>part I

Introduction to Business Research

>chapter 1

Research in Business

>learningobjectives

After reading this chapter, you should understand . . .

1 What business research is and how it differs from decision support systems and business intelligence systems.

2 The trends affecting business research and the emerging hierarchy of research-based decision makers.

3 The different types of research studies used in business.

4 The distinction between good business research and that which falls short of professional quality.

5 The nature of the research process.

> **"Forward-thinking executives recognize that analytics may be the only true source of sustainable advantage since it empowers employees at all levels of an organization with information to help them make smarter decisions."**
>
> Wayne Eckerson,
> director of research, business applications and architecture group,
> TechTarget

>bringingresearchtolife

MindWriter

Myra Wines, director of consumer affairs for MindWriter, Inc., has been charged with the task of assessing MindWriter's CompleteCare program for servicing laptops. As a result, she sent several well-respected research firms a *request for proposal (RFP),* and she and her team are interviewing the last of those firms, Henry & Associates.

Newly promoted to her position, Wines has a TV journalism and government public relations background. She has been a MindWriter laptop owner since it came on the market decades earlier and has never personally experienced a problem. She wants a research supplier from whom she can learn, as well as one whom she can trust to do appropriate, high-quality research.

The last interviewee is Jason Henry, managing partners, Henry & Associates. H&A comes highly recommended by a professional colleague in a different industry. H&A has gained a reputation for merging traditional methodologies with some creative new approaches. Myra is interested in exploring the firm's methodology for customer satisfaction studies. As Wines approaches Henry in the waiting area, she extends her hand. "Welcome to MindWriter, Jason. I'm Myra Wines."

Henry rises, clasping Wines's hand in a firm hand shake. "Pleased to meet you, Myra."

Myra directs Jason's attention to a long corridor. "My team members are gathered in our conference room just down this hall. Let's join them, shall we?"

The interview process starts with Henry's short presentation on H&A and its capabilities. As the interview progresses, Henry shares some impressive results accomplished for former clients in noncompetitive industries. The last slide in his presentation features a top industry award H&A recently won for its customer satisfaction methodology.

During the Q&A that follows, Henry demonstrates current knowledge of the computer industry (he's obviously read numerous articles), confidence, and expertise, at a level that Wines initially had not expected given his relatively youthful appearance. At the conclusion of the interview, Wines is leaning toward hiring Henry & Associates, but wants to confer with her team.

The next day, Myra calls Jason at his office. "We've chosen Henry & Associates for the MindWriter CompleteCare assessment contract. Congratulations."

"Thank you," accepts Jason. "You've made the right choice."

"I've got two seats on a flight to Austin next Wednesday," shares Myra. "Can you join me? This will be my first look at the CompleteCare facility and my first face-to-face contact with its manager. I'd like someone along who can lay the groundwork for the project and understand the number crunching that's already been done."

The phone goes silent as Jason pauses to consult his BlackBerry. Two internal meetings will need to be shifted, but MindWriter is an important new client. "Yes, I can work that in as long as we're back by 7 p.m. I've got an evening commitment."

"Shouldn't be a problem," shares Myra. "Those seats I mentioned are on the corporate jet. We'll be back by 5:30. I'll meet you in the lobby at the county airstrip at 8 a.m. Wednesday then."

"A quick question," interrupts Jason before Myra can disconnect. "I need some idea of what's happening at this meeting."

"The meeting is to get you started. I'll introduce you to other people you will be working with and share more details about the concerns we have with the CompleteCare program," shares Myra.

"Fine. Can you arrange a third seat? It would be best to include Sara Arens from the very beginning. Her expertise will be crucial to the success of the assessment program."

"Yes, you mentioned her before. That shouldn't be a problem, but I'll check and get back to you."

"Then, Wednesday, Sara and I will plan on asking probing questions and listening to discover exactly what

facts management has gathered, what the managers are concerned about, what the problem is from their point of view, what the problem really is at various levels of abstraction . . ."

"Listening to people. Discussing. Looking at things from different viewpoints. Those are things I am also very good at," shares Myra.

"Good. After we hear them out, we come to what H&A is good at: Measurement. Scaling. Project design. Sampling. Finding elusive insights. May I assume we'll be collaborating on the report of results?"

"Absolutely. I'll call you back within 10 minutes about that third seat."

> Why Study Business Research?

One of the fundamental shifts in organizational management in the last 10 years has been the purposeful integration of the Internet by managers at every level of decision making. It might be as simple as tracking project management through SharePoint sites or email messages, or as complex as call routing to various worldwide service centers to ensure the shortest wait time or using GPS to route delivery trucks to eliminate left turns. This integration wasn't purposeful at the beginning of the last decade. Some have said that managers, many trained in lower-technology approaches, were actually dragged all but kicking and screaming into using the Internet as a workspace. But the speed of technology change, and newer generations who have been raised with smart phones and tablet computers, have forced organizations to be more purposeful in their technology integration. Researchers, as part of those organizations, have been pulled along—some reluctantly, but increasingly with enthusiasm.

By the Internet, we mean not just the company-generated content of the World Wide Web where information (and non-information) expands at an alarming rate, but also the rapid advance of user-generated content in social media. As data sources expand managers experience increasing pressure to make some sense of the massive amount of data generated. The Internet has also influenced the way in which we collaborate to define problems and opportunities, as well as our processes for information collection and analysis brought about by the technologies that make up the space known as the "cloud." It is in this space that research is experiencing fundamentally change, not just the tools of researchers but also the methodology of research. Thus we chose our cloud cover design to represent the theme of this edition: researchers are turning to new spaces to understand what motivates people and organizations, and understand processes and machines. They are using new tools to search for new business models, and to understand fundamental shifts in human behaviors, emotions, and attitudes.

You are about to begin your study of business research, both the process and the tools needed to reduce risk in managerial decision making. **Business research,** as we use it in this text, is a systematic inquiry that provides information to guide managerial decisions. More specifically, it is a process of planning, acquiring, analyzing, and disseminating relevant data, information, and insights to decision makers in ways that mobilize the organization to take appropriate actions that, in turn, maximize performance. A variety of different types of research projects are grouped under the label "business research," and we will explore them later in this chapter.

Assume for the moment that you are the manager of your favorite full-service restaurant. You are experiencing significant turnover in your waiter/waitress pool, and some long-time customers have commented that the friendly atmosphere, which has historically drawn them to your door, is changing. Where will you begin to try to solve this problem? Is this a problem for which research should be used?

Perhaps you are the head of your state's department of transportation, charged with determining which roads and bridges will be resurfaced or replaced in the next fiscal year. Usually you would look at the roads and bridges with the most traffic in combination with those representing the most economic disaster, if closed. However, the state's manager of public information has expressed concern about the potential for public outcry if work is once again directed to more affluent regions of the state. The manager suggests using research to assist in making your decision, because the decision is one with numerous operational, financial, and public relations ramifications. Should you authorize the recommended research?

>snapshot

Mercedes-Benz and TNS Infratest Develop Stars Insight

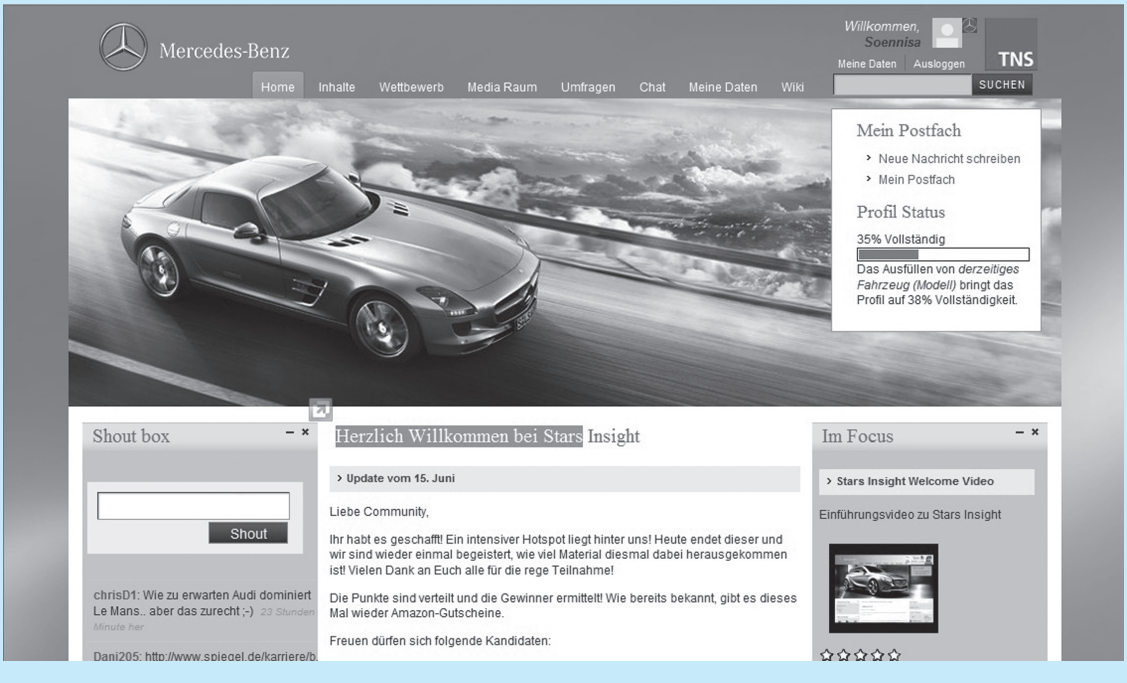
Stars Insight is an online research collaboration between Mercedes-Benz (MB) and TNS Infratest (TNS). "The original purpose of Stars Insight is capturing insights on needs, values, and attitudes of the important 20- to 45-year-old compact car driver," shared Christian Bauer, MP/MR customer insights for Daimler AG. The insights would be used to craft marketing initiatives.

