etc.)
   ❑ Data handling (internal or subcontracted, software used, etc.)
   ❑ Developing/drawing samples
❑ Compatible standard reporting procedures and guidelines
❑ Desired results presentation practices

Source: This checklist was developed from recommendations of industry practitioners and material on the ESOMAR Web site: http://www.esomar.nl/guidelines/CommissioningResearch.htm.

A well-written RFP allows an organization to request high-quality proposals for dealing with complex problems. When not done properly, the RFP process will take longer, cost more, and not provide a complete long-term solution. Therefore, when a manager decides to put a research project to bid using an RFP, it is essential that time and effort be invested at the beginning.

Now, let's say as a researcher you have received an RFP. What is next? First, you decide if creating a proposal is worth your investment of time and effort. Even if you are not responding to the RFP, becoming familiar with proposals can be helpful. As a researcher, you might consider producing all of your projects using a structure or template similar to the proposal format.

> The Research Proposal

A **proposal** is an individual's or company's offer to produce a product or render a service to a potential buyer or sponsor. The purpose of the research proposal is:

1. To present the management question to be researched and relate its importance.

2. To discuss the research efforts of others who have worked on related management questions.

3. To suggest the data necessary for solving the management question and how the data will be gathered, treated, and interpreted.

In addition, a research proposal must present the researcher's plan, services, and credentials in the best possible way to encourage the proposal's selection over competitors. In contract research, the survival of companies depends on their ability to develop winning proposals.[1] A proposal is also known as a work plan, prospectus, outline, statement of intent, or draft plan.[2] The proposal tells us what, why, how, where, and to whom the research will be done. It must also show the benefit of doing the research.[3]

The research proposal is essentially a road map, showing clearly the location from which a journey begins, the destination to be reached, and the method of getting there. Well-prepared proposals include potential problems that may be encountered along the way and methods for avoiding or working around them, much as a road map indicates alternate routes for a detour.

> Sponsor Uses

All research has a sponsor in one form or another. The student researcher is responsible to the class instructor. In a corporate setting, whether the research is being done in-house by a research department or under contract to an external research firm, management sponsors the research. University-, government-, or corporate-sponsored (grant) research uses grant committees to evaluate the work.

A research proposal allows the sponsor to assess the sincerity of the researcher's purpose, the clarity of his or her design, the extent of his or her relevant background material, and the researcher's fitness for undertaking the project. Depending on the type of research and the sponsor, various aspects of a standard proposal design are emphasized. The proposal displays the researcher's discipline, organization, and logic. It thus allows the research sponsor to assess both the researcher and the proposed design, to compare them against competing proposals on current organizational, scholastic, or scientific needs, and to make the best selection for the project.

A poorly planned, poorly written, or poorly organized proposal damages the researcher's reputation more than the decision not to submit a proposal.

Comparison of the research project results with the proposal is also the first step in the process of evaluating the overall research. By comparing the final product with the stated objectives, it is easy for the sponsor to decide if the research goal—a better decision on the management question—has been achieved.

Another benefit of the proposal is the discipline it brings to the sponsor. Many managers, requesting research from an in-house, departmental research project, do not adequately define the problem they are addressing. The research proposal acts as a catalyst for discussion between the person conducting the research and the manager. The researcher translates the management question, as described by the manager, into the research question and outlines the objectives of the study. Upon review, the manager may discover that the interpretation of the problem does not encompass all the original symptoms. The proposal, then, serves as the basis for additional discussion between the manager and the researcher until all aspects of the management question are understood. Parts of the management question may not be researchable, or at least not subject to