TNS drew upon the strengths of Web 2.0 to deliver several key research assets: neutrality of moderation, researcher objectivity, data quality, and respondent anonymity while still allowing MB to narrow its focus to a particular target group of compact car owners. "Through a series of methods—including data from the recruiting screening process, statements from member's profile pages, surveys (both preplanned and instantaneous), online discussions, participant blog posts, and hotspot creative competitions between community members—TNS is able to provide data that helps MB in several ways. Data create a picture of what a modern brand should be, identify future distribution channels, craft authentic target group communication measures by testing advertising, develop the ideal configuration of the desired automobile, identify target group purchase intention criteria, identify the price expectations in the compact-car segment, and understand modern mobility concepts," explained Sandra Klaunzler, senior consultant automotive, TNS Infratest.

Interactivity is the hallmark of Stars Insight. For example, a "hotspot is a period of 2–3 weeks where the community members deal with one specific topic—for example, what are appropriate ways to target young customers who might not yet drive or want to buy a Mercedes," shared Kai Blask, associate director automotive for TNS Infratest. "Within the hotspot we assign the community members one specific task. For example, develop a communication strategy for the market launch of model XY. The respondents work on this either alone or in groups. All participants upload their concepts to the community on a specific date." Member uploads are usually high-quality Word, PowerPoint, or other digital files. "Afterwards, all other community members can evaluate the ideas and give 1 to 5 points for each idea, explained Blask. "The member's idea with the best evaluations wins a specific prize or extra points," as well as significant attention from Mercedes-Benz.

Overall MB has 1,700 members in Stars Insight. Sixty percent of the members own a compact car (not a Mercedes-Benz) and 40 percent own a Mercedes-Benz (no matter what model/segment). TNS won the 2011 Best Study award from the German Association for Marketing and Social Research for the development of the Mercedes-Benz process. It leveraged Acquia Commons social business software to build the award-winning Mercedes-Benz social community website.

www.mercedes-benz.com; www.stars-insight.com; www.tns-infratest.com; www.acquia.com



As the opening vignette and the early decision scenarios reveal, decision makers can be found in every type of organization: businesses, not-for-profit organizations, and public agencies. Regardless of where these decision makers are found or whether their resources are abundant or limited, they all rely on information to make more efficient and effective use of their budgets. Thus, in this book, we will take the broadest perspective of managing and its resulting application to business research.

At no other time in our history has so much attention been placed on measuring and enhancing **return on investment (ROI).** At its most simplistic, when we measure ROI, we calculate the financial return for all expenditures. Increasingly, organizational managers want to know what strategies and tactics capture the highest return. In the last dozen years, as technology has improved our measurement and tracking capabilities, managers have realized they need a better understanding of employees, stockholders, constituents, and customer behavior in order to influence the desired metrics. Business research plays an important role in this new measurement environment. Not only does it help managers choose better strategies and tactics, but business research expenditures are increasingly scrutinized for their contribution to ROI.

The research methods course recognizes that students preparing to manage any function—regardless of the setting—need training in a disciplined process for conducting an inquiry of a **management dilemma,** the problem or opportunity that requires a management decision. Several factors should stimulate your interest in studying research methods:[1]

1. *Information overload.* Although the Internet and its search engines present extensive amounts of information, the information's quality and credibility must be continuously evaluated. The ubiquitous access to information has brought about the development of knowledge communities and the need for organizations to leverage this knowledge universe for innovation—or risk merely drowning in data.
2. *Technological connectivity.* Individuals, public-sector organizations, and businesses are adapting to changes in work patterns (real-time and global), changes in the formation of relationships and communities, and the realization that geography is no longer a primary constraint. With the increased acceptance and use of mobile technology, *information snacking,* short online visits to get specific answers, has become the norm for information gatherers. This could have a profound influence on information collection designed to serve the needs of managers who want quick, smaller chunks of information, each of which is more decision relevant. While this influence is expected in quantitative techniques such as surveys, qualitative research is also increasingly embracing smaller iterative engagements with research subjects to drive research.
3. *Shifting global centers of economic activity and competition.* The rising economic power of Asia and demographic shifts within regions highlight the need for organizations to expand their knowledge of consumers, suppliers, talent pools, business models, and infrastructures with which they are less familiar. This shift increases the value of research designs that can accommodate different norms, values, technologies, and languages. Some in the research industry believe innovation in research methodology will come from the developing world, not the developed economies, as countries in the developing world are already embracing mobile/social research methodologies to a greater degree.
4. *Increasingly critical scrutiny of big business.* The availability of information has made it possible for all a firm's stakeholders to demand inclusion in company decision making, while at the same time elevating the level of societal suspicion. Interconnected global systems of suppliers, producers, and customers have made the emergence and viability of megabusinesses not only possible, but likely.
5. *More government intervention.* As public-sector activities increase, in order to provide some minimal or enhanced level of social services, governments are becoming increasingly aggressive in protecting their various constituencies by posing restrictions on the use of managerial and business research tools (e.g., Do-Not-Call List, Spyware Act).
6. *Battle for analytical talent.* Managers face progressively complex decisions, applying mathematical models to extract meaningful knowledge from volumes of data and using highly sophisticated software to run their organizations. The shift to knowledge-intensive industries puts greater demand

on a scarcity of well-trained talent with advanced analytical skills. The integration of global labor markets, with its infusion of new talent sources, is only a partial answer. Many believe the value of research may no longer be in collecting data, but rather in focusing on context, implications, and outcomes. Data collection and even some major elements of analysis may become the future domain of technologists and data scientists. Researchers will be forced to offer new value based on strategic consulting principles, as data collection becomes more of a commodity.

7. *Greater computing power and speed.*
   - *Lower-cost data collection.* Computers and telecommunications lowered the costs of data collection, drastically changing knowledge about consumers both at store and household levels; employees at the position, team, and department levels; suppliers and distributors at the transaction, division, and company levels; and equipment at the part, process, and production-run levels.
   - *Better visualization tools.* High-speed downloads of images allow us to help people visualize complex concepts; this enriches measurement capabilities.
   - *Powerful computations.* Sophisticated techniques of quantitative analysis are emerging to take advantage of increasingly powerful computing capabilities.
   - *More integration of data.* Computer advances permit business to create and manage large electronic storehouses of data that cross functional boundaries.
   - *Real-time access to knowledge.* Today's computers and software offer the power to collect and analyze data and customize reporting in real time for much quicker decision making.
8. *New perspectives on established research methodologies.* Businesses are demonstrating a palpable hunger for breakthrough insights and more effective methods to get them. Businesses experiencing rapid technological and social change are looking for researchers who can help them keep not just current with the rapid pace of change but in front of it. Older tools and methodologies once limited to exploratory or qualitative research are gaining wider acceptance in dealing with a broader range of managerial problems.

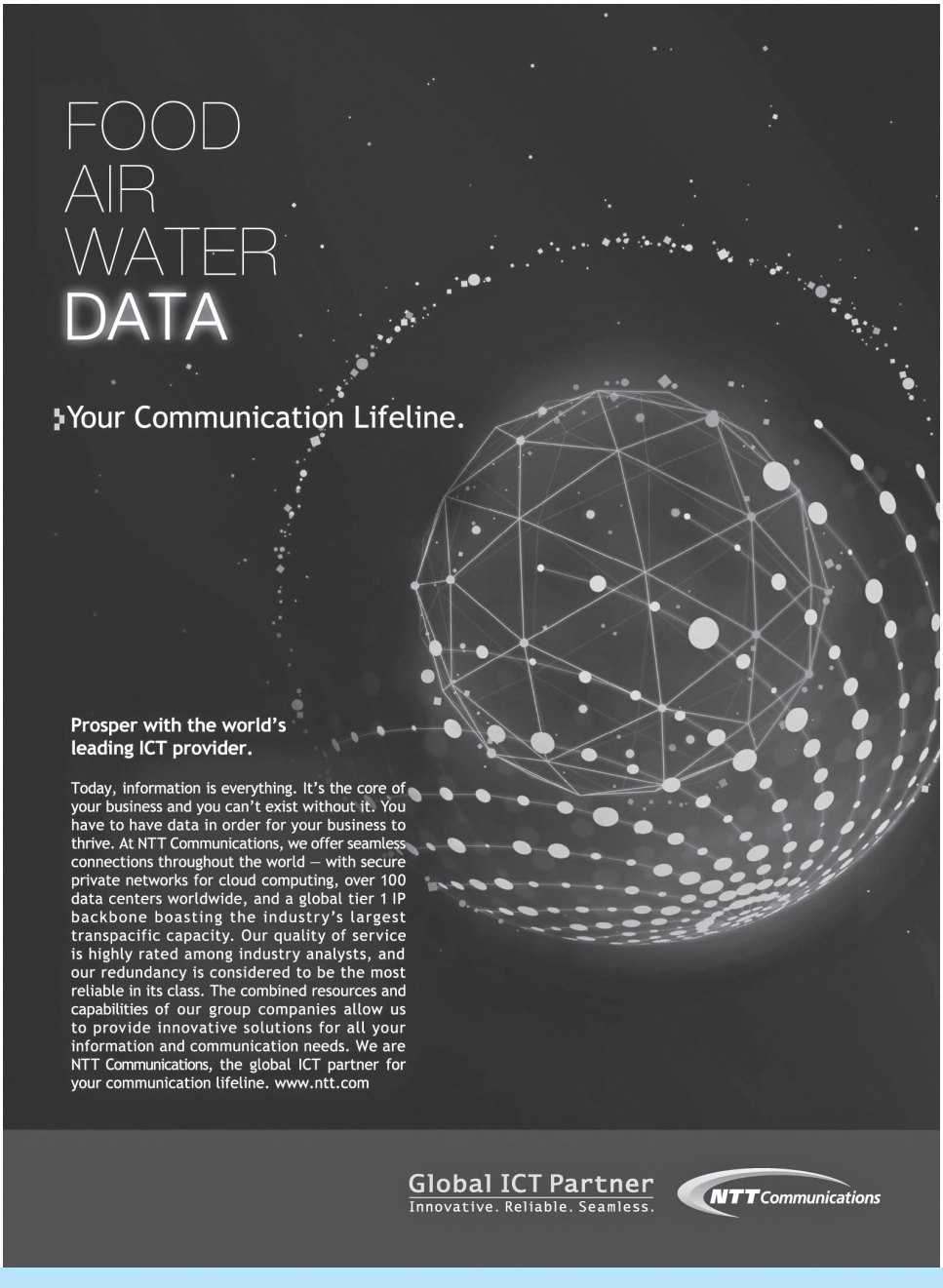
To do well in such an environment, you will need to understand how to identify quality information and to recognize the solid, reliable research on which your high-risk managerial decisions can be based. You will need to know how to conduct such research. Developing these skills requires understanding the scientific method as it applies to the decision-making environment. Many students will also need to hire research suppliers or write an effective RFP (request for proposal). To facilitate that goal, Appendix 1a, available from the text Online Learning Center, describes how the research industry works. Appendix A, at the end of the book, describes how to effectively plan and document research requests and proposals. Along with other reference material provided throughout the book, we address your needs as information collector, processor, evaluator, and user.

> Information and Competitive Advantage

Managers have access to information other than that generated by business research. Understanding the relationship between business research and these other information sources—decision support systems and business intelligence—is critical for understanding how information drives decisions relating to organizational mission, goals, strategies, and tactics.

Goals

A local bakery would have different goals than Nabisco, but each likely has goals related to sales (membership), market share, return on investment, profitability, customer acquisition, customer satisfaction, customer retention, employee productivity, production efficiency, maximization of stock price (or owner's equity), and so on—whether codified in a written plan or detailed only in an entrepreneur's brain. To assist in making increasingly complex decisions on goals, strategies, and tactics, managers turn first to information drawn from the decision support system, combined with that generated by business intelligence on competitive and environmental activity.



>picprofile

As NTT Communications indicates, "Today, information is everything. It's the core of your business and you can't exist without it." NTT uses the private cloud for seamless and secure data access worldwide. www.ntt.com

Decision Support

The need to complete one or many exchanges with its prospective customers, members, or constituents drives every organization. No matter how we define an *exchange*—a purchase, a vote, attendance at a function, a donation to a cause—each exchange, along with the strategic and tactical activities designed to complete it, generates numerous elements of data. If organized for retrieval, collectively these data elements constitute a **decision support system (DSS).** During the last two and one-half decades, advances in computer technology made it possible to share this collected transactional data among an organization's decision makers over an intranet or an extranet.

Today, sophisticated managers have developed DSSs, where data can be accessed in real time (as transactions are completed). Catalog managers (e.g., casual clothing retailer Lands' End) know exactly what tactics generate a transaction from a particular individual within their prospect and customer databases, as well as just how profitable each customer is to the company and an estimate of that customer's lifetime value to the company. Such managers have a distinct advantage in strategic and tactical planning over those without real-time access to transactional data.

Business Intelligence

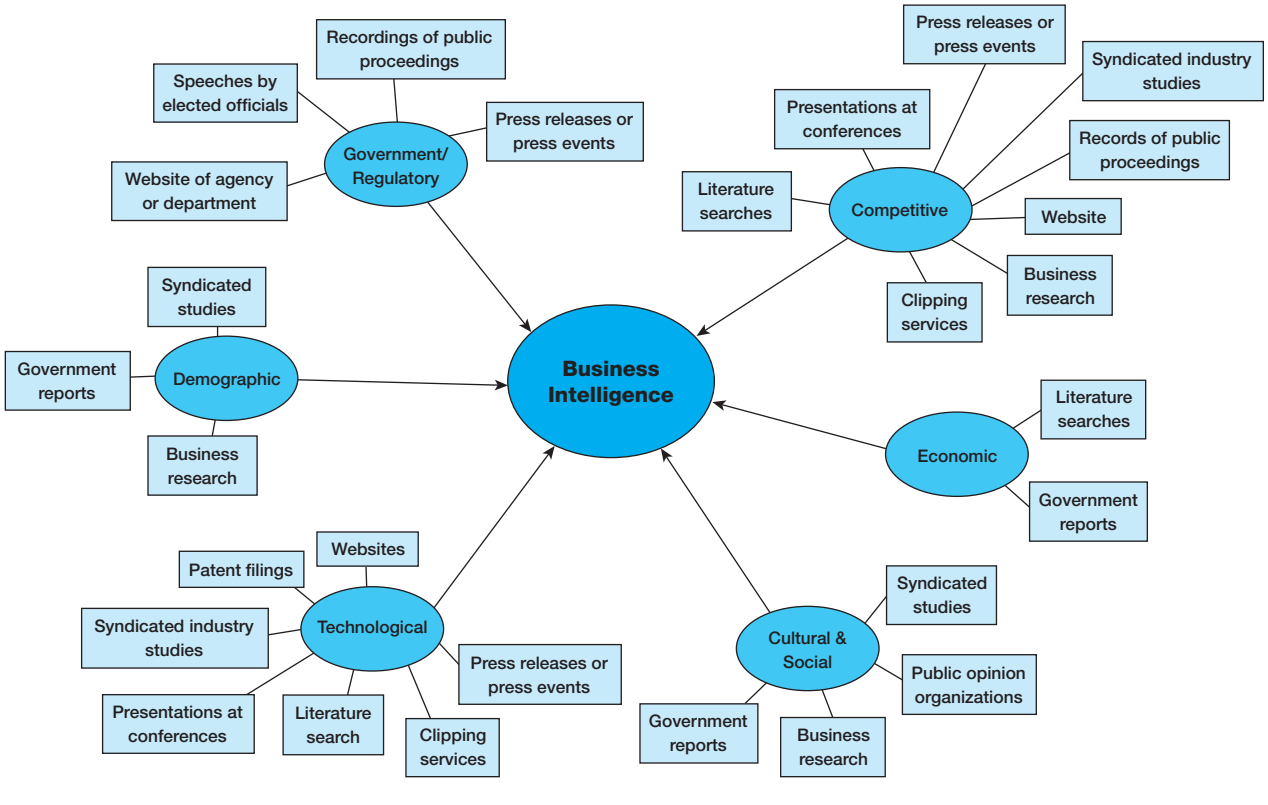
Because no decision exists in a vacuum, the decision maker must have a broad knowledge of the firm's environment. A **business intelligence system (BIS)** is designed to provide the manager with ongoing information about events and trends in the technological, economic, political and legal, demographic, cultural, social, and, most critically, competitive arenas. Such information is compiled from a variety of sources, as is noted in Exhibit 1-1.

Often, data from a DSS or BIS stimulate the question "Should we do business research?" In the MindWriter example, this might be data collected about laptop problems needing repair; or, for our restaurant whose friendliness quotient is changing, it might be customer comments collected by the wait staff.

Strategy

Strategy is defined as the general approach an organization will follow to achieve its goals. In an earlier example, a restaurant was receiving comments that the friendly atmosphere was changing. This perception may have been the result of a change in strategy. Perhaps the restaurant decided to switch from an atmosphere where patrons were encouraged to linger over their meal (occupying

>Exhibit 1-1 Some Sources of Business Intelligence



>snapshot

Client Perspective of Consultancy Skills Needed to Be an Effective Researcher

Recently a group of research clients participated in a GreenBook blog about researchers consultancy skill needs. Here is what they shared.