> Exhibit 4-3 Proposal Development

```
┌─────────────────────┐
│ Manager describes   │
│ problem and states  │                    They
│ the management      │                   disagree
│ question.           │
└─────────┬───────────┘
          │
          ▼
┌─────────────────┐     ┌────────────┐     ┌──────────────────────┐
│ Researcher      │     │ Researcher │     │ Manager and          │
│ translates      │--→  │ explores   │←────│ researcher           │
│ management      │     │ alternative│     │ discuss the proposal │
│ question into   │     │ approaches.│     │ and clarify and      │
│ research        │     └─────┬──────┘     │ redefine the         │
│ question.       │          │            │ problem and          │
└────────┬────────┘          │            │ objectives of the    │
         │                   ▼            │ project.             │
         │            ┌────────────┐      └─────────┬────────────┘
         │            │ Researcher │  They           ▲
         │            │ refines    │  agree    Not   │
         │            │ research   │         accepted│
         │            │ question.  │                 │
         │            └─────┬──────┘        Accepted │
         │                  │                        │
         ▼                  ▼                        │
┌─────────────────┐  ┌────────────┐  ┌──────────┐  ┌──────────┐  ┌────────┐
│ Researcher      │  │ Researcher │  │ Manager  │  │ Manager  │  │ Study  │
│ elaborates      │→ │ prepares   │→ │ reviews  │→ │ approves │→ │ begins.│
│ research        │  │ proposal.  │  │ proposal.│  │ project. │  │        │
│ question into   │  └────────────┘  └──────────┘  └──────────┘  └────────┘
│ investigative   │
│ question(s).    │
└─────────────────┘
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> See Appendix 4a for a sample RFP.

empirical study. An alternate design, such as a qualitative or policy analysis study, may need to be proposed. Upon completion of the discussions, the sponsor and researcher should agree on a carefully worded research question. As Exhibit 4-3 reveals, proposal development can work in an iterative fashion until the sponsor authorizes the research to proceed.
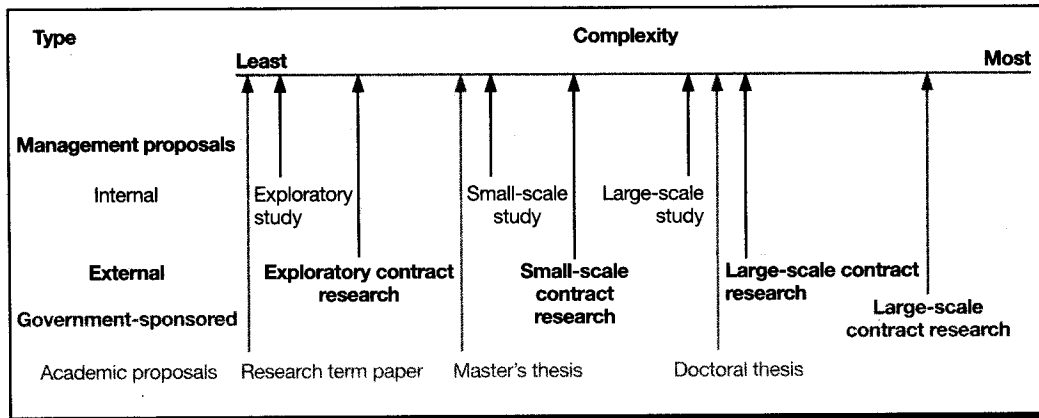
> Researcher Benefits

A proposal is even more beneficial for the researcher than for the sponsor. The process of writing a proposal encourages the researcher to plan and review the project's logical steps. Related management and research literature should be examined in developing the proposal. This review prompts the researcher to assess previous approaches to similar management questions and revise the research plan accordingly. Additionally, developing the proposal offers the opportunity to spot flaws in the logic, errors in assumptions, or even management questions that are not adequately addressed by the objectives and design.

The in-house or contract researcher uses the approved research proposal as a guide throughout the investigation. Progress can be monitored and milestones noted. At completion, the proposal provides an outline for the final research report.[4]

Like any other business, a contract researcher makes his or her profit from correctly estimating costs and pricing the research project appropriately. A thorough proposal process is likely to reveal all possible cost-related activities, thus making cost estimation more accurate. As many of these cost-associated activities are related to time, a proposal benefits a researcher by forcing a time estimate for the project. These time and cost estimates encourage researchers to plan the project so that work progresses steadily toward the deadline. Since many people are inclined to procrastinate, having a schedule helps them work methodically toward the completion of the project.

Researchers often develop Gantt charts of the logical research steps, similar to the one in Exhibit 3-6 in Chapter 3, as working documents when developing responses to RFPs.

> **Exhibit 4-4** Proposal Complexity

Type	Complexity Least → Most				
Management proposals					
Internal	Exploratory study		Small-scale study	Large-scale study	
External	**Exploratory contract research**		**Small-scale contract research**	**Large-scale contract research**	
Government-sponsored					**Large-scale contract research**
Academic proposals	Research term paper		Master's thesis	Doctoral thesis	

> Types of Research Proposals

In general, research proposals can be divided between those generated for internal and those generated for external audiences. An internal proposal is done by staff specialists or by the research department within the firm. External proposals sponsored by university grant committees, government agencies, government contractors, not-for-profit organizations, or corporations can be further classified as either solicited or unsolicited. With few exceptions, the larger the project, the more complex the proposal. In public sector work, the complexity is generally greater than in a comparable private sector proposal.