- **Researchers need to think strategically.** Insights are ultimately about strategy—spelling out implications and recommendations, highlighting opportunities, and describing how business decision makers might use them.
- **Researchers need to be insights- and action-specialists.** Researchers need to think like business decision makers, delivering concrete, call-to-action insights. The insights and recommendations need to reflect an understanding of the rapidly changing contexts and landscapes that the business faces—nimble, flexible, proactive, and forward thinking.
- **Researchers need to challenge decision makers.** Insights need to be bold, provocative. Business decision makers are looking for solutions, direction.
- **Researchers need to advocate.** Researchers need to tell a story, engage an audience, inspire and impassion business decision makers to action. They should learn to become as comfortable using the word *should* as the word could. Advocacy is fact-supported beliefs, not ambivalence.

a table for a long period of time while adding incremental revenues with each additional course) to a new strategy of turning each table in a shorter time frame by changing food preparation and the menu.

A firm usually implements more than one strategy at a time. With regard to training, one organization might train its data warehouse employees with mostly classroom activities, while another will use on-the-job training. Another strategy might describe how an organization handles maintenance on its equipment—rigorous periodic maintenance versus maintenance only when equipment breaks down. Microsoft recently completed a major corporate restructuring. It decided to tie its 600 managers' compensation, not to sales and profits, but to levels of customer satisfaction as measured by periodic customer satisfaction surveys.[2]

The discovery of opportunities and problems that influence strategic decisions is often the task of the BIS in combination with business research.

Tactics

Business research also contributes significantly to the design **tactics**—those specific, timed activities that execute a strategy. Business research also can be used to help a manager decide which of several tactics is likely to successfully execute the desired strategy. In our earlier example, our restaurant manager might have changed the menu (marketing tactic) to feature entrées that could be prepared faster (operations tactic) and delivered to a table more quickly. The manager might also have instituted a new training program (HR tactic) to implement a new zoned, table-coverage structure (operations tactic), along with a new sales-incentive program (HR tactic) that discouraged the wait staff from making small talk with patrons and rewarded teamwork and efficiency.

All of the above examples demonstrate the purposes of business research:

- To identify and define opportunities and problems.
- To define, monitor, and refine strategies.
- To define, monitor, and refine tactics.
- To improve our understanding of the various fields of management.[3]

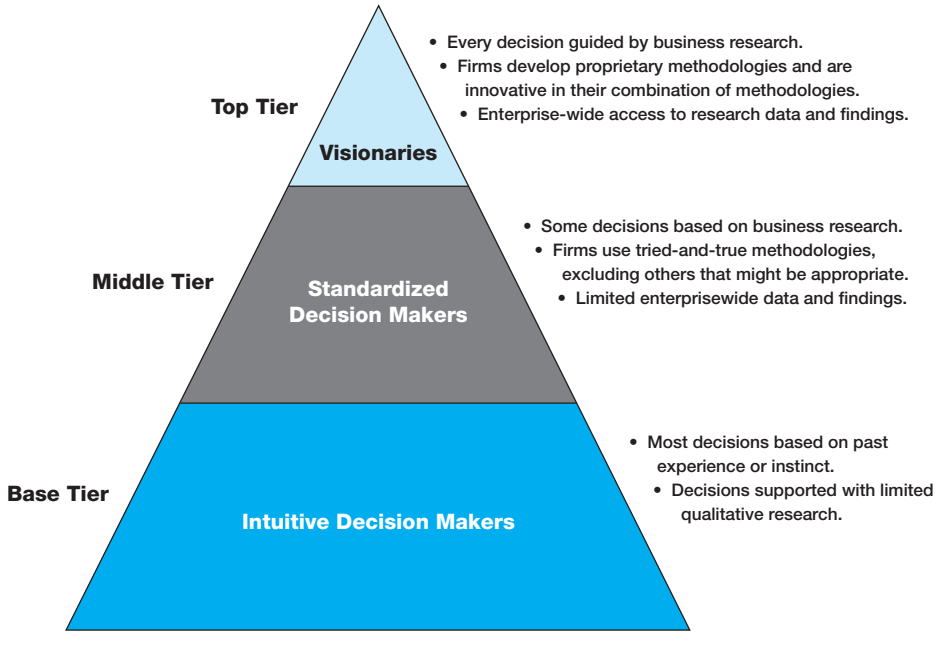
> Hierarchy of Information-Based Decision Makers

Although not all organizations use business research to help make planning decisions, increasingly the successful ones do. Exhibit 1-2 shows an emerging hierarchy of organizations in terms of their use of business research.

In the top tier, organizations see research as the fundamental first step in any venture. They go beyond the tried-and-true methodologies and use creative combinations of research techniques to gain deep insights to aid in their sophisticated decision making. Some even develop their own proprietary methodologies. These firms may partner with a small group of outside research suppliers that have the expertise to use innovative combinations of research methods to address management dilemmas. These visionary managers can be found in research firms, service firms, nonprofit organizations, and product and service manufacturers and distributors. Minute Maid, the manufacturer that brings us fresh and frozen juice-based products, fosters decision making at this level. Its vice president of Consumer and Marketing Knowledge is a member of the firm's highest strategic planning team.[4] Implementation and activation of the research are the critical stages of decision makers in this tier. Design Forum, an architectural and graphic design firm specializing in retail design and positioning for such firms as Lexus, Dunkin' Donuts, and McDonald's, is another firm operating at this level; every recommendation to each client is based on data drawn from the use of extensive research.

In the second tier of the hierarchy are those decision makers that rely periodically on research information. They usually turn to business research primarily when they perceive the risk of a particular strategy or tactic to be too great to proceed without it. They rely heavily on those methodologies that proved themselves in the last several decades of the 20th century—surveys and focus groups—often choosing the methodology before fully assessing its appropriateness to the dilemma at hand. This tier is occupied by many large, medium, and small organizations of all types. Some of the firms newly arrived to this tier are in transition from the base tier. They have realized that failing to collect information prior to decision making or failing to extract insight from information that has been collected in their DSS puts them at a distinct competitive disadvantage.

>Exhibit 1-2 Hierarchy of Information-Based Decision Makers



>snapshot

Pattern Thinking at Yum! Brands

When PepsiCo spun off its restaurant division into a separate corporation, Yum! Brands, Inc., some might have thought that the removal of the struggling restaurants from the more popular and successful snack foods was an end rather than a beginning. But David Novak, saw an opportunity to learn from the best.

"To take advantage of our unique position of being a brand-new public company made up of well-established brands, we did a best-practice tour of some of the most successful companies around at the time in order to take inspiration from them and borrow any good ideas we could find. We visited seven companies in all—GE, Walmart, Home Depot, Southwest Airlines, Target, Coke, and UPS—and then came back and crystallized what we'd learned."

Yum! combined observation with individual depth interviews to gain insights—patterns—that could be used in the restaurant division. Novak employed a technique he coined as *pattern thinking.* Pattern thinking is "where you look at what's working for someone else and apply it to your own situation." The technique generated more than incremental improvements, it helped Yum! take a giant leap forward. Using this approach he and his team identified five Dynasty Drivers for Yum! Brands. "These were the things that we believed would make us an enduringly great company and included: A Company Where Everyone Makes a Difference; Customer and Sales Mania; Competitive Brand Differentiation; Continuity in People and Process; and Consistency in Results."

Novak identified a valuable lesson for researchers. "Pattern thinking requires that you keep your eyes open and actively seek out new ideas wherever you can find them. And you won't truly have your eyes open unless you have enough humility to admit that the best ideas aren't always going to come from you."

www.yum.com

Finally, the base tier comprises those managers who primarily use instinct and intuition rather than research knowledge to facilitate their decisions. These firms may or may not have sophisticated DSSs or BISs. They believe themselves to be so close to customers and distribution partners, as well as to employees and other stakeholders, that they rarely need business research. When they do collect information, they use a limited amount of qualitative research, often in the form of an informal group discussion or small number of individual interviews, to confirm their ideas. Especially in the business-to-business arena, they often rely on feedback filtered by members of the sales force. Following guidelines for adequate sampling or other procedures of scientific inquiry is not fundamental to this group. Larger firms that occupy this tier are influenced as much by organizational culture as by resources. Many small companies find themselves in this tier not because of an unwillingness to use business research but based on a perception that any more formalized research is too expensive to employ and that their resources won't accommodate this mode of decision making.

The trends of the past two decades, especially the technology that has been driving research methodologies of data collection and dissemination, make it likely that managers who do not prepare to advance up the hierarchy will be at a severe competitive disadvantage. Some examples of where business collects its data are shown in Exhibit 1-3.

> The Research Process: A Preview

Writers usually treat the research study as a sequential process involving several clearly defined steps. Exhibit 1-4 models the sequence of the **research process.** 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.

The research process begins much as the opening vignette suggests. You will notice that the top of the model is devoted to understanding the manager's problem—the management dilemma. 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

>Exhibit 1-3 Where Business Collects Research Information

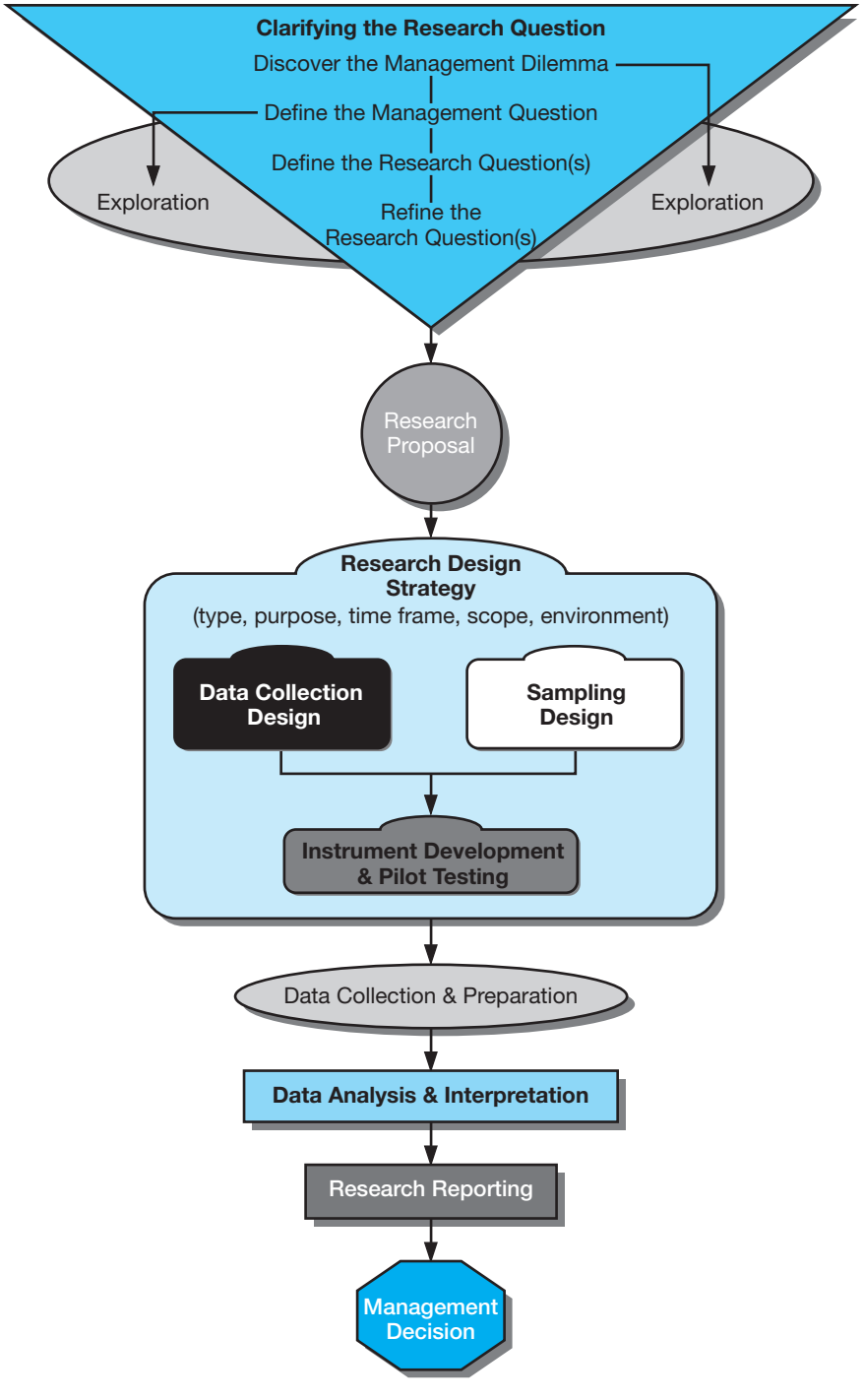
Type of Data	Where/How	Data Source
Transactional	Online and in-store purchases	Customer
	Online, phone, in-store inquiries	Potential customer, customer
	Warehouse and shipping manifests	Logistic partners, employee
	Machine performance	Machine data log
Observational	Online Web visits and in-store shopping trips	Customer, employee
	Competitor interactions	Customer
	Click-through paths on Web	Potential customer, customer
	In-store customer service interactions	Customer, employee
	Stock price valuations	Investors
	Biometric measures (e.g., neuromarketing, fMRI, PET, eye tracking)	Potential customer, customer, employee
Conversational (Touch points)	Surveys, online and in-store intercepts	Potential customer, customer, employee
	Call center interactions	Customer, employee
	In-store customer service interactions	Customer, employee
	Web chat interactions	Customer, employee
	In-store checkout	Customer, employee
	Candidate interviews	Potential employee
	Performance reviews	Employee
	Exit interviews	Employee
	Annual stockholder meetings	Investor
	Financial performance presentations	Financial analyst, institutional investor
	Listening tours	Customer, supplier, logistic partner, employee, decision influencer
	Twitter posts	Customer, employee, competitor, trade associations, distributor
	Facebook posts (company site)	Customer, employee, trade associations, distributor
	Blog activity	Customer, employee, competitor, trade associations, distributor
	Other social media posts or discussions	Customer, employee, competitor, trade associations, distributor
Internet Analytics	Keyword searches	Potential customer, customer
	Click analysis	Potential customer, customer
	Google+	Potential customer, customer

Our interviews and research for this edition, revealed several sources of research data. This table is adapted from that research and author experience as well as from material by Cynthia Clark, "5 Ways to Learn What Customers Aren't Telling You," 1to1 Magazine, March 5, 2012, accessed March 8, 2012 (http://www.1to1media.com/view.aspx?docid=33464) and "Harness the Conversation: Business in Today's Social World," Cvent, accessed March 8, 2012 (http://www.cvent.com/en/sem/business-in-todays-social-world-survey-ebook.shtml).

MindWriter, the critical event could have been the introduction by a competitor of new technology that would revolutionize the battery life of laptops. Such events cause managers to reconsider their purposes or objectives, define a problem for solution, or develop strategies and tactics for solutions they have identified.

In every chapter, we will refer to this model as we discuss each step in the process. Our discussion of the questions that guide project planning and data gathering is also incorporated into the various elements of the model. In the chapters that follow, we discuss scientific research procedures and ethical conduct by showing their application to the pragmatic problems of managers. At a minimum,

>Exhibit 1-4 The Research Process



our objective is to make you a more intelligent consumer of research products prepared by others (see Appendix 1a, available from the text Online Learning Center) as well as to enable you to perform quality research for your own decisions and those to whom you report.

Exhibit 1-4 is an important organizing tool because it provides a framework for introducing how each process module is designed, connected to other modules, and then executed. Thus, it organizes the book.

Is Research Always Problem-Solving Based?

Researchers often are asked to respond to "problems" that managers needed to solve. **Applied research** has a practical problem-solving emphasis. Whether the problem is negative, like rectifying an inventory system that is resulting in lost sales, or an opportunity to increase stockholder wealth through acquiring another firm, problem solving is prevalent.

The problem-solving nature of applied research means it is conducted to reveal answers to specific questions related to action, performance, or policy needs. **Pure research** or **basic research** is also problem-solving based, but in a different sense. It aims to solve perplexing questions or obtain new knowledge of an experimental or theoretical nature that has little direct or immediate impact on action, performance, or policy decisions. Basic research in the business arena might involve a researcher who is studying the results of the use of coupons versus rebates as demand stimulation tactics, but not in a specific instance or in relation to a specific client's product. In another pure research scenario, researchers might study the influence on productivity of compensation systems that pay by piece-work versus salary-plus-bonus structures. Thus, both applied and pure research are problem-solving based, but applied research is directed much more to making immediate managerial decisions.

In answer to the question posed at the beginning of this section, Is research always problem-solving based? the answer is yes. Whether the typology is applied or pure, simple or complex, all research should provide an answer to some question. If managers always knew what was causing problems or offering opportunities in their realm of responsibility, there would be little need for applied research or basic research; intuition would be all that was necessary to make quality decisions.

> What Is Good Research?

Good research generates dependable data that are derived by professionally conducted practices and that can be used reliably for decision making. In contrast, poor research is carelessly planned and conducted, resulting in data that a manager can't use to reduce his or her decision-making risks. Good research follows the standards of the **scientific method:** systematic, empirically based procedures for generating replicable research.

We list several defining characteristics of the scientific method in Exhibit 1-5 and discuss below the managerial dimensions of each.