There are three general levels of complexity: exploratory studies, small-scale studies, and large-scale studies. These are noted in Exhibit 4-4. The exploratory study generates the most simple research proposal. More complex and common in business is the small-scale study—either an internal study or an external contract research project. The large-scale professional study, worth up to several million dollars, is the most complex proposal we deal with here. Government agency large-scale project RFPs usually generate proposals running several hundred pages and use the same modules that we discuss next. However, each agency has unique requirements, making generalized coverage beyond the scope of this text.

Exhibit 4-5 displays a set of modules for building a proposal. Their order can represent an outline for a proposal. Based on the type of proposal you are writing, you may choose the appropriate modules for inclusion. This is a general guide, and sometimes more or less than what is shown here is appropriate for a specific purpose. For example, most small-scale studies do not require a glossary of terms. Terms are defined within the body of the proposal. However, if the proposal deals with an esoteric subject that is not familiar to management, it is appropriate to add a glossary. For a solicited study, the RFP will indicate both the content headings and their order.

Take some time to review Exhibit 4-5. Compare the proposal modules suggested for each type of study. This will increase your understanding of proposals.

Internal Proposals

Internal proposals are more succinct than external ones. At the least complex end of the continuum in Exhibit 4-4, a one- to three-page memo from the researcher to management outlining the problem statement, study objectives, research design, and schedule is enough to start an exploratory study. Privately and publicly held businesses are concerned with how to solve a particular problem, make a decision, or improve an aspect of their business. Seldom do businesses begin research studies for other reasons. Regardless of the intended

> **Exhibit 4-5**   Modules to Include in Proposals: A Comparison of Management-Oriented Proposals and Student Proposals

Proposal Types / Proposal Modules	Management						Govern-ment	Student		
	Internal			External						
	Explor-atory Study	Small-Scale Study	Large-Scale Study	Explor-atory Contract	Small-Scale Contract	Large-Scale Contract	Large-Scale Contract	Term Paper	Master's Thesis	Doctoral Thesis
Executive summary		✔	✔	✔	✔	✔	✔			
Problem statement	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Research objectives	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Literature review			✔			✔	✔		✔	✔
Importance/ benefits of study			✔	✔	✔	✔	✔			✔
Research design	✔	✔	✔	✔	✔	✔	✔		✔	✔
Data analysis						✔	✔			✔
Nature and form of results		✔	✔		✔	✔	✔		✔	✔
Qualification of researchers				✔	✔	✔	✔			
Budget		✔	✔	✔	✔	✔	✔			
Schedule	✔	✔	✔	✔	✔	✔	✔			✔
Facilities and special resources			✔	✔	✔	✔	✔		✔	✔
Project management			✔			✔	✔			
Bibliography			✔			✔	✔	✔	✔	✔
Appendices/ glossary of terms			✔			✔	✔		✔	✔
Measurement instrument			✔			✔	✔			✔

audience, in the small-scale proposal, the literature review and bibliography are consequently not stressed and can often be stated briefly in the research design. Since management insists on brevity, an executive summary is mandatory for all but the most simple of proposals (projects that can be proposed in a two-page memo do not need an executive summary). Schedules and budgets are necessary for funds to be committed. For the smaller-scale projects, descriptions are not required for facilities and special resources, nor is there a need for a glossary. Since managers familiar with the problem sponsor small projects, the associated jargon, require-ments, and definitions should be included directly in the text. Also, the measuring instrument and project management modules are not required. Managers will typically leave this detail for researchers.

>snapshot

USTA: Come Out Swinging

Some of you may be avid tennis players but statistically, odds are you aren't. The United States Tennis Association plans to change that, and to do so, they launched one of the more aggressive sports research programs in history.

Think large sample, very large sample, and you still might not envision the 25,503 households in the United States, British Columbia, Puerto Rico, and the U.S. Virgin Islands that were interviewed by The Taylor Research and Consulting Group, Inc., for the 2003 Tennis Participation Study. This telephone survey, large enough to provide statistically relevant data for all 17 sections of the USTA's membership, was followed by the use of a proprietary qualitative study, called Street Spies, by advertising and marketing agency Vigilante. The latter phase of the research was designed to help the USTA determine the appropriate message to get tennis swinging again as a sport.

"Tennis has everything a sport should have," shared marketing specialist Scott Staniar, whose job it is to reposition and relaunch tennis. "You can play it no matter your age; it's great for keeping you healthy and fit; it's a great way to meet people; and it's fun." But graphically tennis participation can be represented by a flat line. Tennis is losing as many players as it is gaining, often due to the time constraints of dual-income baby boomers. In order for tennis to grow, it needs to aggressively market itself as relevant to an increasingly culturally diverse youth population facing a myriad of recreational choices, not all of them physical—such as computer games and the Internet. "Even though players like Serena and Venus Williams have helped attract African-Americans and Hispanic Americans in greater numbers," says Kurt Kamperman, USTA chief executive, "tennis is still perceived by many as a country club sport." The Come Out Swinging campaign is designed to reinvigorate the sport with the spirit and vitality that is the game. The research led Vigilante

to use celebrities who appeal to a wide range of ethnic audience segments. Each has his or her own gritty, urban, go-all-out competitive image that matches the sport. The campaign directs those who are interested to visit one of more than 3,500 Tennis Welcome Centers or tenniswelcomecenter.com. Tracking that behavior is just one way USTA will measure success. Can you envision the external proposal for this research?

www.usta.com; www.tenniswelcomecenter.com; www.vigilantenyc.com; www.thetaylorgroup.com

To learn more about this research, read the case "USTA: Come Out Swinging" on your text CD.

External Proposals

An external proposal is either solicited or unsolicited. A **solicited proposal** is often in response to an RFP. The proposal is likely competing against several others for a contract or grant. An **unsolicited proposal** represents a suggestion by a contract researcher for research that might be done. For an example, a consulting firm might propose a research project to a client that has retained the consultancy for other purposes. As another example, a research firm might propose an omnibus study to a trade association to address problems arising from a change in the cultural or political-legal environments. The unsolicited proposal has the advantage of not competing against others but the disadvantage of having to speculate on the ramifications of a management dilemma facing the firm's management. In addition to being an outsider assessing an internal problem, the writer of an unsolicited proposal must decide to whom the document should be sent. Such

proposals are often time-sensitive, so the window of opportunity might close before a redirected proposal finds its appropriate recipient.

The most important sections of the external proposal are the objectives, design, qualifications, schedule, and budget. In contract research, the results and objectives sections are the standards against which the completed project is measured. The executive summary of an external proposal may be included within the letter of transmittal. As the complexity of the project increases, more information is required about project management and the facilities and special resources. As we move toward government-sponsored research, particular attention must be paid to each specification in the RFP. To ignore or not meet any specification is to automatically disqualify your proposal as "nonresponsive."[5]

We offer a sample of an external proposal on your text CD.

> Structuring the Research Proposal

Consider again Exhibit 4-5. Using this reference, you can put together a set of modules that tailors your proposal to the intended audience. Each of the following modules is flexible, so its content and length may be adapted to specific needs.

< You might find it valuable to revisit the management-research question hierarchy and the research process model in Chapter 3 prior to reading this section.

Executive Summary

The **executive summary** allows a busy manager or sponsor to understand quickly the thrust of the proposal. It is essentially an informative abstract, giving executives the chance to grasp the essentials of the proposal without having to read the details.[6] The goal of the summary is to secure a positive evaluation by the executive who will pass the proposal on to the staff for a full evaluation. As such, the executive summary should include brief statements of the management dilemma and management question, the research objectives/research question(s), and the benefits of your approach. If the proposal is unsolicited, a brief description of your qualifications is also appropriate.

Problem Statement

This section needs to convince the sponsor to continue reading the proposal. You should capture the reader's attention by stating the management dilemma, its background, its consequences, and the resulting management question. The importance of answering the management question should be emphasized here if a separate module on the importance/benefits of study is not included later in the proposal. In addition, this section should include any restrictions or areas of the management question that will not be addressed.