1. *Purpose clearly defined.* The purpose of the business research—the problem involved or the decision to be made—should be clearly defined and sharply delineated in terms as unambiguous as possible. Getting this in writing is valuable even in instances in which the same person serves as researcher and decision maker. The statement of the decision problem should include its scope, its limitations, and the precise meanings of all words and terms significant to the research. Failure of the researcher to do this adequately may raise legitimate doubts in the minds of research report readers as to whether the researcher has sufficient understanding of the problem to make a sound proposal attacking it.
2. *Research process detailed.* The research procedures used should be described in sufficient detail to permit another researcher to repeat the research. This includes the steps to acquire participants, informed consent, sampling methods and representativeness, and data gathering procedures. Except when secrecy is imposed, research reports should reveal with candor the sources of data and the means by which they were obtained. Omission of significant procedural details makes it difficult or impossible to estimate the validity and reliability of the data and justifiably weakens the confidence of the reader in the research itself as well as any recommendations based on the research.
3. *Research design thoroughly planned.* The procedural design of the research, and its choice among competing designs, should be clearly described and carefully planned to yield results that are as objective as possible. A survey of opinions or recollections ought not to be used when more reliable evidence is available from documentary sources or by direct observation. Bibliographic searches should be as thorough and complete as possible. Experiments should

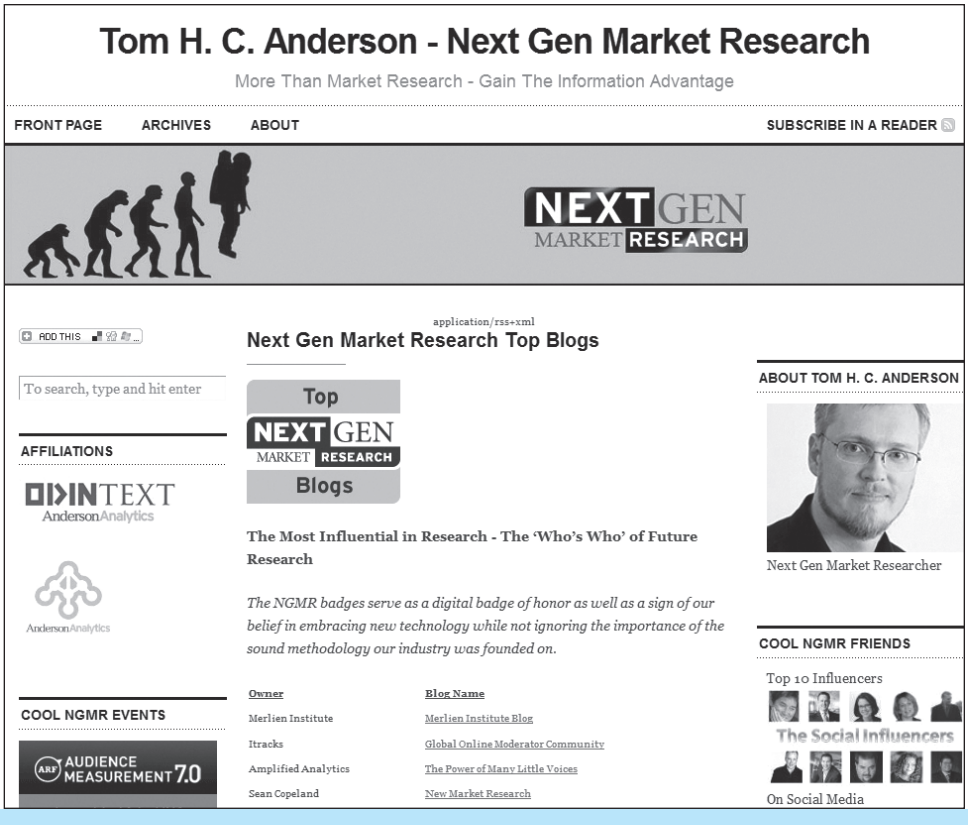
>Exhibit 1-5 What Actions Guarantee Good Business Research?

Characteristics of Research	What a Manager Should Look For in Research Done by Others or Include in Self-Directed Research	Chapter
Purpose clearly defined	• Researcher distinguishes between symptom of organization's problem, the manager's perception of the problem, and the research problem.	4, 5
Research process detailed	• Researcher provides complete research proposal.	4, Appendix A
Research design thoroughly planned	• Exploratory procedures are outlined with constructs defined. • Sample unit is clearly described along with sampling methodology. • Data collection procedures are selected and designed.	3, 4, 5, 6–14
High ethical standards applied	• Safeguards are in place to protect study participants, organizations, clients, and researchers. • Recommendations do not exceed the scope of the study. • The study's methodology and limitations sections reflect researcher's restraint and concern for accuracy.	2, 19, 20
Limitations frankly revealed	• Desired procedure is compared with actual procedure in report. • Desired sample is compared with actual sample in the report. • Impact on findings and conclusions is detailed.	6, 14, 15, 19, 20
Adequate analysis for decision maker's needs	• Sufficiently detailed findings are tied to collection instruments.	15–20
Findings presented unambiguously	• Findings are clearly presented in words, tables, and graphs. • Findings are logically organized to facilitate reaching a decision about the manager's problem. • Executive summary of conclusions is outlined. • Detailed table of contents is tied to the conclusions and findings presentation.	15–20
Conclusions justified	• Decision-based conclusions are matched with detailed findings.	15–20
Researcher's experience reflected	• Researcher provides experience/credentials with report.	19, 20

have satisfactory controls, reducing threats to internal validity and enhancing the probability of external validity (generalizability). Direct observations should be recorded as soon as possible after the event. Efforts should be made to minimize the influence of personal bias in selecting and recording data.

4. *High ethical standards applied.* Researchers often work independently and have significant latitude in designing and executing projects. A research design that includes safeguards against causing mental or physical harm to participants and makes data integrity a first priority should be highly valued. Ethical issues in research reflect important moral concerns about the practice of responsible behavior in society.

   Researchers frequently find themselves precariously balancing the rights of their subjects against the scientific dictates of their chosen method. When this occurs, they have a responsibility to guard the welfare of the participants in the studies and also the organizations to which they belong, their clients, their colleagues, and themselves. Careful consideration must be given to those research situations in which there is a possibility for physical or psychological harm, exploitation, invasion of privacy, and/or loss of dignity. The research need must be weighed against the potential for these adverse effects. Typically, you can redesign a study, but sometimes you cannot. The researcher should be prepared for this dilemma.



>picprofile

Keeping abreast of new methodologies and techniques is a never-ending process for a strong researcher. Following research-related blogs, following and participating in LinkedIn groups, and attending conferences are critical to this process. The Next Generation Market Research blog and LinkedIn group managed by Tom Anderson, founder and managing partner of Anderson Analytics, is a prime example. Note that Anderson provides links to many other research-related blogs from his own at www.tomhcanderson.com/next-gen-market-research-top-blogs.

5. *Limitations frankly revealed.* The researcher should report, with complete frankness, flaws in procedural design and estimate their effect on the findings. There are very few perfect research designs. Some of the imperfections may have little effect on the validity and reliability of the data; others may invalidate them entirely. A competent researcher should be sensitive to the effects of imperfect design. The researcher's experience in analyzing data should provide a basis for estimating the influence of design flaws. As a decision maker, you should question the value of research about which no limitations are reported.
6. *Adequate analysis for decision maker's needs.* Analysis of the data should be extensive enough to reveal its significance, what managers call insights. The methods of analysis used should be appropriate. The extent to which this criterion is met is frequently a good measure of the competence of the researcher. Adequate analysis of the data is the most difficult phase of research for the novice. The validity and reliability of data should be checked carefully. The data should be classified in ways that assist the researcher in reaching pertinent conclusions and clearly reveal the findings that have led to those conclusions. When statistical methods are used, appropriate descriptive and inferential techniques should be chosen, the probability of error should be estimated, and the criteria of statistical significance applied.
7. *Findings presented unambiguously.* Some evidence of the competence and integrity of the researcher may be found in the report itself. For example, language that is restrained, clear, and precise; assertions that are carefully drawn and hedged with appropriate reservations; and an apparent effort to achieve maximum objectivity tend to leave a favorable impression

of the researcher with the decision maker. Generalizations that outrun the statistical findings or other evidence on which they are based, exaggerations, and unnecessary verbiage tend to leave an unfavorable impression. Such reports are not valuable to managers wading through the minefields of organizational decision making. Presentation of data should be comprehensive, reasonably interpreted, easily understood by the decision maker, and organized so that the decision maker can readily locate critical findings.

8. *Conclusions justified.* Conclusions should be limited to those for which the data provide an adequate basis. Researchers are often tempted to broaden the basis of induction by including personal experiences and their interpretations—data not subject to the controls under which the research was conducted. Equally undesirable is the all-too-frequent practice of drawing conclusions from a study of a limited population and applying them universally. Researchers also may be tempted to rely too heavily on data collected in a prior study and use it in the interpretation of a new study. Such practice sometimes occurs among research specialists who confine their work to clients in a small industry. These actions tend to decrease the objectivity of the research and weaken readers' confidence in the findings. Good researchers always specify the conditions under which their conclusions seem to be valid.
9. *Researcher's experience reflected.* Greater confidence in the research is warranted if the researcher is experienced, has a good reputation in research, and is a person of integrity. Were it possible for the reader of a research report to obtain sufficient information about the researcher, this criterion perhaps would be one of the best bases for judging the degree of confidence a piece of research warrants and the value of any decision based upon it. For this reason the research report should contain information about the qualifications of the researcher.

Good business research has an inherent value only to the extent that it helps management make better decisions to achieve organizational goals. Interesting information about consumers, employees, competitors, or the environment might be pleasant to have, but its value is limited if the information cannot be applied to a critical decision. If a study does not help management select more effective, more efficient, less risky, or more profitable alternatives than otherwise would be the case, its use should be questioned. Alternatively, management may have insufficient resources (time, money, or skill) to conduct an appropriate study or may face a low level of risk associated with the decision at hand. In these situations, it is valid to avoid business research and its associated costs in time and money. Business research finds its justification in the contribution it makes to the decision maker's task and to the bottom line.

> A Glimpse at Four Research Studies

From each of the following illustrations of management dilemmas, we can abstract the essence of research. How is it carried out? What can it do? What should it not be expected to do? As you read the four cases, be thinking about the possible range of situations for conducting research, and try answering these questions: (1) What is the decision-making dilemma facing the manager? (2) What must the researcher accomplish?

ClassicToys

You work for ClassicToys, a corporation that is considering the acquisition of a toy manufacturer. The senior vice president for development asks you to head a task force to investigate six companies that are potential candidates. You assemble a team composed of representatives from the relevant functional areas. Pertinent data are collected from public sources because of the sensitive nature of the project. You examine all of the following: company annual reports; articles in business journals, trade magazines, and newspapers; financial analysts' assessments; and company advertisements. The team members then develop summary profiles of candidate firms based on the characteristics gleaned from the sources. The final report highlights the opportunities and problems that acquisition of the target firm would bring to all areas of the business.

MedImage

You are the business manager for MedImage, a large group of physicians specializing in diagnostic imaging (MRI, nuclear, tomography, and ultrasound). A prominent health insurance organization has contacted you to promote a new cost-containment program. The doctors' committee to which you will make a recommendation will have a narrow enrollment window for their decision. If they choose to join, they will agree to a reduced fee schedule in exchange for easier filing procedures, quicker reimbursement, and listing on a physicians' referral network. If they decline, they will continue to deal with their patients and the insurance carrier in the current manner. You begin your investigation by mining data from patient files to learn how many are using this carrier, frequency of care visits, complexity of filings, and so on. You then consult insurance industry data to discover how many potential patients in your area use this care plan, or similar care plans with alternative insurance carriers, and the likelihood of a patient choosing or switching doctors to find one that subscribes to the proposed program. You attempt to confirm your data with information from professional and association journals. Based on this information, you develop a profile that details the number of patients, overhead, and potential revenue realized by choosing to join the plan.

MoreCoatings

MoreCoatings, a paint manufacturer, is having trouble maintaining profits. The owner believes inventory management is a weak area of the company's operations. In this industry, many paint colors, types of paint, and container sizes make it easy for a firm to accumulate large inventories and still be unable to fill customer orders. You look into the present warehousing and shipping operations and find excessive sales losses and delivery delays because of out-of-stock conditions. An informal poll of customers confirms your impression. You suspect the present inventory database and reporting system do not provide prompt, usable information needed for appropriate production decisions.

Based on this supposition, you familiarize yourself with the latest inventory management techniques. You ask the warehouse manager to take an inventory, and you review the incoming orders for the last year. In addition, the owner shows you the production runs of the last year and his method for assessing the need for a particular color or paint type. By modeling the last year of business using production, order, and inventory management techniques, you choose the method that provides the best theoretical profit. You run a pilot line using the new control methodology. After two months, the data show a much lower inventory and a higher order fulfillment rate. You recommend that the owner adopt the new inventory method.

York College

You work for York College's alumni association. It is eager to develop closer ties with its aging alumni to provide strong stimuli to encourage increased donations and to induce older, nontraditional students to return to supplement enrollment. The president's office is considering starting a retirement community geared toward university alumni and asks your association to assess the attractiveness of the proposal from an alumni viewpoint. Your director asks you to divide the study into four parts.

Phase 1

First you are to report on the number of alumni who are in the appropriate age bracket, the rate of new entries per year, and the actuarial statistics for the group. This information allows the director to assess whether the project is worth continuing.

Phase 2

Your early results reveal a sufficient number of alumni to make the project feasible. The next step in the study is to describe the social and economic characteristics of the target alumni group. You review

gift statistics, analyze job titles, and assess home location and values. In addition, you review files from the last five years to see how alumni responded when they were asked about their income bracket. You are able to describe the alumni group for your director when you finish.

Phase 3

It is evident that the target alumni can easily afford a retirement community as proposed. The third phase of the study is to explain the characteristics of alumni who would be interested in a university-related retirement community. For this phase, you engage the American Association of Retired Persons (AARP) and a retirement community developer. In addition, you search for information on senior citizens from the federal government. From the developer you learn what characteristics of retirement community planning and construction are most attractive to retirees. From the AARP you learn about the main services and features that potential retirees look for in a retirement community. From government publications you become familiar with existing regulations and recommendations for operating retirement communities and uncover a full range of descriptive information on the typical retirement community dweller. You make an extensive report to both the alumni director and the university president. The report covers the number of eligible alumni, their social and economic standings, and the characteristics of those who would be attracted by the retirement community.

Phase 4

The report excites the college president. She asks for one additional phase to be completed. She needs to predict the number of alumni who would be attracted to the project so that she can adequately plan the size of the community. At this point, you call on the business school's research methods class for help in designing a questionnaire for the alumni. By providing telephones and funding, you arrange for the class to conduct a survey among a random sample of the eligible alumni population. In addition, you have the class devise a second questionnaire for alumni who will become eligible in the next 10 years. Using the data collected, you can predict the initial demand for the community and estimate the growth in demand over the next 10 years. You submit your final report to the director and the president.

What Dilemma Does the Manager Face?

The manager's predicament is fairly well defined in the four cases. Let's see how carefully you read and understood them. In the ClassicToys study, the manager, the senior vice president for development, must make a proposal to the president or possibly the board of directors about whether to acquire a toy manufacturer and, if one is to be acquired, which one of the six under consideration is the best candidate. In MedImage, the physicians in the group must decide whether to join the proposed managed health care plan of one of their primary insurers. In the MoreCoatings study, the owner of the paint manufacturer must decide whether to implement a new inventory management system. At York College, the president must propose to the board of directors whether to fund the development of a retirement community. How did you do? If you didn't come to these same conclusions, reread the cases before proceeding to catch what you missed.

In real life, management dilemmas are not always so clearly defined. In the MoreCoatings study, rather than pinpointing the problem as one of inventory management, the paint manufacturer's owner could have faced several issues: (1) a strike by the teamsters impacting inventory delivery to retail and wholesale customers; (2) the development of a new paint formula offering superior coverage but requiring a relatively scarce ingredient to manufacture, thereby affecting production rates; (3) a fire that destroyed the primary loading dock of the main shipping warehouse in the Midwest; (4) the simultaneous occurrence of all three events. As the research process begins with a manager's decision-making task, accurately defining the dilemma is paramount but often difficult. We outline the research process that begins this activity at the end of this chapter and address it in detail in Chapter 4.

The Types of Research Studies Represented by the Four Examples

All four studies qualify as applied research and can be classified as reporting, descriptive, explanatory, or predictive.

Reporting

At the most elementary level, a **reporting study** provides a summation of data, often recasting data to achieve a deeper understanding or to generate statistics for comparison. The task may be quite simple and the data readily available. At other times, the information may be difficult to find. A reporting study calls for knowledge and skill with information sources and gatekeepers of information sources. Such a study usually requires little inference or conclusion drawing. In the ClassicToys study, the researcher needs to know what information should be evaluated in order to value a company. In the study of management, this knowledge would be acquired primarily in courses in financial management, accounting, and marketing. Knowing the type of information needed, the researcher in the ClassicToys study identifies sources of information, such as trade press articles and annual reports. Because of the possible effect of the toy manufacturer evaluation on the stock prices of the conglomerate instigating the study and each toy company, only public sources are used. Other reporting studies of a less sensitive nature might have the researcher interviewing source gatekeepers. In the York College study, for example, interviewing the director of local retirement facilities might have revealed other sources to include in the search. Such an expert is considered a gatekeeper. Early in your career, identifying gatekeepers for your firm and industry is critical to success as a manager.

Purists might argue that reporting studies do not qualify as research, although such carefully gathered data can have great value. A research design does not have to be complex and require inferences for a project to be called research. In the early part of your career, you will likely be asked to perform a number of reporting studies. Many managers consider the execution of such studies an excellent way for new employees to become familiar with their employer and its industry.

Descriptive

A **descriptive study** tries to discover answers to the questions *who, what, when, where,* and, sometimes, *how.* The researcher attempts to describe or define a subject, often by creating a profile of a group of problems, people, or events. Such studies may involve the collection of data and the creation of a distribution of the number of times the researcher observes a single event or characteristic (known as a **research variable**), or they may involve relating the interaction of two or more variables. In MedImage, the researcher must present data that reveal who is affiliated with the insurer, who uses managed health care programs (both doctors and patients), the general trends in the use of imaging technology in diagnosing illness or injury severity, and the relationship of patient characteristics, doctor referrals, and technology-use patterns.

Descriptive studies may or may not have the potential for drawing powerful inferences. Organizations that maintain databases of their employees, customers, and suppliers already have significant data to conduct descriptive studies using internal information. Yet many firms that have such data files do not mine them regularly for the decision-making insight they might provide. In the opening vignette, Myra Wines could mine numerous company databases for insight into the nature and number of service-related problems arising after purchase and, similarly, for information about product use inquiries. A database generated by warranty registration cards could reveal significant data concerning purchaser characteristics, as well as purchase location and product use behavior. A descriptive study, however, does not explain *why* an event has occurred or why the variables interact the way they do.