Problem statements too broadly defined cannot be addressed adequately in one study. It is important that the management question distinguish the primary problem from related problems clearly. Be sure your problem statement is clear without the use of idioms or clichés. After reading this section, the potential sponsor should know the management dilemma and the question, its significance, and why something should be done to change the status quo.[7]

Research Objectives

This module addresses the purpose of the investigation. It is here that you lay out exactly what is being planned by the proposed research. In a descriptive study, the objectives can be stated as the research question.

Recall that the research question can be further broken down into investigative questions. If the proposal is for a causal study, then the objectives can be restated as a hypothesis.

The objectives module flows naturally from the problem statement, giving the sponsor specific, concrete, and achievable goals. It is best to list the objectives either in order of importance or in general terms first, moving to specific terms (i.e., research question followed by underlying investigative questions). The research question(s) (or hypotheses, if appropriate) should be separated from the flow of the text for quick identification.

The research objectives section is the basis for judging the remainder of the proposal and, ultimately, the final report. Verify the consistency of the proposal by checking to see that each objective is discussed in the research design, data analysis, and results sections.

Literature Review

The **literature review** section examines recent (or historically significant) research studies, company data, or industry reports that act as a basis for the proposed study. Begin your discussion of the related literature and relevant secondary data from a comprehensive perspective, moving to more specific studies that are associated with your problem. If the problem has a historical background, begin with the earliest references.

Avoid the extraneous details of the literature; do a brief review of the information, not a comprehensive report. Always refer to the original source. If you find something of interest in a quotation, find the original publication and ensure you understand it. In this way, you will avoid any errors of interpretation or transcription. Emphasize the important results and conclusions of other studies, the relevant data and trends from previous research, and particular methods or designs that could be duplicated or should be avoided. Discuss how the literature applies to the study you are proposing; show the weaknesses or faults in the design, discussing how you would avoid similar problems. If your proposal deals solely with secondary data, discuss the relevance of the data and the bias or lack of bias inherent in it.

A literature review might reveal that the sponsor can answer the management question with a secondary data search rather than the collection of primary data. We discuss this more fully in Chapter 7.

The literature review may also explain the need for the proposed work to appraise the shortcomings and/or informational gaps in secondary data sources. This analysis may go beyond scrutinizing the availability or conclusions of past studies and their data, to examining the accuracy of secondary sources, the credibility of these sources, and the appropriateness of earlier studies.

Close the literature review section by summarizing the important aspects of the literature and interpreting them in terms of your problem. Refine the problem as necessary in light of your findings.

Importance/Benefits of the Study

In this section you describe explicit benefits that will accrue from your study. The importance of "doing the study now" should be emphasized. Usually, this section is not more than a few paragraphs. If you find it difficult to write, then you have probably not adequately clarified the management dilemma. Return to the analysis of the problem and ensure, through additional discussions with your sponsor or your research team or by a reexamination of the literature, that you have captured the essence of the problem.

This section also requires you to understand what is most troubling to your sponsor. If it is a potential union activity, you cannot promise that an employee survey will prevent unionization. You can, however, show the importance of this information and its implications. This benefit may allow management to respond to employee concerns and forge a linkage between those concerns and unionization.

The importance/benefits section is particularly important to the unsolicited external proposal. You must convince the sponsoring organization that your plan will meet its needs.

Research Design