The descriptive study is popular in research because of its versatility across management disciplines. In not-for-profit corporations and other organizations, descriptive investigations have a broad

appeal to the administrator and policy analyst for planning, monitoring, and evaluating. In this context, *how* questions address issues such as quantity, cost, efficiency, effectiveness, and adequacy.[5]

Explanatory

Academics debate the relationship between the next two types of studies, explanatory and predictive, in terms of which precedes the other. Both types of research are grounded in theory, and theory is created to answer why and how questions. For our purposes, an **explanatory study** goes beyond description and attempts to explain the reasons for the phenomenon that the descriptive study only observed. Research that studies the relationship between two or more variables is also referred to as a *correlational study*. The researcher uses theories or at least hypotheses to account for the forces that caused a certain phenomenon to occur. In MoreCoatings, believing the problem with paint stockouts is the result of inventory management, the owner asks the researcher to detail warehousing and shipping processes. It would be a descriptive study if it had stopped here. But if problems in the processes could be linked with sales losses due to an inability to make timely deliveries to retail or wholesale customers, then an explanatory study would emerge. The researcher tests this hypothesis by modeling the last year of business using the relationships between processes and results.

Predictive

If we can provide a plausible explanation for an event after it has occurred, it is desirable to be able to predict when and in what situations the event will occur. A **predictive study,** the fourth type, is just as rooted in theory as explanation. NATA, a national trade association for the aviation industry, may be interested in explaining the radiation risks from the sun and stars for flight crews and passengers. The variables might include altitude, proximity of air routes to the poles, time of year, and aircraft shielding. Perhaps the relations among the four variables explain the radiation risk variable. This type of study often calls for a high order of inference making. Why, for example, would a flight at a specified altitude at one time of year not produce so great a radiation risk to the airliner's occupants as the same flight in another season? The answer to such a question would be valuable in planning air routes. It also would contribute to the development of a better theory of the phenomenon. In business research, prediction is found in studies conducted to evaluate specific courses of action or to forecast current and future values.

The researcher is asked to predict the success of the proposed retirement facility for alumni for York College based on the number of applicants for residency the project will attract. This prediction will be based on the explanatory hypothesis that alumni frequent programs and projects sponsored by the institution because of an association they maintain between their college experience and images of youthfulness and mental and physical stimulation.

Finally, we would like to be able to control a phenomenon once we can explain and predict it. Being able to replicate a scenario and dictate a particular outcome is the objective of **control.** In the York College study, if we assume that the college proceeds with its retirement community and enjoys the predicted success, the president will find it attractive to be able to build a similar facility to serve another group of alumni and duplicate that success.

Control is a logical outcome of prediction. The complexity of the phenomenon and the adequacy of the prediction theory, however, largely decide success in a control study. At York College, if a control study were done of the various promotional approaches used with alumni to stimulate images of youthfulness, the promotional tactics that drew the largest number of alumni applications for residency could be identified. Once known, this knowledge could be used successfully with different groups of alumni only if the researcher could account for and control all other variables influencing applications.

Any of the four types of studies—reporting, descriptive, explanatory, or predictive—can properly be called research. We also can conclude from the various examples that research is a systematic inquiry aimed at providing information to solve managerial problems.

>summary

1 Research is any organized inquiry carried out to provide information for solving problems. This includes reporting, descriptive, explanatory, and predictive studies. We emphasize the last three in this book. Business research is a systematic inquiry that provides information to guide decisions. More specifically, it is a process of determining, acquiring, analyzing and synthesizing, and disseminating relevant data, information, and insights to decision makers in ways that mobilize the organization to take appropriate actions that, in turn, maximize performance. If organized for retrieval, data collected from the day-to-day operations of the organization constitute a decision support system (DSS). A business intelligence system (BIS) is designed to provide the manager with ongoing information about events and trends in the technological, economic, political and legal, demographic, cultural, social, and, most critically, competitive arenas. Research studies are used to supplement DSS and BIS.

2 The managers of tomorrow will need to know more than any managers in history. Business research will be a major contributor to that knowledge. Managers will find knowledge of research methods to be of value in many strategic and tactical situations. They may need to conduct research either for themselves or for others. As buyers of research services, managers will need to be able to judge research quality. Finally, they may become research specialists themselves.

Not all managers have established research as a priority in their process of decision making. Consequently, a hierarchy of research-based decision makers is emerging. The top tier contains those managers who use research as a fundamental step in all decisions and who use creative vision to establish proprietary methodologies. The middle tier includes those managers who occasionally turn to research but only rely on the tried-and-true methods. The bottom tier is those managers who by choice or economic circumstance choose to rely on intuition and judgment rather than business research.

3 The research process is a model for the development and interpretation of research studies. Although many researchers perceive the research study 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.

4 What characterizes good research? Generally, one expects good research to be purposeful with a clearly defined focus and plausible goals; with defensible, ethical, and repeatable procedures; and with evidence of objectivity. The reporting of procedures—their strengths and weaknesses—should be complete and honest. Appropriate analytical techniques should be used; conclusions drawn should be limited to those clearly justified by the findings; and reports of findings and conclusions should be clearly presented and professional in tone, language, and appearance. Managers should always choose a researcher who has an established reputation for quality work. The research objective and its benefits should be weighed against potentially adverse effects.

5 Research is any organized inquiry carried out to provide information for solving problems. This includes reporting, descriptive, explanatory, and predictive studies. Reporting studies provide a summation of data, often recasting data to achieve a deeper understanding or to generate statistics for comparison. A descriptive study tries to discover answers to the questions *who, what, when, where,* and, sometimes, *how.* An explanatory study attempts to explain the reasons for the phenomenon that the descriptive study only observed. A predictive study attempts to predict when and in what situations an event will occur. Studies may also be described as applied research or basic research. Applied research applies research to discovering solutions for immediate problems or opportunities. Basic (or pure) research aims to solve perplexing questions or obtain new knowledge of an experimental or theoretical nature that has little direct or immediate impact on action, performance, or policy decisions.

>keyterms

applied research 15

business intelligence system (BIS) 9

business research 4

control 22

decision support system (DSS) 8

descriptive study 21

explanatory study 22

management dilemma 6

predictive study 22

pure research (basic research) 15

reporting study 21

research process 12

research variable 21

return on investment (ROI) 6

scientific method 15

strategy 9

tactics 10

>discussionquestions

Terms in Review

1 What is business research? Why should there be any question about the definition of research?

2 What is the difference between applied research and basic or pure research? Use a decision about how a salesperson is to be paid, by commission or salary, and describe the question that would guide applied research versus the question that would guide pure research.

3 Distinguish between an explanatory and predictive research study.

4 Distinguish between a reporting study and a descriptive study.

Making Research Decisions

5 A sales force manager needs to have information in order to decide whether to create a custom motivation program or purchase one offered by a consulting firm. What are the dilemmas the manager faces in selecting either of these alternatives?

6 Toyota had a major problem with unexplained acceleration in several of its top models in 2010. It closed down production and stopped sales of multiple models. What types of research might Toyota have conducted to make these decisions?

7 You have received a business research report done by a consultant for your firm, a life insurance company. The study is a survey of customer satisfaction based on a sample of 600. You are asked to comment on its quality. What will you look for?

8 As area sales manager for a company manufacturing and marketing outboard engines, you have been assigned the responsibility of conducting a research study to estimate the sales potential of your products in the domestic (U.S. or Canadian) market. Discuss key issues and concerns arising from the fact that you, the manager, are also the researcher.

Bringing Research to Life

9 What evidence is presented in the Bringing Research to Life vignette of efforts to understand the management dilemma?

From Concept to Practice

10 Apply the principles in Exhibit 1-4 to the research scenario in question 8.

From the Headlines

11 Kathy Lee Berggren, a professor of oral communication at Cornell University, indicates "a lot of my students really [only] scratch the surface with the type of research they're doing." According to Andy Guess, at Inside Higher Ed, "Just because students walk in the door as 'digital natives', doesn't mean they're equipped to handle the heavy lifting of digital databases and proprietary search engines that comprise the bulk of modern, online research techniques." Students erroneously think a Google search is research.

As you read through the reasons that should stimulate your interest in studying research methods or evaluate the nine factors that guarantee good research, what actions do you propose to narrow the gap between students' research competence and what's required of a modern college graduate about to become a manager?

>cases*

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Ohio Lottery: Innovative Research Design Drives Winning

* You will find a description of each case in the Case Index section of this textbook. Check the Case Index to determine whether a case provides data, the research instrument, video, or other supplementary material. Written cases are downloadable from the text website (www.mhhe.com/cooper12e). All video material and video cases are available from the Online Learning Center. The film reel icon indicates a video case or video material relevant to the case.

>online learning center appendices

You'll find the following appendix available from the Online Learning Center to supplement the content of this chapter:

Appendix 1a: How the Research Industry Works.