Up to now, you have told the sponsor what the problem is, what your study goals are, and why it is important for you to do the study. The proposal has presented the study's value and benefits. The design module describes what you are going to do in technical terms. This section should include as many subsections as needed to show the phases of the project. Provide information on your proposed design for tasks such as sample selection and size, data collection method, instrumentation, procedures, and ethical requirements. When more than one way exists to approach the design, discuss the methods you have rejected and why your selected approach is superior.

Data Analysis

A brief section on the methods used for analyzing the data is appropriate for large-scale contract research projects and doctoral theses. With smaller projects, the proposed data analysis would be included within the research design section. It is in this section that you describe your proposed handling of the data and the theoretical basis for using the selected techniques. The object of this section is to assure the sponsor you are following correct assumptions and using theoretically sound data analysis procedures.

When there is no statistical or analytical expertise in the company, sponsors are more likely to hire professional help to interpret the soundness of this section.
This module is often an arduous section to write. You can make it easier to write, read, and understand your data analysis by using sample charts and tables featuring "dummy" data.

The data analysis section is so important to evaluating contract research proposals that the researcher should contact an expert to review the latest techniques available for use in the particular research study and compare these to the proposed techniques.

Nature and Form of Results

Upon finishing this section, the sponsor should be able to go back to the statement of the management question and research objectives and discover that each goal of the study has been covered. One should also specify the types of data to be obtained and the interpretations that will be made in the analysis. If the data are to be turned over to the sponsor for proprietary reasons, make sure this is reflected. Alternatively, if the report will go to more than one sponsor, that should be noted.

This section also contains the contractual statement telling the sponsor exactly what types of information will be received. Statistical conclusions, applied findings, recommendations, action plans, models, strategic plans, and so forth, are examples of the forms of results.

Look for these elements in a proposal when hiring a contract researcher.
Qualifications of Researchers

This section should begin with the principal investigator and then provide similar information on all individuals involved with the project. Two elements are critical:

1. Professional research competence (relevant research experience, the highest academic degree held, and memberships in business and technical societies).
2. Relevant management experience.[8]

With so many individuals, research specialty firms, and general consultancies providing research services, the sponsor needs assurance that the researcher is professionally competent. Past research experience is the best barometer of competence, followed by the highest academic degree earned. To document relevant research experience, the researcher provides concise descriptions of similar projects. Highest degree usually follows

>snapshot

Bissell: Small, Yet Powerful

When CEO Mark Bissell returned from a European business trip with a prototype appliance, a steam cleaner named Steam Gun, he challenged the marketing research director to determine the marketing for the new product within a one-month time frame. With a full-scale research project out of the question, the research director chose a small-scale ethnography study using real-world observations of people's interactions with the product. He approached a local Parent Teacher Association, a ready source of female respondents, which distributed the Steam Gun to 20 volunteers. He followed up the test with in-home visits. Within 30 days, the research director knew the name must be changed and that those in the "serious cleaner" target segment would need to

be convinced that steam cleaning with chemical-free water would be effective. He delivered a marketing program in the requisite time for the newly named BISSELL® Steam 'n Clean®. The primary budget item in the research was a $1,500 donation to the PTA, proving that research budgets for successful decision making come in all sizes.
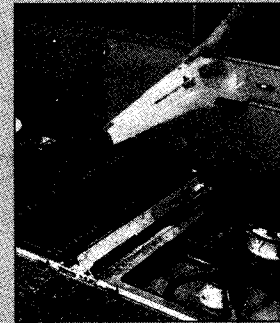
www.bissell.com

the person's name (e.g., S. Researcher, PhD in Statistics). Society memberships provide some evidence that the researcher is cognizant of the latest methodologies and techniques. These follow the relevant research experience as a string or bulleted list, with organization name followed by term of membership and any relevant leadership positions.

Researchers are increasingly in the business of providing advice, not just research services. And businesses are looking for quality advice. Comparatively, the researcher who demonstrates relevant management or industry experience will be more likely to receive a favorable nod to his or her proposal. The format of this information should follow that used for relevant research experience. The entire curriculum vitae of each researcher need not be included unless required by the RFP. However, researchers often place complete vitae information in an appendix for review by interested sponsors.

Research companies often subcontract specific research activities to firms or individuals that specialize or offer specific resources or facilities. This is especially true for studies involving qualitative research techniques such as in-depth personal interviews and focus groups. Usually brief profiles of these companies are provided in this section only if their inclusion enhances the credibility of the researcher. Otherwise, profiles of such subcontractors are included in an appendix of the final report, rather than in the proposal.

Budget

The budget should be presented in the form the sponsor requests. For example, some organizations require secretarial assistance to be individually budgeted, whereas others insist it be included in the research director's fees or the overhead of the operation. In addition, limitations on travel, per diem rates, and capital equipment purchases can change the way in which you prepare a budget.

Typically, the budget should be no more than one to two pages. Exhibit 4-6 shows one format that can be used for small contract research projects. Additional information, backup details, quotes from vendors, and hourly time and payment calculations should be put into an appendix if required or kept in the researcher's file for future reference.

The budget statement in an internal research proposal is based on employee and overhead costs. The budget presented by an external research organization is not just the wages or salaries of its employees but the person-hour price that the contracting firm charges.

> Exhibit 4-6 Sample Proposal Budget for a Research Program

Budget Items	Rate	Total Days	Charge
A. Salaries			
1. Research director, Jason Henry	$200/hr	20 hours	$ 4,000
2. Associate	100/hr	10 hours	1,000
3. Research assistants (2)	20/hr	300 hours	6,000
4. Secretarial (1)	12/hr	100 hours	1,200
Subtotal			$12,200
B. Other costs			
5. Employee services and benefits			
6. Travel			$ 2,500
7. Office supplies			100
8. Telephone			800
9. Rent			
10. Other equipment			
11. Publication and storage costs			100
Subtotal			$ 3,500
C. Total of direct costs			$15,700
D. Overhead support			5,480
E. Total funding requested			$21,180

The detail the researcher presents may vary depending on both the sponsors' requirements and the contracting research company's policy. Some research companies, particularly in database and computerized analysis areas, quote on the basis of "man-machine hours" involved in a project. The man-machine hour is the hourly fee charged for a person with computer hardware and organizational resources. Here, rather than separating the "other costs" of Exhibit 4-6, these costs are embedded in a combined rate. One reason why external research agencies avoid giving detailed budgets is the possibility that disclosures of their costing practices will make their calculations public knowledge, reducing their negotiating flexibility. Since budget statements embody a work strategy depicted in financial terms that could be used by the recipient of the proposal to develop a replicate research plan, vendors are often doubly careful.

The budget section of an external research contractor's proposal states the total fee payable for the assignment. When it is accompanied by a proposed schedule of payment, this is frequently detailed in a purchase order. Like other large-ticket-price services delivered over time in stages (e.g., building a home), payments can be paid at stages of completion. Sometimes a retainer is paid at the beginning of the contract, then a percentage at an intermediate stage, and the balance on completion of the project.

It is extremely important that you retain all information you use to generate your budget. If you use quotes from external contractors, get the quotation in writing for your file. If you estimate time for interviews, keep explicit notes on how you made the estimate. When the time comes to do the work, you should know exactly how much money is budgeted for each particular task.[9]

Some costs are more elusive than others. Do not forget to build the cost of proposal writing into your fee. Publication and delivery of final reports can be a last-minute expense that may be easily overlooked in preliminary budgets.

Schedule

Your schedule should include the major phases of the project, their timetables, and the milestones that signify completion of a phase. For example, major phases may be (1) exploratory interviews, (2) final research